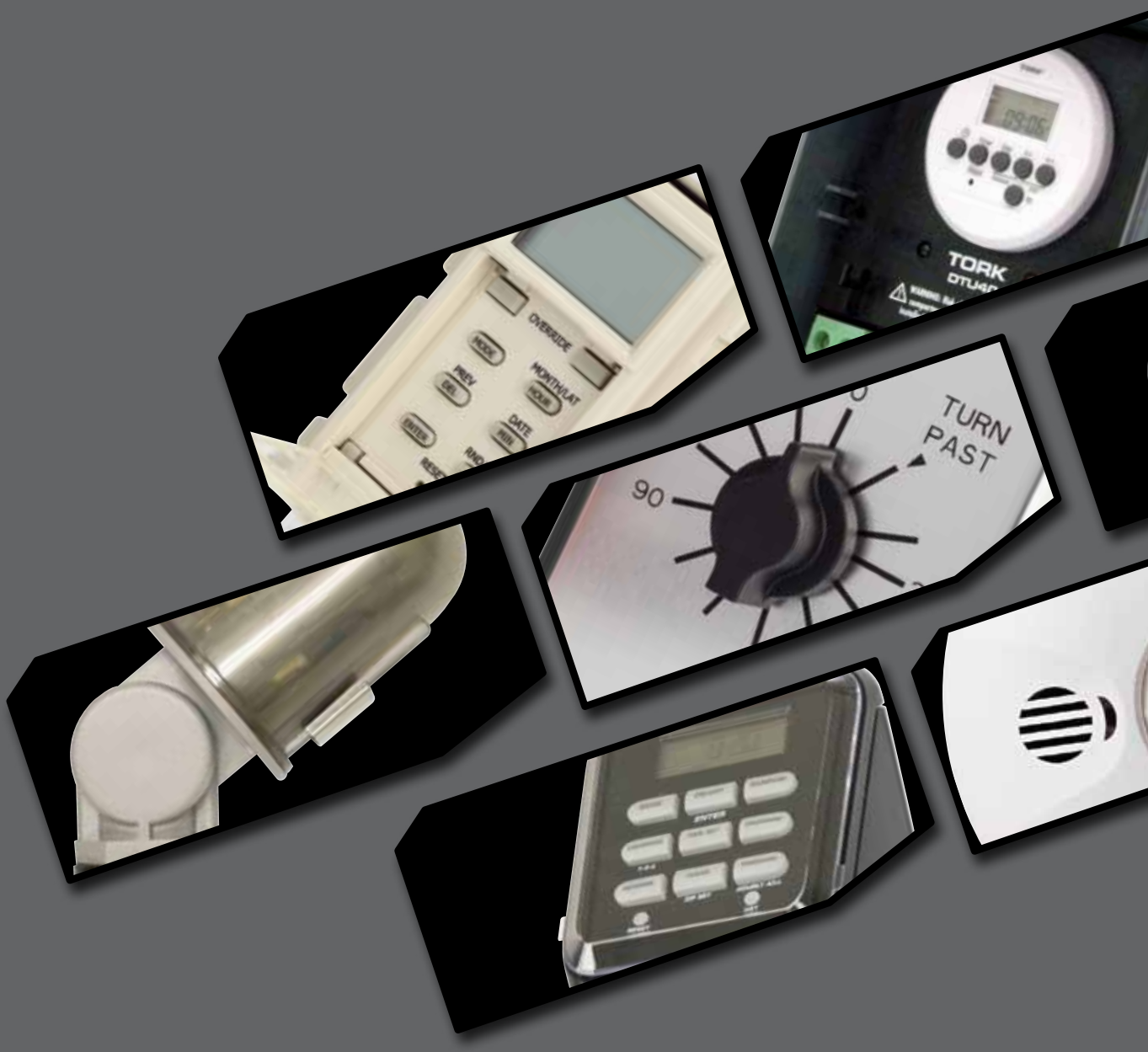
TORK®

nsi INDUSTRIES



4 HOUR
8 HOUR
12 HOUR
SET
AM
PM
OFF
TURN PAST
HOLD
TIME
TORK
ON
OFF
TORK
E101B
TORK
TIMER

< ***Responsible Energy*** is the mark of TORK's commitment to developing and manufacturing energy saving, environmentally friendly products.

EXTERIOR LIGHTING ZONES

When ambient light levels drop at dusk, lighting is needed to provide safety and security. BUT: Does all lighting need to be on all night long? The proper selection of lighting controls is essential to ensuring that energy is only used when needed. An efficient lighting control design creates zones of light levels that can be varied by time at night.

ZONE 1 - DUSK TO DAWN - All night Security Lighting

Photocontrols and Photosensors

The first zone gives a minimum light level where security is the primary need. Determine what lighting is necessary, such as building-mounted wallpacks and a portion of the parking lot lighting. These should be on from dusk to dawn, and are best controlled by a photosensor device.

ZONE 2 - DUSK TO TIME OFF - Safety and Architectural Lighting

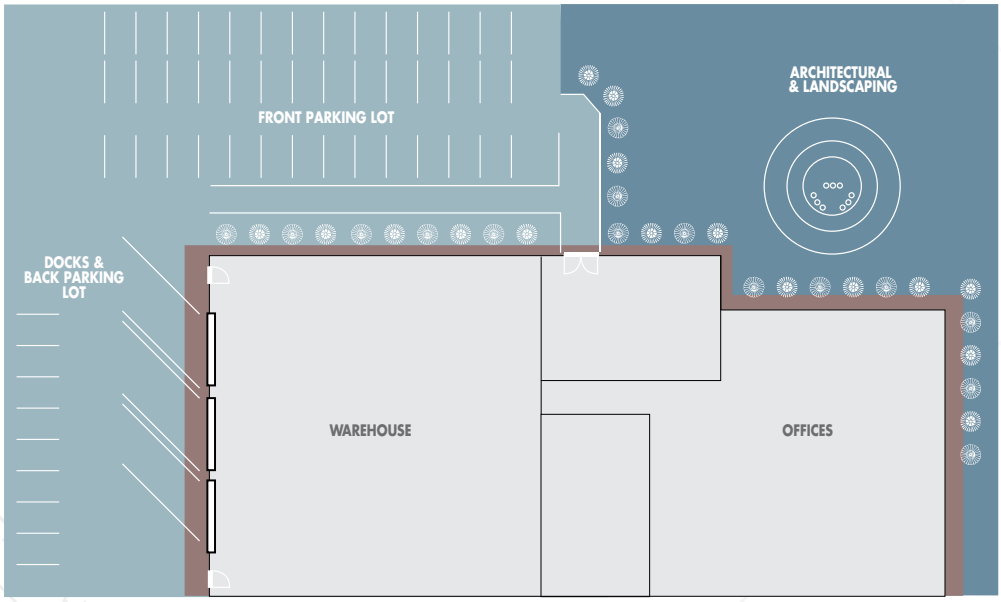
Photosensor/Time-based controls, Astronomic controls

The second zone provides a higher light level for safety, when people are normally present. Maximum levels for the parking lot and all walkway lighting are needed. These lights are best controlled by a combination photosensor and time-based device to allow shut-off during the night. The astronomic-calculated sunset/time control can also be useful.

ZONE 3 - ARCHITECTURAL - Building Facade, Landscape and Signage

Astronomic controls

The third zone covers architectural lighting for building facade or landscape and signs. These are best controlled with an astronomic-calculated sunset/time control.



CALIFORNIA Title 24
ASHRAE 90.1

< Use the Quick Reference ***Energy Code Guide*** for approved products.

Responsible Energy
Each of these marked products have features that decrease energy consumption and/or damage to the environment by one or more of the following:

- Timed control, Photocontrol and/or Astronomic control of on and off functions of lighting, fans, pumps and appliances
- Timed control of systems or multiple zones of lighting
- Photo or occupancy sensing control of lighting
- Supercapacitor backup, no batteries to replace or dispose.
- Helps meet CA Title 24, ASHRAE , IECC and other standards for responsible building products

INTERIOR LIGHTING ZONES

The first way to save energy begins with eliminating lighting when it isn't needed. As with exterior lighting, an efficient design matches controls to the typical use of the area.

ZONE A - SMALL SPACES - Meeting rooms, restrooms, storage spaces

Occupancy sensors, interval timers

The first zone includes small spaces such as offices, restrooms and storage areas – places where people may not occupy the space continuously. Individual wall switch replacement provides low cost installation, with occupancy sensors and interval timers as the best solution. In the event that wall switches do not provide proper coverage for the occupancy sensor, ceiling mounted options are available.

ZONE B - LARGE SPACES - Open offices, public spaces, hallways, warehouses

Time of Day with Override, Occupancy Sensors

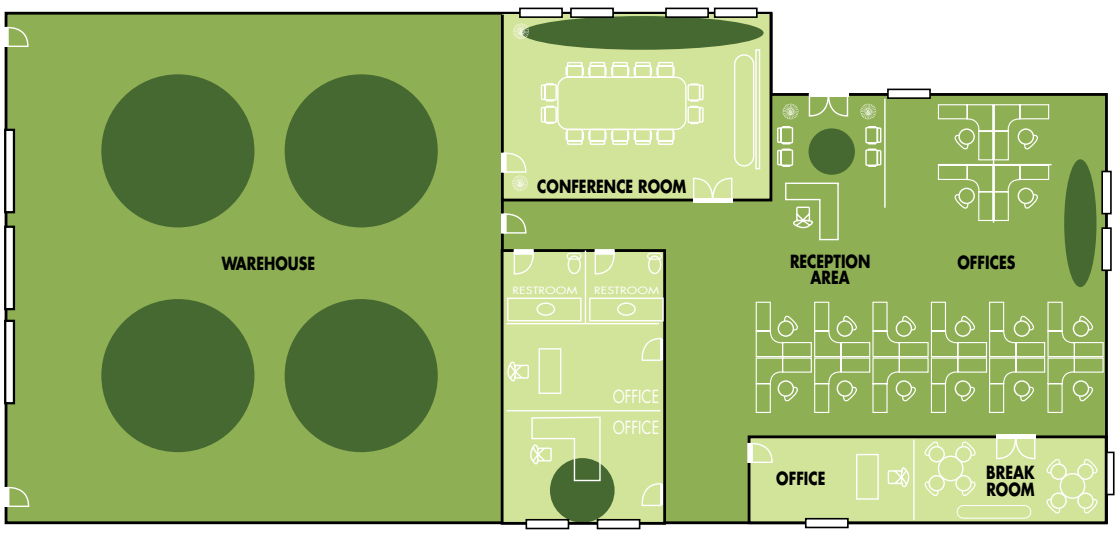
The second zone is for common areas, such as hallways, reception spaces or large spaces for open offices. These places are commonly controlled with time-of-day devices and must include an after-hours override. A conveniently placed switch should provide a limited override with a maximum length of two or four hours*, or occupancy sensors can be used to ensure that lights are shut off when people have left the building.

* Energy codes vary on the stated maximum time, but shorter times can give more energy savings.

ZONE C - DAYLIGHT HARVESTING - Large or small spaces with natural light

Light Sensors, Light Sensors with Occupancy, Astronomic Timers

A third zone that uses daylighting control can be added to either of the first two zones. Light sensors can shut off a portion of the lighting when windows or skylights contribute sufficient natural light to the area. This "harvesting" of light is an excellent, green way to conserve energy.



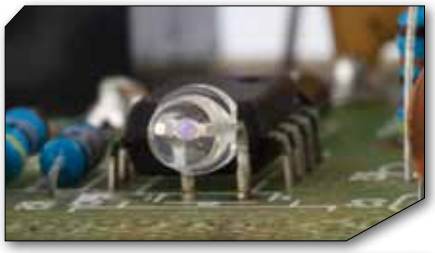
TORK® PHOTOCONTROLS

QUICK REFERENCE GUIDE

	2100 SERIES	2110 SERIES	2000 SERIES	2001/ 2020 SERIES	3000 SERIES	5000M SERIES	2005A SERIES	2005B SERIES	5200 SERIES	5200-UL SERIES	5737 SERIES
Page	403	404	405	406/407	408	409	411	412	413	414	415
Mounting	Conduit	Conduit	Conduit	Conduit	Flush	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock
Adjustable Swivel				Yes							
Housing	Die Cast Zinc	Die Cast Aluminum	Lexan®	Lexan®	Lexan®	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic
Turn ON Light Level	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 to 3 fc	1 to 3 fc	1.5 fc	1.5 fc	1.5 fc	5 fc
Adjustable light level adjustment	Yes	Yes	Yes	Yes (2001)							
Turn OFF Ratio	3:1	3:1	3:1	3:1	3:1	5:1	3:1	1.5:1	1.5:1	1.5:1	1.5:1
Time Delay ON	Yes	Yes	Yes	Yes	Yes	Yes	Instant	Instant	Instant	Instant	Instant
Time Delay OFF	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Light Sensor	CdS	CdS	CdS	CdS	CdS	CdS	CdS	Filtered Silicon Sensor	Silicon Sensor	Filtered Silicon Sensor	Silicon Sensor
CFL Compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LED Driver Listed										Yes	
Surge Protection						Yes	Yes	Yes	Yes	Yes	Yes
Photo Timer											Yes

FEATURES

CHOICE OF PHOTOCELLS



Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. Available on turn-lock photocontrols. IR Filtering responds to the light spectrum near to that of a human eye.

Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Available in 1/2" and 1" size on both wired and turn-lock photocontrols. Photocell responds to the light spectrum near to that of a human eye.

TOUGH ENCLOSURES

All conduit and flush mounted models utilize die-cast zinc, die cast aluminum, or genuine Lexan® materials. All turn-lock models utilize high impact UV stabilized polypropylene, ABS, PBT or polycarbonate materials.

TURN-LOCKS MEET ANSI C136.10

All models meet the current ANSI requirements for locking-type prongs and color coded voltage designations. Locking prongs are solid brass.

Color-Coded Dome

Grey	105-130VAC
Maroon	208-277VAC
Blue	105-285VAC
Yellow	480VAC
Green	347VAC

CHOICE OF MOUNTING ORIENTATION

Models are available in fixed position or 180° swivel.

DEPENDABLE PERFORMANCE

Built-in time delay prevents false switching due to light from passing vehicles, lightning, etc.

QUALITY ASSURANCE

TORK® *Photocontrols are designed and manufactured with components which adhere to the highest industry standards. Trained personnel and in-process quality procedures ensure that every unit meets our strictest quality standards.*

2100 SERIES
SPECIFICATION GRADE
1/2" CONDUIT MOUNTING
DIE CAST ZINC
PHOTOCONTROL

APPLICATIONS

- Parking lot lighting
- Building perimeter lighting
- Outdoor signage

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc, Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

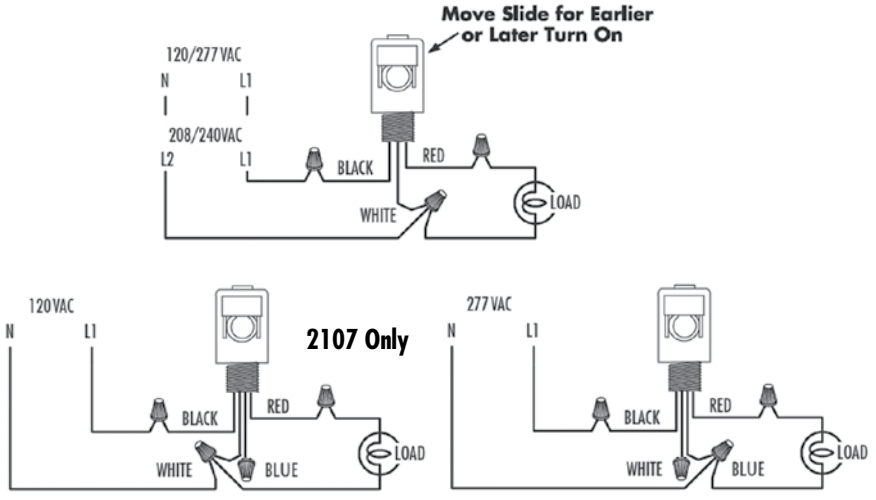
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A.

HOUSING: Heavy Duty die cast zinc housing and base. Gasketed for maximum weather protection.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2101	60012	120	SPST	2000W	1800VA
2104	60013	208-277	SPST	2000W	1800VA
2107	60031	120/277	SPST	2000W	1800VA
73866	62020	Mounting Bracket			



2110 SERIES
SPECIFICATION GRADE
1/2" CONDUIT MOUNTING
DIE CAST ALUMINUM PHOTOCONTROL

2117

2115 & 2116

APPLICATIONS

- Parking lot lighting
- Building perimeter lighting
- Outdoor signage

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

STANDARDS: Meets ANSI/UL773A.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

HOUSING: Die cast aluminum housing and base. Gasketed for weather protection.

ENERGY SAVINGS: Works with screw base CFLs.

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc, Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1/2" diameter. MODEL 2117 is 1" cell.

CONTACTS: Remain closed between dusk and dawn (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C. (2117 #10AWG red and black).

POWER CONSUMPTION: Averages under 1 watt.

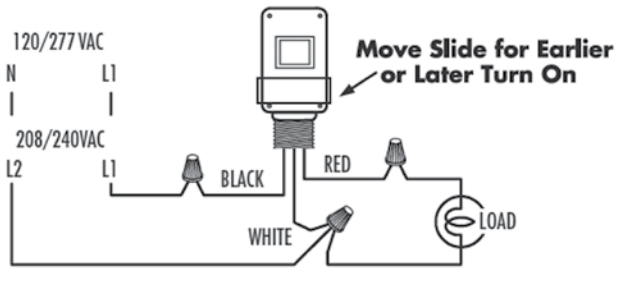
TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2115	60032	120	SPST	2000W	1800VA
2116	60033	208-277	SPST	3470-4620W	2080-2770VA
2117*	60037	120	SPST	3000W	3000VA
73866	62020	Mounting Bracket			

*Not UL or CSA rated.



2000 SERIES

1/2" CONDUIT MOUNTING
FIXED POSITION, LEXAN® HOUSING
WITH WEATHERPROOF SEALANT
PHOTOCONTROL

APPLICATIONS

- Flood lamp
- Patio lamp
- Decorative lighting

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy comformal coated 1/2" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

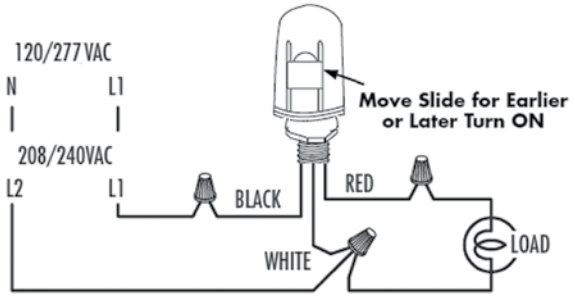
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant. Translucent Lexan® Dome prolongs cell life by further screening out ultraviolet rays. Dome and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2000	60017	120	SPST	2000W	1800VA
2000-2	60018	208-277	SPST	3470-4620W	2080-2770VA
73866	62020	Mounting Bracket			



2001 SERIES
1/2" CONDUIT MOUNTING
180° SWIVEL, LEXAN® HOUSING
PHOTOCONTROL

APPLICATIONS

- Flood lamp
- Patio lamp
- Decorative lighting

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy comformal coated 1/2" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

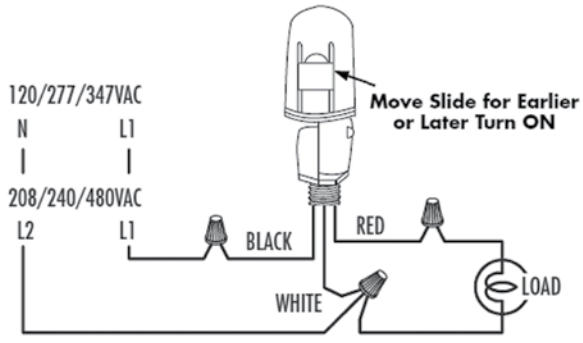
STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant. Translucent Lexan® Dome prolongs cell life by further screening out ultraviolet rays. Dome and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2001	60015	120	SPST	2000W	1800VA
2002	60016	208-277	SPST	3470-4620W	2080-2770VA
NEW! 2006*	60028	347	SPST	5760W	3470VA
NEW! 2018**	62021	480	SPST	7500W	4800VA
73866	62020	Mounting Bracket			

*CSA certified only. **Not UL or CSA rated.



2020 SERIES
1/2" CONDUIT MOUNTING
180° SWIVEL, LEXAN® HOUSING
PHOTOCONTROL

APPLICATIONS

- Flood and patio lamps
- Decorative lighting
- Ideal for applications where it is essential to aim the photocell in an exact direction to sense natural light but avoid artificial light.

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1/2" diameter.

CONTACTS: Normally closed (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

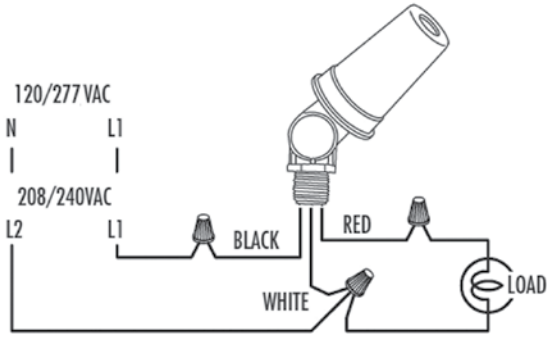
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant, cover and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2021	60024	120	SPST	2000W	1800VA
2022	60025	208-277	SPST	3470-4620W	2080-2770VA
73866	62020	Mounting Bracket			



3000 SERIES
FLUSH MOUNTING LEXAN® HOUSING PHOTOCONTROL

APPLICATIONS

- Pole lanterns
- Lawn lighting
- Walkways

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, conformal coated 1/2" diameter.

CONTACTS: Normally closed (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 9" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

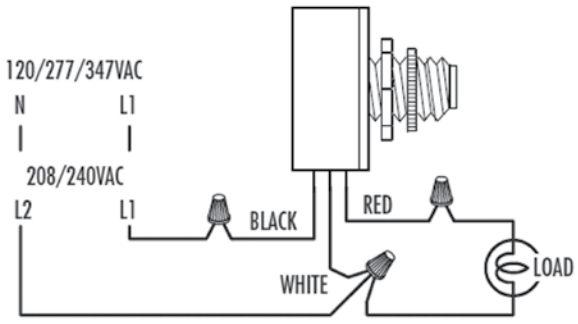
STANDARDS: Meets ANSI/UL773A

HOUSING & MOUNTING: Control housing is weather-resistant molded Lexan® with ultrasonically welded seams.
MODEL 3000: Flush mounting through .6875" hole in post lantern or lighting fixture, 3⁄8" NPT, stem 3⁄4" long. Gasket and nut supplied.
MODEL 3010: flush mounting into standard, raintight junction box. Includes aluminum plate and gasket to fit FS type outdoor junction box.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
3000	60020	120	SPST	2000W	1800VA
3002	60019	208-277	SPST	3470-4620W	2080-2770VA
NEW! 3006*	60026	347	SPST	5760W	3470VA
3010	60021	120	SPST	2000W	1800VA

*CSA certified only.



5000M SERIES
DELAYED RESPONSE UTILITY GRADE MOV SURGE ARRESTOR PHOTOCONTROL

APPLICATIONS

- For use on streets, highways and other luminaries equipped with locking type receptacles, where most stringent surge protection is needed.

SPECIFICATIONS

ON/OFF: Turn-ON is 1 to 3 fc. Turn-OFF to Turn-ON ratio is 5 max.

TIME DELAY: ON and OFF.

CELL: CdS, epoxy conformal coated ½" and 1" diameter models.

SURGE ARRESTOR: 380 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

FEATURES

SENSOR: Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delayed response prevents false switching due to light from vehicles or lighting, etc.

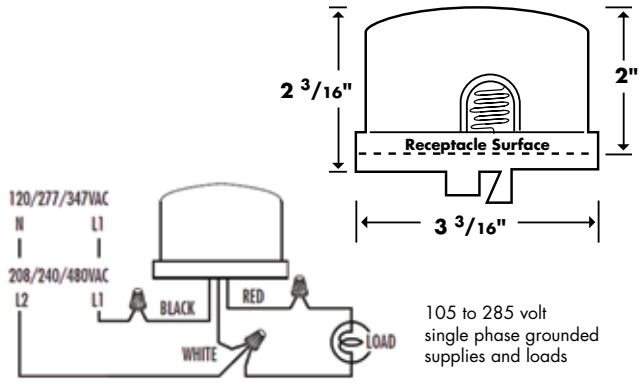
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: Bi-metal provides positive snap action switching, reducing bounce and prolonging contact life.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	LIGHT SENSOR	RATING	
				TUNGSTEN	BALLAST
5001M	61012	105-130	1"	2000W	1800VA
5004M	61013	208-277	1"	3470-4620W	2080-2770VA
5007M	61014	105-130/208-285	1/2"	2000W 3470-4620W	1800VA 2080-2770VA
5008M*	61017	480	1"	7500W	4800VA
5021M	61015	105-130	1/2"	2000W	1800VA
5024M	61016	208-277	1/2"	3470-4620W	2080-2770VA
NEW! 5026M**	61045	347	1/2"	5760W	3470VA

*Not UL listed or CSA certified.
**CSA certified only.



105 to 285 volt single phase grounded supplies and loads

5400A SERIES
CONTACTORS WITH TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For street lighting. Controls all lighting loads in excess of the capacity of the photoelectric control contacts.

SPECIFICATIONS

RECEPTACLE: 3-prong turn-lock meets the requirements of EEI NEMA.

POWER CONSUMPTION: Maximum 3 watts during daylight.

CAT. NO.	UPC CODE	PHOTOCONTROL INCLUDED	VOLTAGE (VAC) 60Hz	SWITCH
5403A	81012	2005B	120	DPST
5404A	81013	2007B	208-240	DPST
5404-3A	81014	2007B	277	DPST

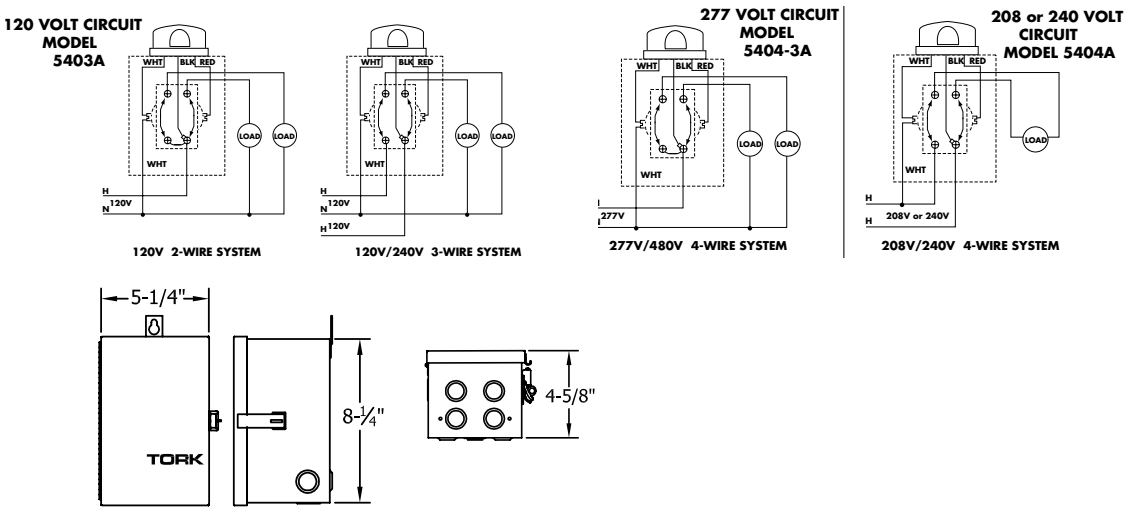
FEATURES

OPERATION: Delay up to two minutes to prevent false switching due to light from passing vehicles, lighting, etc. Photocontrol provides dusk to dawn control of lighting contactor for heavy duty switching.

STANDARDS: Meets UL773 and ANSI C136.10 for photocontrols.

HOUSING: Outdoor NEMA Type 3R. Beige enamel finish. Two ½"– ¾" combination KO in bottom.

TYPE	VOLTAGE (VAC)	CONTACT RATING PER POLE
Resistive	120-277	40A
Tungsten	120	30A
Ballast	120-277	40A
LED Driver	120-277	40A
Motor	120 240	3HP 7.5HP



2005A SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For state and county DOT & municipalities use on roadway and bridges. Also use for general commercial facilities.

SPECIFICATIONS

ON/OFF: Turn-ON is 1.5 foot candle +/-0.5 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: CdS, epoxy conformal coated ½" diameter.

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joules MOV exceeds NEMA and ANSI requirements.

LOCKING PRONGS: Solid brass prongs for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

FEATURES

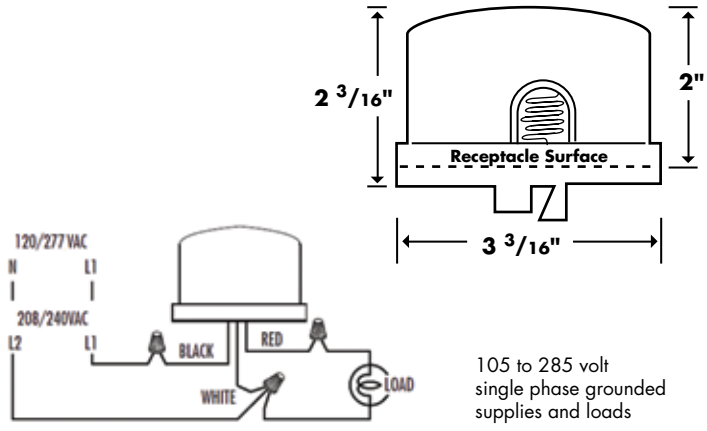
SENSOR: Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polypropylene, UV stabilized, permanent color with UV resistant clear acrylic window. Provides high impact, flammability resistance and electrically save operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
2005A	62012	105-130	Grey	1000W	1800VA
2007A	62013	105-285	Blue	1000W	1800VA



105 to 285 volt single phase grounded supplies and loads

2005B SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For state and county DOT & municipalities use on roadway and bridges. Also use for general commercial facilities.

SPECIFICATIONS

ON/OFF: Turn-ON is 1.5 foot candle +/-0.2 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: Molded sealed IR filtered sensor

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joules MOV exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass prongs for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 4 years.

FEATURES

SENSOR: Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. IR filter responds to the light spectrum near to that of a human eye.

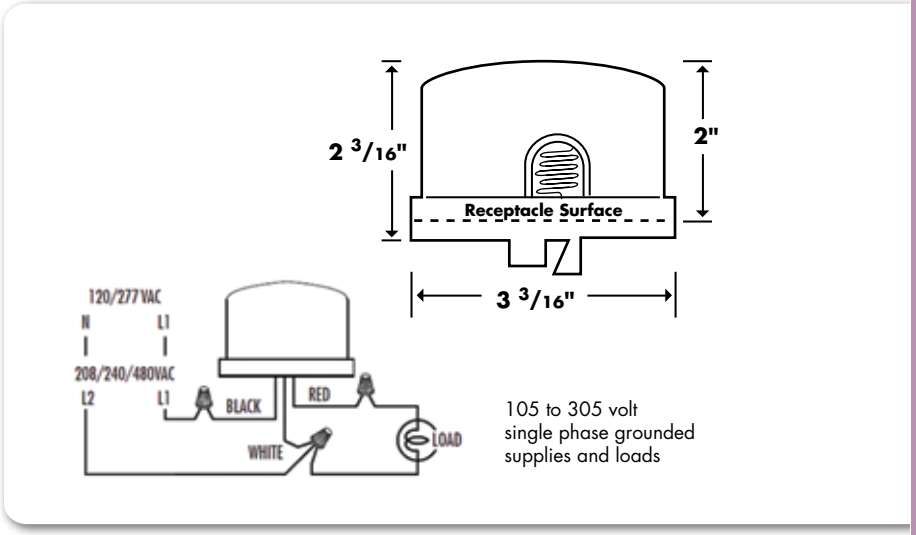
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

CAT.. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
2005B	60015	105-130	Grey	1000W	1800VA
2007B	60016	105-305	Blue	1000W	1800VA
2008B*	62017	400-550	Yellow	1000W	1800VA

*Not UL listed.



105 to 305 volt single phase grounded supplies and loads

5200 SERIES
UTILITY GRADE ELECTRONIC WITH FAIL ON MODE PHOTOCONTROL

APPLICATIONS

- Designed meet local utility standards for street and highway lighting controls.

FEATURES

SENSOR: Molded sealed silicon sensor resists effects of moisture and airborne contaminants.

STANDARDS: Meets ANSI C136 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

SPECIFICATIONS

ON/OFF: Turn ON is 1.5 foot candle +/- 0.2 OFF/ON ratio is 1.5:1 average*.

TIME DELAY: Instant ON/3-5 second OFF.

CELL: Molded sealed silicon sensor

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life.
Fail ON for safety.

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

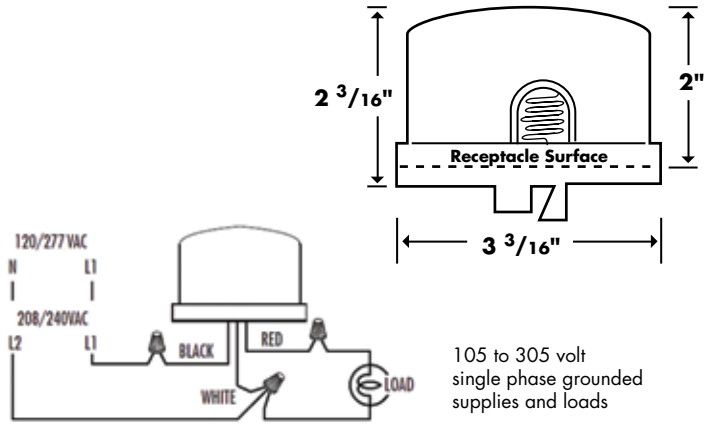
CUSTOM: Available for custom design to meet specific utility specification.

TEMPERATURE RANGE:
-40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

CAT.NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
5231	78885	105-130	Grey	1000W	1800VA
5237	78886	105-305	Blue	1000W	1800VA



105 to 305 volt single phase grounded supplies and loads

5200-UL SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- Designed meet local utility standards for street and highway lighting controls.

SPECIFICATIONS

ON/OFF: Turn ON is 1.5 foot candle +/- 0.2 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 second OFF.

CELL: Molded sealed IR filtered sensor

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

CUSTOM: Available for custom design to meet specific utility specification.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 6 years.

FEATURES

SENSOR: Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. IR filter responds to the light spectrum near to that of a human eye.

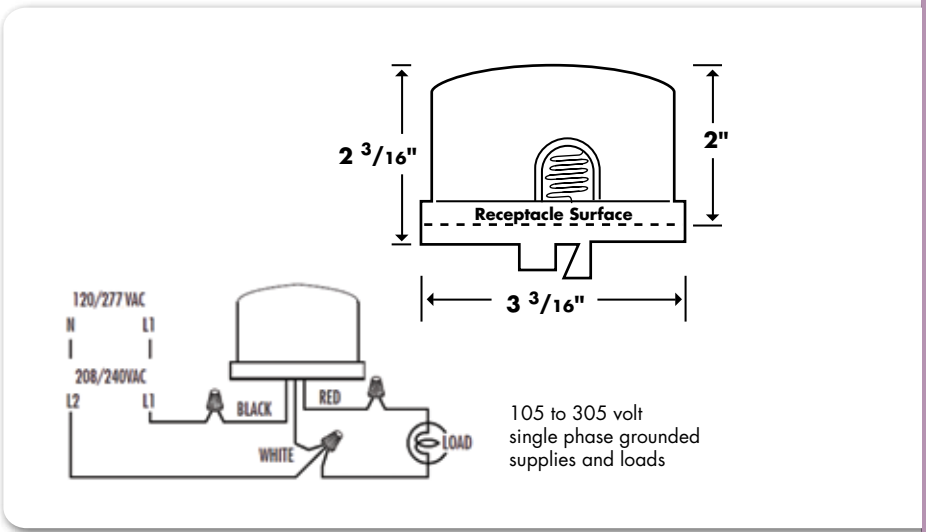
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

ENERGY SAVINGS: Listed for use with LED lamp drivers

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING		LED DRIVER
				TUNGSTEN	BALLAST	
NEW! 5237-UL	78895	105-305	Blue	1000W	1800VA	1000W



105 to 305 volt single phase grounded supplies and loads

5737 SERIES

ON AT DUSK, OFF AT MIDNIGHT
ON EARLY MORNING,
OFF AT DAWN
PHOTO-TIMERS

APPLICATIONS

- Offices
- Restaurant signage
- Billboards
- Landscape and yard lighting
- Ideal for situations when visible traffic is reduced – lights ON at dusk and OFF at 10pm or later, then on again for early morning illumination.

FEATURES

OPERATION: Microprocessor tracks the dusk and dawn times with the seasons and automatically determines midnight, NO PROGRAMMING REQUIRED. Automatically "re-learns" and resets after power outage, eliminating costly maintenance. DST correction built in.

STANDARDS: Meets ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: UV stabilized, ANSI color-coded polypropylene dome. UV stabilized, clear acrylic window. ABS base. Cross-linked, polypropylene gasket.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety

SPECIFICATIONS

ON/OFF: Turn ON at dusk is 5.0 foot candle +/- 0.5 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: Silicon photosensor

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

5737TM HALF-NIGHT FUNCTION: Allows user to adjust OFF time during the night. OFF time can be set for up to two hours before (for extra energy savings) or up to two hours after midnight. Use to stagger groups of lights to go OFF at different times during the night.

5737TZ TWO FUNCTION:
1) Standard: Set as a Dusk to Dawn photocontrol.
2) Half-night & Pre-Dawn: Turns on at Dusk. User adjusts OFF time for up to two hours before or after midnight. Then set countdown to Pre-dawn ON again 2 - 10 hours later. It always turns OFF at Dawn.

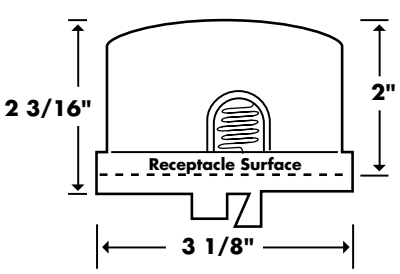
LOCKING PRONGS: Solid brass Prongs for maximum corrosion resistance and electrical conductivity.

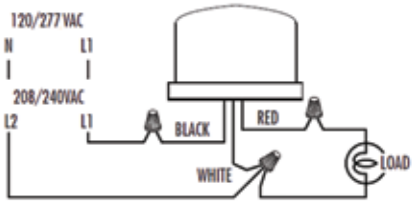
TEMPERATURE RANGE:
-40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	SWITCH	RATING	
					TUNGSTEN	BALLAST
5737TZ	62010	105-305	Blue	SPST	1000W	1800VA
5737TM	62009	105-305	Grey	SPST	1000W	1800VA





105-305 VAC
single phase grounded supplies and loads

PHOTOCONTROL ACCESSORIES
FOR TURN-LOCK CONTROLS

MOUNTING BRACKET
Utility mounting bracket for 1/2" threaded conduit photocontrols.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	73866	62020	Mounting Bracket

REPLACEMENT CAPS
5500 replaces photocontrol to change light fixture to always ON.
5500-OC replaces photocontrol to change light fixture to always OFF.
Durable materials and gasket provide longevity and weatherproof protection.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	5500	61130	Shorting cap 480VAC max 1800W Tungsten 1800VA Ballast
	5500-OC	61132	Open cap 480VAC max (Black housing)

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, gasket and two mounting screws.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2223	61025	Receptacle with gasket

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, mounting bracket and one mounting screw.

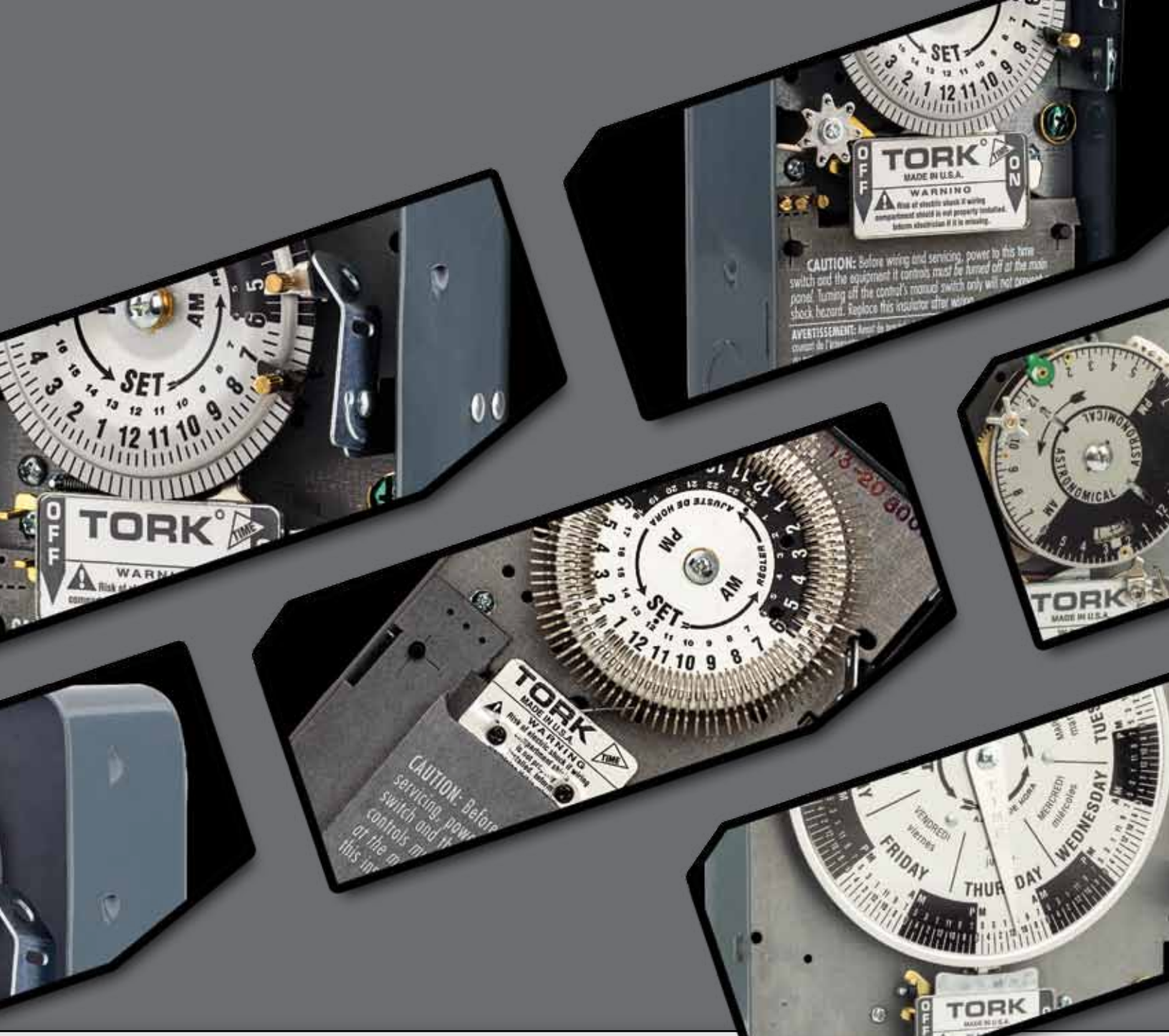
DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2224	61026	Receptacle and mounting bracket

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, plastic housing, lock nut (with 1⁄2" NPT) and a mounting bracket.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2421	61021	Receptacle with plastic housing and bracket

NSi offers many splicing options to complete the pole installation.
See the splicing section pages 211- 232.

12
9
6
POWER



TORK® ELECTROMECHANICAL TIME SWITCHES

QUICK REFERENCE GUIDE

SERIES	PAGE NO.	CLOCK DIAL	MINIMUM SETTINGS (MINUTES) ON	MINIMUM SETTINGS (MINUTES) OFF	SKIP A DAY	MANUAL OVERRIDE	SUNRISE/ SUNSET	MAX ON & OFF EVENTS PER DAY	SWITCH TYPES	RATINGS (AMPS)	RESERVE POWER
TU40	421	24 Hour	15	15		Permanent		48	SPST, DPST, SPDT, DPDT	40	
1100	423	24 Hour	20	75		Yes		12	SPST, DPST	40	
7000	425	24 Hour	20	75	Yes	Yes		12	SPST, DPST, SPDT, DPDT, 3PST	40	Available
7000Z	427	24 Hour	20 or 40 Minute Offset		Yes	Yes	SunSet	1	SPST, DPST, SPDT, DPDT, 3PST	40	Available
TZ	441	24 Hour	20 or 40 Minute Offset		Yes	Permanent by circuit	SunSet	1	DPDT, 3PST	20	Standard
W	435	7 Day	60	120	Yes	Yes		2	SPST, DPST, SPDT, DPDT, 3PST 4PST	40	Available
TW	439	7 Day	60	120	Yes	Permanent by circuit		2	DPDT, 3PST	20	Standard
T900	437	7 Day	60	120	Yes	Permanent by circuit	Photo Control	2	2 SPDT 3 SPDT	20	Standard
1847A	433	24 Hour	20	75	Yes			12	SPDT, Momentary Contact	10	Available
1847AZ	433	24 Hour	20 or 40 Minute Offset		Yes	Yes	SunSet	1	SPDT, Momentary Contact	10	Available
1847AW	433	7 Day	60	120	Yes	Yes		2	SPDT, Momentary Contact	10	Available
8000	429	24 Hour	15	15	Available			48	SPDT	20	Available
8000	431	6, 12, 30 & 60 Min.	Varies by dial 6 sec. to 1 min.					30/dial	SPDT	20	
WH2B	432	24 Hour	20	75		Yes		12	DPST	40	

FEATURES

EASY TO SET DIAL ASSEMBLY

Tork's 24 hour dial assembly allows the user to set the time switch more accurately, easily moving it by hand in small increments. Dial can provide up to 12 ON/OcFFs per day with cycles as short as 20 minutes. AM and PM settings are easy to see by the light and dark areas of the dial.

CAPTIVE TABS – DUTY CYCLE DIAL

For applications requiring many ON/OFF cycles per day, captive tabs on this dial tilt in and out just using your fingertip!

FIELD UPGRADEABLE TO SunSet DIALS

All Tork 24 hour time switches can be upgraded in the field to a SunSet timer dial.

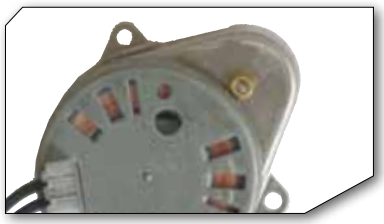
SPRING WOUND RESERVE

During power outages, precision spring mechanism takes over instantly and automatically. Keeps the mechanism on time up to 16 hours on 24 hour models and up to 24 hours on 7 day models. No resetting is needed after power resumes, and field installation is easy!

REMOVABLE DOOR

Tork time switches feature removable doors to provide easy access for installation and wiring.

ENCLOSED MOTOR



Time switch motors are enclosed to protect from dust and damage.

QUALITY ASSURANCE

TORK® *Electromechanical Controls are designed and manufactured with components which adhere to the highest industry standards. Trained personnel and in-process quality procedures ensure that every unit meets our strictest quality expectations.*

TU40 SERIES
UNIVERSAL MULTI-VOLTAGE
SAME ON/OFF TIMES EACH DAY
24 HOUR TIME SWITCH

ALL PURPOSE CONTACTS, HOUSING, & VOLTAGES!

APPLICATIONS

- Lighting
- Pumps
- Signs
- Air conditioning
- Water heaters
- Fans

FEATURES

MULTI-VOLTAGE: Automatic input voltage detection.

EASY SET: Real time clock face and day/night markings for setting trippers.

SCHEDULING: Minimum ON is setting 15 minutes. Dial has 96 captive trippers.

4 in 1 CONTACTS: DPDT can also wire as SPST, SPDT, & DPST.

BYPASS SWITCH: Sets timer to permanent ON, OFF or timer operation.

VACATION MODE: Set timer OFF with no change of tripper settings.

INDICATING LIGHTS: Power ON green and load ON red and LED indicators.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 60Hz	DRY CONTACTS (UNPOWERED)	ENCLOSURE TYPE
TU40	24000	120/208-240/277	DPDT	Plastic Indoor/Outdoor NEMA 3R
TU40-Y	24001	120/208-240/277	DPDT	Metal Indoor NEMA 1

SPECIFICATIONS

INPUT VOLTAGE: 120/208-240/277VAC, 60Hz (auto detection).

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #18 AWG.

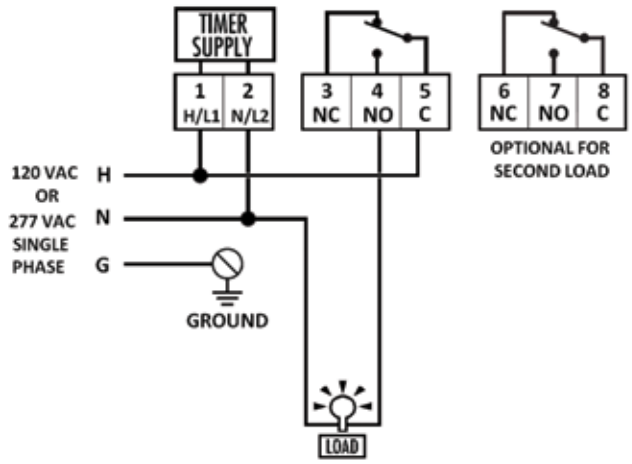
OPERATING TEMPERATURE: -31°F to 116°F (-35°C to +47°C).

POWER CONSUMPTION: 6 watts maximum.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R or -Y suffix metal indoor NEMA 1 enclosure. Both with lockable hasp standard (see page 557 for enclosure dimensions).

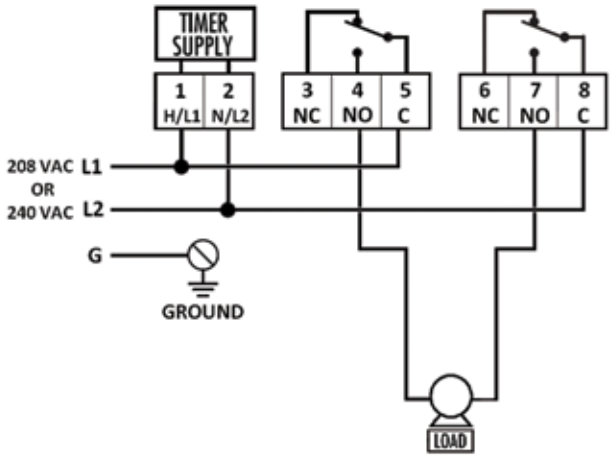
TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	30A
Inductive	120-277	30A	15A
Ballast	120	30A	10A
	277	20A	10A
Tungsten	120	15A	
Motor Load	120	1HP, 30FLA, 90LRA	¼HP, 12FLA, 30LRA
	240	2HP, 20FLA, 60LRA	½HP, 12FLA, 33LRA
Pilot Duty	120	720VA	290VA
	240	720VA	360VA
Resistive	28VDC	20A	
Max above 104°F	120-277	30A	

TYPICAL SPST WIRING - LOAD SAME VOLTAGE AS TIMER SUPPLY



CONNECT LINE VOLTAGE (H) TO TERMINAL 5

TYPICAL DPST WIRING - LOAD SAME VOLTAGE AS TIMER SUPPLY



CONNECT LINE VOLTAGE (L1) TO TERMINAL 5
CONNECT LINE VOLTAGE (L2) TO TERMINAL 8

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1100 SERIES
SAME DAY ON/OFF TIMES EACH DAY
24 HOUR TIME SWITCH

APPLICATIONS

- Lighting
- Pumps
- Signs
- Air conditioning
- Water heaters
- Fans

- Automatic ON/OFF control when operation is required at the same time every day.

FEATURES

SCHEDULING: Minimum ON is setting 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
1101	10011	120	SPST	Metal Indoor NEMA 1
1101B-P *	10068	120	SPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1101-NC	10053	120	SPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1101-O	10015	120	SPST	Metal Indoor/Outdoor NEMA 3
1101BM-IAP *	10073	120	SPST	Mechanism and retrofit plate
1101-7 **	10033	347	SPST	Metal Indoor NEMA 1
1102B	10065	208-277	SPST	Metal Indoor NEMA 1
1103	10013	120	DPST	Metal Indoor NEMA 1
1103B-P *	10069	120	DPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1103-NC	10054	120	DPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1103-O	10016	120	DPST	Metal Indoor/Outdoor NEMA 3
1103M	10023	120	DPST	Mechanism
1104	10014	208-277	DPST	Metal Indoor NEMA 1
1104B-P *	10070	208-277	DPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1104-NC	10055	208-277	DPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1104B-O *	10075	208-277	DPST	Metal Indoor/Outdoor NEMA 3
1104BM-MB *	10076	208-277	DPST	Mechanism and surface mounting bracket
1104BM-IAP *	10074	208-277	DPST	Mechanism and retrofit plate
Replacement Trippers	Order #P47 for a pair of ON/OFF trippers			
Replacement Motor	#101 (120V) & #201 (208-277V)			
SunSet Conversion	Astronomic dial. Consult factory for correct number for your latitude			

* B suffix units cULus

** 1101-7 CSA only

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts maximum.

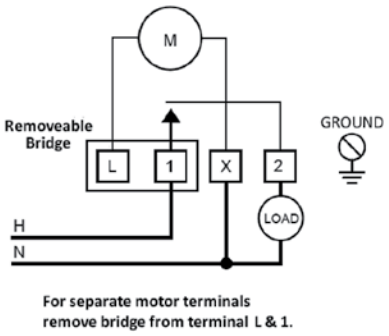
ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows any 1100 series to fit into an Intermatic case.

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
NEW! LED Driver*	120-277	20A
Pilot Duty	120 -277	1000VA**
Motor	120	2HP
	240	5HP
277VAC Single Phase		

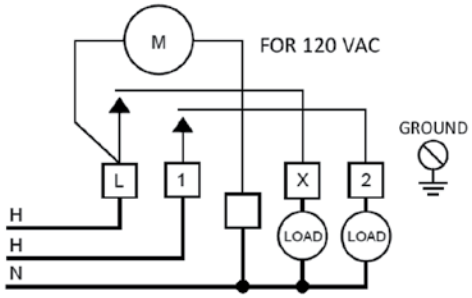
* LED rating UL only or cULus on B suffix units
** B suffix units 120VAC 1000VA / 240VAC 2000VA
1101-7 is 30 AMP inductive at 347 volts and CSA only

1101 & 1102



For separate motor terminals remove bridge from terminal L & 1.

1103



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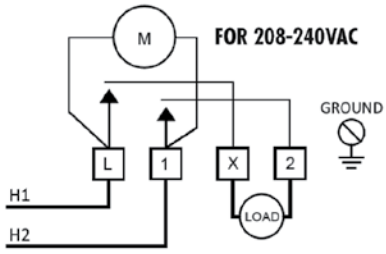

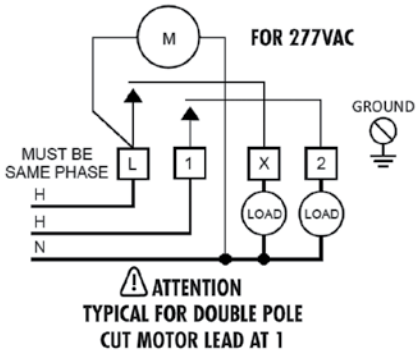

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7000 SERIES
WITH SKIP-A-DAY FEATURE
RESERVE POWER OPTIONAL
24 HOUR TIME SWITCH

SKIP-A-DAY
24 HOUR!

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Lighting
- Heating
- Pumps
- Air conditioning
- Signs

- Automatic ON/OFF control when operation is required at the same time every day, with optional versatility of one to six days omission.

FEATURES

SCHEDULING: Minimum ON setting is 20 minutes with minimum OFF setting at 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

SKIP-A-DAY: Omit operations on any day with a 7-spoke wheel marked with days of week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
7100	10001	120	SPST	Metal Indoor NEMA 1
7102	10002	208-277	SPST	Metal Indoor NEMA 1
7200	11001	120	DPST	Metal Indoor NEMA 1
7200-O	10512	120	DPST	Metal Indoor/Outdoor NEMA 3
7202	11002	208-277	DPST	Metal Indoor NEMA 1
7202-O	10509	208-277	DPST	Metal Indoor/Outdoor NEMA 3
7300	12001	120	3PST	Metal Indoor/Outdoor NEMA 3
7302	12002	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120	13001	120	SPDT	Metal Indoor NEMA 1
7122	13002	208-277	SPDT	Metal Indoor NEMA 1
7220	14001	120	DPDT	Metal Indoor NEMA 1
7222	14002	208-277	DPDT	Metal Indoor NEMA 1
WITH RESERVE POWER				
7200L	19003	120	DPST	Metal Indoor NEMA 1
7202L	19004	208-277	DPST	Metal Indoor NEMA 1
7300L	19005	120	3PST	Metal Indoor/Outdoor NEMA 3
7302L	19006	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120L	19007	120	SPDT	Metal Indoor NEMA 1
7220L	19009	120	DPDT	Metal Indoor NEMA 1
7222L	19011	208-277	DPDT	Metal Indoor NEMA 1
Replacement Trippers	Order #P49 for a pair of ON/OFF per dial. Additional ON/OFF trippers per dial order #P47. 3 omitting screws #53005 supplied.			
Replacement Motor	#101 (120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V). For Astronomic Conversion: Order #Z KIT for 7000 Series.			
SunSet Conversion	Astronomic dial. Consult factory for correct number for your latitude			

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

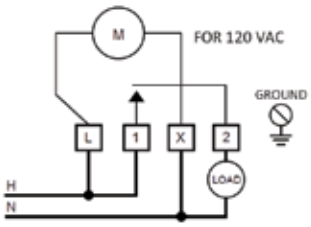
ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows any 7100 and 7200 series (except "L" models) to fit into an Intermatic case.

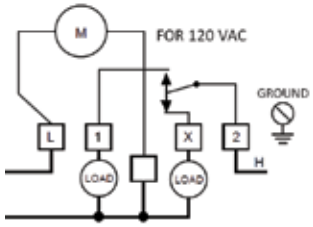
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP

277 volt Single Phase

7100 & 7102



7120 & 7122



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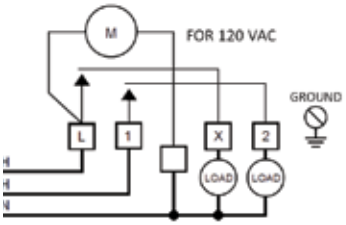

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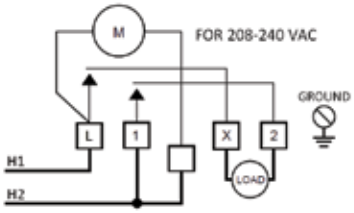

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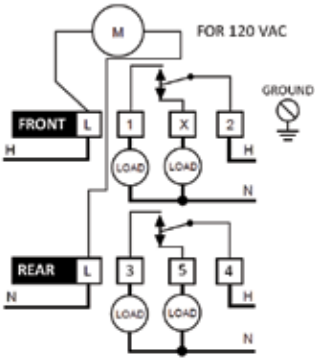

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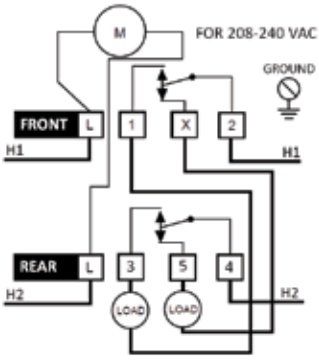
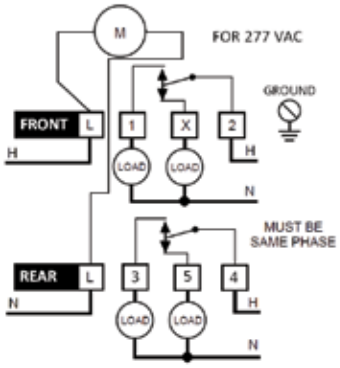
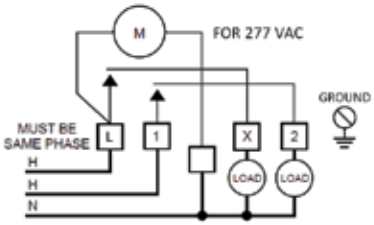
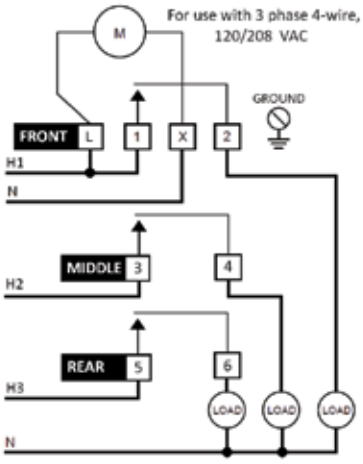






7300



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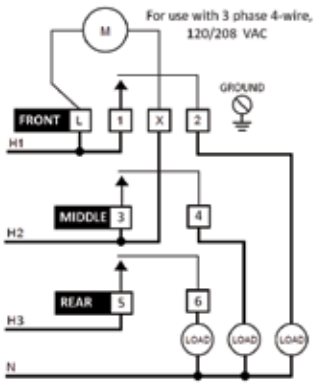

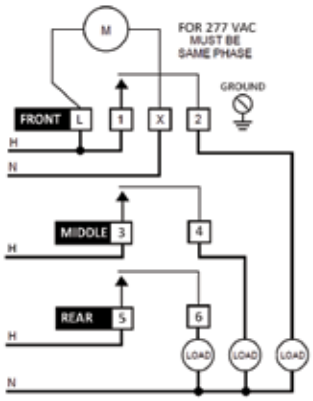

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7000Z SERIES

SunSet WITH SKIP-A-DAY FEATURE
RESERVE POWER OPTIONAL
ASTRONOMIC TIME SWITCH

SunSet

CALIFORNIA Title 24

ASHRAE 90.1

ADJUSTS TO DAILY CHANGES IN SUNSET TIMES!

APPLICATIONS

- Parking lots
- Walkways
- Outdoor signage
- Window displays
- Canopy lighting
- Landscape lighting

- Automatic ON at dusk, OFF at dawn. Control of outdoor lighting.

FEATURES

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times. Available from 18° - 45° northern latitudes.

SKIP-A-DAY: Omit operations on any day with a 7 spoke wheel marked with days of the week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
7200Z–*	**	120	DPST	Noryl® Indoor/Outdoor NEMA 3R
7202Z–*	**	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R
7300Z–*	**	120	3PST	Metal Indoor/Outdoor NEMA 3
7302Z–*	**	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120Z–*	**	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
WITH RESERVE POWER				
7200ZL–*	**	120	DPST	Noryl® Indoor/Outdoor NEMA 3R
7202ZL–*	**	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R
7300ZL–*	**	120	3PST	Metal Indoor/Outdoor NEMA 3
7302ZL–*	**	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120ZL–*	**	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
7122ZL–*	**	208-277	SPDT	Noryl® Indoor/Outdoor NEMA 3R
Replacement Motor		#101 (120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V)		

*Add degrees latitude to complete number (18, 30, 34, 38, 40, 42, or 45).
**Consult factory for UPC number.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

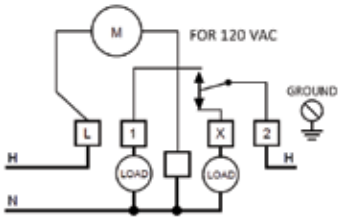
POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

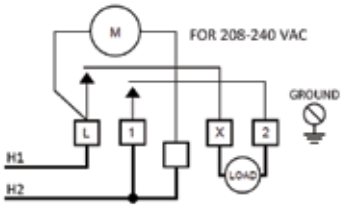
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP
	277VAC Single Phase	

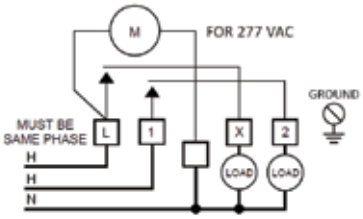
ASTRONOMIC LATITUDE ZONES

7120Z

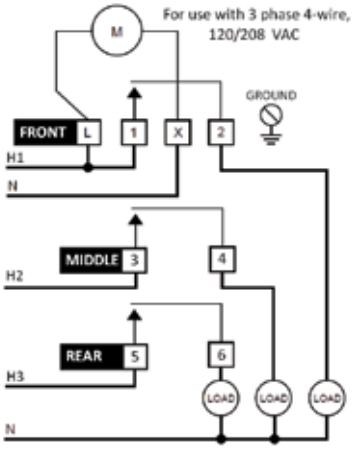


7200Z

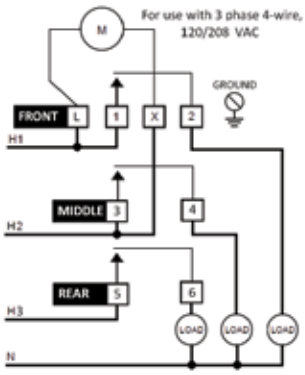


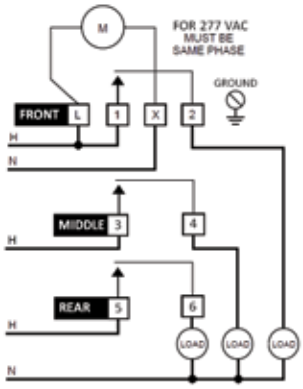


7300Z



7302Z





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8000 SERIES

MANY DAILY ON/OFF OPERATIONS PER DAY

DUTY CYCLE

24 HOUR TIME SWITCH

DUTY CYCLE FOR MULTIPLE ON/OFF OPERATIONS!

APPLICATIONS

- Duty cycling
- Ventilating fans
- Pumping
- Irrigation
- Process control
- Laboratory experiments

- For one or multiple daily ON/OFF operations.

FEATURES

SCHEDULING: Minimum ON setting is 15 minutes with minimum OFF setting at 15 minutes. Dial has 96 captive tabs.

DUTY CYCLE: Adjustable from ½, 1, 2, 3, 4, 6, 12, and 24 hours.

SKIP-A-DAY: Some models include 7 day or 14 day wheel to omit selected days of the week.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
8001	70001	120	SPDT	Metal Indoor NEMA 1
8001-N	70025	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
8001-NC	70009	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R w/ clear Lexan® cover
8001-LC/WB	70010	120	SPDT	Mechanism and bracket
8001-O	70029	120	SPDT	Metal Indoor/Outdoor NEMA 3
8004	70002	208-277	SPDT	Metal Indoor NEMA 1
8001U	70003	480/120 Trans.	SPDT	Metal Indoor NEMA 1
8001U-N	70014	480/120 Trans.	SPDT	Noryl® Indoor/Outdoor NEMA 3R
8001U-O	70011	480/120 Trans.	SPDT	Metal Indoor/Outdoor NEMA 3
24 HOUR WITH 7 DAY OMIT				
8007	70005	120	SPDT	Metal Indoor NEMA 1
8007-O	70012	120	SPDT	Metal Indoor/Outdoor NEMA 3
8008	70006	208-277	SPDT	Metal Indoor NEMA 1
8007U	70008	480/120 Trans.	SPDT	Metal Indoor NEMA 1
8007U-O	70028	480/120 Trans.	SPDT	Metal Indoor/Outdoor NEMA 3
24 HOUR WITH 7 DAY OMIT & RESERVE POWER				
8007L	70015	120	SPDT	Metal Indoor NEMA 1
8008L	70016	208-277	SPDT	Metal Indoor NEMA 1
24 HOUR WITH 14 DAY OMIT				
8007V	70007	120	SPDT	Metal Indoor NEMA 1
24 HOUR WITH 14 DAY OMIT & RESERVE POWER				
8007VL	70017	120	SPDT	Metal Indoor NEMA 1
Replacement Motor		#101(120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V)		

SPECIFICATIONS

INPUT VOLTAGE: 120, 208-277VAC or 480VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

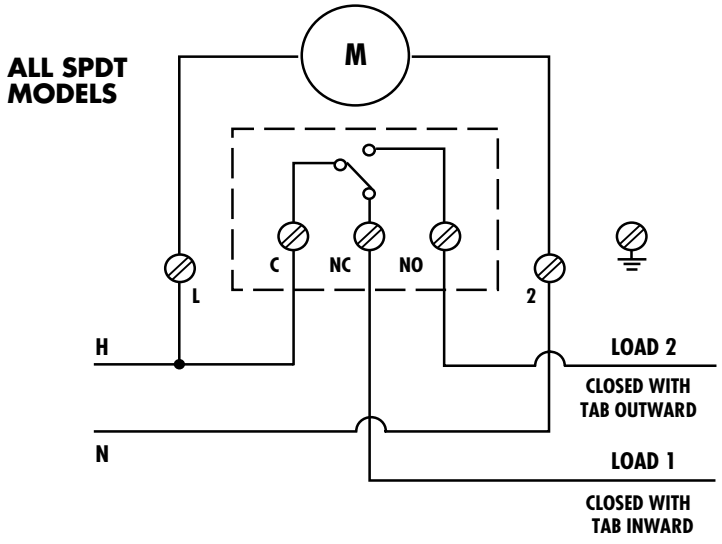
OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows 8001 & 8004 to fit into an Intermatic case.

TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	120 or 240 480	20A 20A
Motor	120	3/4 HP



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8000 SERIES
MULTIPLE ON/OFF CYCLES
REPEATING VARIABLE CYCLE
TIME SWITCH

APPLICATIONS

- Duty cycling
- Ventilating fans
- Pumping
- Irrigation
- Process control
- Laboratory experiments
- For one or many daily ON/OFF operations.

FEATURES

SCHEDULING: 60 captive tabs per dial with minimum ON/OFF settings:
– 60 minute dial with 1 minute tabs.
– 30 minute dial with 30 second tabs.
– 12 minute dial with 12 second tabs.
– 6 minute dial with 6 second tabs.

DUTY CYCLE: Settings of 1/60 th of dial speed.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 60Hz.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

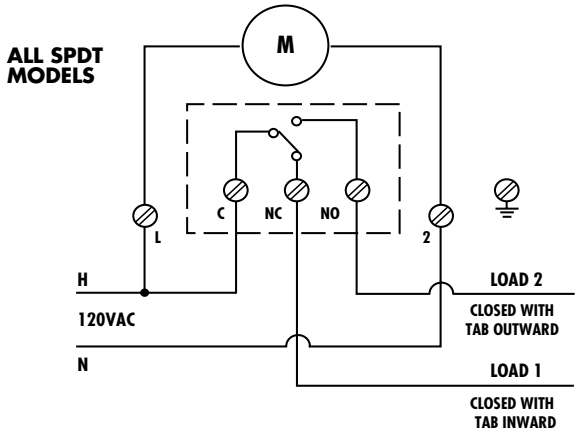
OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION:
3 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	TYPE
8601	70034	120	SPDT	60 Minute
8301	70033	120	SPDT	30 Minute
8121	70032	120	SPDT	12 Minute
8061	70031	120	SPDT	6 Minute
Replacement Motor	For 8601 #102, for 8301 #108, for 8121 #107, and for 8061 #105.			

TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	120 or 240 480	20A 20A
Motor	120	3/4 HP



WH2B
24 HOUR WATER HEATER TIME SWITCH

Avoid utility peak rates
Turn off when not needed

APPLICATIONS

Automatic ON/OFF control of electric water heaters. Schedules the water heater to turn ON only when needed, avoiding energy waste when hot water is not needed.

SPECIFICATIONS

INPUT VOLTAGE: 208 – 250V 60 Hz.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
WH2B	70044	208-250	DPST	Metal Indoor NEMA 1

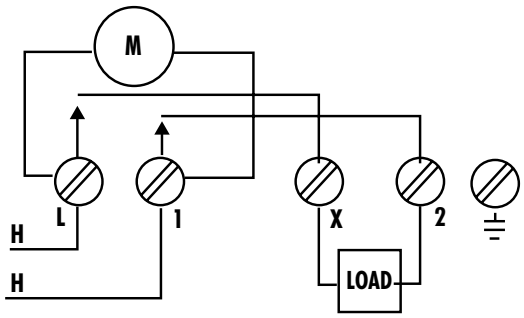
TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	208-250	40 A 10,000W
Replacement Motor	#201 (208-277)	
Replacement Trippers	Order #P47 for a pair of ON/OFF trippers	

FEATURES

SCHEDULING: Minimum ON is setting 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs. 3 pairs of trippers supplied.

EXTERNAL MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

TYPICAL FOR 240 VOLT SUPPLY



1800 SERIES

FOR MECHANICALLY HELD CONTACTORS AND LOW VOLTAGE REMOTE CONTROL MOMENTARY CONTACT TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Mechanically-held contactors
- 3-wire momentary
- lighting systems
- Remote station switching

FEATURES

SCHEDULING: Choice of three types.

24 HOUR SKIP-A-DAY: Minimum ON setting is 20 minutes with minimum OFF setting at 75 minutes. Dial accommodates up to 12 pairs of trippers. Omit operations on any day with a 7 spoke wheel marked with days of week.

ASTRONOMIC SCHEDULING: Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times.

7 DAY SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial will accomodate up to 2 pairs on ON/OFF trippers per day - 7 pairs are supplied.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	TYPE
1847A	52001	120	SPDT Momentary	24 Hour
1848A	52014	208-277	SPDT Momentary	24 Hour
1847AZ*	**	120	SPDT Momentary	Astronomic
1847AW	52005	120	SPDT Momentary	7 Day
WITH RESERVE POWER				
1847AL	52006	120	SPDT Momentary	24 Hour
1847AZL*	**	120	SPDT Momentary	Astronomic
1847AWL	52010	120	SPDT Momentary	7 Day
Replacement Trippers	For 24 hour models order #P49 for a pair ON/OFF per dial. Additional ON/OFF trippers per dial order #P47. 3 omitting screws #53005 supplied. 7 day models order #P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#101(120V) & #201 (208-277V). For "L" models #36 (120V)			

*Add degrees latitude to complete number (18, 30, 34, or 42).
**Consult factory for UPC number.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC or 208-277VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

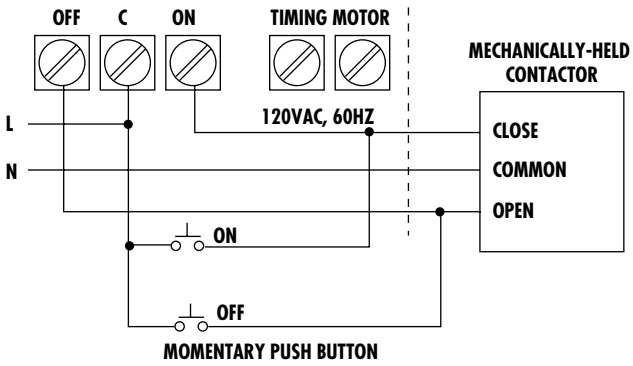
TERMINAL RANGE: #12 - #22AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	24-277	10A
Pilot Duty	24-277	360VA



ASTRONOMIC LATITUDE ZONES

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W SERIES
DIFFERENT SCHEDULES EACH DAY
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Heating
- Air conditioning
- Display lighting
- Ventilating systems
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. Models W400A and W402A offer minimum ON/OFF settings of 3½ hours. 7 day calendar dial accommodates up to 2 pairs of ON/OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
W100	30001	120	SPST	Metal Indoor NEMA 1
W120	33001	120	SPDT	
W200	31001	120	DPST	
W202	31011	208-277	DPST	
W220	34001	120	DPDT	
W222	34011	208-277	DPDT	
W300	32001	120	3PST	
W300-0	32003	120	3PST	Metal Indoor/Outdoor NEMA 3
W302	32002	208-277	3PST	Metal Indoor NEMA 1
W400B*	35003	120	4PST	
W402B*	35004	208-277	4PST	
WITH RESERVE POWER				
W220L	39009	120	DPDT	Metal Indoor NEMA 1
W222L	39010	208-277	DPDT	
W300L	39005	120	3PST	
W302L	39006	208-277	3PST	
W400BL*	39008	120	4PST	
Replacement Trippers	Order #P69 for 7 pairs of ON/OFF trippers			
Replacement Motor	#101 (120V) & #201 (208-277V). For "L" models order #36 (120V) and #46 (208-277V).			

*UL Listed only.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

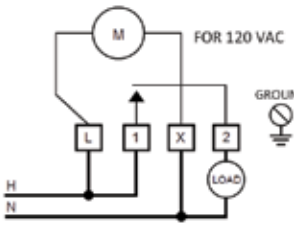
POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp. Other enclosures include metal Indoor/Outdoor NEMA 3 with suffix "O" (see page 557 for enclosure dimensions).

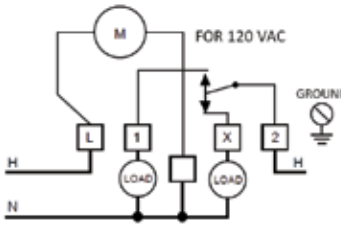
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP

277VAC Single Phase

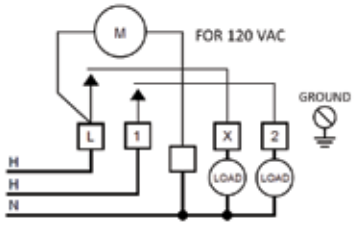
W100



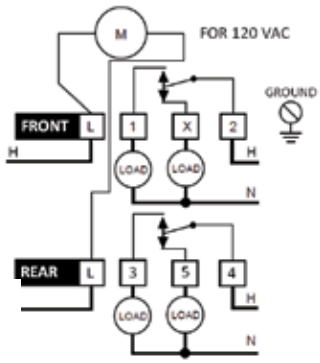
W120



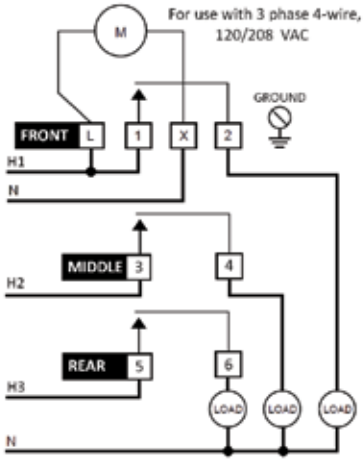
W200



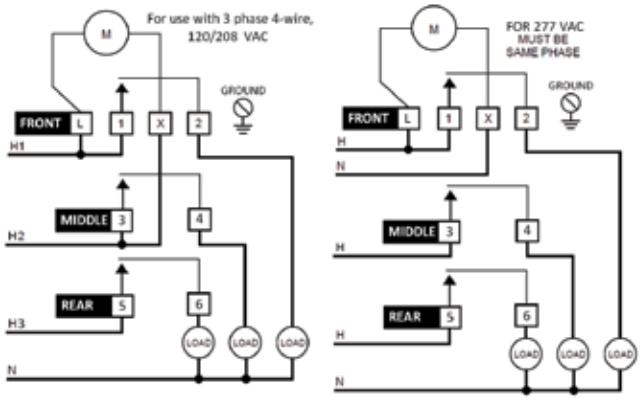
W220



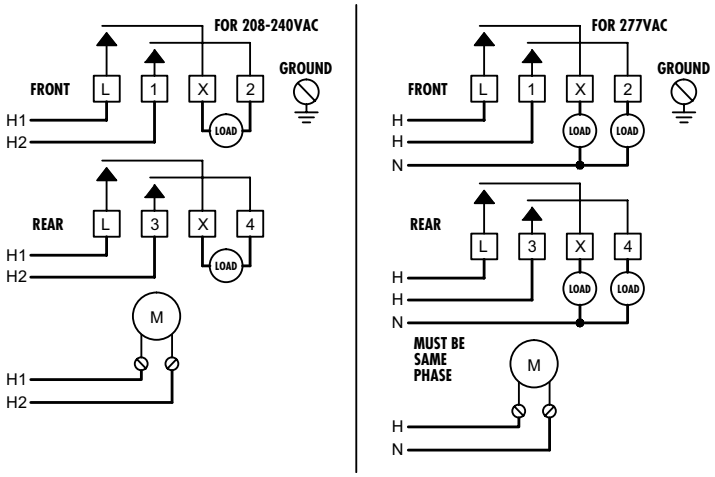
W300



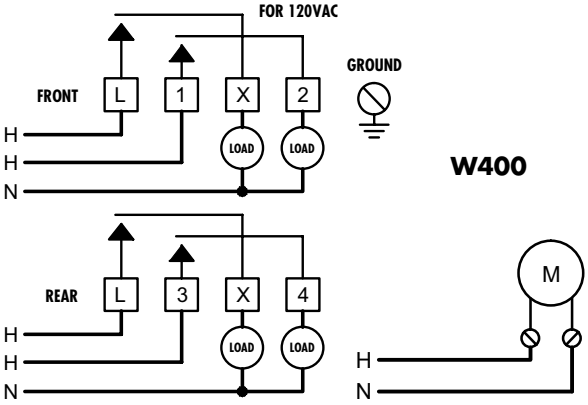
W302



W402



W400



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T900 SERIES

PHOTOELECTRIC & 7 DAY CONTROL COMBO
DIFFERENT SCHEDULES EACH DAY
RESERVE POWER STANDARD
2 & 3 CIRCUIT CONTROL CENTERS

Optional "E" cover

Model 2101 supplied with unit.

APPLICATIONS

- Parking lot lighting
- HVAC
- Display lighting
- Security lighting
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING:

CIRCUIT 1: ON automatically at dusk, OFF at individual preset times each day, including skipping days when desired. Unit can be set to turn ON before dawn for early morning lighting.

CIRCUIT 2: ON at dusk, OFF at dawn automatically, daily.

CIRCUIT 3: Individual daily ON and OFF settings at desired times, including skipping any desired day or days Minimum ON is setting 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial will accommodate up to 2 pairs of ON-OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL BY-PASS SWITCHES: Single pole, 20 Amps – one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent – will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
T920L	41033	120	2 SPDT	Metal Indoor NEMA 1
T920L-E	41034	120	2 SPDT	Metal Indoor NEMA 1 with switch access
T920L-O	41035	120	2 SPDT	Metal Indoor/outdoor NEMA 3
T930L	41055	120	3 SPDT	Metal Indoor NEMA 1
T930L-E	41056	120	3 SPDT	Metal Indoor NEMA 1 with switch access
T930L-O	41057	120	3 SPDT	Metal Indoor/outdoor NEMA 3
Replacement Trippers	#P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#36 (120V)			
Replacement Bypass Switch	#66061			

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

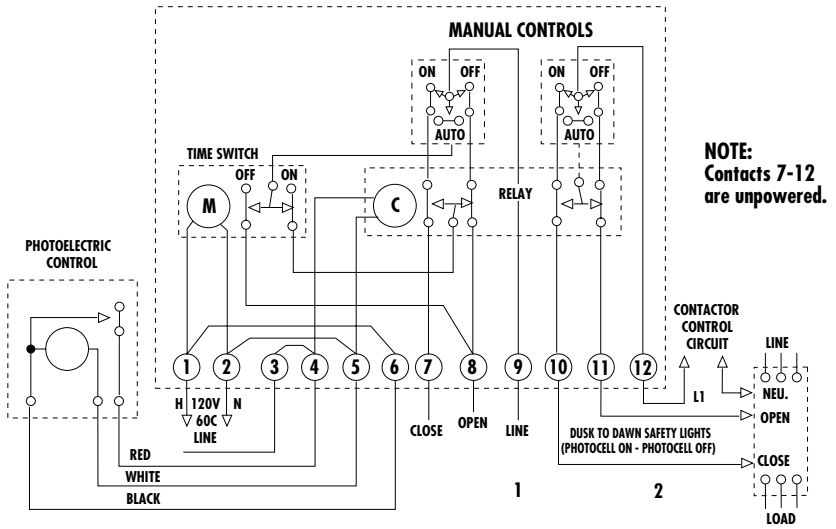
TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

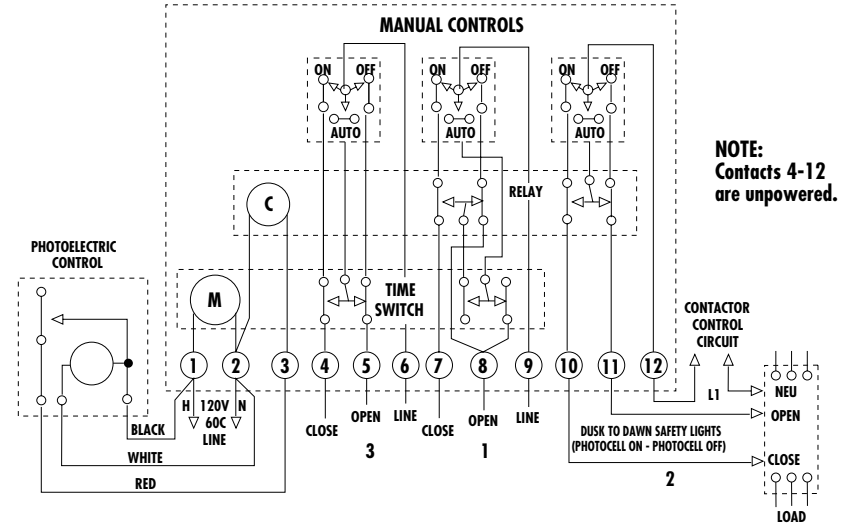
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp. Other enclosures include cover for access to by-pass switches with suffix "E" or Indoor/Outdoor NEMA 3 metal with suffix "O" (see page 557 for enclosure dimensions).

T920L
ONLY CIRCUITS 1 AND 2 ARE INCLUDED IN T920L



T930L
ALL 3 CIRCUITS ARE INCLUDED IN T930L



NOTE 1: All models designed to control mechanically-held and magnetic contactors, when wired in accordance with manufacturers recommendations. Contacts are unpowered control circuits rated for 24-277V contactor coils. See notes on wiring schematics.

NOTE 2: For momentary Contact of contactor coils, use TORK Model SMC-3D, in our Digital Controls Catalog.

For Specification Writers' Guides, please visit our website: http://www.nsiindustries.com/support-downloads/technical-library.aspx

TW SERIES

DIFFERENT SCHEDULES EACH DAY
MANUAL BYPASS SWITCHES
RESERVE POWER STANDARD
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

Optional "E" cover

APPLICATIONS

- Heating
- Air conditioning
- Display lighting
- Ventilating systems
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial accommodates up to 2 pairs of ON-OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL BY-PASS SWITCHES: Single pole, 20 Amps – one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent – will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
TW-220L	39013	120	DPDT	Metal Indoor NEMA 1
TW-220L-E	39021	120	DPDT	Metal Indoor NEMA 1 with switch access
TW-222L	39014	208-277	DPDT	Metal Indoor NEMA 1
TW-300L	39015	120	3PST	Metal Indoor NEMA 1
TW-302L	39016	208-277	3PST	Metal Indoor NEMA 1
Replacement Trippers	Order #P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#36 (120V) & #46 (208-277V)			
Replacement Bypass Switch	#66061			

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE:
120 or 208 - 277VAC, 60Hz, varies by model.

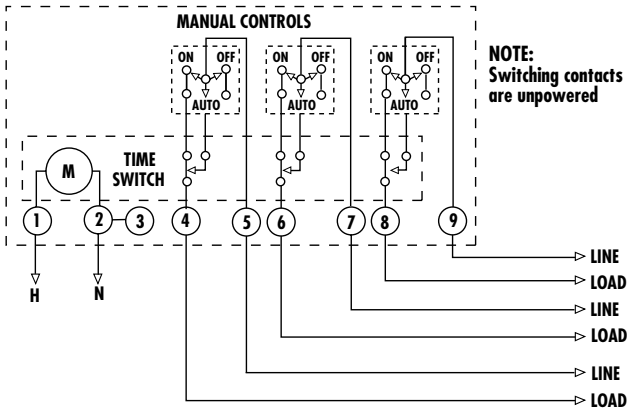
TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

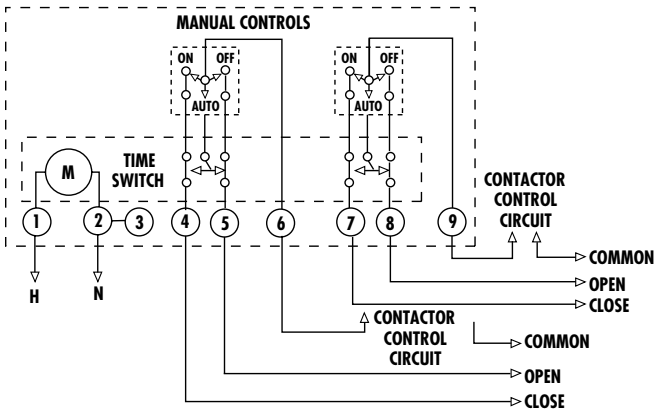
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).



TW300L

When single line source is used, jumper terminals 1-5-7-9 and connect all commons to terminals 2 and 3.



TW220L

Wiring shown is for mechanically-held contactors. Use CLOSE terminal only for magnetically-held contactors and to control direct loads not exceeding 2000 watts.

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TZ SERIES SunSet

MANUAL BYPASS SWITCHES
RESERVE POWER STANDARD
ASTRONOMIC TIME SWITCH

SunSet

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Schools
- Industrial yards
- Shop windows
- Parking lots
- Highway signs
- Bridges

FEATURES

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times. Available from 18° - 45° northern latitudes.

SKIP-A-DAY: Omit operations on any day with a 7 spoke wheel marked with days of the week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL BYPASS SWITCHES: Single pole, 20 Amps - one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent, will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
TZ220L*	**	120	DPDT	Metal Indoor NEMA 1
TZ220L-O*	**	120	DPDT	Metal Indoor/outdoor NEMA 3
TZ222L*	**	208 - 277	DPDT	Metal Indoor NEMA 1
TZ300L*	**	120	3PST	Metal Indoor NEMA 1
TZ300L-O*	**	120	3PST	Metal Indoor/outdoor NEMA 3
TZ302L*	**	208 - 277	3PST	Metal Indoor NEMA 1
Replacement Motor	For "L" models #36 (120V) & #46 (208-277V)			
Replacement Bypass Switch	#66061			

*Add degrees latitude to complete number (18, 30, 34, 38, 40, 42, or 45).
**Consult factory for UPC number.

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE:
120 or 208 - 277VAC, 60Hz, varies by model.

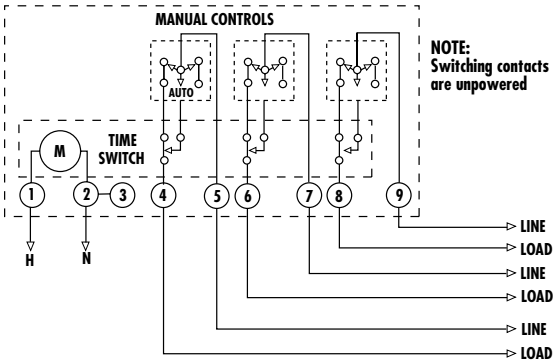
TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

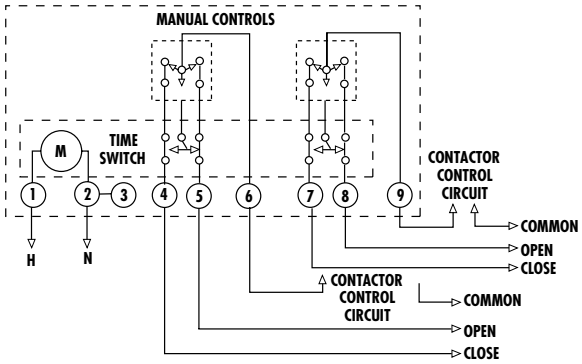
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp and for some models enclosures is Indoor/Outdoor NEMA 3 metal with suffix "O" (see page 557 for enclosure dimensions).



TZ300L

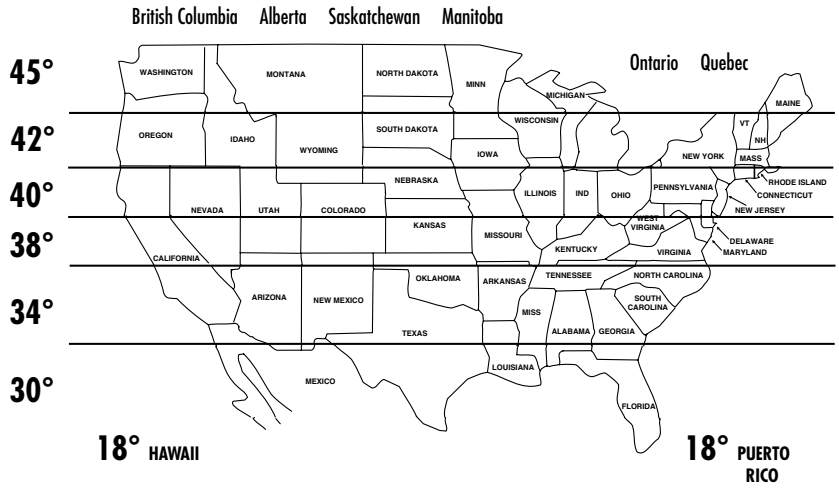
When single line source is used, jumper terminals 1, 5, 7, 9 and connect all commons to terminals 2 and 3.



TZ220L

Wiring shown is for mechanically held contactors. Use CLOSE terminal only for magnetically held contactors and to control direct loads not exceeding 2000 watts.

ASTRONOMIC LATITUDE ZONES



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1CH
2CH
4CH
LAT
HOUR
MONTH
MIN
DATE
SEASON
DAY
YEAR
SEC
EVENT
MODE
DEL
PREV

TORK® DIGITAL TIME SWITCHES

QUICK REFERENCE GUIDE

	DTU40 DTWH40	EH20C	SA300	E-PB	E	EW	EWZ	DG	DGM	DW	DWZ	DTS
Page No.	447	449	451	453	453	455	457	459	459	461	461	463
Number of Channels	1	1	1	1	1 or 2	1 or 2	1 or 2	1 or 2	1	2	1	1, 2 or 4
ON/OFF Set Points	7 pair	14	1 pair	20	20	20	20	56	56	99	99	99
365 Day/7 Day Scheduling	7 day	7 day	7 day	24 hour	24 hour	7 day	7 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day
Automatic Daylight Savings Adjustment	Manual	Yes	Manual	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leap Year		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Holiday Schedules										24	24	24
Block Holiday		Yes						9	9			
Season Scheduling												4
SunSet (Astronomic)			ZipSet				Yes				Yes	
Photosensor Input												
Remote Override Input												
Signal/Pulse Duration												Yes
Momentary for Contactors					Option	Option	Option		Yes			
Duty Cycle												
31 Day Cycle												
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clock Format	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	12/24	12/24	12/24	12/24	12/24
Power Outage Backup	Rechargeable Battery	4 day Super Capacitor	Battery	4 day Super Capacitor	4 day Super Capacitor	4 day Super Capacitor	4 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor
Schedule Retention without power	Battery	Permanent	Battery	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent
Staggered Start					Yes	Yes	Yes	Yes	Yes	Yes		Yes
Memory Module												
Computer Programming Software												
Output Contacts: Amps Resistive or General Purpose	40A	40A	40A	30A	40A	40A	40A	20A	20A	30A	30A	30A
Contact Type: Dry Unpowered	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voltage Input AC	120/208-240/277	120-277	120 or 120/277	120	120-277	120-277	120-277	120-277	120-277	120/208-240/277	120/208-240/277	120/208-240/277
Other Voltage Inputs Available												

			LIGHTING CONTROLS					CYCLE - SIGNAL TIMER		
	DZS	DZM	ELC74/78/712	DGU	DGUM	DGLC	DLC400	DG	DGS	DIN
Page No.	465	467	473	471	471	471	475	479	479	485
Number of Channels	1, 2, or 4	2	4, 8, or 12	1	1	1 or 2	4	1 or 2	1	1 or 2
ON/OFF Set Points	99	99	128	56	56	56	99	56	56	8 pair 3 pair/ch
365 Day/7 Day Scheduling	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	24 Hour	7 Day	7 Day
Automatic Daylight Savings Adjustment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Leap Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Individual Holiday Schedules	24	24	26				24			
Block Holiday			10	9	9	9				
Season Scheduling	4	4					4			
SunSet (Astronomic)	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Photosensor Input			Yes	Yes	Yes	Yes	Yes			
Remote Override Input			Yes	Yes	Yes	Yes	Yes			
Signal/Pulse Duration	Yes		Yes					Yes	Yes	
Momentary for Contactors		Yes	Yes		Yes					
Duty Cycle			Yes					Yes	Yes	
31 Day Cycle								Yes		
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clock Format	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	AM/PM
Power Outage Backup	7 day Super Capacitor	7 day Super Capacitor	2 day Capacitor 1 year battery	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	6 month battery	7 day Super Capacitor	7 day Super Capacitor	8 year battery
Schedule Retention without power	Permanent	Permanent	Battery	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Battery
Staggered Start	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Memory Module	Yes	Yes					Yes			
Computer Programming Software	Yes	Yes					Yes			
Output Contacts: Amps Resistive or General Purpose	30A/20A	30A	20A	20A	20A	20A	30A	20A	20A	16A
Contact Type: Dry Unpowered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voltage Input AC	120/208-240/277	120/208-240/277	24/120/208 240/ 277	120-277	120-277	120-277	120/208-240/277	120-277	120-277	120
Other Voltage Inputs Available	12VDC 24VAC		24VAC All Models					12VDC 24VAC	24VAC	

DT SERIES
AUTOMATIC VOLTAGE DETECTION
7 DAY TIME SWITCH AND WATER HEATER TIMER

MORE WIRING SPACE!

DTU40

DTWH40

Avoid utility peak rates
Turn off when not needed

APPLICATIONS

- **DTU40**
  - Pumps, motors, fans
  - Signs and lighting
  - Water heaters
  - Heating and air conditioning
- **DTWH40**
  - Water Heaters
  - This timer turns OFF when rates are high and turns OFF when no one is home.

FEATURES

SCHEDULING: 7 ON & OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

DAYLIGHT SAVING: Manual button push for one hour adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

EXTERNAL MANUAL OVERRIDE: DTWH40 only on clear door. Override without opening case.

RANDOM MODE: Varies ON and OFF times to create "lived-in" look when away.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Battery retains time and schedule.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DTU40	24004	120/208-240/277	1	DPDT
DTWH40	24005	120/240	1	DPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	120-277	40A	30A
Inductive	120-277	30A	15A
Ballast	120 277	30A 20A	10A 10A
Tungsten	120	15A	
Motor	120 240	1HP/30FLA/90LRA 2HP/20FLA/60LRA	1/4HP/12FLA/30LRA 1/2HP/12FLA/33LRA
Pilot duty	120 240	720VA 720VA	290VA 260VA
Resistive	28VDC	20A	
Max above 104°F	120-277	30A	

SPECIFICATIONS

INPUT VOLTAGE: 120/208-240/277 VAC, 50/60 Hz (auto detection). DTWH40 is 120/240VAC 50/60Hz (auto detection).

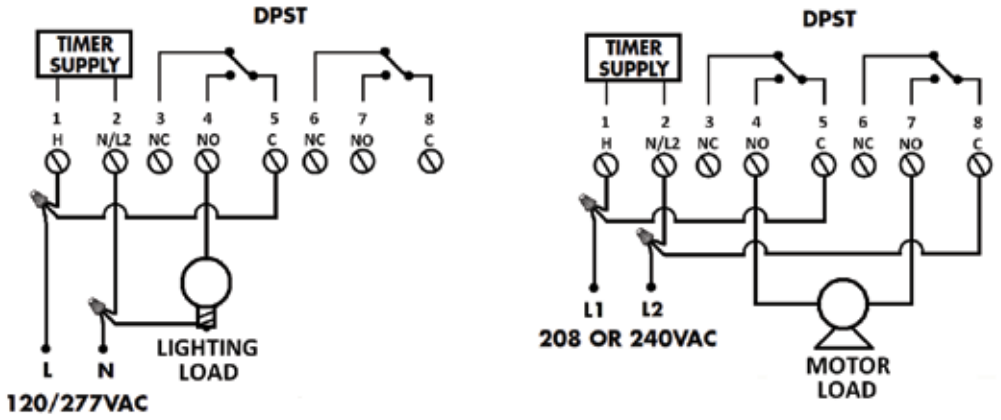
TERMINAL RANGE: #8 - #18AWG.

OPERATING TEMPERATURE: -31°F to 116°F (-35°C to +47°C).

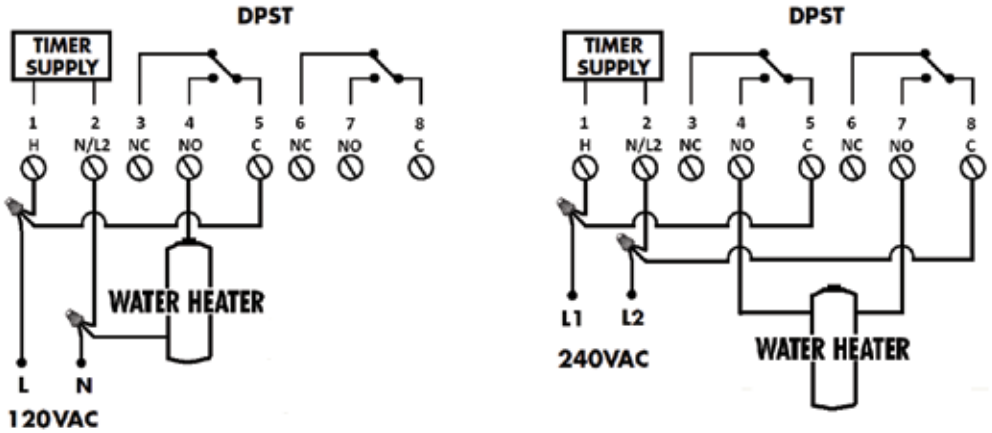
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: DTU40 polycarbonate Indoor/ Outdoor NEMA 3R. DTWH40 polycarbonate indoor NEMA 1 enclosure with clear cover. Both with lockable hasp (see page 557 for enclosure dimensions).

DTU40



DTWH40



EH20C
AUTOMATIC VOLTAGE DETECTION WATER HEATER TIMER WITH SUMMER LOAD SHED

responsible energy

Avoid utility peak rates
Turn off when not needed

PRE PROGRAMMED FOR EASY SET-UP

APPLICATIONS

c UL us

- Electric water heaters for residential or commercial.

FEATURES

PRE-PROGRAMMED: Unit preset for daily OFF time from 12:00am to 4:00am daily.

SUMMER LOAD SHED: Additional OFF time from 3:00pm to 7:00pm during Summer time (6/1 to 9/30) annually to avoid peak usage.

SCHEDULING: Additional 14 ON or OFF set points for individual programs for each day of the week. Minimum setting 1 minute.

HOLIDAY SCHEDULE: Extend to the load shed date throughout the year or preset extra load shed schedules while on vacation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF. Override during pre-programed times limited to 60 minutes per day.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Lithium battery. Non-rechargeable with 8 year expected life.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50-60Hz	OUTPUT CONTACTS
EH20C	82314	120-277	DPST

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120-277	40A
Inductive	120-277	40A
Pilot duty	120-277	720VA
Motor	120 208 240-277	1 HP 1 1/2 HP 2 HP

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

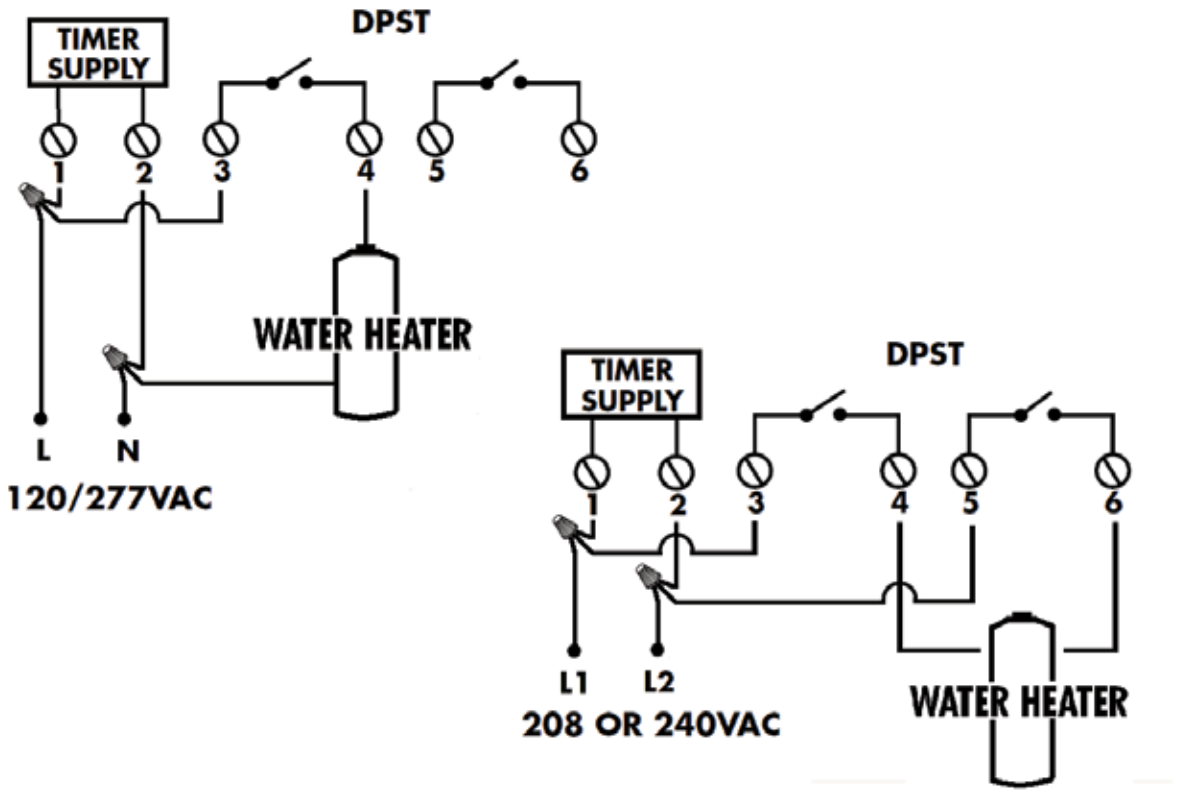
INPUT VOLTAGE: 120-277VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE: -40˚ to +149˚F (-40˚ to +65˚C).

POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Indoor/Outdoor NEMA 3R Polycarbonate with locking hasp. (see page 557 for enclosure dimensions).



SA300 SERIES
Zip-Set™
DIGITAL TIME SWITCH

responsible energy

AREA CODE ENTRY FOR FAST SET-UP

APPLICATIONS

- Outdoor lighting
- Electric motors
- Indoor lighting or signs

FEATURES

ZIP-SET: Fast and easy. Just enter area code and timer adjusts to your time with preset program of Sunset ON and time off program.

SCHEDULING: One On/Off set point pair is active at a time. Only one schedule may be active at a time: Schedule 1, Schedule 2, a combination of 1 & 2, or ZipSet™. Day combinations for 7-5-2 speed programming.

MANUAL DAYLIGHT SAVING: Simple switch adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

RANDOM FEATURE: Varies on time +/-90 minutes each day for lived in look.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Replaceable batteries

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS
SA300	16546	120	SPST
SA306	16549	120	DPST
SA400	16552	120/277	SPST

TYPE	VOLTAGE (VAC) 60Hz	RATING
Resistive	120*	40A
Inductive	120*	40A
Tungsten	120*	40A
Incandescent	120*	40A
Motor	120	1 1/2HP
*SA400	120/277	

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 60Hz
SA400 120/277VAC, 60Hz

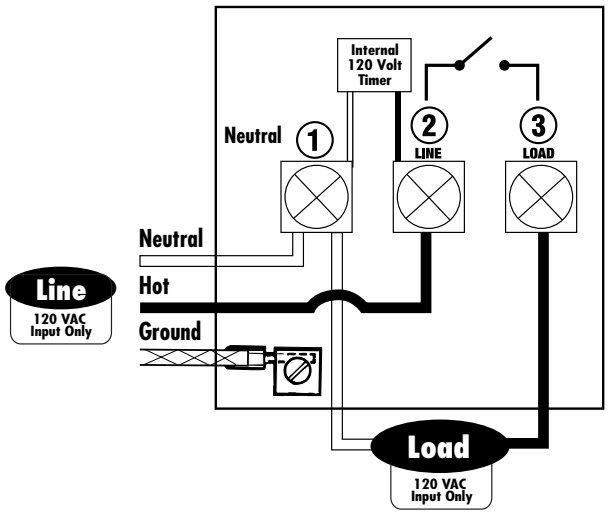
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
32˚ to +100˚F (0˚ to +37˚C).

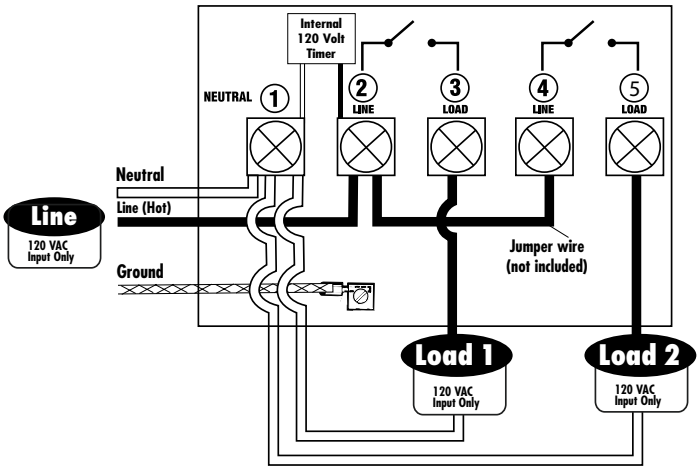
POWER CONSUMPTION: 5VA Max.

ENCLOSURE: Indoor Metal with locking hasp.
SA400 Outdoor Metal with locking hasp.
(see page 557 for enclosure dimensions).

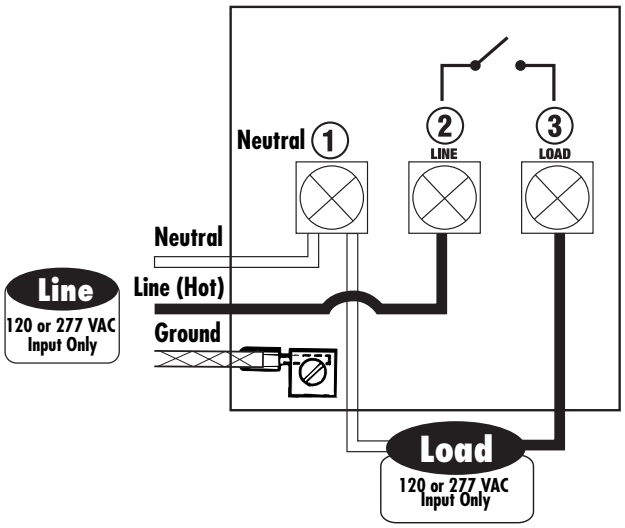
SA300



SA306



SA400



E & E-PB SERIES

MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
24 HOUR TIME SWITCH

BACKUP *WITHOUT* BATTERY, ECO FRIENDLY!

APPLICATIONS

- Signs
- Air conditioning
- Lighting
- Sump pumps
- Ventilating fans

FEATURES

SCHEDULING: 20 ON/OFF set points repeat each day. Minimum setting 1 minute.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contractors: Model E201B only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
E101B	82401	120-277	1	SPST
E103B	82411	120-277	1	DPST
E120B	82406	120-277	1	SPDT
E201B	82466	120-277	2	SPST
E101PB	82461	120	1	SPST

TYPE	E101B, E103B, E201B		E120B		E101PB	
	VOLTAGE (VAC)	RATING NO	RATING NO	RATING NC	VOLTAGE (VAC)	RATING NO
General Purpose	120-277	40A	30A	30A	120/240 277	30A 12A
Inductive	120-277	40A	30A	30A	120/240 277	30A 12A
Ballast	120 208-277	30A 20A	30A 20A	10A 10A	120 277	20A 6A
Tungsten	120	15A	15A	2A	120	5A
Pilot Duty	120-277	720VA	720VA	720VA	120-240 277	470VA 690VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP	120 240	1HP 2HP
Resistive	28VDC	30A	30A	30A	28VDC	20A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
E SERIES
120 - 277VAC, 50/60Hz (automatic detection).
E-PB
120VAC, 50/60Hz.

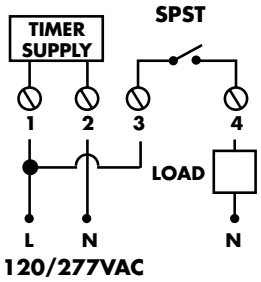
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

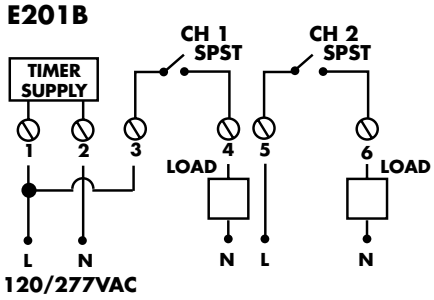
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R is standard with lockable hasp (see page 557 for enclosure dimensions).

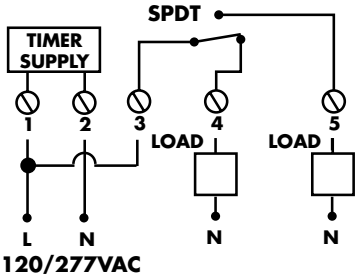
E101B

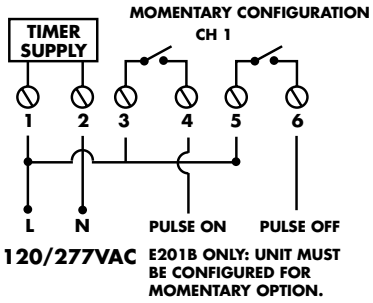


E201B

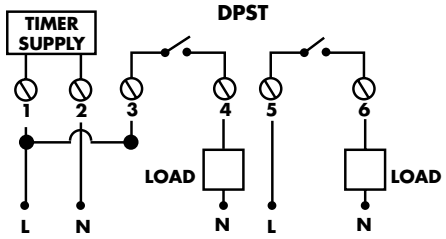


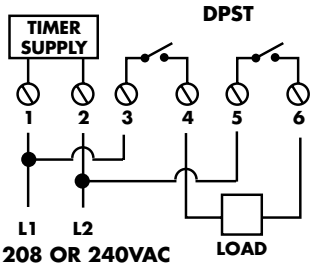
E120B



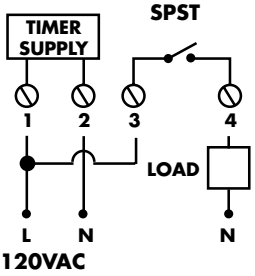


E103B





E101PB



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EW SERIES
MULTIPURPOSE CONTROL
1 OR 2 CHANNEL
7 DAY TIME SWITCH

AUTOMATIC DST SAVES TIME CHANGES TWICE A YEAR!

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Outdoor signs
- Lighting security
- Heating and air conditioning

FEATURES

SCHEDULING: 20 ON & OFF set points for individual programs for each day of the week. Minimum setting is 1 minute.

DAYLIGHT SAVING: Automatic (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contractors: Model EW201B only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
EW101B	82431	120-277	1	SPST
EW103B	82441	120-277	1	DPST
EW120B	82436	120-277	1	SPDT
EW201B	82467	120-277	2	SPST
EW101B-Y	82249	120-277	1	SPST
EW103B-C	82253	120-277	1	DPST
EW103B-Y	82255	120-277	1	DPST
EW120B-C	82437	120-277	1	SPDT
EW120B-Y	82261	120-277	1	SPDT
EW201B-Y	82299	120-277	2	SPST

TYPE	EW101B, EW103B, EW201B		EW120B		
	VOLTAGE (VAC)	RATING NO	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	120-277	30A	30A
Inductive	120-277	40A	120-277	30A	30A
Ballast	120 208-277	30A 20A	120 208-277	30A 20A	10A 10A
Tungsten	120	15A	120	15A	2A
Pilot Duty	120-277	720VA	120-277	720VA	720VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP
Resistive	28VDC	30A	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

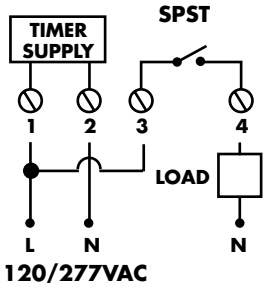
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

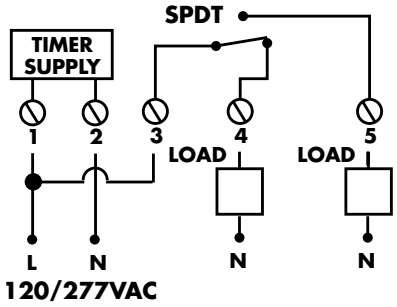
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R. Suffix -C plastic clear cover Indoor/Outdoor NEMA 3R. Suffix -Y metal Indoor enclosure NEMA 1. All with lockable hasp (see page 557 for enclosure dimensions).

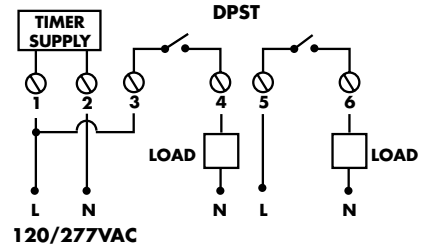
EW101B

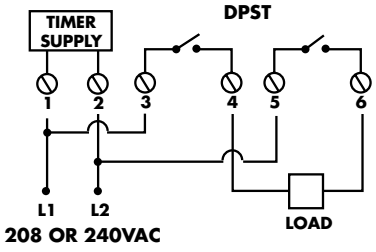


EW120B

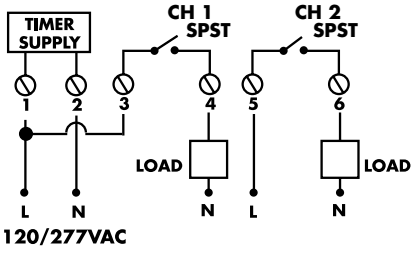


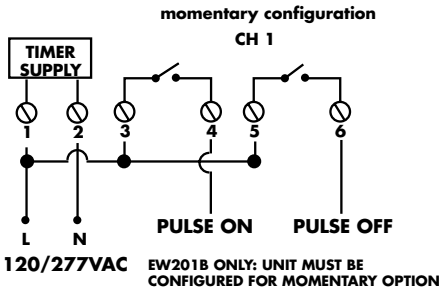
EW103B





EW201B





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EWZ SERIES

SunSet 1 OR 2 CHANNEL 7 DAY TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

PREFERRED FOR OUTDOOR LIGHTING!

APPLICATIONS

- Outdoor signs
- Lighting security
- Heating and air conditioning

FEATURES

SCHEDULING: 20 ON & OFF set points for individual programs for each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes from both sunset and sunrise times.

DAYLIGHT SAVING: Automatic (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contactors: Model EWZ201 only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
EWZ101	82470	120-277	1	SPST
EWZ103	82473	120-277	1	DPST
EWZ120	82471	120-277	1	SPDT
EWZ201	82472	120-277	2	SPST
EWZ101-MB	82263	120-277	1	SPST
EWZ103-MB	82269	120-277	1	DPST
EWZ120-MB	82275	120-277	1	SPDT
EWZ201-MB	82281	120-277	2	SPST

TYPE	EWZ101,EWZ103, EWZ201		EWZ120		
	VOLTAGE (VAC)	RATING NO	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	120-277	30A	30A
Inductive	120-277	40A	120-277	30A	30A
Ballast	120 208-277	30A 20A	120 208-277	30A 20A	10A 10A
Tungsten	120	15A	120	15A	2A
Pilot Duty	120-277	720VA	120-277	720VA	720VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP
Resistive	28VDC	30A	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #8 - #16AWG.

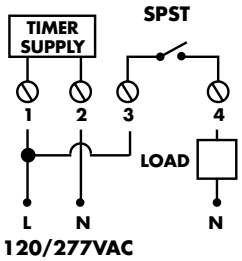
OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

POWER CONSUMPTION: 6VA Max.

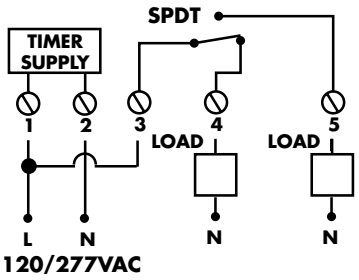
ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R is standard with lockable hasp (see page 557 for enclosure dimensions). Suffix -MB without enclosure and includes mounting bracket.

OPTIONS: Suffix -Q Quartz crystal timing. Maintains accurate timing where 50 or 60 Hz is not consistent such as on-site generator produced power. Consult factory for minimum order size.

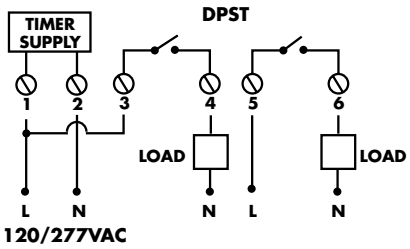
EWZ101

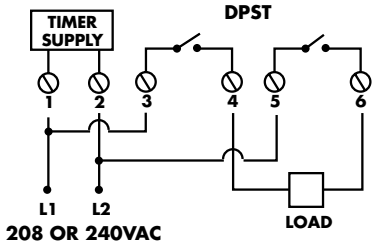


EWZ120

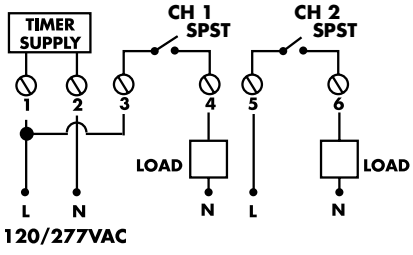


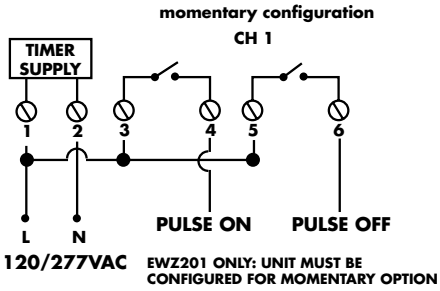
EWZ103





EWZ201





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DG100 SERIES
MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
365/7 DAY
TIME SWITCH

HOLIDAY PROGRAMMING FOR MORE SAVINGS!

c UL us

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Indoor/Outdoor lighting
- HVAC equipment
- School warning and other
- Traffic lights
- Water heaters in offices, churches and factories

FEATURES

SCHEDULING: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

MOMENTARY CONTACT: DGM100A has 2 second contact closures for ON & OFF control of mechanically held contactors or latching relays.

BLOCK HOLIDAY: 9 holiday blocks can be set for individual days or for duration of any number of days.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour format.

POWER OUTAGE BACKUP: Permanent schedule retention is provided. Supercapacitor provides 7 days of real time back up.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DG100A	82201	120-277	1	DPDT
DG200A	82209	120-277	2	SPDT
DGM100A	82210	120-277	1	SPDT Momentary
DG100A-Y	82221	120-277	1	DPDT
DGM100A-Y	82222	120-277	1	SPDT Momentary

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	24-277	20A	10A
Ballast	120-277	20A	10A
Tungsten	120	15A	
Pilot Duty	120 240	720VA	290VA 360VA
Motor	120 240	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

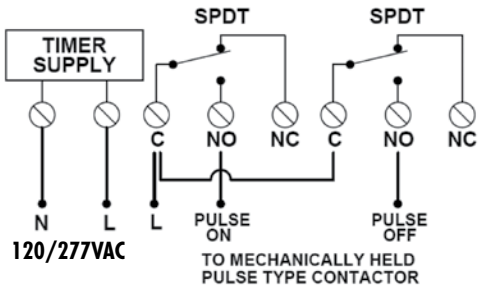
TERMINAL RANGE: #12 - #18AWG.

OPERATING TEMPERATURE:
-31° to +131°F (-35° to +55°C).

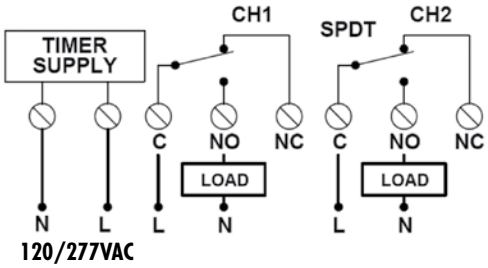
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -Y metal indoor enclosure NEMA 1. All with lockable hasp (see page 557 for enclosure dimensions).

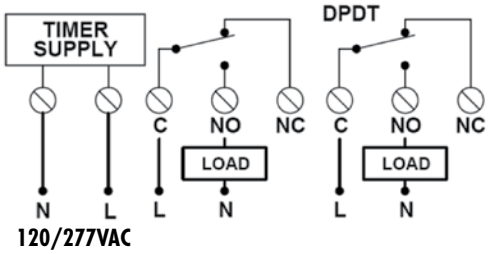
DGM100A

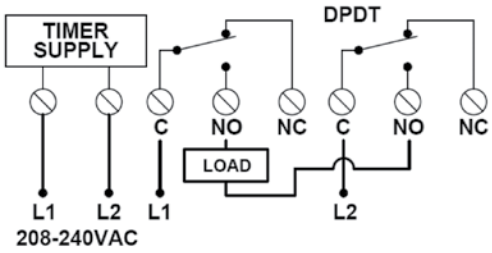


DG200A



DG100A





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DW SERIES
MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
365 / 7 DAY ADVANCE TIME SWITCHES

SunSet

SPECIFICATION FAVORITE!

APPLICATIONS

- **1 CHANNEL**
- Outdoor lighting
- Security lighting
- Parking lot lighting
- Canopy lighting

- **2 CHANNEL**
- HVAC equipment
- Interior lighting
- Electric motors
- Refrigerator defrost control: condensers, heaters.

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC (DWZ100B only): Adjusts daily to changes in sunset times. Adjustable 10°- 60° Northern or Southern latitudes. Can be individually offset +/- 1 to 240 minutes from both sunset and sunrise times.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation scheduled ON or OFF, automatic operation then resumes.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour Format

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DWZ100B	82189	120/208-240/277	1	SPDT
DW200B	82190	120/208-240/277	2	SPDT
DW200B-0	82231	120/208-240/277	2	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24-277	30A	30A
Ballast	120 277	30A 20A	10A 10A
Tungsten	120-277	15A	2A
Pilot Duty	120-277	720VA	720VA
Motor Load	120 208-277	1HP 2HP	1HP 2HP
Resistive	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

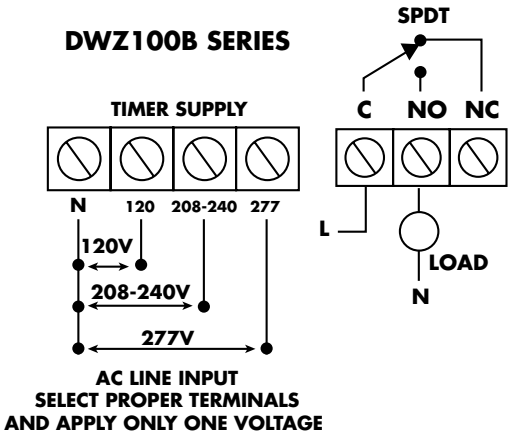
INPUT VOLTAGE:
120/208-240-277VAC, 50/60Hz.

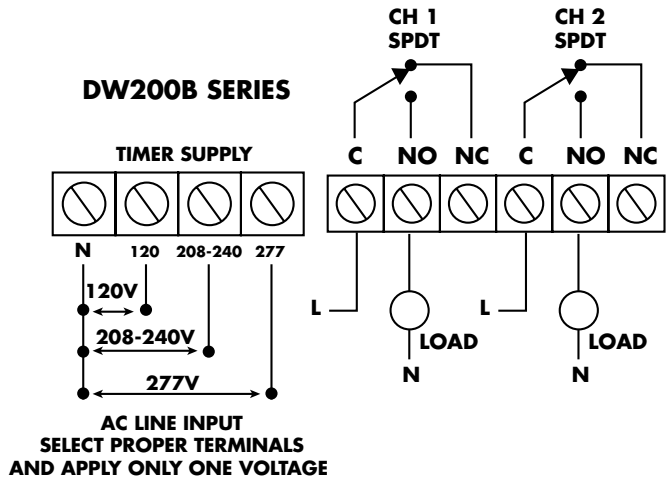
TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +158°F (-40° to 70°C).

POWER CONSUMPTION: 5VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for enclosure dimensions).





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DTS SERIES
MULTIPURPOSE CONTROLS
1, 2 OR 4 CHANNEL
365 / 7 DAY ADVANCE TIME SWITCH

MAINTAINED AND SIGNAL TIMING!

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Indoor and outdoor lighting
- Heating and air conditioning
- Security systems
- Horns and bells
- Low voltage lighting
- Misting and spraying
- Roof cooling
- Clock correction systems
- Process functions

FEATURES

SCHEDULING: 99 ON/OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

SIGNAL/PULSE DURATION: 2 different settings per channel: each 1-99 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes. In signal mode, activates pulse.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time back up.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DTS100B	82185	120/208-240/277	1	DPDT
DTS200B	82186	120/208-240/277	2	SPDT
DTS400B	82187	120/208-240/277	4	SPDT

TYPE	DTS100B, DTS200B VOLTAGE (VAC)	RATING NO	RATING NC	DTS400B VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24-277	30A	30A	24-277	20A	20A
Ballast	120 277	30A 20A	10A 10A	120-277	13A	
Tungsten	120-277	15A	2A	120	8A	
Pilot Duty	120-277	720VA	720VA	120-277	720VA	360VA
Motor Load	120 208-277	1HP 2HP	1HP 2HP	120/240	1/2HP	1/2HP
Resistive	28VDC	30A	30A	-	-	-

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE: 120/208-277VAC, 50/60Hz.

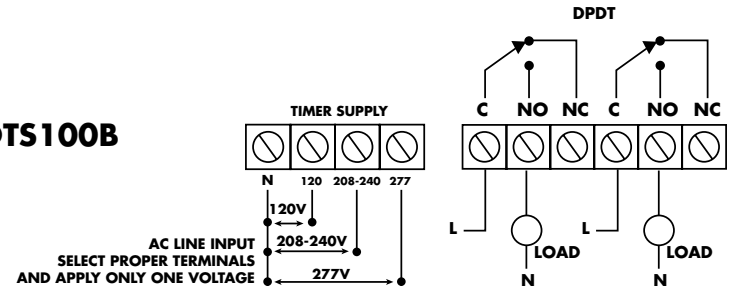
TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

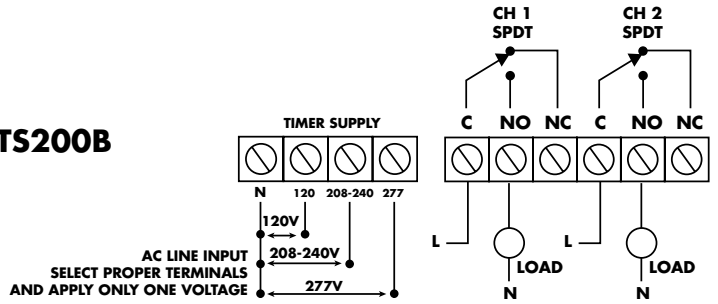
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for enclosure dimensions).

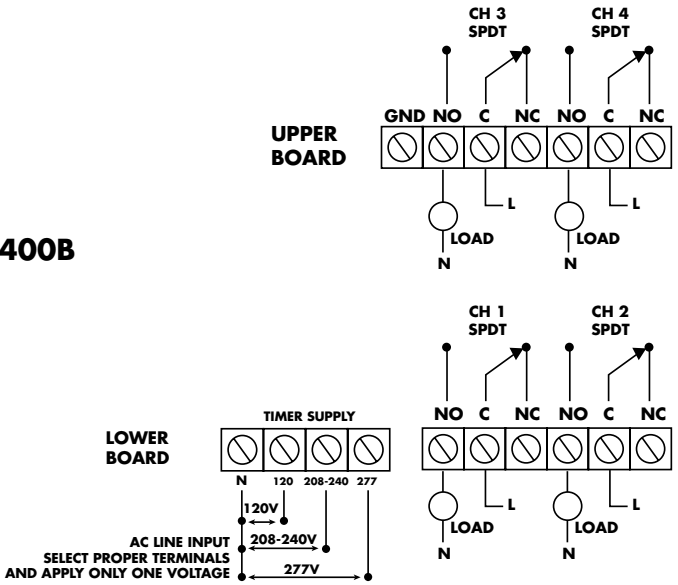
DTS100B



DTS200B



DTS400B



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DZS SERIES
MULTIPURPOSE CONTROLS
1, 2 OR 4 CHANNEL
365 / 7 DAY ADVANCED TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

REMOVABLE **MEMORY MODULE FOR COMPUTER PROGRAMMING!**

APPLICATIONS

c UL us

- HVAC equipment
- Horns and bells
- Interior lighting
- Electric motors
- Outdoor lighting and signs

Memory Module Programmer optional

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10˚ - 60˚ Northern or Southern latitudes can be individually offset +/-1 to 240 minutes from both sunset and sunrise times.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

SIGNAL/PULSE DURATION: 2 different settings per channel: 1-99 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes. In signal mode, activates pulse.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent schedule retention with memory module. Supercapacitor provides 7 days of real time backup.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZS series unit.

COPY FEATURE: Unit can be configured to copy program schedule to multiple memory modules.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DZS100BP	82182	120/208-240/277	1	DPDT
DZS200BP	82183	120/208-240/277	2	SPDT
DZS400BP	82184	120/208-240/277	4	SPDT
DZS100BP-0	82215	120/208-240/277	1	DPDT
DZS200BP-0	82227	120/208-240/277	2	SPDT
DZS200BP-12	82228	12VDC	2	SPDT
DZS200BP-24	82229	24VAC	2	SPDT
DZS400BP-0	82230	120/208-240/277	4	SPDT
USB-MMP	82196		Memory Module Programmer	Includes software

TYPE	DZS100BP, DZS200BP VOLTAGE (VAC)	DZS100BP, DZS200BP RATING NO	DZS100BP, DZS200BP RATING NC	DZS400BP VOLTAGE (VAC)	DZS400BP RATING NO	DZS400BP RATING NC
General Purpose	24-277	30A	30A	24-277	20A	20A
Ballast	120 277	30A 20A	10A 10A	120-277	13A	- -
Tungsten	120-277	15A	2A	120	8A	-
Motor Load	120 208-277	1HP 2HP	1HP 2HP	120/240	1/2HP	1/2 HP
Pilot Duty	120-277	720VA	720VA	120-277	720VA	360VA
Resistive	28VDC	30A	30A	-	-	-

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120/208-240/277VAC, 50/60Hz.

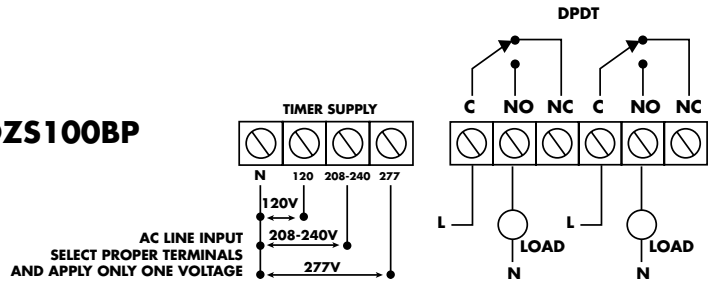
TERMINAL RANGE:
#14-#16AWG for line input.
#12-#16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +158°F (-40° to 70°C).

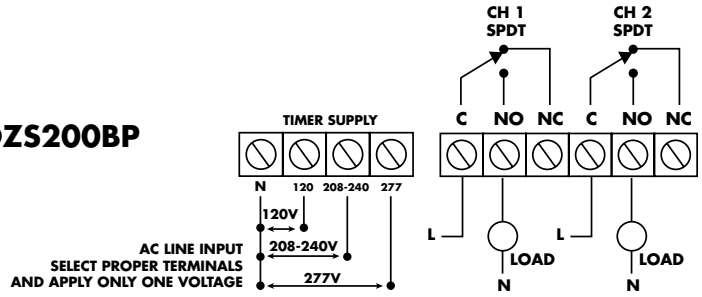
POWER CONSUMPTION:
5VA Max: DZS100/200BP.
6VA Max: DZS400BP.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for enclosure dimensions).

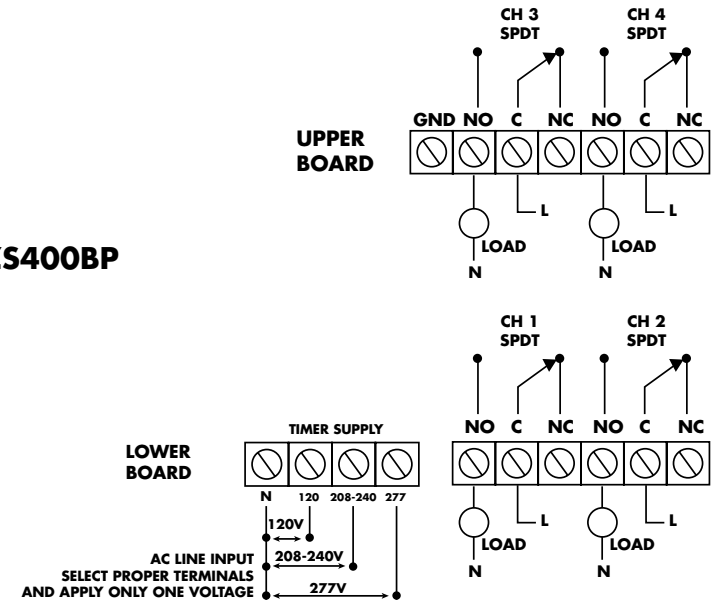
DZS100BP



DZS200BP



DZS400BP



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DZM SERIES
MOMENTARY OUTPUT
365 / 7 DAY ADVANCED LIGHTING CONTROL TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

Memory Module Programmer optional

GREAT FOR LATCHING CONTACTORS!

APPLICATIONS

c UL us

- Low voltage latching relays
- Direct wire to mechanically held contactors

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes can be individually offset +/- 1 to 240 minutes from both sunset and sunrise times.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent scheduled retention with memory module. Supercapacitor provides 7 days of real time backup.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZM series unit.

COPY FEATURE: Unit can be configured to copy program schedule to multiple memory modules.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DZM200BP	82188	120/208-240/277	2	SPDT Momentary
DZM200BP-0	82232	120/208-240/277	2	SPDT Momentary
USB-MMP	82196		Memory Module Programmer	Includes software

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120-277	20A
Pilot Duty	120-277	720VA

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

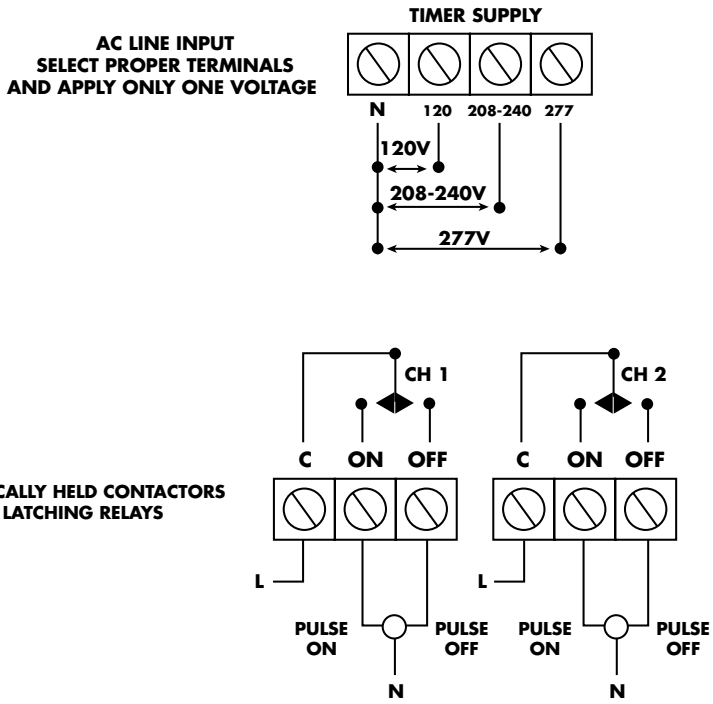
INPUT VOLTAGE: 120/208-240/277VAC, 50/60Hz.

TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40˚ to 158˚F (-40˚ to +70˚C).

POWER CONSUMPTION: 4VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for dimensions).



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LC200 SERIES
LIGHT LEVEL / TIME OF DAY OPTION
2 ZONES LIGHTING CONTROL

responsible energy

ASHRAE 90.1

STAGE LIGHTING TURN ON LEVEL

APPLICATIONS

- 24 hour convenience stores
- Open wall parking structures
- Large canopies
- Building perimeters
  Atriums

- Use to control two different outdoor lighting circuits utilizing one photocell. Sign lighting can turn ON at one ambient light level while parking lot lighting turns ON at a different light level.

FEATURES

PHOTOSENSOR INPUT: EPC1 included.

DUAL OUTPUTS: with independent turn-ON adjustment for Stage1 and Stage 2.

LIGHT LEVEL ACTIVATION: Turn ON is user settable from 2 to 100 footcandle; Independent light level adjustment for each zone. Turn OFF is a maximum of 2 times turn ON level. Built-in delay OFF of 30 seconds to avoid reaction to lightning or headlights.

SWITCHED INPUT: Turns off loads. Can be used for photocell ON and time switch OFF operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF ZONES	OUTPUT CONTACTS
LC200	82111	120/240/277	2	SPDT
LC200M	82113	120/240/277	2	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	120/240 277	20A 12A	10A
Ballast	120 240/277	20A 6A	10A 3A
Tungsten	120/240/277	5A	3A
Pilot Duty	120/240 277	470VA 690VA	275VA

SPECIFICATIONS

INPUT VOLTAGE:
120/240/277VAC, 50/60Hz.

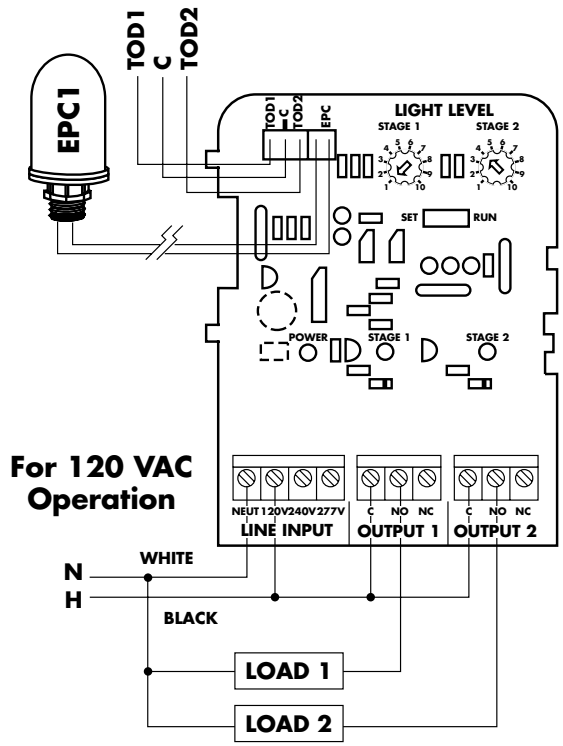
TERMINAL RANGE: Relay #12AWG; input power terminals #14 - #22AWG; TOD/sensor terminals accept #18 - #22AWG.

OPERATING TEMPERATURE:
-40°F to +140°F (-40°C to + 60°C).

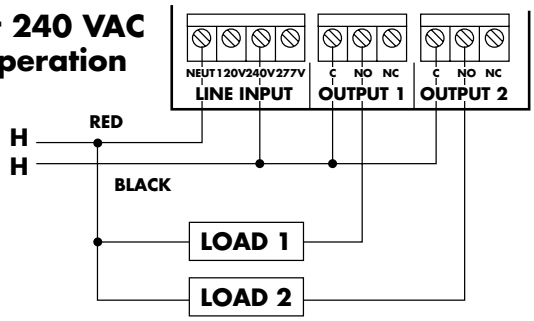
POWER CONSUMPTION: 5VA Maximum.

ENCLOSURE: LC200 includes metal Indoor NEMA 1 with lockable hasp (see page 557 for dimensions).

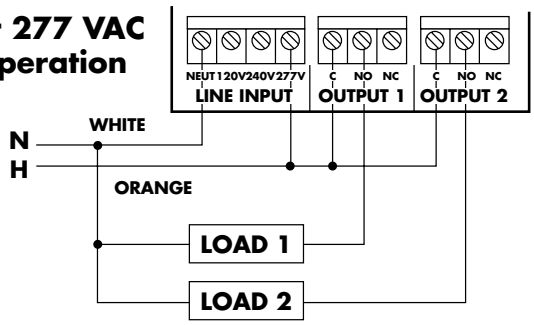
OTHER MOUNTINGS:
LC200M mechanism only.



For 120 VAC Operation



For 240 VAC Operation



For 277 VAC Operation

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DGU & DGLC SERIES

LIGHTING CONTROL WITH PHOTO OR OVERRIDE INPUT
7 DAY LIGHTING CONTROL TIME SWITCH

SMALL BUSINESS ENERGY CODE PANEL

Model EPC-A supplied with DGLC-A unit.

With optional Timed Override

APPLICATIONS

INTERIOR LIGHTING
- Open office zoning
- Hallways
- Meeting and sales areas
- Stock rooms and warehouses

EXTERIOR LIGHTING
- Signage and store windows
- Security
- Parking lots

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DGU100A-Y	82211	120-277	1	DPDT
DGUM100A	82212	120-277	1	SPDT Momentary
DGUM100A-Y	82224	120-277	1	SPDT Momentary
DGLC100A-NC	82223	120-277	1	DPDT
DGLC200A-NC	82213	120-277	2	SPDT
EPC-A	82112	Accessory Photo Sensor	-	-
SS410	14033	24VAC/24VDC	-	SPDT
TRP-24B	98225	120/277	Transformer Power Pack	SPST

FEATURES

SCHEDULING: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes from both sunset and sunrise times.

PHOTOSENSOR INPUT: Unique push button set-up assures accurate operation with automatic calibration that adjusts for wire size and distance. EPC-A photo sensor is included with the DGLC-A and may be ordered as an option for use with model DGU100A & DGUM100A.

LIGHT LEVEL ACTIVATION: Turn ON is user settable from 1 to 100 footcandle; Turn OFF is a maximum of 2 times turn ON level. Each channel has an independent setting. Includes a user settable delay before ON and OFF between 1 – 90 seconds.

REMOTE OVERRIDE ON: Each channel has independent input for a maintained dry-contact closure. May use TORK model SS410 and TRP-24Bfor timed override. May use with occupancy sensor with dry contacts as override.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MOMENTARY CONTACT - DGUM100A: 2 second contact closure ON & OFF to control mechanically held contactors or latching relays.

BLOCK HOLIDAY: 9 holiday blocks can be set for individual days or for duration of any number of days.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

CLOCK FORMAT: AM/PM or 24 Hour format.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120-277VAC, 50/60Hz (auto detection).

TERMINAL RANGE:
#12 - #18AWG for line/load.
#18 - #26AWG sensor/switch input.

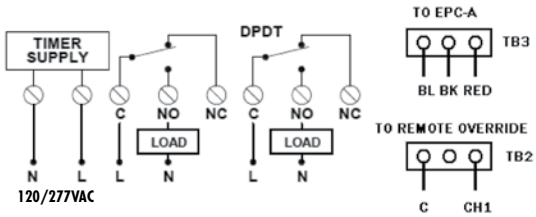
OPERATING TEMPERATURE:
-31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA Maximum.

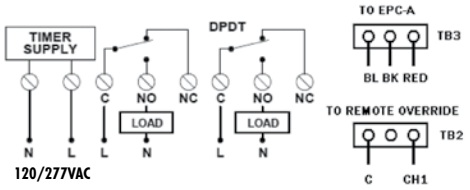
ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R . Suffix -NC Noryl® Indoor/Outdoor NEMA 3R with clear Lexan® cover. Suffix -Y metal Indoor enclosure NEMA 1. All with lockable hasp (see page 557 for dimensions).

TYPE	VOLTAGE	RATING NO	RATING NC
Resistive	24-277VAC	20A	10A
Ballast	120-277VAC	20A	10A
Tungsten	120VAC	15A	
Pilot Duty	120VAC 240VAC	720VA	290VA 360VA
Motor	120VAC 240VAC	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

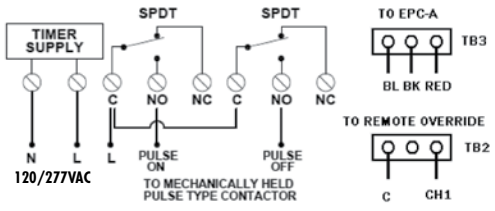
DGU100A



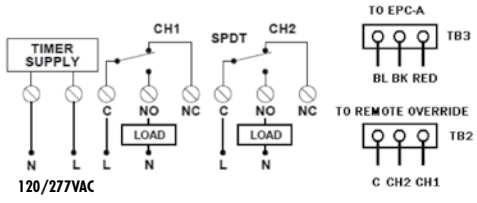
DGLC100A



DGUM100A



DGLC200A



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ELC SERIES
ENERGY AND LIGHTING CONTROL
4, 8 & 12 ZONE
LIGHTING CONTROL

THE *DO-IT-ALL* ENERGY & LIGHTING CONTROLLER

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

c UL us

APPLICATIONS

- HVAC equipment
- Indoor/Outdoor lighting
- Meets indoor/outdoor lighting energy code requirements

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT CONTACTS
ELC74	82523	24/120/208-240/277	4	SPDT
ELC78	82524	24/120/208-240/277	8	SPDT
ELC712	82525	24/120/208-240/277	12	SPDT
EPC-LC	82233	Accessory Photo Sensor	-	-
LCS115M	82082	Accessory Momentary Switch	-	SPST

FEATURES

SCHEDULING: 128 time based events allow individual programs for each day of the week at a minimum 1 minute apart. Event types include ON, OFF, Duration, or Duty Cycle.

SENSOR EVENT: 32 sensor driven events allow individual programs for each day of the week.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 70° Northern or Southern latitudes. Settings can be offset from both sunset and sunrise times.

UNIVERSAL INPUT: 8 inputs may be assigned to any channel. ELC74 includes 4.
SWITCHED INPUT: Accepts input from optional momentary or maintained switch for a timed override.
PHOTOSENSOR INPUT: Accepts input from optional sensor. EPC-LC (indoor/outdoor) has a range from 0 - 250 foot-candels.

MOMENTARY CONTACT: May be configured for momentary ON/OFF operation to control latching contactors. The ELC74 operates as a two channel unit. The ELC78 operates as a four channel unit. The ELC712 operates as a six channel unit.

HOLIDAYS: 26 holidays may be set using 10 individual dates, 10 month type (last Monday in May), or 6 specific holidays with one of 3 independent holiday schedules.

BLOCK HOLIDAY: 10 holiday blocks can be set for individual days or for duration of any number of days and may use one of 3 holiday schedules.

PULSE/TIME DURATION: 4 different ON settings from 1 second to 23 hours, 59 minutes, 59 seconds.

DUTY CYCLE: 4 different ON and OFF patterns from 1 second to 23 hours, 59 minutes, 59 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

REMOTE OVERRIDE: Universal input may be programmed for timed override from a momentary or maintained dry contact switch.

MANUAL OVERRIDE: Keyboard button control until the next regularly scheduled ON or OFF, automatic operation then resumes.

STAGGERED START: Optional stagger up time between channels, after a power outage; selectable from 5 seconds, 15 seconds, 30 seconds, 1 minute, 5 minutes, 10 minutes, and 15 minutes.

CLOCK FORMAT: AM/PM or 24 hour format.

POWER OUTAGE BACKUP: The program and time of day are maintained for a minimum of 2 days by means of a capacitor. After two days, a lithium battery takes over and provides a minimum accumulated time of 1 year. The lithium battery should provide over 10 years of protection.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
24/120/208-240/277VAC, 50/60Hz.

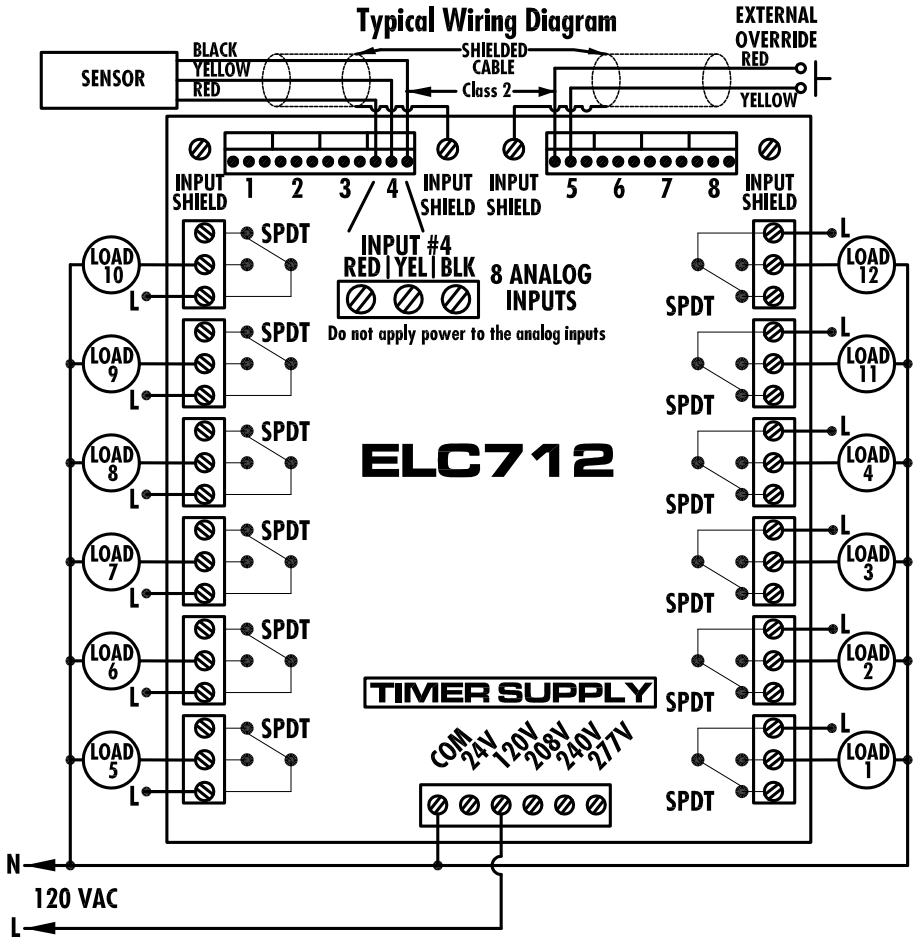
TERMINAL RANGE:
#10 - #16AWG for line input.
#10 - #16AWG for load output.
#14 - #22AWG universal input.

OPERATING TEMPERATURE:
-20°F to +140°F (-29°C to + 60°C).

POWER CONSUMPTION: 10VA Maximum.

ENCLOSURE: Metal Indoor NEMA 1 with lockable hasp (see page 558 for dimensions).

TYPE	VOLTAGE	RATING	
		NO	NC
General Purpose	24/120 - 277VAC	20A	15A
Ballast	120-277VAC	20A	20A
Tungsten	120-277VAC	5A	-
Pilot Duty	120-240VAC	470VA	275VA
Motor	120VAC 208-277VAC	1HP 2HP	1/4HP 1/2HP



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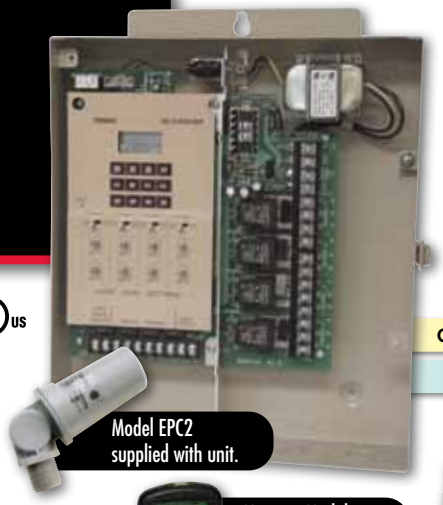
DLC400BP
4 ZONE LIGHTING CONTROL TIME SWITCH

FLEXIBLE INDOOR & OUTDOOR LIGHTING CONTROLLER



CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

INTERIOR LIGHTING
- Open office zoning
- Hallways
- Meeting and sales areas
- Stock rooms and warehouses

EXTERIOR LIGHTING
- Signage and store windows
- Security
- Parking lots

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DLC400BP	82191	120/208-240/277	4	SPDT
USB-MMP	82196	Memory Module Programmer	Includes Software	
SS410	14033	24VAC/24VDC	-	SPDT

FEATURES

CONFIGURABLE ZONES: Simple three position slide switch sets logic for each zone: Time ON/Time OFF, Photo ON/Photo OFF, or Photo ON/ Time OFF.

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week. Minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. **1.** Adjustable 10° - 60° Northern or Southern latitudes. **2.** Can be individually offset +/-1-240 minutes from both sunset and sunrise times.

PHOTOSENSOR INPUT: EPC2 photo sensor included.

LIGHT LEVEL ACTIVATION: Turn ON and OFF level is user settable from 1 to 100 footcandle. Each channel has an independent setting.

REMOTE OVERRIDE: Maintained dry contact closure or use TORK Model SS410 for timed override with flash warning before OFF. May use with occupancy sensor as override.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

POWER OUTAGE BACKUP: Permanent schedule retention with memory module. Battery provides real time backup for 6 months cumulative.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZS series unit.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
120/208 - 240/277VAC, 50/60Hz.

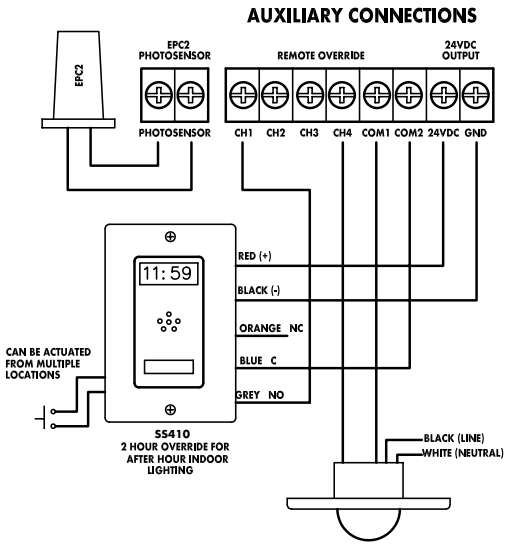
TERMINAL RANGE: #10 - #14AWG.

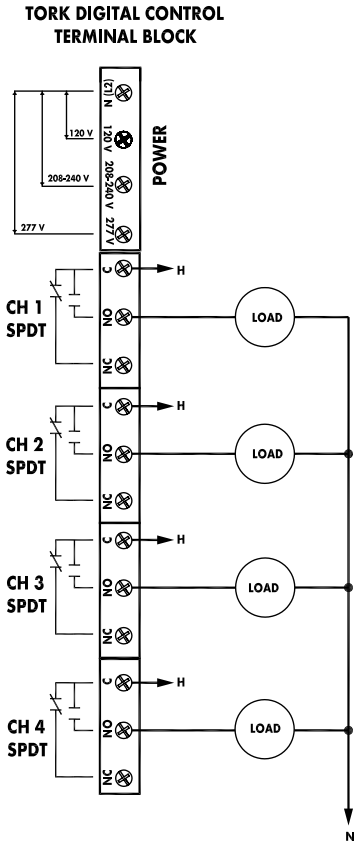
OPERATING TEMPERATURE:
-40°F to +158°F (-40°C to + 55°C).

POWER CONSUMPTION: 30VA Maximum.

ENCLOSURE: Metal Indoor/Outdoor NEMA 3 with lockable hasp (see page 557 for dimensions).

TYPE	VOLTAGE	RATING	
		NO	NC
General Purpose	24-277VAC, 30VDC	30A	30A
Ballast	120-277VAC	20A	10A
Tungsten	120VAC	10A	
Pilot Duty	120-277VAC	720VA	720VA





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LD SERIES
EXTENDED LIGHTING CONTROL LIGHTING DELAY TIME SWITCH

ASHRAE 90.1

ADD A WARNING BLINK TO ANY CONTROL

APPLICATIONS

- Open offices
- Gymnasiums
- Warehouses
- Outdoor recreation courts
- User-activated lights with time limits
- Match with photocontrol and timer to limit hours of use

SPECIFICATIONS

INPUT VOLTAGE:
120/208/240/277VAC, 50/60Hz.

TERMINAL RANGE: #10 - #16AWG for line/load. #18 - #26AWG switch input.

OPERATING TEMPERATURE:
-22° to 150°F (-30° to +65°C).

POWER CONSUMPTION:
5VA Maximum.

ENCLOSURE: Metal Indoor NEMA 1 with lockable hasp (see page 557 for dimensions).

FEATURES

MAINTAINED INPUT WITH LOAD WARNING BLINK:
LDS Series controls output load contacts based on power applied to the time switch input contact. At removal of power from the time switch input, LDS Series provides 1 second blink then keeps load contacts closed for an extra 1 or 5 minutes (user selectable) before turn off.

MAINTAINED INPUT WITH AUXILARY WARNING:
LDSH Series controls output load contacts based on power applied to the time switch input contact. At removal of power from the time switch input, LDSH Series closes a second set of contacts for a user supplied audible or visual warning device. The warning circuit closes for a selected time of 4 seconds (best for audible device or continuous, then keeps load contacts closed for an extra 1 or 5 minutes (user selectable) before turn OFF.

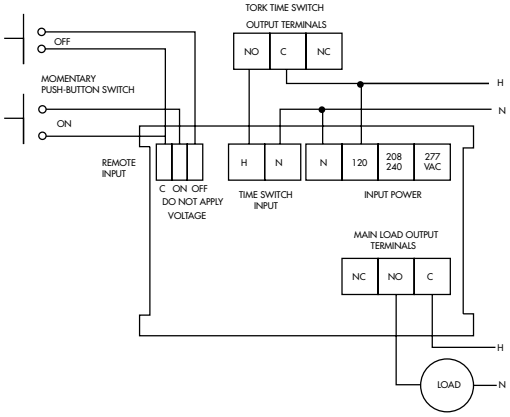
MOMENTARY INPUT: Provides timed override when time switch input contact is unpowered (timer OFF). When activated during the warning period, load contacts are kept closed and timing starts. Both series can accept momentary input contact closure for ON to start the timing and OFF to end the timing.

TIMED OVERRIDE SETTINGS: User may select override times of ½, 1, 1½, 2, 6, 9, or 12 hours. Warning before OFF is always active after override time.

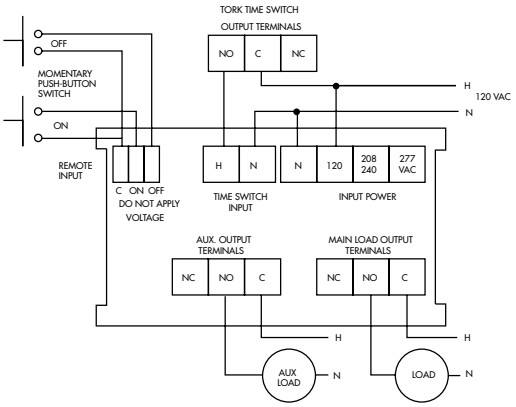
CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
LDS-A	81026	120/208-240/277	SPDT	Metal Indoor NEMA 1
LDS	81025	120/208-240/277	SPDT	Mechanism
LDSH-A	81031	120/208-240/277	SPDT	Metal Indoor NEMA 1
LDSH	81028	120/208-240/277	SPDT	Mechanism

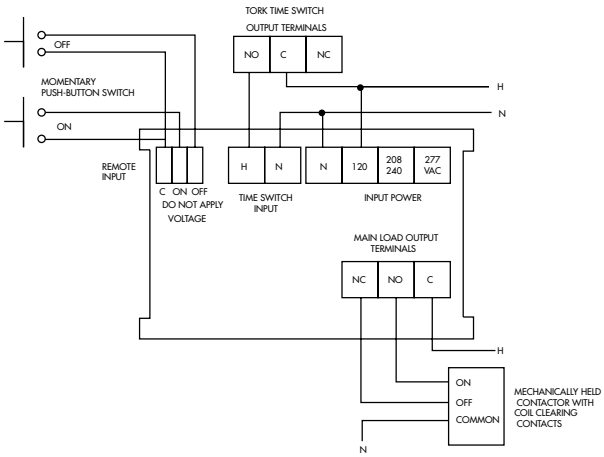
TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24/240 277	20A 20A	10A 3A
Ballast	120 208-277	20A 10A	10A 3A
Tungsten	120-277	5A	3A
Pilot Duty	120-240 277	470VA 690VA	275VA
Resistive	28VDC	20A	10A

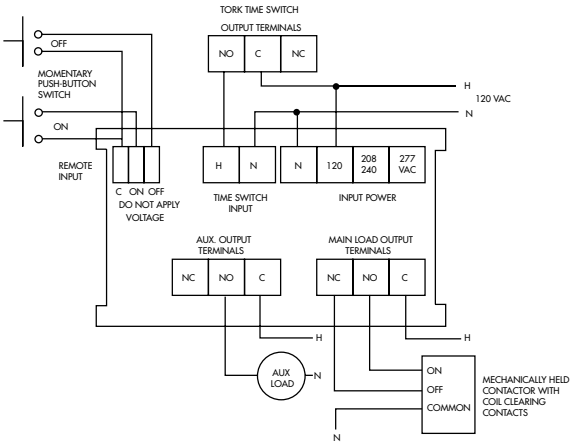
LDS WIRING



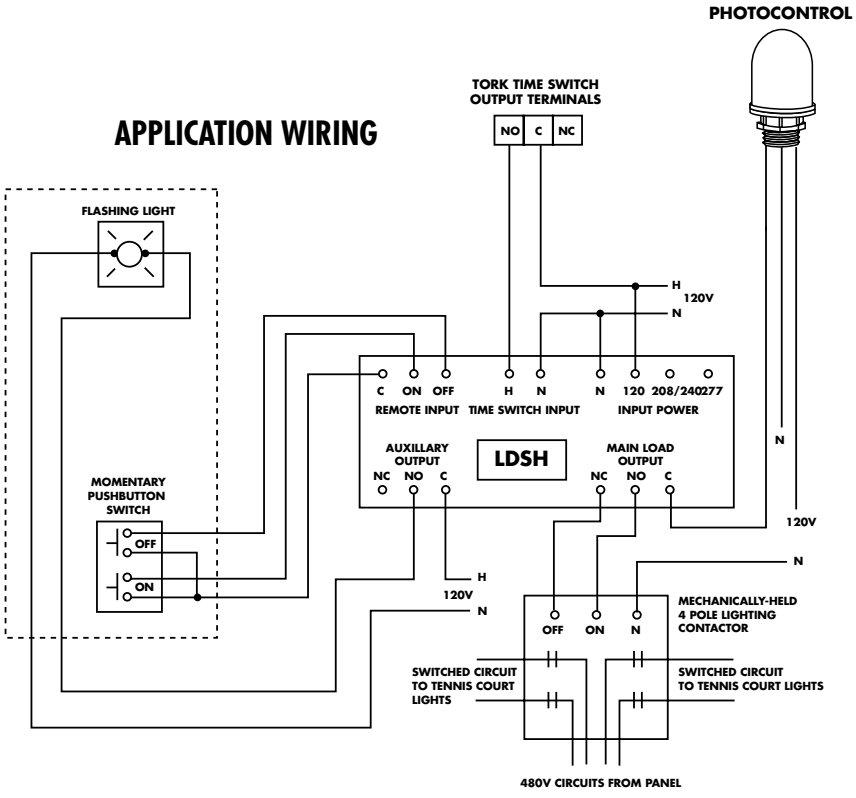
LDSH WIRING







APPLICATION WIRING



DGS SERIES
SIGNALING AND DUTY CYCLE 24 HOUR OR 7 DAY TIME SWITCH

31 DAY CYCLE TIME: AN INDUSTRY FIRST!

APPLICATIONS

- Signaling
- Duty cycle

FEATURES

DG180A & DG280A: 56 ON & OFF set points provide daily repeated programs. Minimum setting is 1 minute.

DGS100A: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

DUTY CYCLE & SIGNALING: Two different ON/OFF patterns or signal durations may be programmed. The durations can be up to 23 hours, 59 minutes and 59 seconds in length.

SKIP FUNCTION (24 HOUR UNITS ONLY): Each channel can be set for ACTIVE/SKIP operations that alternate from 1 - 31 days. This becomes an effective way to cycle loads on varying days within the month. Using the two-circuit DG280A, two loads can be set to operate on alternate days in a simple manner.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 hour.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
24 HOUR MODELS				
DG180A	82206	120-277	1	DPDT
DG280A	82207	120-277	2	SPDT
DG280A-24	82220	24VAC	2	SPDT
7 DAY MODELS				
DGS100A	82205	120-277	1	DPDT
DGS100A-12	82218	12VDC	1	DPDT
DGS100A-24	82219	24VAC	1	DPDT

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
120 - 277 VAC, 50/60 Hz (auto detection).

TERMINAL RANGE: #12 - #18AWG.

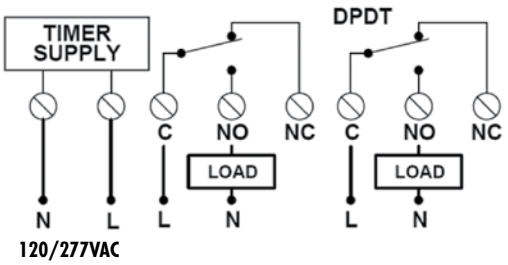
OPERATING TEMPERATURE:
-31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA Maximum.

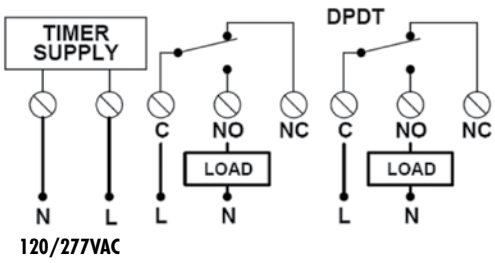
ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	24-277	20A	10A
Ballast	120-277	20A	10A
Tungsten	120	15 A	
Pilot Duty	120 240	720VA	290VA 360VA
Motor	120 240	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

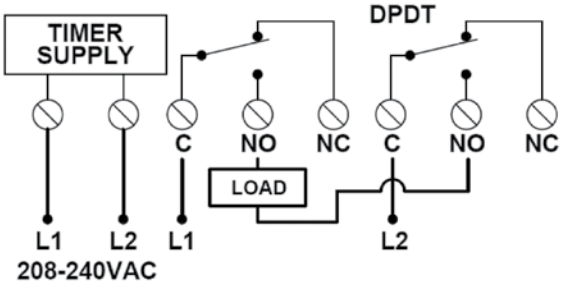
DGS100A
FOR 120V/277VAC



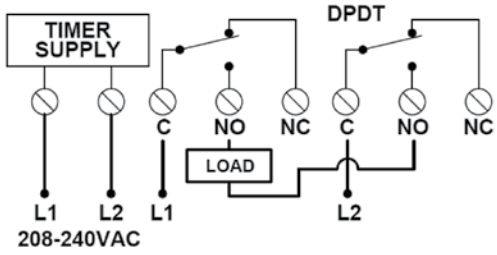
DG180A
FOR 120V/277VAC



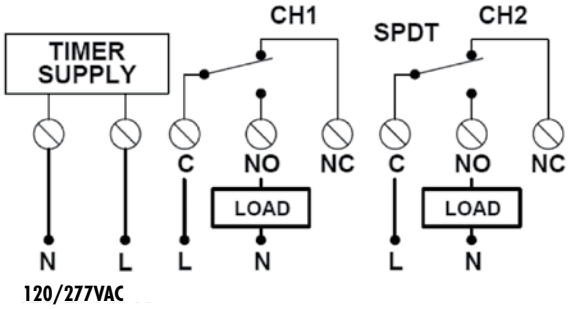
DGS100A
FOR 208-240VAC



DG180A
FOR 208-240VAC



DG280A



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EJWT & E500T SERIES

DELAY, INTERVAL & PERCENTAGE TIME CYCLE TIME SWITCHES

PERFECT FOR PROCESS CONTROL

EJWT

E502T

E501T

APPLICATIONS

- Poultry and livestock
- Agriculture or greenhouse
- Oil well pumping
- Ventilation
- Process control

FEATURES

EJWT – PERCENTAGE TIMER
960 time combinations with two dials.
Cycle Time Dial sets 32 repeating cycles from 15 seconds to 24 hours.
Percentage ON Dial has 32 steps from 0% to 100%.
Repeats cycle as long as power is applied.

E500T – ON DELAY TIMER
Dial sets 30 time delay durations from 5 seconds to 3 hours.
External switch activated starts delay to ON.
Runs until external switch turns OFF.

E501T – AUTO OFF INTERVAL TIMER
Dial sets 30 time durations from 10 seconds to 12 hours.
Start/Stop button or External switch starts interval ON.
Automatically turns OFF at end of preset time.
START/STOP or External switch turns OFF.

E502T – OFF DELAY TIMER
Dial sets 30 time durations from 5 seconds to 3 hours.
External switch starts interval ON.
Automatically turns OFF at end of preset time.
External switch turns OFF.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
EJWT	82513	120-240	SPDT
E500T	82514	120-240	SPDT
E501T	82515	120-240	SPDT
E502T	82516	120-240	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-240	20A	10A
Resistive	120-240	20A	10A
Motor	120 208-240	1HP 2HP	1/4HP 1/2HP
Pilot Duty	120/240	470VA	275VA

SPECIFICATIONS

TIMING ACCURACY: 1% of timing range.

INPUT VOLTAGE: 120/240VAC, 60Hz.

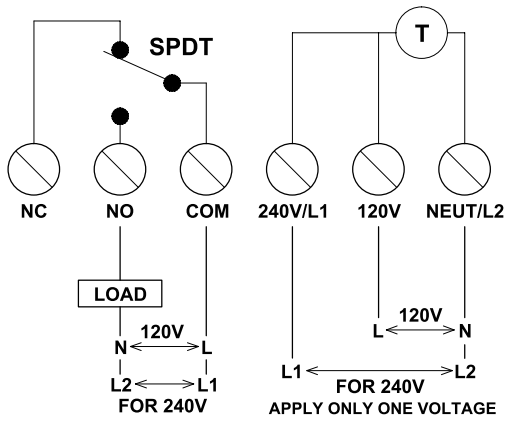
TERMINAL RANGE: #12 - #18AWG.

OPERATING TEMPERATURE:
32°F to +122°F (0°C to + 50°C).

POWER CONSUMPTION: 16VA Maximum.

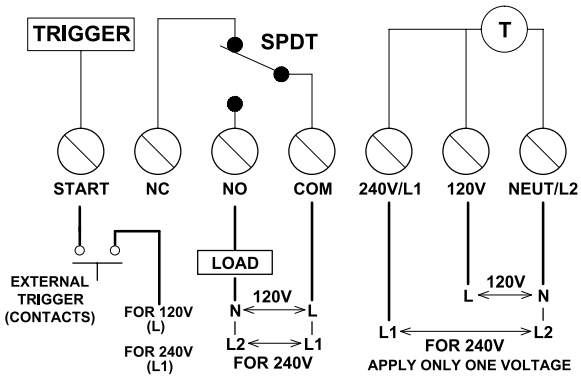
ENCLOSURE: Indoor NEMA 4X is standard (see page 558 for enclosure dimensions).

EJWT



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

E500T / E501T / E502T



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

PCT SERIES
PANEL MOUNT CYCLE TIME SWITCHES

NEW!

APPLICATIONS

- Oil field pumping stations
- Poultry and livestock feeding and watering
- Ventilation
- Process control

SPECIFICATIONS

TIMING ACCURACY: 1% of timing range.

INPUT VOLTAGE: 120-240VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #14 - #16AWG for line input, #12 - #16AWG for load output.

OPERATING TEMPERATURE: -40˚ to +149˚F (-40˚ to +65˚C).

POWER CONSUMPTION: 5VA Max.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
PCT15M	82528	120-240	SPDT

TYPE	RATINGS	
	NO	NC
120-240VAC General Purpose & Resistive	20A	20A
120VAC Motor	1HP	1/4HP
240VAC Motor	2HP	1/2HP

FEATURES

FIXED TIMER CYCLE: 15 minutes repeating cycle when unit is powered.

PERCENTAGE ON: 1% to 99% increments.

DISPLAY: Digital percentage reading.

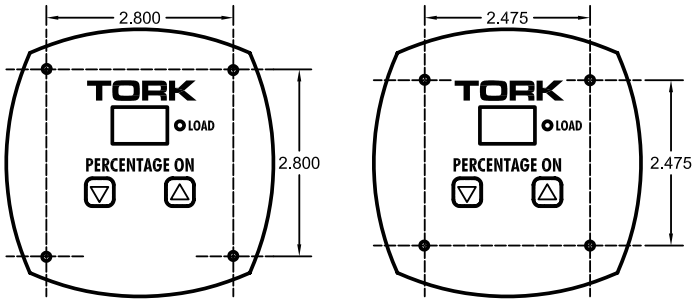
ON SETTING: Hold ON.

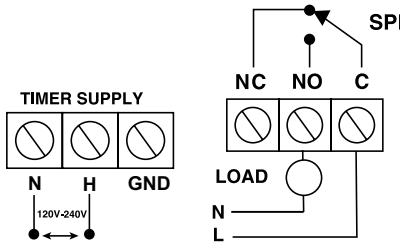
OFF SETTING: Hold OFF.

POWER OUTAGE BACKUP: Remembers place in cycle when power resumes.

TEST MODE: For temporary ON/OFF cycle verification.

PANEL MOUNTING: 3" diameter back housing retrofits to existing mechanical timer dimensions. Two sets of mounting dimensions to choose from. (see page 558 for enclosure dimensions).





ACT30MA SERIES
ADJUSTABLE CYCLE TIMER TIME SWITCHES

APPLICATIONS

- Poultry and livestock feeding and watering
- Agriculture irrigation for field or greenhouse
- Oil well pumping daily cycle
- Ventilation
- Process control

FEATURES

960 time combinations with two dials

ON time dial sets 30 time steps from 30 seconds to 15.5 minutes

OFF dial has 30 steps time steps from 30 seconds to 15.5 minutes

Repeats cycle as long as power is applied

Hold On or Hold Off positions included

SPECIFICATIONS

INPUT VOLTAGE: 120-240VAC

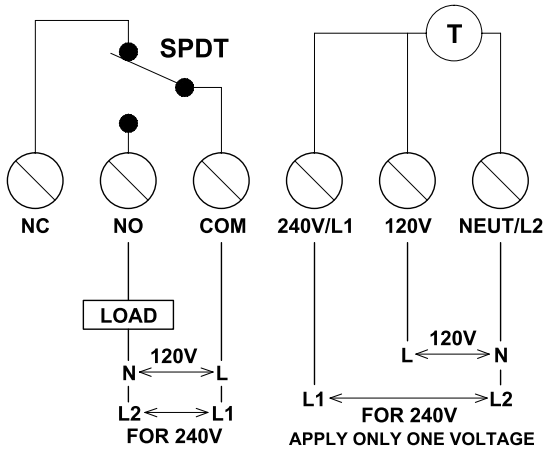
TERMINAL RANGE: #18 - #12AWG

CONTACTS: SPDT

ENCLOSURE:
Indoor NEMA 4X is standard (see page 558 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
ACT30MA	82527	120-240	SPDT

TYPE	RATINGS NO	RATINGS NC
120-240VAC General Purpose & Resistive	20A	10A
120VAC Motor	1HP	1/4HP
208-240VAC Motor	2HP	1/2HP
120-240VAC Pilot Duty	470VA	275VA



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

DIN SERIES
1 OR 2 CHANNEL
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

DIN100B

CALIFORNIA Title 24

ASHRAE 90.1

DIN200B

PANEL BUILDERS' CHOICE

APPLICATIONS

- Panel builders
- Indoor/Outdoor lighting
- Security systems
- HVAC equipment

FEATURES

SCHEDULING: 8 ON and OFF pairs of set points for DIN100B. 4 ON and OFF (CH A) and 3 ON and OFF (CH B) pairs of set points for DIN200B. Individual programs on each day of the week. Minimum setting is 1 minute.

MANUAL OVERRIDE: Until the next regular scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Battery retains time and schedule.

CATALOG NO.	UPC CODE	DRY CONTACTS	CLOCK INPUT (VAC)50/60 Hz	NO. OF CHANNELS	NUMBER OF ON/OFF
DIN100B	82193	SPDT	120	1	8
DIN200B	82192	SPDT	120	2	4 Channel A 3 Channel B

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	120	16A	16A
General Purpose	120	8A	8A
Motor (DIN100 only)	120	1/2HP	

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 50/60Hz.

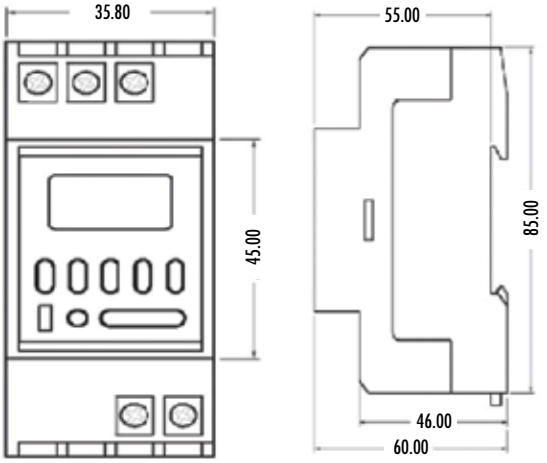
TERMINAL RANGE: #12 - #18AWG.

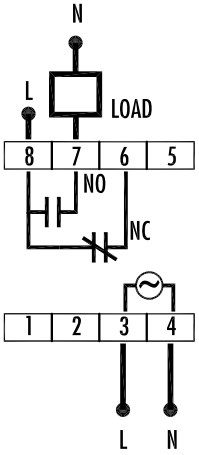
OPERATING TEMPERATURE:
DIN100B: 14°- 131°F (-10°- +55°C).
DIN200B: 14°- 113°F (-10°- +45°C).

POWER CONSUMPTION: 4VA Maximum.

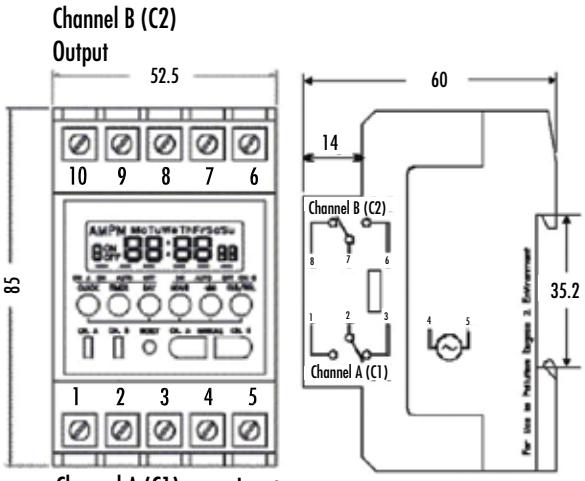
MOUNTING: DIN rail #50022 (35mm) or flat surface using supplied adapter.

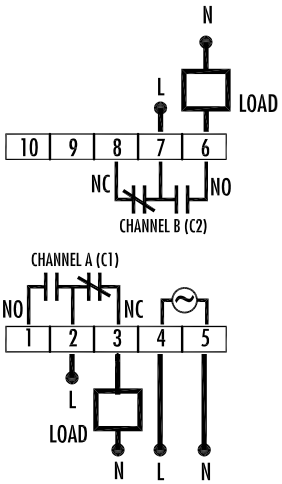
DIN100B





DIN200B





SMC SERIES
MOMENTARY CONTACT ADAPTER

APPLICATIONS

- Converts maintained contacts for pulse switching
- Timer to latching contactor control
- Photocell to latching contactor control Signaling

FEATURES

MAINTAINED INPUT: SMC3D accepts maintained input power from any 120 volt control. When power is applied or removed a short contact closure (pulse) is created on the dry output contacts.

MOMENTARY OUTPUT: SMC3D provides two dry output contacts. The ON contact provides a 2 second contact closure (pulse) when power is applied to the input contacts. The OFF contact provides a 2 second pulse when power is removed from the input contacts.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 50/60Hz.

TERMINAL RANGE: #12 - #18AWG.

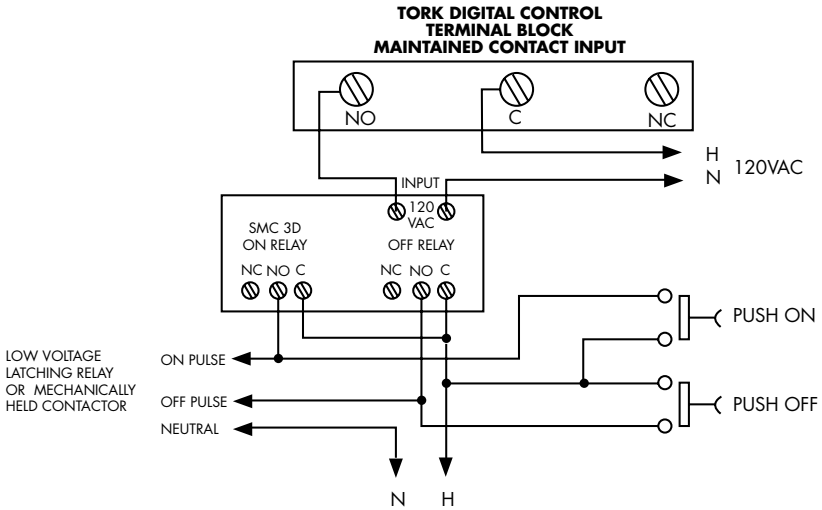
OPERATING TEMPERATURE: -31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	OUTPUT CONTACTS
SMC3D	52011	120	SPDT Momentary

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	120	10A	10A
General Purpose	120	10A	10A
Motor	120	1/4HP	



5401 SERIES
INCREASED AMPERAGE & VOLTAGE SWITCHING 40 AMP CONTACTORS

5401A 5441A

APPLICATIONS

- Lighting loads
- Exhaust fans
- Electric and hot water heaters
- Refrigeration and defrosting

CATALOG NO.	UPC CODE	COIL VOLTS	NO. OF CONTACTORS	OUTPUT CONTACTS
5401A	81019	120	1	3PST
5441A	81020	120	4	3PST

FEATURES

CONTACT RATINGS: Can switch up to 40 AMPS per pole from 120VAC to 277V lighting loads, one to three circuits simultaneously.

EASY WIRING: Includes 120 volt control wiring compartment. 5441 has terminal strip pre-mounted for quick connection.

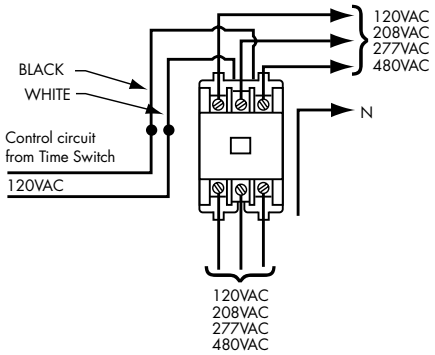
ENCLOSURE: Metal NEMA 1 Indoor enclosure (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	FLA	RATING
Tungsten*	120	-	30A
Ballast*	120/277	-	40A
LED Driver*	120/277	-	40A
Motor (Single Phase)	120 240	40 40	3HP 7.5HP
Motor (3 Phase)	240 480	40 40	10HP 20HP

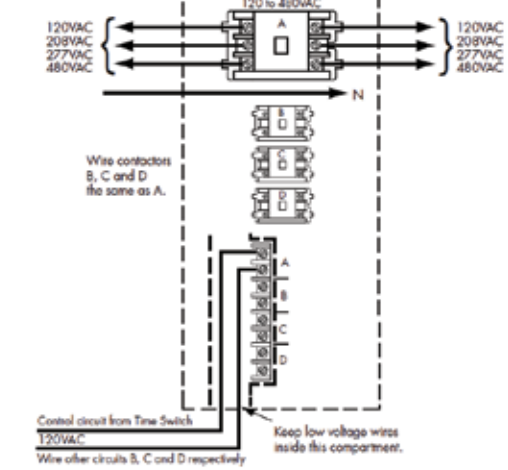
Coil Data: 120VAC @ 60Hz
6VA Holding/seal; 60VA inrush

* Ratings for single phase load

5401A



5441A



HPS STARTER
FOR HIGH PRESSURE SODIUM LAMPS
STARTING AID

APPLICATIONS

- Designed to operate as a starting aid, for all H.P.S. ballasts from 35 to 400 watts, with lamp voltage of 55 or 100 volts.

SPECIFICATIONS

LINE VOLTAGE: 105 - 347VAC.

LAMP VOLTAGE: 55 or 100VAC.

LAMP WATTAGE: 35 to 400 watts.

OPERATING TEMPERATURE: -40°F to +221°F (-40°C to + 105°C).

LEAD LENGTH: 9 inches.

ENCLOSURE: Durable, high temperature Lexan® housing.

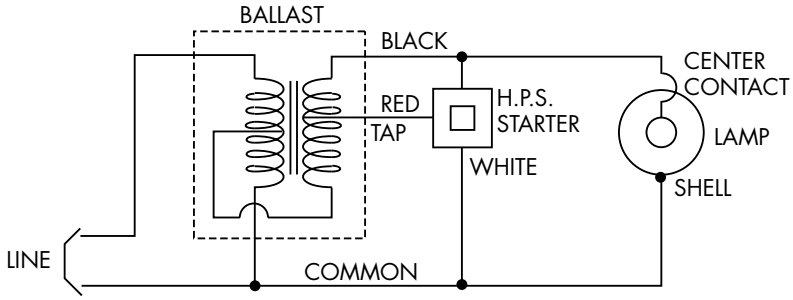
FEATURES

SMART VOLTAGE: Delivers appropriate trigger spikes for lamp ignition, then reduces voltage to good lamps. Continues to feed voltage spikes to old or poorly working lamps.

HIGH GRADE MATERIAL: All components are sealed with high grade die-electric material to protect against contaminants and other adverse environmental conditions.

EASY INSTALLATION: Universal 3 wire design, color coded for ease of installation.

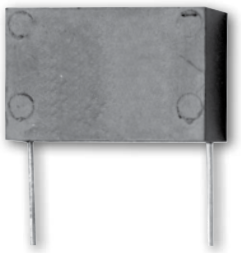
CATALOG NO.	UPC CODE	DESCRIPTION
HPS30	81030	High Pressure Sodium Starter



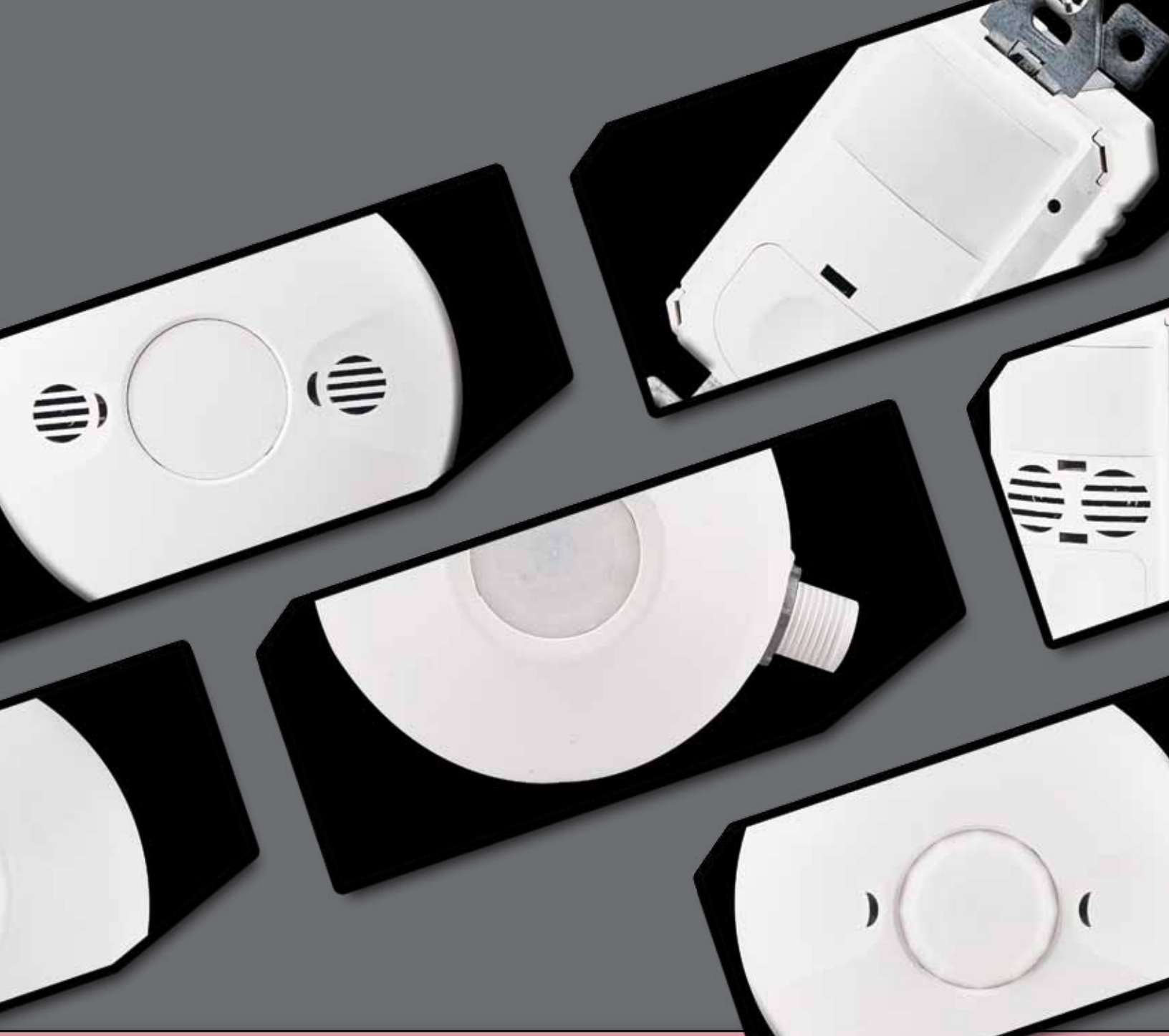
SURGE SUPPRESSOR
FOR HIGH ELECTRICAL NOISE

APPLICATIONS

- For high electrical noise interference, recommended for all digital controls.



CATALOG NO.	UPC CODE	DESCRIPTION
90058-1	81024	Surge Suppressor



TORK® OCCUPANCY SENSORS

SENSOR TECHNOLOGY & PLACEMENT GUIDE

TECHNOLOGY
PIR AND ULTRASONIC

A ***Passive Infrared Sensor*** (PIR sensor), is a device that measures infrared radiation (IR), or heat, from objects in its field of view. Because it only receives information, it is considered passive. The IR sensor views a human body as an IR generating object. The lens of the occupancy sensor breaks up the field of view into IR sensitive bands. The occupancy sensor is designed to only react when heat is sensed moving from band to band. For PIR occupancy sensors to work object must have direct "line of sight" to the PIR sensor.

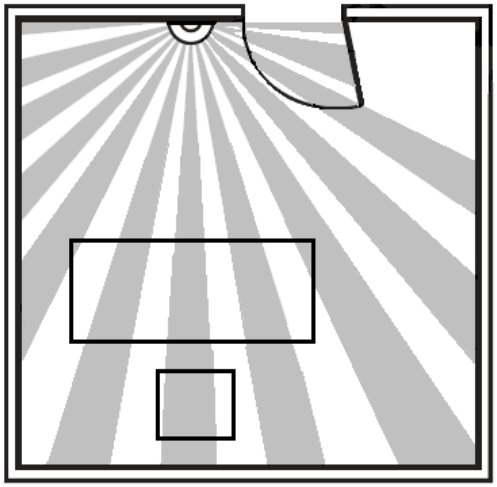
An ***Ultrasonic Sensors*** (US sensor) is a technology that works on a principle similar to radar or sonar. It is an active technology that sends and receives. It emits an inaudible high-frequency sound wave and evaluates the echo which is received back after bouncing around in the room. This allows the sensor to evaluate the whole room and can "look" over walls and obstructions to identify movement.

Both technologies show higher sensitivity closer to the sensor to allow small movements to be noticed. Sensitivity reduces further away from the sensor and may require a walking step to activate the sensor.

PLACEMENT GUIDELINES
WALL SENSOR

A ***Wall Switch Sensor*** provides a 180° coverage pattern, extending outward from the sensor. This will allow for instant turn ON when an occupant enters the space. Total area covered will be over 400 square feet.

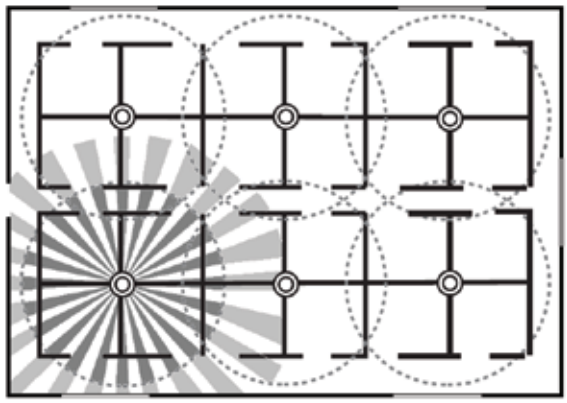
- Proper placement gives the sensor a clear line of sight to the entry door without viewing the hallway.
- The occupant must be able to see the sensor from their normal work position otherwise the sensor will not be able to detect their presence.
- For offices where there are other obstructions between the sensor and the occupant or the entry door, a ceiling sensor is required.

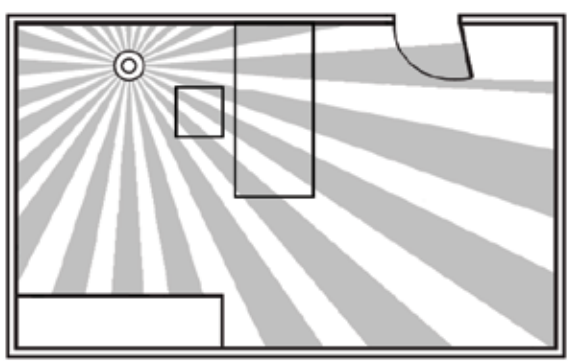


PLACEMENT GUIDELINES
CEILING SENSOR

A ***Ceiling Sensor*** provides a 360° coverage pattern of up to 1200 square feet when using passive infrared only. When using dual technology the coverage pattern extends to over 2000 square feet. Barriers within the space that block line-of-sight to sensor detection will decrease coverage area when using passive infrared by itself, ultrasonic dual technology will allow the sensor to get around the obstructions.

- Designed for ceiling mounting at a height of 8-10 feet (mounting sensor at greater heights decreases the sensitivity to motion, while lower mounting height will decrease range).
- The sensor needs a visually unobstructed view of the normally occupied workspace and entry door(s).
- Avoid sensor placement with a direct view out a doorway. Placing the sensor offset from the center and away from the door is recommended.
- If the occupant cannot see a PIR sensor from their normal work position, the sensor will not be able to detect their presence.
- File cabinets, partitions, or walls are typical types of obstructions. If there are other obstructions between the sensor and the occupant, an ultra-sonic or dual technology ceiling sensor is recommended.
- When the light level feature is used, mount within 15 feet of the widows or skylight and avoid mounting the sensor close to lighting fixtures.
- Place the sensor no closer than 5 feet to an HVAC air duct when using dual technology sensors.
- Open office designs encourage placement of the sensors to allow overlapping coverage of small motion range and a clear view into each cubicle. Walking step motion may cover the entry to the space. Dual technology units provide added sensitivity to small motion.





WOS SERIES
PIR WALL SWITCH OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 3 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Two selectable modes: Automatic On/Off or energy saving Walk Through. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

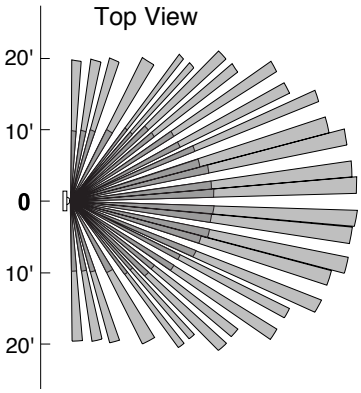
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas. Use in bathrooms to avoid manual off condition for occupant as another person leaves.

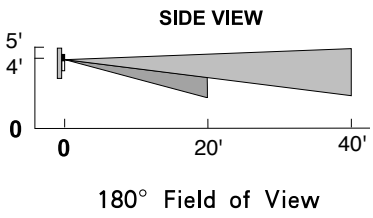
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

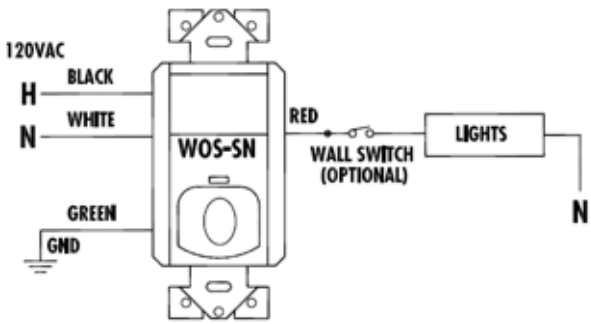
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-SN	98213	120	Requires Neutral







WOS-M SERIES
PIR WALL SWITCH OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-M	98217	120/230/277	No Neutral Required
WOS-MN	98215	120/230/277	Requires Neutral

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

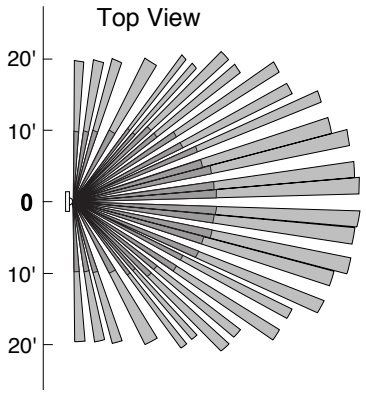
FLASH WARNING: Optional load flicker 2 minutes before Off.

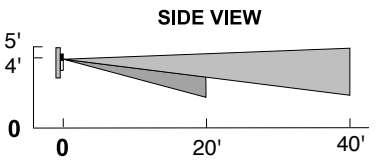
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas. Use in bathrooms to avoid manual off condition for occupant as another person leaves.

COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

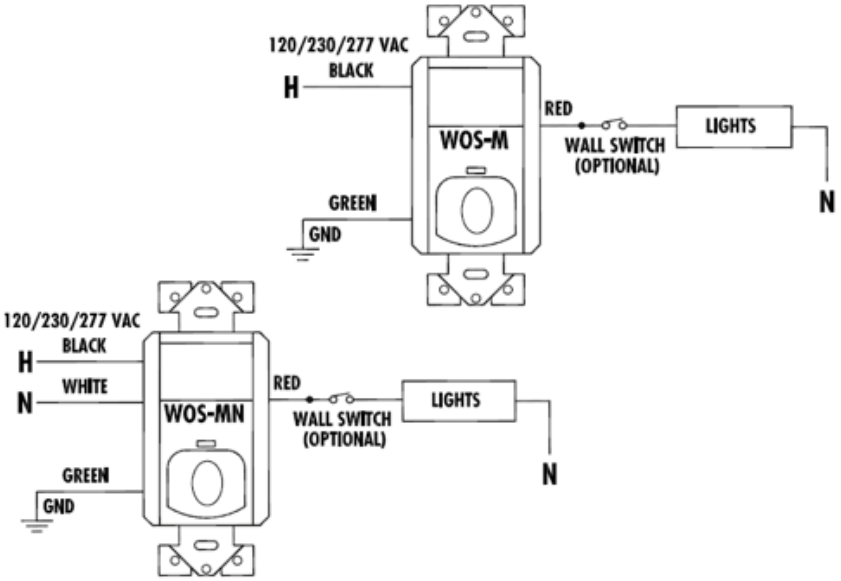
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).





180° Field of View



WOS-M2R SERIES
PIR WALL SWITCH TWO RELAY OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-M2R	98221	120/230/277	No Neutral Required
WOS-MN2R	98219	120/230/277	Requires Neutral

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming. Each relay can have different settings.
- BATHROOM MODE: set fan relay time delay longer than lighting relay.
- TWO STEP LIGHT LEVEL: set each relay to turn off at different daylighting levels
- PUBLIC AREAS: Disable one relay button manual OFF function. Use in bathrooms to avoid full off condition for occupant as another person leaves.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Facto ry default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

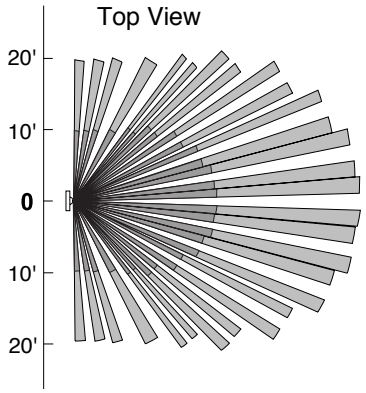
FLASH WARNING: Optional load flicker 2 minutes before Off.

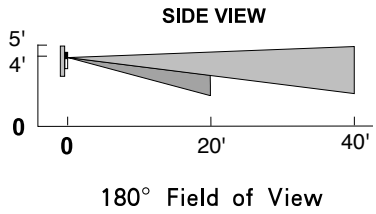
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas.

COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

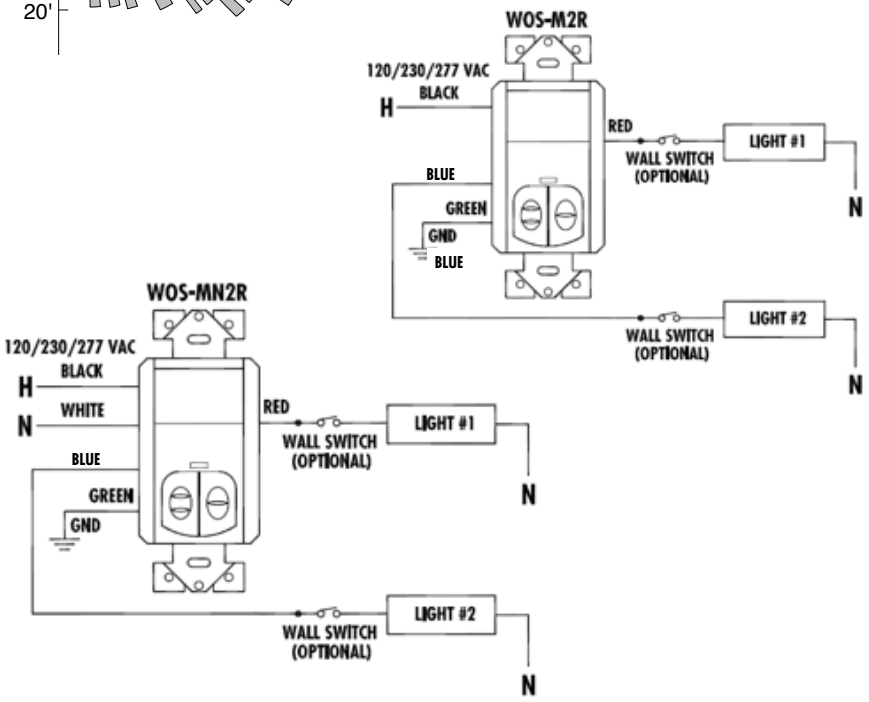
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).





180° Field of View



WOS-M2T SERIES
ULTRASONIC AND PIR WALL SWITCH OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE:
PIR 1200 sq. ft.
Ultra-Sonic 400 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming. Each relay can have different settings.
- INITIAL ON: customize and set one technology only to trigger turn on.
- MAINTAIN ON: customize and set one technology to keep lights on.
- PUBLIC AREAS: Disable button manual OFF function. Use in bathrooms to avoid full off condition for occupant as another person leaves.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

FLASH WARNING: Optional load flicker 2 minutes before Off.

TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas.

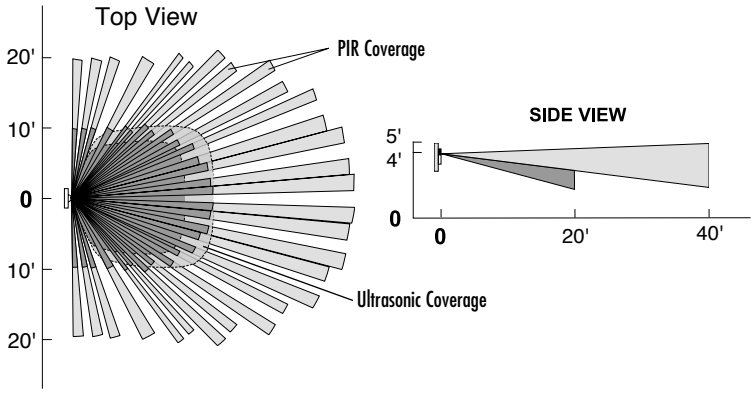
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

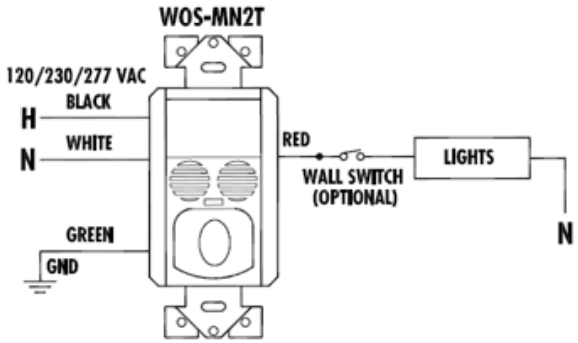
SENSOR CHOICES: Factory default setting allows either technology to trigger the unit. Optional is a disable function of one technology for initial and/or maintain on operations.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-MN2T	98223	120/230/277	Requires Neutral





COS-L2T SERIES
ULTRASONIC AND PIR CEILING MOUNTING OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

c UL us

- Large offices areas
- Larger meeting rooms
- Classrooms
- Bathroom & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE:
PIR 1200 sq. ft.
Ultra-Sonic 900 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-L2T	98207	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.
- INITIAL ON: customize and set one technology only to trigger turn on.
- MAINTAIN ON: customize and set one technology to keep lights on.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

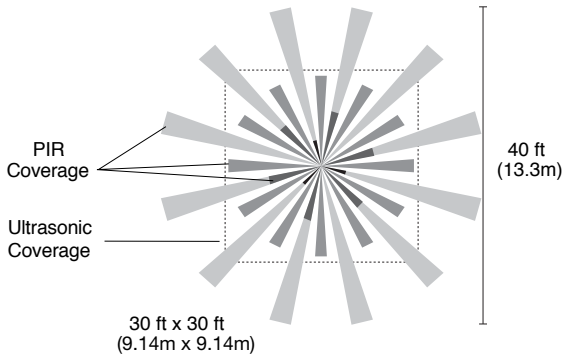
FLASH WARNING: Optional load flicker 2 minutes before Off.

COVERAGE AREA: Adjustable for three steps of sensitivity for ultrasonic and two steps for PIR.

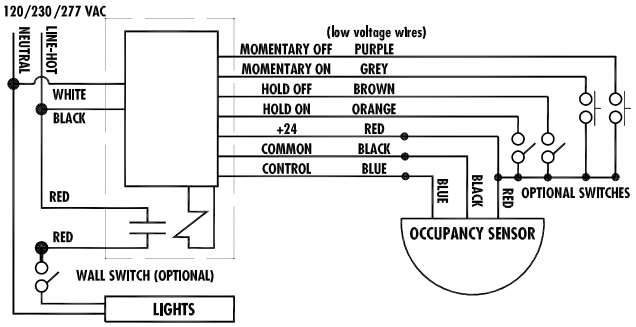
SENSOR CHOICES: Factory default setting allows either technology to trigger the unit. Optional disable function of one technology for initial and/or maintain on operations.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



TRP-24I POWER PACK



COS-L SERIES
PIR CEILING MOUNTING OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

c UL us

- Large offices areas
- Larger meeting rooms
- Classrooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-L	98203	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

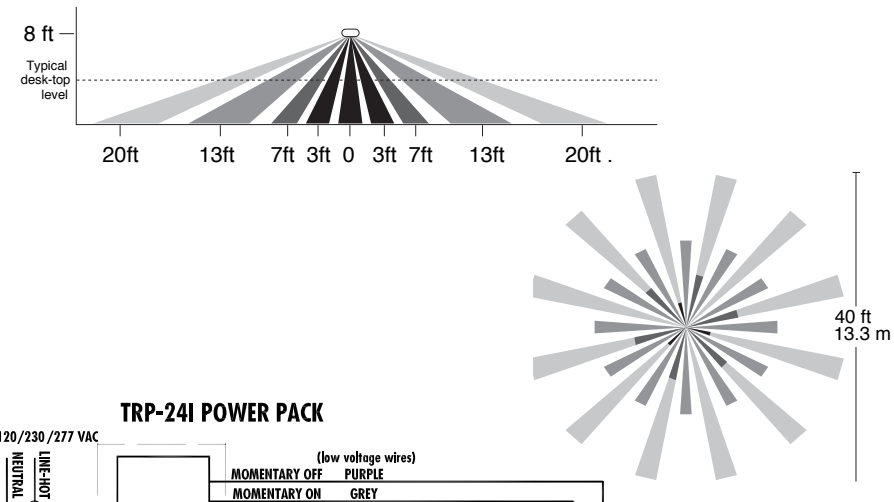
TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

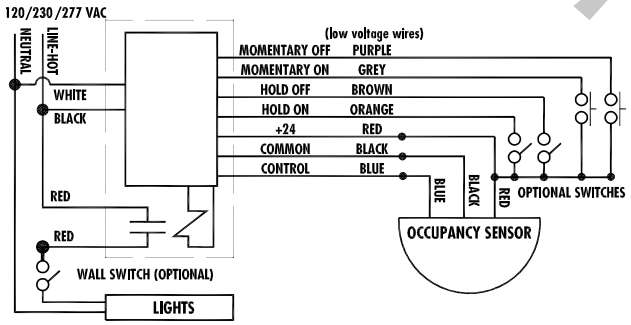
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



TRP-24I POWER PACK



COS-LU SERIES
ULTRASONIC CEILING MOUNTING OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Large offices areas
- Larger meeting rooms
- Classrooms
- Bathroom & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately.

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 900 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-LU	98205	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

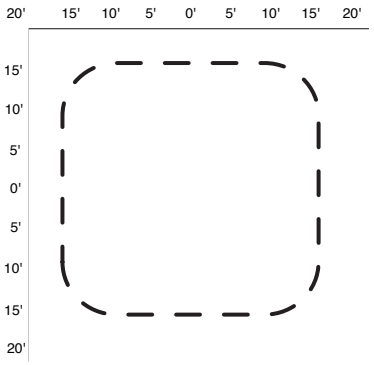
TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

COVERAGE AREA: Adjustable for three steps of sensitivity.

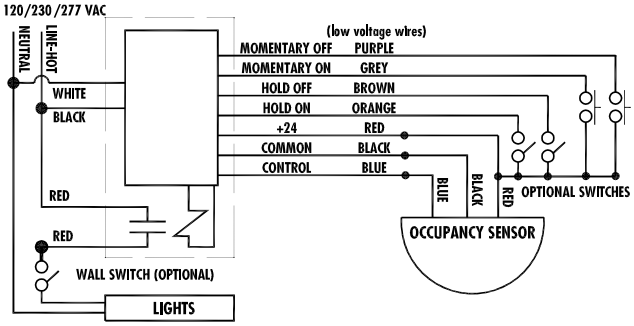
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



30 ft x 30 ft
(9.14m x 9.14m)

TRP-24I POWER PACK



COS-M SERIES
PIR CEILING MOUNTING
LINE VOLTAGE
OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

c UL us

APPLICATIONS

- Large offices areas
- Larger meeting rooms
- Classrooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

POWER SUPPLY:
Built-in

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

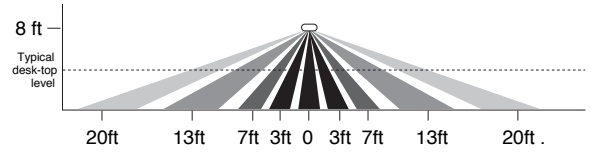
FLASH WARNING: Optional load flicker 2 minutes before Off.

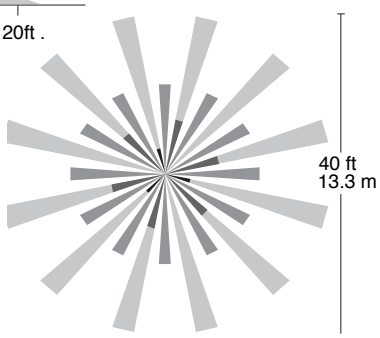
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

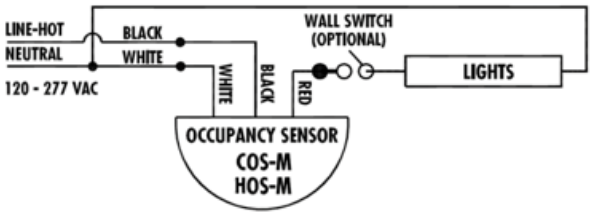
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to a box. Available is optional adapter for pendant or side mounting with ½" threaded nipple.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC)	DESCRIPTION
COS-M	98201	120/230/277	White
COS-ADP	98229	1/2" pendant/side mounting adapter	







TORK® nsi

HOS-M SERIES
HIGH BAY PIR MOUNTING LINE VOLTAGE OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Warehouse
- Tall aisle
- High ceiling equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

POWER SUPPLY:
Built-in

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1000 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

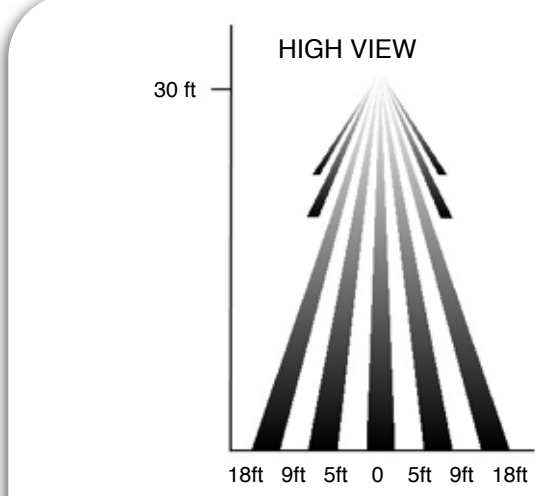
FLASH WARNING: Optional load flicker 2 minutes before Off.

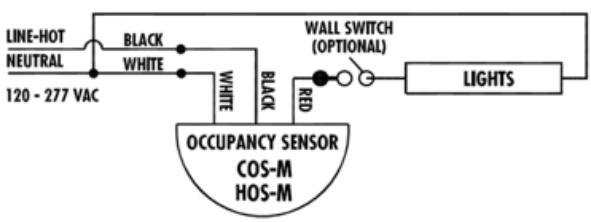
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Includes as standard an adapter for pendant or side mounting with ½" threaded nipple. Also mounts direct to box or ceiling.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC)	DESCRIPTION
HOS-M	98209	120/230/277	White





CPS-L SERIES
CEILING MOUNTING PHOTO SENSOR

ASHRAE 90.1

APPLICATIONS

- Side window areas of offices
- Spaces with skylights
- Classrooms

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

WARRANTY: 5 YRS.

FEATURES

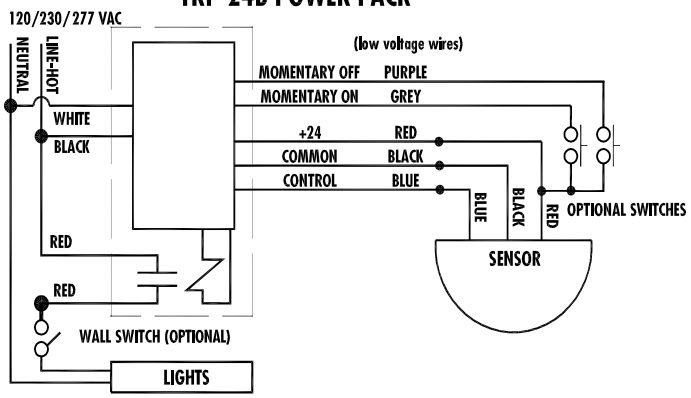
SOFTWARE SET: Completely customizable functions through button push programming.

LIGHT LEVEL SETTING: Light level between 5 to 200 fc.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
CPS-L	98211	24VDC	White
TRP-24B	98225	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

TRP-24B POWER PACK



TRP-24 SERIES
POWER PACK FOR OCCUPANCY SENSORS

ASHRAE 90.1

APPLICATIONS

- Power and switching for occupancy or light sensors
- Power and switching for SS410 auto-off switch
- BAS compatible
- Demand shedding applications
- Low cost momentary switching of loads

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 15A Incandescent
120V 20A Ballast
230V 20A Ballast
277V 20A Ballast
120V 1 HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	OUTPUT CONTACTS
TRP-24B	98225	120/230/277	SPST
TRP-24I	98227	120/230/277	SPST
LCS115M	82082	Momentary Switch SPST	

FEATURES

OPERATION: Switches line voltage loads ON/OFF based on a contact closure from an occupancy sensor, AUTO OFF switch, or relay.

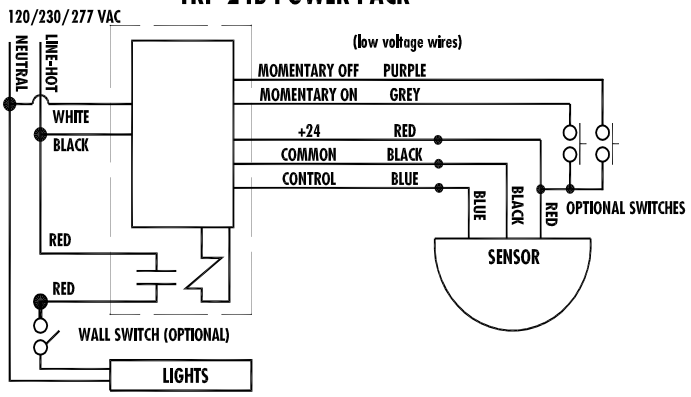
SENSOR CONTROL: Three wires for typical device control. Red and black wires for 24VDC output to power a device. Blue control wire to receive ON/OFF signal back from device.

TRP-24B INPUT: Two additional input wires to control TRP.
1. ON from momentary switch.
2. OFF from momentary switch.

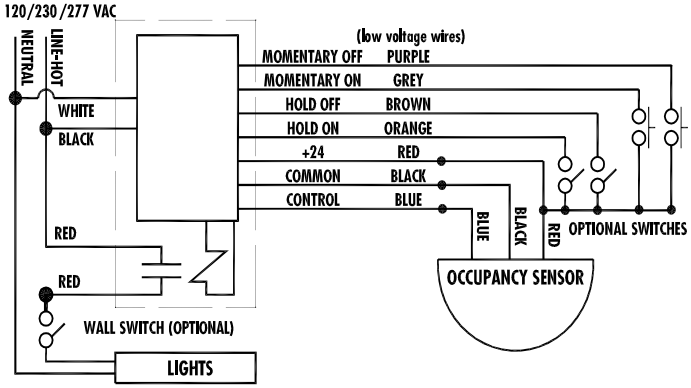
TRP-24I INPUT: Four additional input wires to control TRP.
1. Hold OFF for demand shed control.
2. Hold ON override.
3. ON from momentary switch.
4. OFF from momentary switch.

MOUNTING: Box mount to ½" KO

TRP-24B POWER PACK



TRP-24I POWER PACK



TORK® IN-WALL TIME SWITCHES

QUICK REFERENCE GUIDE

	SS700Z	SS721Z	SS720A	SS720Z	SA170	701A 711A	SS403	SS423	SS410	SS	D1060 D212	A	C
Page No.	509	509	511	512	513	514	515	515	515	517	518	519	520
Timer Type	SunSet 7 Day Digital	SunSet 7 Day Digital	7 Day Digital	SunSet 7 Day Digital	ZipSet Digital	24 Hour Mechanical	Auto OFF Digital	Auto OFF Digital	Auto OFF Digital	Auto OFF Electronic	Auto OFF Electronic	Auto OFF Mechanical	Auto OFF Mechanical
Voltage	120/277	120/277	120	120	120	120	120/277	120/277	24	24/120/ 208-240/277	120	125/250/ 277	125/250/ 277
Minimum Settings ON	1 min.	1 min.	1 min.	1 min.	1 min.	30 min.	5 min-24 hr	5 min-24 hr	5 min-24 hr	1 min-18 hr	10-60 min. 2-12 hr	Various 2 min-12 hr	Various 2 min-12 hr
Minimum Settings OFF	1 min.	1 min.	1 min.	1 min.	1 min.	30 min.	5 min.	5 min.	5 min.	1 min.	10 min.		
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes							
SunSet (Astronomic)	Yes	Yes		Yes	ZipSet								
ON/OFF Set Points	10 Pair	10 Pair	7 Pair	7 Pair	1 Pair	24							
Flash Warning							Yes	Yes	Yes	Yes			
Audible Warning							Yes	Yes	Yes	Yes			
Power Outage Backup	Capacitor	Capacitor	Battery	Battery	Battery								
Switch Type	SPST	SPST	SPST	SPST	SPST	SPST	SPST	SPST	SPDT	SPST or SPDT	SPST	SPDT	SPDT or DPST
Resistive Ratings	16A	16A	15A	15A	15A	15 & 20A	15A	15A	1A	4A or 7.5A	15A	20/10/ 10A	20/10/ 10A
LED Ratings	10A	10A					1200W	1200W					
Neutral Required for Wiring	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No
3-Way Wiring	Yes	Yes	No	No	No	No	Yes	Yes	Yes	SS13 Yes	No	No	No

TORK® SS700Z & SS721Z

SunSet IN-WALL TIMER

SUNSET / SUNRISE / 7 DAY

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

UL LISTED FOR LED

BACK-UP WITHOUT BATTERIES!

APPLICATIONS

c UL us

- Commercial outdoor security lighting
- Interior lobby lighting
- Contactors for fans and motors
- Sign lighting

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120/277VAC, 50/60Hz.

WIRE SIZE: #12AWG input/output - #16AWG 3-way (remote).

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C).

FEATURES

SCHEDULING: 10 ON and OFF pairs of set points for individual programs on each day of the week. 11 day groups speed programming. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Sunset and sunrise times are adjustable from 10°-60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes for earlier or later operation.

RANDOM MODE: Varies ON and OFF times to create lived in look when away.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL MODE: Does not run programs until set to AUTO (automatic) mode.

VACATION MODE: No operation when away.

EASY WIRING:
SS700Z does not require a neutral, can be used as a 3-way switch.

SS721Z Requires a neutral, can be used as a 3-way switch.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 2 days of real time backup.

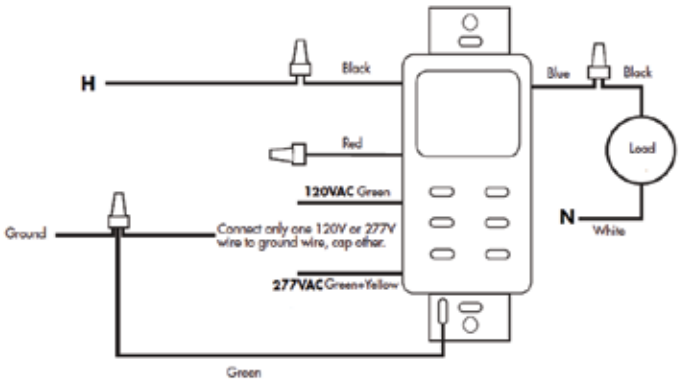
COMMERCIAL GRADE SPECS: Control lighting contactors and 277VAC loads. Compatible with CFL lamps.

FULL SWITCHING: No minimum load requirement.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	SWITCH TYPE	COLOR
SS700Z	14019	120/277	SPST	White
SS700ZA	14020	120/277	SPST	Light Almond
SS721Z	14027	120/277	SPST	White
SS721ZA	14028	120/277	SPST	Light Almond

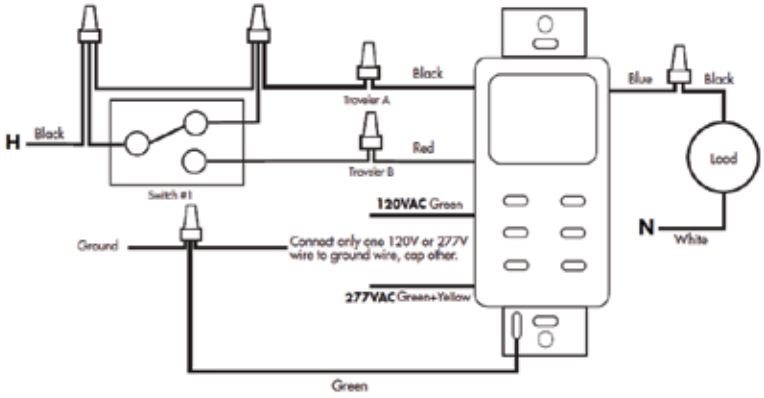
TYPE	SS700Z SERIES RATING	VOLTAGE (VAC)	SS721Z SERIES RATINGS
Resistive	16A	120-277	16A
Ballast	10A	120-277	13A
LED Driver	10A	120-277	10A
Tungsten	8A	120	8A
Pilot Duty	360VA	120	720VA
Motor	1/2HP	120	1/2HP

WIRING DIAGRAM: INSTALLATION SS700Z

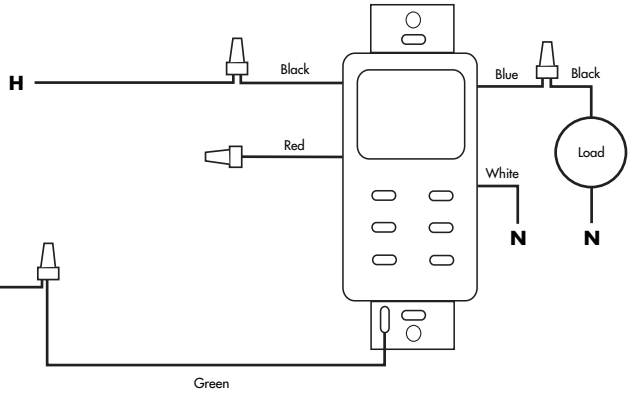


WIRING DIAGRAM: THREE-WAY INSTALLATION SS700Z

Connect a wire inside the gang-box between Traveler A and Hot.

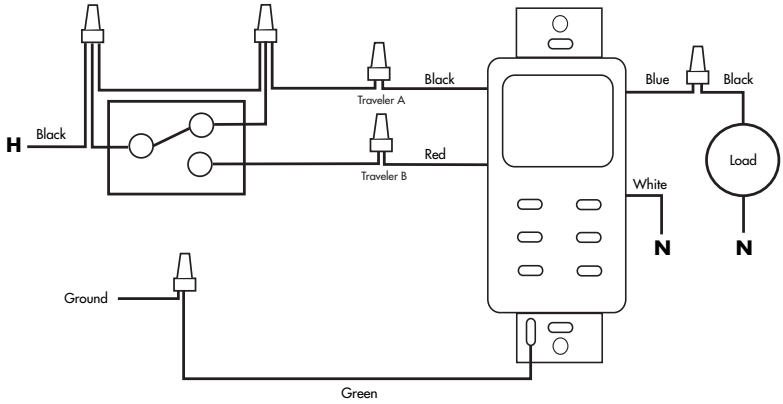


WIRING DIAGRAM: INSTALLATION SS721Z



WIRING DIAGRAM: THREE-WAY INSTALLATION SS721Z

Connect a wire inside the gang-box between Traveler A and Hot.



SS720A SERIES
7 DAY IN-WALL RESIDENTIAL TIMER

APPLICATIONS

- Residential Interior lights
- Random for lived-in look
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/month

INPUT VOLTAGE: 125VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
SS720A	14017	120	White
SS720AA	14018	120	Light Almond

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	15A
Tungsten	120	15A
Motor	120	1HP
Electronic Ballast	120	500VA

FEATURES

SCHEDULING: 7 ON and OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

DAYLIGHT SAVING: Manual button push for one hour adjustment.

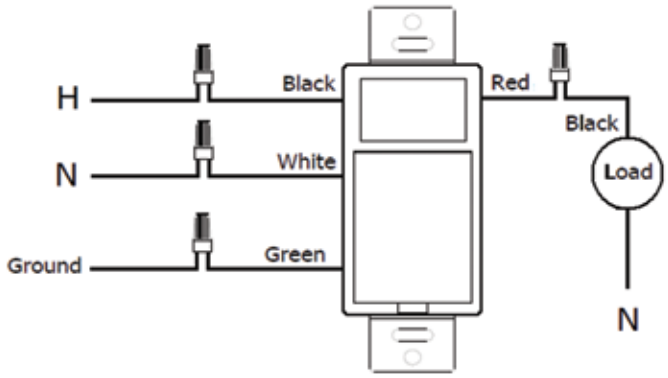
MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Rechargeable Ni-Cad battery retains time and schedule.

WALL PLATE: Supplied with standard single gang decorator wall plate.



TORK® SS720Z

SunSet IN-WALL RESIDENTIAL TIMER

SUNSET / SUNRISE / 7 DAY

APPLICATIONS

- Residential Interior lights
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/ month

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
SS720Z	14023	120	White

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	15A
Tungsten	120	960W
Motor	120	½HP
Electronic Ballast	120	500VA

FEATURES

SCHEDULING: 7 ON and OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Sunset and sunrise times with five zones: North USA/Southern Canada, Central USA, South USA, Northern Canada/Alaska, and Hawaii/Puerto Rico.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

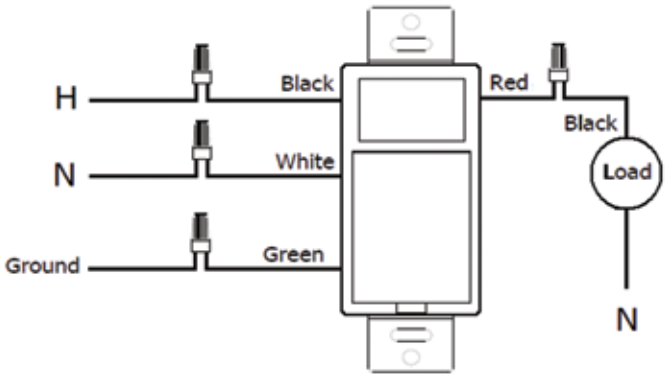
MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Rechargeable Ni-Cad battery retains time and schedule.

WALL PLATE: Supplied with standard single gang decorator wall plate.



SA170 SERIES
Zip-Set™ IN-WALL RESIDENTIAL TIMER
SUNSET / TIME OFF

*Wall plate not included

APPLICATIONS

- Residential Exterior lights
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/month

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

	CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
NEW!	SA170	16528	120	White

TYPE	VOLTAGE (VAC)	RATING
Resistive	120	15A
Inductive	120	15A
Tungsten	120	5A
Motor	120	1/2HP

FEATURES

Zip-Set™ factory preset time. Just enter area code and it finds correct time and sunset time.

SCHEDULING: One On/Off set point pair is active at a time. Schedule 1, Schedule 2, a combination of 1 & 2, or ZipSet™. Day combinations for 7-5-2 speed programming.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

COUNTDOWN: Button press turns lights ON and starts a 5 minute countdown to OFF.

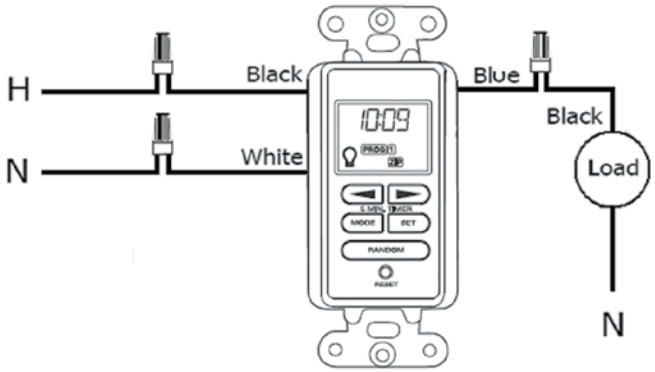
DAYLIGHT SAVING: Manual button push for one hour adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Lithium batteries retain time and schedule.



701A & 711A SERIES
24 HOUR IN-WALL TIMER

APPLICATIONS

- Porch or patio
- Doorway
- Pool
- Outdoor security lighting

FEATURES

SCHEDULING: Minimum ON setting is 30 minutes. Dial has 48 captive trippers.

BYPASS SWITCH: Slide switch for ON, OFF, or TIMER (automatic) operation.

VACATION MODE: Set timer OFF with no change of tripper settings.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM marked on dial.

WALL PLATE: Supplied with single gang wallplate.

SPECIFICATIONS

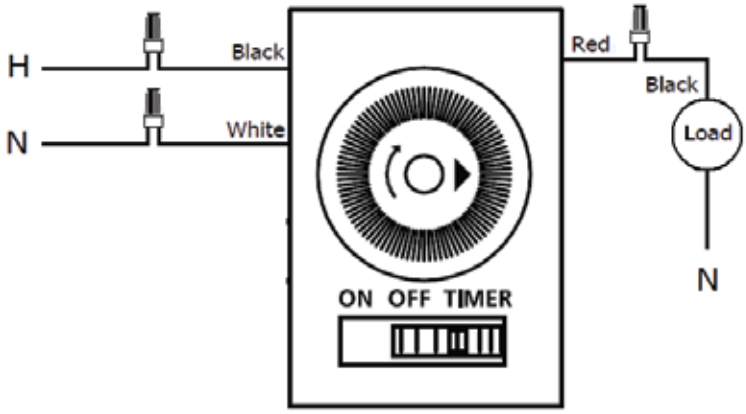
INPUT VOLTAGE: 125VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
701A	10113	125	White
701AA	10118	125	Light Almond
711A	10114	125	White

TYPE	VOLTAGE (VAC)	RATING	
		701A SERIES	711A SERIES
General Purpose	125	20A	15A
Resistive	125	20A	15A
Tungsten	125	1500W	1250W
Motor	125	1 HP	1/2 HP



TORK® SS400 SERIES
DIGITAL AUTO OFF IN-WALL TIMER

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

UL LISTED FOR LED

PROGRAMMABLE!

SS400 Series
*Wall plate included

APPLICATIONS

c UL us

- Offices, meeting rooms
- Energy code timed override
- Exhaust fans
- Equipment room and storage spaces

SPECIFICATIONS

TIMING ACCURACY: Line Frequency

INPUT VOLTAGE: SS403/SS423 – 120/230/277VAC 50/60 Hz
SS410 – 24VDC OR 24VAC 50/60 Hz

WIRE SIZE: SS403/SS423 – #14AWG input/output - #16AWG 3-way (remote)
SS410 – #18AWG

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C)

WARRANTY: 5 Yrs.

FEATURES

WIRING CHOICES:
SS403 – no neutral for retrofit
SS423 – with neutral for new construction
SS410 – multiple circuits with power packs
– low voltage for class 2 wiring

ENERGY CODE PRESET: 2 hour timing for Title 24 and IECC (default). 4 hour timing for ASHRAE 90.1 (with quick dip switch adjustment)

PROGRAMMABLE: 5 minutes to 24 hour:
5 minute steps from 5 minutes to 1 hour.
10 minute steps from 1 to 4 hours.
30 minute steps from 4 to 12 hours.
1 hour steps from 12 to 24 hours.

SCROLL LOCK: Limits user adjustment to a maximum equal to the preset time.

FLASH WARNING: Optional one second flicker turns load off/on 2 minutes before end of time cycle.

BEEPER WARNING: Optional beep will sound every 15 seconds during the last 2 minutes of the time cycle.

TAMPER RESISTANT: Wall plate locks access to dip switch adjustments.

THREE-WAY & MULTI-WAY: Three-way compatible with existing switch. Multi-way requires momentary switches at the additional locations. Maximum distance 100 feet.

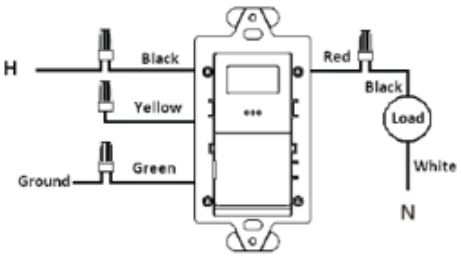
DISPLAY: Backlit LCD Display.

COLOR: White (single gang decorator wall plate included).

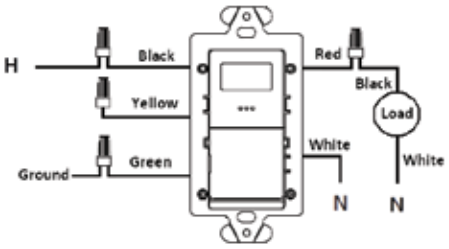
CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	SWITCH TYPE	COLOR
SS403	14029	120/230/277	SPST	White
SS423	14030	120/230/277	SPST	White
SS410	14033	24VDC or 24VAC	SPDT	White

TYPE	VOLTAGE	SS403 RATING	VOLTAGE (VAC)	SS423 RATING
Resistive	120-277VAC	15A	120-277	15A
Ballast	120-277VAC	10A	120-277	13A
LED Lamp Driver	120-277VAC	1200W	120-277	1200W
Tungsten	120VAC	8A	120	8A
Pilot Duty	120VAC	360VA	120-277	720VA
Motor	120VAC	1/4HP	120-277	1HP
		SS410		
VOLTAGE	RATING		VOLTAGE (VAC)	RATING
28VDC	.5A Max		24	1A Max
Minimum Load 1ma @ 5V				

SS403 Wiring

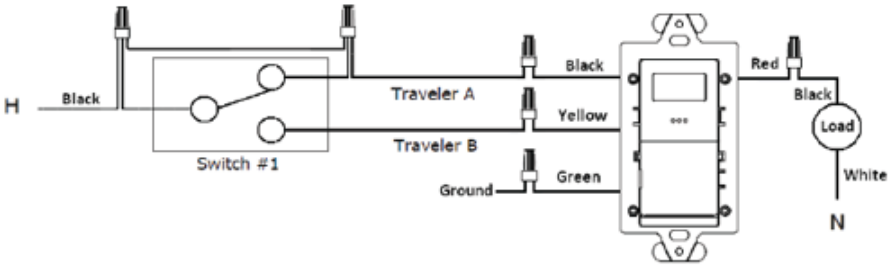


SS423 Wiring



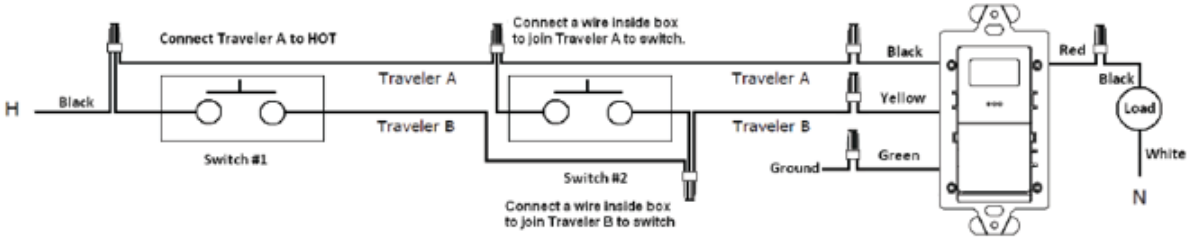
SS403 Wiring for 3-Way

Connect a wire inside the gang-box between Traveler A and HOT

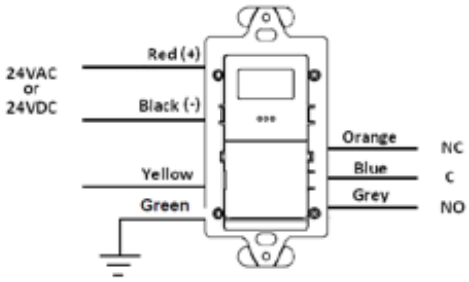


SS403 Wiring for 4-Way

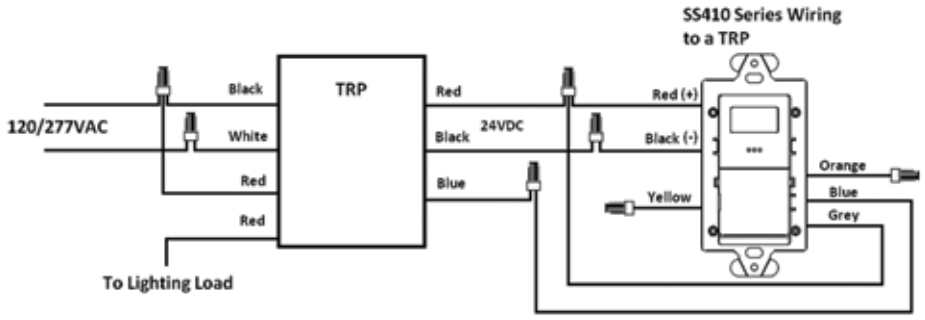
Use mometary switches at all additional locations.
Tork #LCS115M



SS410 Series Wiring



SS410 Series Wiring to a TRP



SS SERIES
AUTO OFF
IN-WALL TIMER

APPLICATIONS

- Bathroom fans and lights
- Indoor/Outdoor lighting
- Storage areas
- Hospitality areas

SPECIFICATIONS

TIMING ACCURACY:
±5% @ 60° to 80°F.

INPUT VOLTAGE:
24/120/208-240/277VAC, 50/60Hz.

WIRE SIZE: #18AWG.

OPERATING TEMPERATURE:
0°F to +100°F (-17°C to +37°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	WARNING BEFORE TIME OUT	SWITCH TYPE
SS20	14005	24/120/208-240/277	None	Single pole
SS20F	14008	24/120/208-240/277	*Flicker	Single pole
SS13F	14007	24/120/208-240/277	*Flicker	3-way
SS13B	14006	24/120/208-240/277	**Beep	3-way

*Flicker feature turns load OFF for ½ second, 2 minutes before end of timed cycle and again 1 minute before end of timed cycle.
**Beep feature will begin a ½ second audible warning every 12 seconds during the last 2 minutes of timed cycle.

FEATURES

VARIABLE TIMING: Choose from 1 minute to 18 hours.

FLASH WARNING: "F" suffix models with flicker feature turns load off for 1/2 second, 2 minutes before end of timed cycle and again 1 minute before end of timed cycle.

AUDIBLE WARNING: "B" suffix model will buzz that every 12 seconds during the last 2 minutes of timed cycle.

TAMPER RESISITANT: Time ON interval preset is hidden behind wall plate.

EASY SET: Small screw driver adjustment provides quick set-up of timing.

EASY WIRING: No neutral needed, great for retrofit.

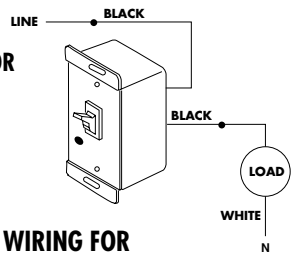
3-WAY: SS13 SERIES replaces standard 3-way switch with no re-wiring.

COLOR: White.

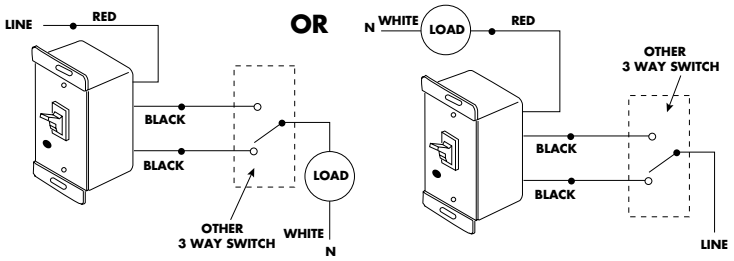
TYPE	CONTACT RATINGS	MINIMUM LOAD VOLTS	MINIMUM LOAD WATTS
SS13F & SS13B	.25-4.0A Resistive	24	6
	.25-4.0A Ballast*	120	30
	.25-4.0A Tungsten	208	50
	1/8 HP @ 120VAC	240	60
	1/3 HP @ 240VAC	277	70
SS20 & SS20F	.50-7.25A Resistive	24	12
	.50-7.25A Ballast*	120	60
	.50-4.0A Tungsten	208	105
	1/6 HP @ 120VAC	240	120
	1/2 HP @ 240VAC	277	150

*Not compatible with compact fluorescent lamps (CFL) and electronic fluorescent ballasts.

TYPICAL WIRING FOR 120 VAC SINGLE POLE



TYPICAL WIRING FOR 120 VAC – 3 WAY (Red is common)



D SERIES
ELECTRONIC AUTO OFF IN-WALL TIMER

APPLICATIONS

- Whole house fans
- Indoor/Outdoor lighting
- Bathroom fans and lights
- Self storage

SPECIFICATIONS

TIMING ACCURACY: Line voltage.

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to 122°F (0°C to 50°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	TIME SETTINGS	OUTPUT CONTACTS
D212H	14021	120	Ivory	2, 4, 8, 12 HOURS
D212HA	14022	120	Light Almond	2, 4, 8, 12 HOURS
D212HW	14023	120	White	2, 4, 8, 12 HOURS
D1060M	14025	120	Ivory	10, 20, 30, 60 MINUTES
D1060LA	14024	120	Light Almond	10, 20, 30, 60 MINUTES
D1060MW	14025	120	White	10, 20, 30, 60 MINUTES

FEATURES

VARIABLE TIMING:
Button push changes time ON setting.

D1060M: 10, 20, 30, 60 minute.
D212H: 2, 4, 8, 12 hour.

LED DISPLAY: Indicator moves to new range as timer counts down.

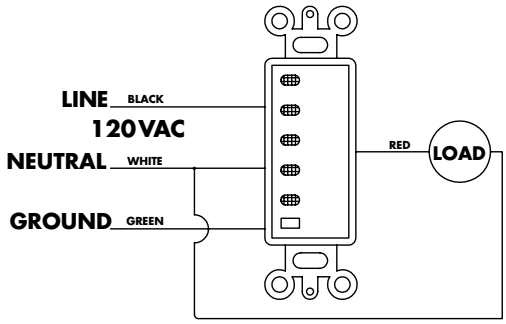
TAMPER RESISTANT: Time ON interval preset.

EASY SET: No adjustments, just wire and go!

WIRING: Requires a neutral.

THREE COLORS: Ivory, Light Almond, White.

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	1000W
Tungsten	120	1000W
Motor	120	1/4 HP
Ballast	120	1000VA



A SERIES
SPRINGWOUND AUTO OFF IN-WALL TIMER

*Wallplate not included

NEW!
SPDT, 2 IN 1 CONTACTS

APPLICATIONS

- Whole house fans
- Indoor/Outdoor lighting
- Bathroom fans and lights
- Self storage

SPECIFICATIONS

INPUT VOLTAGE:
125/250/277VAC, 50/60Hz.

TERMINAL SIZE: #12AWG.

OPERATING TEMPERATURE:
32°F to 122°F (0°C to 50°C).

CATALOG NO.	UPC CODE	HOLD FEATURE	COLOR
15 MINUTE MAX.			
A515MH	15020	With Hold	Ivory
A515MHW	15120		White
A515M	15013	No Hold	Ivory
A515MW	15113		White
A515MA	15127		Light Almond
30 MINUTE MAX.			
A530MH	15021	With Hold	Ivory
A530MHW	15121		White
A530M	15014	No Hold	Ivory
A530MW	15114		White
A530MA	15128		Light Almond
60 MINUTE MAX.			
A560MH	15022	With Hold	Ivory
A560MHW	15122		White
A560M	15015	No Hold	Ivory
A560MW	15115		White
2 HOUR MAX.			
A502HHW	15123	With Hold	White
A502H	15016	No Hold	Ivory
A502HW	15116		White
6 HOUR MAX.			
A506HHW	15125	With Hold	White
A506H	15018	No Hold	Ivory
A506HW	15118		White
12 HOUR MAX.			
A512HH	15026	With Hold	Ivory
A512HHW	15126		White
A512H	15019	No Hold	Ivory
A512HW	15119		White

FEATURES

VARIABLE TIMING: Twist knob for time ON setting. Time ON lengths from 15 minutes to 12 hour vary by model.

HOLD FEATURE: Some models have position for constant ON.

EASY SET: No adjustments. Just wire and go!

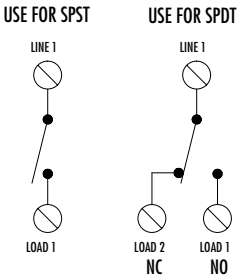
EASY WIRING: No neutral required. Great for retrofit! Use as single or in multi-gang box with no de-rating.

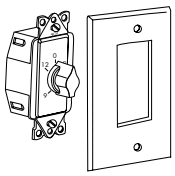
SWITCH TYPE: SPDT "2 in 1" contacts wire has SPST also.

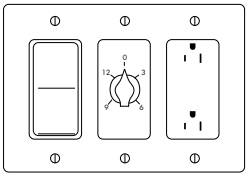
COLOR: Ivory, Light Almond, White.

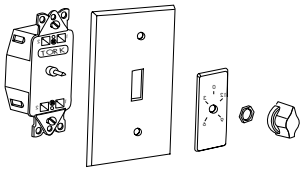
WALL PLATE: Fits standard or decorator style wall plates, see below (not included).

TYPE	VOLTAGE (VAC)	RATING
Resistive	125 250 277	20A 10A 10A
Inductive	125 250 277	20A 10A 10A
Tungsten	125	7A
Motor	125 250	1HP 2HP









CAUTION: This timer is not to be used in precision timing applications where inaccurate timing could have dangerous consequences (i.e. sun lamp, sauna, etc.).

C SERIES
COMMERCIAL STYLE SPRINGWOUND AUTO OFF IN-WALL TIMER

*Wallplate included

NEW! SPDT, 2 IN 1 CONTACTS

APPLICATIONS

c UL us

- Ventilating fans
- HVAC
- Whirlpools
- Self storage
- Motors and pumps

SPECIFICATIONS

INPUT VOLTAGE: 125/250/277VAC, 50/60Hz.

TERMINAL SIZE: #12AWG.

OPERATING TEMPERATURE: 32°F to 122°F (0°C to 50°C).

TYPE	VOLTAGE (VAC)	RATING
Resistive	125 250 277	20A 10A 10A
Inductive	125 250 277	20A 10A 10A
Tungsten	125	7A
Motor	125 250	1HP 2HP

FEATURES

VARIABLE TIMING: Twist knob for time ON setting. Time ON lengths from 15 minutes to 12 hour vary by model.

HOLD FEATURE: Some models have position for constant ON.

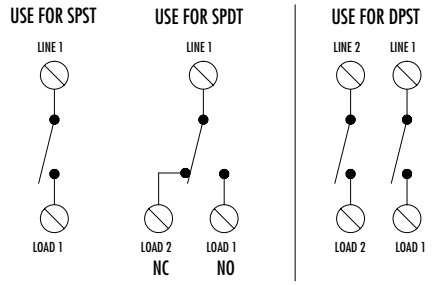
EASY SET: No adjustments. Just wire and go!

EASY WIRING: No neutral required. Great for retrofit!

SWITCH TYPE: SPDT "2 in 1" contacts wire as SPST also, except C460M and C412H are DPST.

COLOR: Metal-brushed aluminum.

WALL PLATE: Includes real metal wall plate with screw mounting, to add extra security for commercial applications.



CAUTION: This timer is not to be used in precision timing applications where inaccurate timing could have dangerous consequences (i.e. sun lamp, sauna, etc.).

CATALOG NO.	UPC CODE	HOLD FEATURE
15 MINUTE MAX.		
C515M	15501	No Hold
30 MINUTE MAX.		
C530M	15503	No Hold
60 MINUTE MAX.		
C560M	15505	No Hold
C560MH	15506	With Hold
C460M*	15011	No Hold
2 HOUR MAX.		
C502H	15507	No Hold
6 HOUR MAX.		
C506H	15511	No Hold
12 HOUR MAX.		
C512H	15513	No Hold
C512HH	15514	With Hold
C412H*	15010	No Hold

*DPST switch type.

TORIC
TIME

TORK® PLUG-IN TIMERS

400 SERIES
INDOOR PLUG-IN MECHANICAL TIMERS

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Control lamps, radios, televisions, appliances.
- Give the home a "lived in" look while away.
- Save energy and provide security.

401A

▲ 403A

402A

▲ 405A

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

ON/OFF: Manual ON/TIMER switch.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
401A	16001	125 VAC, 15A, 1875W Resistive 125VAC, 10A, 1250W Tungsten 125VAC, 1/3HP	1	Polarized	Multiple ON/OFF Lighting Timer	15 minute
402A	16002		1	Grounded	Heavy Duty 24 hour Timer	15 minute
403A	16013		1	Polarized	Powerful & Compact Automatic Timer	30 minute
405A	16014		2	Grounded	Heavy Duty 15 AMP Automatic Timer	15 minute

NOTE: "▲" = Indicates outlet location.

SA100 SERIES
INDOOR PLUG-IN MECHANICAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Control lamps, radios, televisions, appliances.
- Give the home a "lived in" look while away.
- Save energy and provide security.

SA011

SA105

SA100

SA110

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

ON/OFF: Manual ON/TIMER switch.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA011	16501	120VAC 15A Resistive, 120VAC 15A Inductive , 120VAC 1800W Tungsten, 120VAC 1/2HP Motor	1	Polarized	Lamp Timer with LED night light	Two Pair of On/Off trippers
SA100	16507	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1800W Tungsten	1	Polarized	Basic Timer with cover to hide dial	15 Minutes
SA105	16510		1 Timed 1 Untimed	Polarized Polarized	Table Top Timer for easy access with 6" cord	15 Minutes
SA110	16513		1 Timed 1 Untimed	Grounded Polarized	Heavy Duty Appliance Timer with cover to hide dial	15 Minutes

NOTE: "▲" = Indicates outlet location.

SA100 & 400 SERIES
INDOOR DIGITAL PLUG-IN TIMERS

NEW!

SA134

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Vary schedules daily.
- Give the home a "lived in" look while away.
- Save energy and provide security.

SA130

455D

457Z SunSet

FEATURES

SA134:
24 hour programming
Battery Back-up for power outages

SA130 & 455A:
7 day programming
Random feature for lived in look
Manual Daylight Savings
Battery Back-up for power outages

SunSet™ TIMER 457Z:
Sunset On with 7 day programmable Off or sunrise Off
Random feature for lived in look
Automatic Daylight Savings
Battery Back-up for power outages
Never come home to a dark house

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA134	16522	120VAC 8.3 amp Resistive 120VAC 600W Tungsten	1	Polarized	Easy Set 24 hour daily repeat timer	2 On/Off Settings
SA130*	16519	120VAC 15A Resistive , 120VAC 15A Inductive, 120VAC 500W Tungsten 120VAC 1/2 HP Motor	1 Timed 1 Untimed	Polarized	Easy Set Lamp Timer with cover to hide buttons	2 On/Off settings. 1 setting may be active at a time
455D	16015	125VAC 15A General Purpose 125VAC 15A Resistive 125VAC 1000W Tungsten	2	Grounded	Seven Day Programmable	24 ON/OFFs Different schedule for each day of the week. Multiple ON/OFFs
457Z	16016		2	Grounded	SunSet™ Timer Dusk to Dawn with automatic daylight savings	20 ON/OFFs Different schedule for each day of the week. Multiple ON/OFFs

NOTE: "▲" = Indicates outlet location. *ETL Listed for US and Canada

SA200 & SA500 SERIES
WIRELESS PLUG-IN CONTROLS

NEW!

APPLICATIONS

- Remotely turn ON/OFF items.
- Control lamps, radios, appliances, outdoor lighting.
- Safety: enter and leave rooms in full light.
- Provide a convenient control from your chair.

SA230

SA500

FEATURES

INDOOR REMOTE OUTLET - SA500 :

Control indoor outlet up to 80′ away
Transmitter has 3 pair ON/OFF buttons to allow independent control of 3 receivers
Match receiver and outlet with simple dial. No fussy programming.
Get one for each room. No cross talk.
Wireless control without moving across room

OUTDOOR REMOTE OUTLET - SA230:

Control indoor outlet up to 80′ away
Matched receiver and outlet. No programming
Transmitter has 1 pair ON/OFF button
Wireless control from the comfort of inside

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA500	16555	125VAC 8A Resistive 125VAC 625W Tungsten	1	Grounded	Indoor Remote Controlled Outlet	Manual On/Off with push button transmitter
SA230	16564	125VAC 8A Resistive 125VAC 600W Tungsten	2	Grounded	Outdoor Remote Controlled Outlet	Manual On/Off with push button transmitter

NOTE: "▲" = Indicates outlet location.

600 & SA200 SERIES
OUTDOOR PLUG-IN MECHANICAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting.
- Save energy. Don't run lights all night.
- Match dusk On with light activated timer.

601A

652B

602A

SA205

FEATURES

MECHANICAL TIMERS:

TIMER REPEAT SCHEDULE: Daily.
VARIABLE TIMING: Multiple ON/OFF times.
MANUAL SWITCH: ON or TIMER mode

LIGHT ACTIVATED TIMERS:

TIMER REPEAT SCHEDULE: Daily turns on at dusk
VARIABLE TIMING: Dial turn to choose a countdown time to turn Off hours after dusk

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
601A	16020	125 VAC, 15A, 1875W General Purpose 125VAC, 15A, 1875W Resistive 125VAC, 10A, 1250W Tungsten 125VAC, 1/2HP	1	Grounded	Outdoor Lighting Timer	15 Minutes
602A	16021		2	Grounded	Outdoor Lighting Timer	15 Minutes
SA205*	16534	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1800W Tungsten 120VAC 1800W Incandescent 120VAC 1/2 HP Motor	1 Timed 1 Untimed	Grounded	Landscape Timer	15 Minutes
652B	16018	125VAC 15A General Purpose 125VAC 15A Resistive 125VAC 1000W Tungsten 125 VAC 500VA Electronic Ballast 125VAC 1/3HP, TV-5	2	Grounded	Light Activated Outdoor Lighting Timer	Turns on at Dusk and countdown Off 2, 4, 6 or 8 hours later

* ETL listed for U.S. and Canada.

NOTE: "▲" = Indicates outlet location.

600 & SA200 SERIES
OUTDOOR PLUG-IN DIGITAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Match dusk On with light activated timer

621D & 631D
(621D without photocell)

611D

654A

SA204

FEATURES

DIGITAL TIMER:
7 day programming
Manual Daylight Savings
Random feature for lived in look
Battery Back-up for power outages

PHOTO-TIMERS:
Dusk to Dawn operation
Set a fixed time off before Dawn
Battery Back-up for power outages

LIGHT ACTIVATED TIMERS:
TIMER REPEAT SCHEDULE: Daily turns on at dusk.

VARIABLE TIMING: Choose a countdown time to turn Off from 1 to 9 hours after dusk.

654A USER SELECT MODE: Start countdown at any time and repeats daily.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
621D	16056	125 VAC, 15A, 1875W General Purpose 125VAC, 15A, 1875W Resistive 125VAC, 1000W Tungsten 125VAC, 8A Ballast 125VAC, 1/2HP	2	Grounded	Digital Outdoor Timer	7 On/Off pairs. Schedule for each day of week
611D	16018		1	Grounded	Digital Outdoor Photo-Timer	Photocell Turns on at Dusk and off at Dawn or off at a pre-set time
631D	16027		2	Grounded	Digital Outdoor Photo-Timer	
SA204*	16561	120VAC 8A Resistive 120VAC 600W Tungsten	2	Grounded	Light Activated Landscape Timer	Turns on at Dusk and countdown off 1 through 9 hours later
654A	16025	125VAC 15A General Purpose, 125VAC 15A Resistive, 125VAC 625W Tungsten 125VAC 1/3HP, TV-5	2	Grounded	Light Activated Outdoor Lighting Timer or User Selected Daily Repeat	Turns on at Dusk and countdown off 1 through 9 hours later. Includes user select mode.

* ETL listed for U.S. and Canada.

NOTE: "▲" = Indicates outlet location.

SA200 SERIES
OUTDOOR PLUG-IN STAKE TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Multiple outlets for holiday lighting

SA215

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

MANUAL SWITCH: ON or TIMER mode.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA215	16540	125V 15A Resistive 125V 1250W Tungsten 125V 1/2HP Motor	6	Grounded	Holiday Décor Stake Timer	30 minutes

NOTE: "▲" = Indicates outlet location.

SA200 SERIES
OUTDOOR Zip-Set DIGITAL PLUG-IN TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Match dusk On everyday

FEATURES

- Fast programming with ZIP-SET™ One-Step™ set-up. Just enter your area code
- ZIP-SET™ turns lights ON at sunset & OFF at countdown or preset time.
- 7-5-2 settings for full week, weekdays, and weekends
- Option to set with one of three on/off programs
- Manual Daylight Savings
- Random feature for lived in look
- Battery Back-up for power outages

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA210	16537	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1000W Tungsten 120VAC 1/4 HP Motor	2 Timed 1 Untimed	Grounded	Zip-Set™ Outdoor Living Wall Mount Timer	Sunset On and countdown hours to Off or same fixed time off each day
SA220	16534	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 600W Tungsten 120VAC 1/4 HP Motor	6 Timed 1 Untimed	Grounded	Zip-Set™ Outdoor Lighting Stake Timer	Sunset On and countdown hours to Off or same fixed time off each day

TORK*ALERT*™ SIGNALING DEVICES

MECHANICAL STROBE HORNS

TA880-N5

TA5508H-G1

APPLICATIONS

- High performance for industrial signaling applications. Offers high sound output, low current draw and dependable operation. Strobes use xenon flashtube, ideal for maximum efficiency and reliability.

FEATURES

ALARM: Penetrating mechanical sound.

WIRING: Low current draw. Horn may be wired separately

MOUNTING: 4" square surface mounting.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	INPUT CURRENT (AMPS)	dB @10 FEET	CANDELA
TA880-N5	96015	120VAC	0.115	96	15
TA5508H-G1	96071	24VDC	.059	strobe only	15/75

NOTE: TA880-N5 For outdoor use, unit must be mounted in a TA-WBBF outdoor backbox. See page 550 for ordering. TA5508H-G1 for indoor mounting only.

MECHANICAL HORNS

APPLICATIONS

- Loud tone with typical decibel output of 87 dB at 10 feet. Low frequency resonation for strong penetration of noisy areas like boiler rooms, water pumping stations, elevators and air compressor rooms.

FEATURES

INPUT VOLTAGE: Wide input voltage ratings for compatibility with unregulated power supplies.

WIRING: Screw terminals for convenient IN/OUT wiring. Low current draw for minimizing power supply and wiring cost.

HOUSING: Steel, painted Dawn Mist. Resonant grill design for high sound output.

MOUNTING: To indoor box TA-BBSF or outdoor box TA-WBBF, see accessories page 550.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	INPUT CURRENT (AMPS)
SURFACE TYPE			
TA874-N5	96023	120VAC, 60Hz	0.070
TA874-N5R (Red)	97613	120VAC, 60Hz	0.070
TA875-G1	97687	24VDC	0.035
WITH WEATHERPROOF BACKBOX TA-WBBF UL LISTED FOR OUTDOOR USE			
TA876-N5	96026	120VAC, 60Hz	0.070

NOTE: Use TORK signal timers for 24 hour or 7 day scheduling, see page 485.

MULTI-TONE ELECTRONIC HORNS

24VDC &115VAC

TA875-1G1

TA-MTS

APPLICATIONS

- For indoor and outdoor use. Superior sound penetration for various room conditions. Screw terminals accept #12AWG.

FEATURES

OPERATING TEMPERATURE:
TA-MTS: -31˚F to +150˚F (-35˚C to +66˚C).

DIMENSIONS AND MOUNTING:
TA-MTS: 4 1⁄18″H x 4 1/8″W x 3 17/32″D
Can be mounted on celing or wall.
TA875-1G1: 4 3/4″H x 4 3/4″W x 1 3/8″D
1 gang, 2 gang or 4" square backbox.

TA875-1G1 24VDC HORN		
ALARM TONE	CURRENT (AMPS)	TYPICAL dB @10 FEET
BELL	0.020	91
HI-LO	0.025	96
CHIME	0.028	93
SINGLE STROKE BELL	0.026	93
HORN	0.023	97
3 BEEPS, PAUSE	0.023	97
SIREN	0.040	95
SLOW WHOOP	0.040	96

TA-MTS 115VAC HORN				
ALARM TONE	AMPS @ 120VAC		TYPICAL dB @10 FEET	
	HIGH	STANDARD	HIGH OUTPUT	STANDARD OUTPUT
HORN	0.050	0.042	85	82
BELL	0.041	0.039	82	75
HORN 2	0.050	0.040	85	79
CODE 3 HORN	0.050	0.042	82	75
CODE 3 TONE	0.042	0.040	79	75
SLOW WHOOP	0.050	0.042	85	82
SIREN	0.045	0.041	85	82
HI-LO	0.042	0.039	82	79

CATALOG NO.	UPC CODE	INPUT VOLTAGE	DESCRIPTION
TA875-1G1	97641	20-31VDC	Multi-tone Electric Horn
TA-MTS	97674	115 VAC	Multi-tone Electric Horn

HEAVY DUTY BELLS

4", 6", 10" DIAMETERS
AC VIBRATING BELLS

APPLICATIONS

- For indoor or outdoor applications. High sound output, durable and dependable performance. Ideal for schools and hopsitals.

FEATURES

TERMINAL SIZE: #12 - 22 AWG.

WIRING: Screw terminals permit fast IN/OUT field wiring.

HOUSING: Steel gong and cast aluminum. See page 551 for dimensional drawings.

MOUNTING: To indoor box TA-BBSF or outdoor box TA-WBBF, see accessories page 550.

CATALOG NO.	UPC CODE	SHELL SIZE	VOLTAGE	INPUT CURRENT (AMPS)	dB @ 10 FEET	COLOR
TA340-4G5	96001	4″	24VAC	0.320	81-90	Dawn Mist
TA340-4N5	96002	4″	120VAC	0.065	81-90	Dawn Mist
TA340-6G5	96003	6″	24VAC	0.320	81-95	Dawn Mist
TA340-6N5	96004	6″	120VAC	0.065	81-95	Dawn Mist
TA340-10G5	96005	10″	24VAC	0.320	84-98	Dawn Mist
TA434-4N5	98005	4"	120VAC	0.065	81-95	Red
TA434-6N5	97521	6″	120VAC	0.065	81-95	Red
TA434-10N5	96522	10″	120VAC	0.065	84-98	Red

LIGHT DUTY AND GENERAL PURPOSE BELLS & BUZZER

TA740

TA725

APPLICATIONS

- Designed to operate on either bell ringing transformers or batteries. Non-adjustable sound.

CATALOG NO.	UPC CODE	DESCRIPTION	VAC	VDC	AMPS	dB
TA740	96228	2½" Gong	8-16	3-6	1	76 @ 10'
TA744	96230	4" Gong	8-16	3-6	1	78 @ 10'
TA725	96226	Buzzer	8-16	3-6	1	88 @ 3'

FEATURES

ALARM: Bell ringing, non-adjustable sound.

DIMENSIONS FOR TA725:
3" H x 2½" W x 1" D.

MOUNTING: Fully enclosed sturdy steel bases and covers. Base and cover snap together, no screws required.

CHIMES & CHIME KITS

APPLICATIONS

- Powerful and loud, pleasant sounding push-button chimes. Ideal for homes, apartments and offices.

CATALOG NO.	UPC CODE	DESCRIPTION	DIMENSIONS
TAC212WS	96064	16VAC Chime + Push Button clip for Stucco + 10VA Transformer	7 3/16"L x 4"W x 2"D
TAC212WL	96054	16VAC Chime +1 Illuminated & 1 Non-illuminated Push-button +10VA Transformer	7 1/4"L x 4 3/4"W x 2 1/2"D

FEATURES

INPUT: 16V, 10VA, 120VAC.

ALARM: Chime.

MOUNTING: Fully enclosed sturdy steel bases.

WEATHERPROOF MOTOR DRIVEN SIREN

APPLICATIONS

- For industrial and outdoor use. Ideal for evacuation and warning systems.

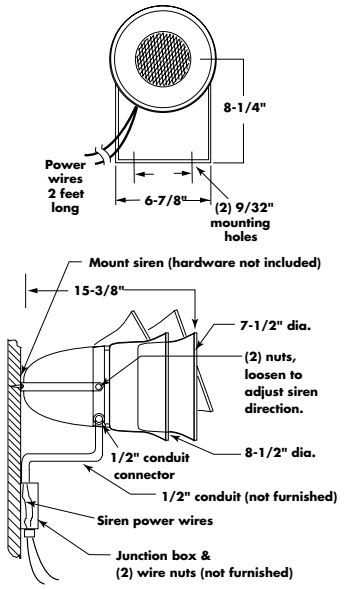
FEATURES

INPUT VOLTAGE: 120AC & DC, 60Hz.

ALARM: Loud, distinctive tone. Designed to be effective over standard horns or bells.

HOUSING: Red enamel paint over heavy gauge aluminum housing. Fully enclosed motor. 180° swivel and adjustable direction.

DIMENSIONS



CATALOG NO.	UPC CODE	INPUT VOLTAGE	dB @10 FEET	AMPS	VA
TA315-1N5	96599	120VAC/DC	117	2.5	300

MANUAL FIRE ALARM
PULL-DOWN STATION

APPLICATIONS

- Designed for indoor use. Ideal for schools, hospitals, industrial plants, warehouses and retail stores. Key required to close and reset device. Meets requirements, BSA, MEA, CA and UL.

FEATURES

ALARM: Loud, distinctive tone. Designed to be compatible with any control panel to initiate local alarm signals, trip municipal fire alarm box and start fire pumps.

MOUNTING: Sturdy metal construction, mounts to a standard single gang electrical box.

CATALOG NO.	UPC CODE	SWITCH	VOLTS	AMPS
TA270A	96521	SPST, NO	30V AC/DC	1

TELEPHONE RELAY

APPLICATIONS

- This device activates appliances when a telephone ring voltage is detected. For indoor and outdoor use with horns, bells or strobes. Recommended use where ambient noise levels are high. FCC approved.

FEATURES

INPUT: Accepts RJ-11C phone plug.

WIRING: Hard wire connections, for analog phone lines.

MOUNTING: Weatherproof, indoor and outdoor, includes mounting bracket.

CATALOG NO.	UPC CODE	INPUT TELEPHONE RING VOLTAGE	AC INPUT VOLTAGE	RINGER EQUIVALENCE	PEAK CANDLEPOWER
TA-B-8332	97100	39-150V/20-30Hz	115VAC-5A, 230VAC-2A	Up to 115VDC-500MA	0.6

WALL CLOCKS
QUARTZ & ELECTRIC

APPLICATIONS

- Each model meets United States Government Specifications. All Clocks provide second hand for accurate timing.

FEATURES

QUARTZ
Accurate to one minute per year. Low power consumption for long battery life. Uses AA battery (not supplied).

ELECTRIC (UL)
110VAC, 60 Hz synchronous motor. 66 inch line cord and plug. Does not require grounding.

MOUNTING: Concealed mounting brackets allow for simple, neat placement on walls.

QUARTZ CLOCK				
CATALOG NO.	UPC CODE	TYPE	SIZE	FRAME COLOR
TA1886 G	96156	QUARTZ	8″	Grey
TA1886 B	96155	QUARTZ	8″	Brown
TA1887 G	96159	QUARTZ	12″	Grey
TA1887 B	96157	QUARTZ	12″	Brown
TA1887 BK	96158	QUARTZ	12″	Black

ELECTRIC CLOCK				
CATALOG NO.	UPC CODE	TYPE	SIZE	FRAME COLOR
TA1880 G	96152	ELECTRIC	8″	Grey
TA1880 B	96151	ELECTRIC	8″	Brown
TA1882 G	96154	ELECTRIC	12″	Grey
TA1882 B	96153	ELECTRIC	12″	Brown

ELECTRIC DOOR OPENERS
REMOTE CONTROL & CONTACT DEVICES

APPLICATIONS

- For unlocking or locking metal or wooden doors using low voltage wiring. For AC, use TA591 or TA592 transformer.

MAGNETIC SWITCH CONTACTS

For activating a variety of signals, ideal for limiting space applications. Self-insulating and can be mounted in any direction. All units include companion magnet. Dimensions: 2 3/16"L x 1/2"W x 1/2"D

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA60	96975	Circuit closed with magnet engaged		
	TA61	96976	Make & break NO and NC	24VAC 12VDC	.5
	TA62	96977	Circuit open with magnet engaged		
	TA67W	96979	Terminal Cover		

DOOR/WINDOW CONTACTS, ROLLING BALL TYPE

Signals automatically with the opening and closing of doors, windows and transoms. Operates from pressure in any direction. Non-tilt, non-jamming design. Fits 3/4" hole; no need to mortise.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA44	96995	Normally closed Push to open		
	TA45	96996	Normally open Push to close	12-24V AC/DC	2
	TA46	96997	Momentary contact Push to make & break		

MORTISE TYPE REMOTE OPENER

Reversible for right or left hand door. Use with mortise entrance locks having a latch bolt with up to 1/2" width and throw. 6" wire leads. Dimensional drawings available.

DEVICE	CATALOG NO.	UPC CODE	VOLTS	AMPS
	TA09	96960	8-16VAC 3-6VDC	.95-1.75 1.25-1.80
	TA154	96962	16VAC 3-6VDC	.95-1.75 1.25-1.80

ELECTRIC DOOR SWITCH

For turning lights/signals on or off when doors are opened or closed. Ideal for closets, dark rooms, storage areas of walk-in refrigeration. Rust resistant steel case with 4 knockouts, antique brass plate. Box dimensions: 1 1/4"W x 3 7/8"H x 2"D. Plate dimensions: 1 1/4"W x 4"

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA502	96964	Light ON when door is open	125VAC 250VAC	6 3

RIM TYPE REMOTE OPENER

Reversible for right or left hand door. Standard surface type used with lock latches with up to 5/8" width and throw. 6" wire leads. Dimensional drawings available

DEVICE	CATALOG NO.	UPC CODE	VOLTS
	TA152	96961	8-16VAC, 3-6VDC

DOOR TRIP SWITCH

Signals automatically as door is openend. Commonly used on store doors to announce entrance of customers. Mounts on top of door frame. Solid cast brass. Size: 3 x 1 5/8"

DEVICE	CATALOG NO.	UPC CODE	VOLTS	AMPS MAX.
	TA236	96963	12-24VAC	2

TORK ALERT™

PUSH-BUTTONS
ILLUMINATED, NON-ILLUMINATED & WEATHERPROOF

APPLICATIONS

- For outdoor use to activate low voltage bells, buzzers, horns or any other audible signal. Ideal for factory doors, receiving departments, small office buildings, limited access retail stores and private homes.

WEATHERPROOF PUSH-BUTTONS / SOLID CAST BRASS

BUTTON	CATALOG NO.	UPC CODE	DESCRIPTION	INPUT VOLTAGE
	TA1786B	96090	Without conduit backplate	Momentary Contacts 4 amps AC/DC @ 12V 4 amps AC, 2 amps DC @ 24V 2 amps AC 1 amp DC @48V
	TA1786CB	96091	With conduit backplate	

ILLUMINATED PUSH-BUTTONS, UP TO 16VAC

BUTTON	CATALOG NO.	UPC CODE	COLOR	SIZE
	TA603L	96035	Gold	1 3/4" (diameter)
	TA631L	96089	White	2 3/4" x 7/8"
	TA656B	96039	Gold	15/16 x 2 3/4"
	TA215LB	96031	Brass	1 1/4 x 2″
	TA620L*	96037	Chrome	5/8" (diameter)
	TA620LB*	96038	Brass	5/8" (diameter)

NON-ILLUMINATED PUSH-BUTTONS, UP TO 24VAC

BUTTON	CATALOG NO.	UPC CODE	COLOR	SIZE
	TA600	96041	Polished Brass	2 1/4" (diameter)
	TA603	96044	Polished Brass	1 3/4" (diameter)
	TA631	96088	White	2 3/4" x 7/8"
	TA635	96047	Ivory, black bar	2 3/4" x 7/8"
	TA666BK	96048	Black, ivory bar	2 3/4" X 2 3/4"
	TA602	96043	Polished Brass	13/8" x 5 1/4"
	TA601	96042	Sprayed Brass	2 x 2 9/16"
	TA620*	96045	Chrome	5/8" (diameter)
	TA620B*	96046	Brass	5/8" (diameter)

*Stainless steel plate to fit TA620 models: Order TA 147-1

WARNING LIGHTS
INDUSTRIAL UNITS

LETTER	INDICATES COLOR
R	Red
A	Amber
C	Clear
B	Blue

APPLICATIONS

- ½" conduit mounting. Full selection of dome colors, see "Ordering Info". For outdoor use. All units must be mounted vertically with base at bottom.

TA47N5 / TA47R5 – ALL PURPOSE 360° BEACON

Large parabolic reflector rotates around a 100 wall bulb. Long range beam. Use to indicate equipment malfunctions, security intrusion, etc.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA47RN5	96061	90 FPM Corrosion resistant/Outdoor use Glass filled polypropylene housing Acrylic dome Tamper resistant dome clamps Nominal current draw 9 1/2"H x 8 1/2" diameter	117VAC	
	TA47AN5	96161		117VAC	.9
	TA47AR5	96162		240VAC, 60Hz	

TA52N5 – COMPACT ROTATING BEACON

Light intensifying reflector rotates arounf a low current 25 watt bulb. Bayonet socket for easy lamp replacement. Ideal for restricted or dangerous areas.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA52RN5	96063	80-90 FPM 360˚ rotation Dependable belt & turntable design Acrylic dome Nominal current draw 6 1/2"H x 55/8" diameter	117VAC	.21
	TA52AN5	96163			
	TA52BN5	96263			

TA93-2N5 – MIDI-STROBE

Solid state circuitry in a low profile design. No moving parts means less Maintenance!

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA93-2RN5	99622	70-80 FPM Solid state electronic circuitry High output 3-4 watt, 3.6 joules Vertically mounted flash tube Snap out socket base for 360˚ Fresnel dome optics Nominal current draw 6 1/2"H x 5 1/8" diameter	117VAC	.04
	TA93-2AN5	97623			
	TA93-2CN5	96968			
	TA93-2BN5	97624			

TA94N5 – ELECTRONIC STROBE

High intensity strobe tube with inner fluted lens for maximum brilliance. No moving parts makes it immune to shock and vibration. Ideal for security alert.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA94RN5	97626	70-80 FPM Solid state electronic circuitry High output 3-4 watt, 3.6 joules Acrylic dome Glass filled polypropylene housing Suitable for outdoor use 9 1/2"H x 8 1/2" diameter	117VAC	.04
	TA94AN5	97627			
	TA94BN5	97628			

WARNING LIGHTS
VEHICULAR UNITS

LETTER	INDICATES COLOR
R	Red
A	Amber

APPLICATIONS

- 1/2" conduit mounting.
  Full selection of dome colors, see "Ordering Info".
  For outdoor use. All units must be mounted vertically with base at bottom.

TA53E1 – ROTATING BEACON

Single point shock-mounting. Ideal for use on security or service vehicles.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA53AF1	96185	90-100 FPM Dependable belt & turntable design 25 watt lamp Acrylic Dome Nominal current draw 7 1/2"H x 6" diameter	36VDC
	TA53AG1	96184		24VDC

TA54E1 – PORTABLE, MAGNETIC, ROTATING BEACON

Single point shock-mounting. Ideal for use on security or service vehicles.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA54AE1	96187	75 FPM, 12 watt lamp Quiet belt-drive motor. Teardrop design fits under windshields. Includes glare shield, velcro tape 4 1/2" H x 7 1/2" diameter	12VDC
	TA54RE1	96087		

TA131DN5 / TA131DU1 – DOUBLE FLASH SUPER STROBE

Ideal for industrial applications requiring extremely high visibility. One model covers all popular mounting methods: ½" pipe, surface, flange, electrical box.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA131DRN5	96510	60 FPM, 7.5 JPF High intensity 85,000 peak CP Flashtube Rated at 7000-8000 hrs. Durable Lexan® housing 5"H x 7 1/4" diameter	120VAC	.2
	TA131DAN5	96610			
	TA131DRU1	96511		10.5-31.0VDC	
	TA131DAU1	97611			

TA879 – VEHICULAR BACKUP ALARM

Solid state electronic unit. Helps to comply with OSHA and State regulations. Makes distinctive noise, ideal for extreme variations in background noise

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA879	96102	2 sound levels 97 or 87 dB +/- dB at 4ft Multi-voltage Water-resistant housing	12 to 48VDC

NOTE: "FPM" = Flashes per minute
"JPF" = Joules per flash

For replacement parts and accessories, see page 550.

POWER SUPPLY UNITS
24 VDC UNITS

TA640

TA606

APPLICATIONS

- Units provide power to multiple signaling devices, depending on requirements.

FEATURES

TA606
Regulated and filtered 24VDC up to 600mA. Easy-to-use screw terminals, accepts #16-24AWG. No conduit is required for installation.

TA640
Dual output unit, each providing 2 Amps fo current. If connected in parallel, will provide up to 4 Amps. Circuit breaker provides input protection.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	REGULATION	RIPPLE VOLTAGE
TA606	96109	117VAC	24VDC	600mA		
TA640	96110	115VAC	24VDC	4A	+/-5%	10mVRMS

TRANSFORMERS

APPLICATIONS

- Engineered to ensure long use for bells, buzzers and chimes.

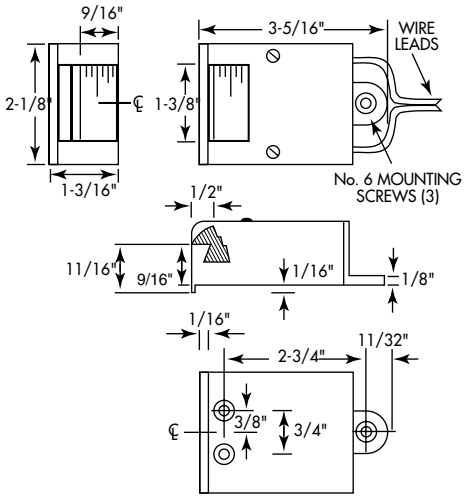
CATALOG NO.	UPC CODE	TYPE	VOLTS-AMPS (VA)	PRIMARY VOLTAGE AC	SECONDARY VOLTAGE AC	Hz
TA590	96104	Bell	5	120	10	60
TA591	96105	Chime	10	120	16	60
TA592	96106	Tri-Volt	10-10-20	120	8-16-24	50/60
TA598	96602	Tri-Volt	20-30-30	120	8-16-24	60
TA599	96108	Heavy Duty	40	120	24	60
TA1245Y-50	96166	Heavy Duty	50VA	120/208/240	24	60
TA1245Y-75	96167	Heavy Duty	75VA	120/208/240	24	60

ACCESSORIES, REPLACEMENT PARTS

UNIT	CATALOG NO.	UPC CODE	DESCRIPTION
TA93-2	TA-L6-2	96982	110VAC Xenon Flash Tube
TA52	TA-L8	96134	110VAC Bulb
TA94	TA-L10	96136	110VAC Xenon Flash Tube
TA-94	TA-L10-1	96981	110VAC Xenon Flash Tube
TA502	TA502SW	96966	Replacement switch
TA874 Series	TA-BBSF	97694	Backbox – 4" painted Dawn Mist 3/4" and 1" KO's
TA874 Series	TA-WBBF	97692	Weatherproof Backbox – 1/2" KOs 4" painted Dawn Mist
TA-BBSF, TA-WBBF	TA-SFPF	97707	Semi-Flush plate – Dawn Mist
TA-BBSF, TA-WBBF	TA-SFPFR	97697	Semi-Flush plate – Red
TA47, TA94	TA-ADR	96111	Acrylic Dome – Red
TA47, TA94	TA-ADA	96311	Acrylic Dome – Amber
TA52, TA53	TA-D5B	96419	Acrylic Dome – Blue
TA54	TA-D6A	96320	Dome – Amber
TA93, TA94	TA-D7R	96121	Fresnal Dome – Red
TA93, TA94	TA-D7A	96321	Fresnal Dome – Amber
TA93, TA94	TA-D7C	96621	Fresnal Dome – Clear
TA131D	TA-D8R	96970	Acrylic Dome – Red

REMOTE CONTROL DOOR OPENERS

TA152



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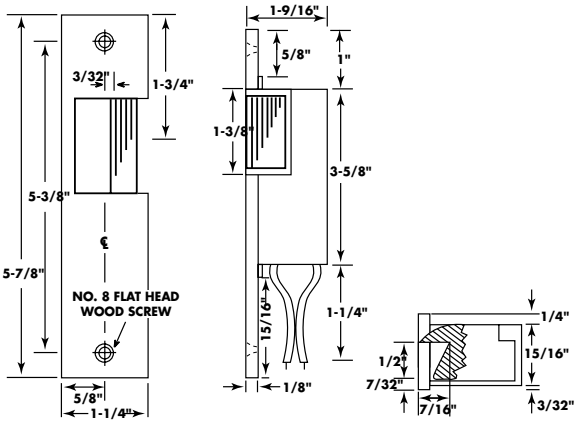

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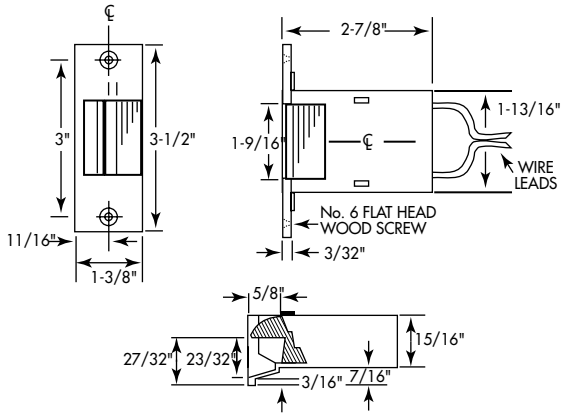
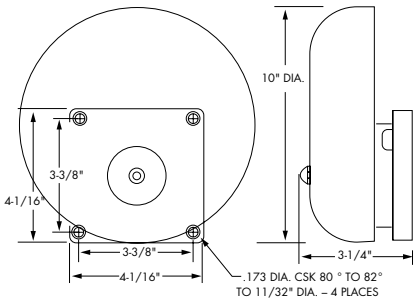


HEAVY DUTY BELLS

10″



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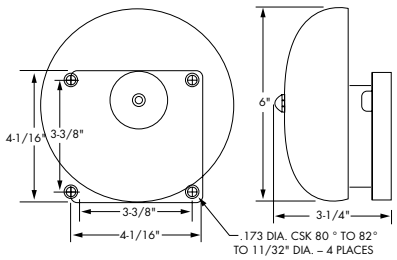

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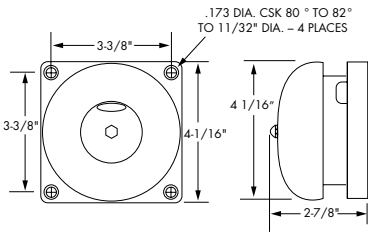
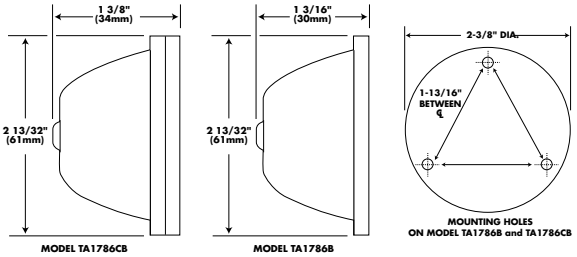


WEATHERPROOF BUTTON

TA1786B ONLY



TORK® POOL & SPA CONTROLS

PP PANEL SERIES
POOL AND SPA PANELS

APPLICATIONS

c UL us
LISTED
POOL/SPA
CONTROL PANEL
3NZM

- Pumps
- Swimming pools
- Fountains
- Ponds

FEATURES

COMBINATION PANEL: The PP Panel Series provides a flexible platform to create a custom pool and spa control at an off the shelf price. Start with a blank panel and add timers, freeze controls, circuit breakers, switches and outlets for a custom installation.

PP-100R: 100 amp load center 120-240V, 5/10 circuit breaker base.

PP-125R: 125 amp load center 120-240V, 8/16 circuit breaker base.

CONTROLS: Freeze protection or mechanical and digital timers are all available with unique features not found elsewhere in the industry. Find specification details on pages 557 and 558.

BREAKERS: Listed for Cutler Hammer (BR), GE (THQL), Murray/Siemens (MP) and Square D (HOM) (not included).

REVERSIBLE DOOR: Easy-Hinge patented removable and reversible door. Change from left to right opening. Solves installation issues in the field.

WHILE-IN-USE COMPARTMENT: Inside mounting for two devices with cord exit.

DEVICE MOUNTING: Provision for mounting one or two devices in any combination accepts toggle, GFCI, X-10 and UPB type devices in, PP-100R and PP-125R enclosures.

TRANSFORMER: Select panels include 120V input: 100 watt with output 12V/13V or 300 watt with output 12V/13V/14V.

ENCLOSURE: Metal NEMA 3R with lockable hasp. See page 558 for dimensions.

PP-125R-P4

PP-125R-P4-100X

CATALOG NO.	UPC CODE	CONTROL	CONTROL INPUT	ADDITIONAL INFORMATION
PP-100R	94016	-	-	Panel only. Add controls from page 557 and 558.
PP-125R	94017	-	-	Panel only. Add controls page 557 and 558.
PP-125R-P4	53007	P1104-M	240VAC	Add another control from page 557 and 558.
PP-125R-P4-100X	94018	P1104-M	240VAC	Includes 100 watt Low Voltage Transformer
PP-125R-P4-300X	94019	P1104-M	240VAC	Includes 300 watt Low Voltage Transformer

P1100 SERIES
SWIMMING POOL TIMERS, 24 HOUR ELECTROMECHANICAL CONTROL

QUICK INSTALL/RELEASE LEVER: For easy installation and removal when installing into pool panels.

LOAD INDICATOR LAMP

CONVENIENT EXTERNAL ROCKER SWITCH: 3 position switch: OFF/ON/AUTO. Use switch to turn OFF pump at the end of pool season.

REAL TIME SWITCH FACE: Easy to set and check time.

CAPTIVE TRIPPERS: 15 minute intervals, no lost trippers.

HEATER CONTACTS: FM suffix includes "Fireman Switch" to turn off pool heater 20-30 minutes before timer turns OFF. Contact rates SPST, 15A @120V.

THERMOSTAT: PFP models include built in Freeze Protection. No extra wiring. Thermostat turns on load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

ACCESSORY CONTACT: PF models include extra contact to accept PFPT Freeze Protection Accessory. Thermostat turns ON load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

TIMER INTERLOCK: Makes one second timer dependant on operation of another timer.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	CONTACTS	RESISTIVE/ INDUCTIVE RATINGS	HP RATING	NOTES
PFP2-M	94026	240	DPST	40A	7.5HP @ 240V	Thermostat only
PFP3-M	94027	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Thermostat only
P1101-M	10056	120	DPST	40A	3 HP @ 120V	
P1101FM-M	10060	120	DPST	40A	3 HP @ 120V	Fireman Switch
PF1101-M	94020	120	DPST	40A	3 HP @ 120V	Accepts PFPT thermostat input
PF1101FM-M	94024	120	DPST	40A	3 HP @ 120V	Fireman Switch & Accepts PFPT thermostat input
PFP1102-M	94022	240	DPST	40A	7.5HP @ 240V	Freeze Protection included
PFP1103-M	94023	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Freeze Protection included
P1104-M	10057	240	DPST	40A	7.5HP @ 240V	
P1104FM-M	10061	240	DPST	40A	7.5HP @ 240V	Fireman Switch
PF1104-M	94021	240	DPST	40A	7.5HP @ 240V	Accepts PFPT thermostat input
PF1104FM-M	94025	240	DPST	40A	7.5HP @ 240V	Fireman Switch & Accepts PFPT thermostat input
PFPT	94028	120/240	-	-	-	Thermostat accessory

*PFPT

NOTE: " " = Indicates Freeze Protection.

PEW1100 SERIES
SWIMMING POOL TIMERS, 7 DAY DIGITAL CONTROL

QUICK INSTALL/RELEASE LEVER: For easy installation and removal when installing into pool panels.

LOAD INDICATOR LAMP

LARGE LCD DISPLAY

LARGE "MANUAL" BUTTON: 3 operating modes available: OFF/ON/AUTO. Using the OFF mode, the pool can be closed down without disrupting the time settings.

POWER OUTAGE BACKUP: Battery retains time and schedule.

7 DAY PROGRAMMING ONE MINUTE INTERVAL: Allows for the control of various electrical equipment on a 7 day schedule. 15 schedule weekly programs.

THERMOSTAT: PFPEW models include built in Freeze Protection. No extra wiring. Thermostat turns on load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

ACCESSORY CONTACT: PFEW models include extra contact to accept PFPT Freeze Protection Accessory. Thermostat turns ON load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

TIMER INTERLOCK: Makes one timer dependant on operation of another timer.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	CONTACTS	RESISTIVE/ INDUCTIVE RATINGS	HP RATING	NOTES
PEW101-M	82432	120	DPST	40A	3 HP @ 120	
PFEW101-M	94029	120	DPST	40A	3 HP @ 120	Accepts PFPT thermostat input
PFPEW1102-M	94031	240	DPST	40A	7.5HP @ 240V	Freeze protection included
PFPEW1103-M	94032	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Freeze protection included
PEW104-M	82442	240	DPST	40A	7.5HP @ 240V	
PFEW104-M	94030	240	DPST	40A	7.5HP @ 240V	Accepts PFPT thermostat input

NOTE: " " = Indicates Freeze Protection.

1100 SERIES
SAME ON/OFF TIMES EACH DAY
SWIMMING POOL TIME SWITCHES

APPLICATIONS

- Pool pumps
- Heaters
- Lighting

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60Hz (varies by model).

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40° to 165°F (-40° to +74°C).

POWER CONSUMPTION: 3 watt max.

ENCLOSURE: Lockable hasp. Type varies by model. See page 557 for dimensions and additional enclosure information.

FEATURES

SCHEDULING: Minimum ON setting is 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

TYPE	VOLTAGE	CONTACT RATING
General Purpose	120-277VAC	40A
Resistive	120-277VAC	40A
Tungsten	120VAC	40A
Ballast	120-277VAC	20A
LED Driver*	120-277VAC	20A
Motor	120VAC	2HP
	240VAC	5HP
277VAC Single Phase		

*UL only or & cULus on B suffix units

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
1101	10011	120	SPST	Metal Indoor NEMA 1
1101BM-IAP*	10073	120	SPST	Mechanism and mounting plate
1104	10014	208-277	DPST	Metal Indoor NEMA 1
1104B-P*	10070	208-277	DPST	Polycarbonate Indoor/Outdoor NEMA 3R
1104B-O*	10075	208-277	DPST	Metal Indoor/Outdoor NEMA 3
1104BM-IAP*	10074	240	DPST	Mechanism and mounting plate
1101FM-N	10043	120	SPST	Noryl® Indoor/Outdoor NEMA 3R with fireman switch
1104FM-N	10044	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R with fireman switch
1101FM-M	10043	120	SPST	Mechanism with fireman switch
1104FM-M	10044	208-277	DPST	Mechanism with fireman switch
1101D	10028	120	Two 1101 SPST each	Metal Indoor/Outdoor NEMA 3R
1104D	10029	208-277	Two 1104 DPST each	Metal Indoor/Outdoor NEMA 3R
1104DF	10032	208-277	One 1104 One 1104FM	Metal Indoor/Outdoor NEMA 3R
Replacement Trippers		Order #P47 for a pair of ON/OFF trippers Order #PF48 for a pair of ON/OFF trippers for 1100FM series		
Replacement Motor		#101 (120V) & #201 (208-277V)		

* B suffix units cULus

POOL & SPA JUNCTION BOXES

JPB75175

APPLICATIONS

- For installation of underwater pool lights or low voltage connections.

FEATURES

- Durable PVC molded case
- INTERIOR & EXTERIOR bonding
- Flexibility for conduit sizing
- Built-in strain relief cord clamps
- Line or low voltage wiring
- Complete compliance with UL Standard 1241

CATALOG NO.	UPC CODE	DESCRIPTIONS	CONDUIT HUBS
JBP75175	95457	Two Light Junction Box	3/4" / 1/2" / 1"
JBP57510	95485	Four Light Junction Box	1/2" / 3/4" / 3/4" / 1" / 1"

DPC201 SERIES
DIGITAL TWO-SPEED PUMP TIMER

APPLICATIONS

- Swimming pools with two-speed pump motors

FEATURES

PUMP PROTECTION: Unit always starts on HIGH with 5 minute countdown before switching to low.

SCHEDULING: Up to 3 HIGH/LOW/OFF cycles repeat each day. Minimum setting 5 minute.

MANUAL OVERRIDE: Hold OFF until midnight then follows the next regularly scheduled HIGH/LOW/OFF operation.

DAYLIGHT SAVING: Automatic adjustment (can be omitted)

LEAP YEAR: Automatic Compensation

CLOCK FORMAT: AM/PM

POWER OUTAGE BACKUP: Permanent schedule retention. Super capacitor provides 4 days of real time backup.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50-60Hz	OUTPUT CONTACTS
DPC201	82457	120-277	SPST

LOAD TYPE	RATINGS	
	120VAC	208-277VAC
Motor	1HP	1 1/2 HP@208VAC 2 HP@240-277VAC
Resistive	40A	40A
Inductive	40A	40A
Ballast	30A	20A
Tungsten	15A	
Pilot Duty	720VA	720VA

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

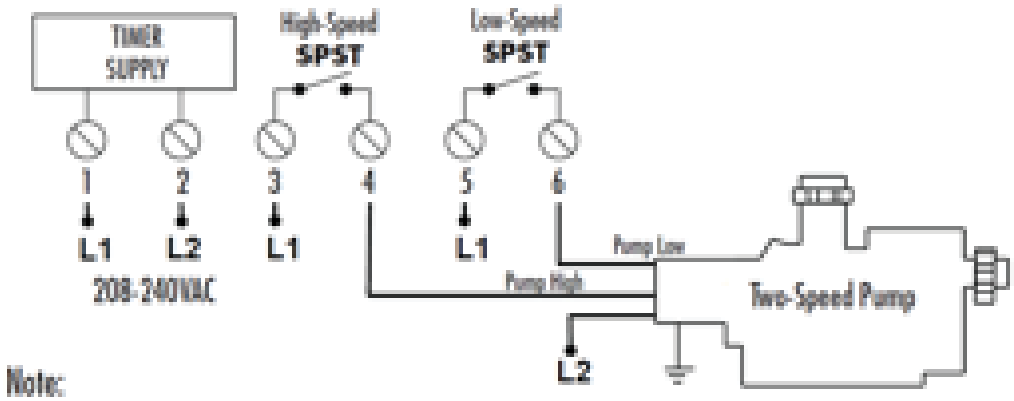
INPUT VOLTAGE:
120-277VAC, 50/60Hz (automatic detection)

TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40˚ to +149˚F (-40˚ to +65˚C)

POWER CONSUMPTION: 6VA max.

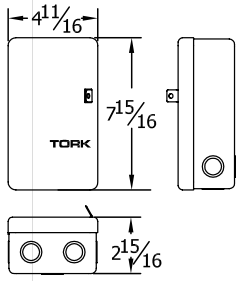
ENCLOSURE: Indoor/Outdoor NEMA 3 Metal with locking hasp. See page 557 for dimensions and additional enclosure information.



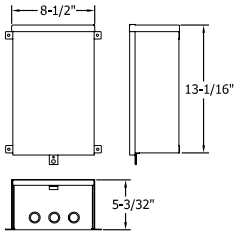
Note:
A) Power must be supplied to each terminal marked L1
B) For 120VAC motors use Neutral in place of L2

ENCLOSURES

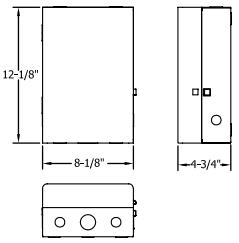
STANDARD FOR MODELS			METAL INDOOR NEMA 1 ENCLOSURE #68229
1101	7120	EW101B-Y	
1102	7122	EW103B-Y	
1103	8001		
1104	8004		
1101FM	8061		
1104FM	8121		
7100	8301		
7102	8601		
7200	8602		
7202	TU40-Y		
1101-7	EW201-Y		
WH2B	EW120B-Y		



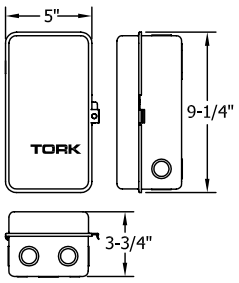
STANDARD FOR MODELS		METAL INDOOR/OUTDOOR MODEL #9006
TZ220L-O	TZ300L-O	
TZ300L-O	T920L-O	
T930L-O	W300-O	



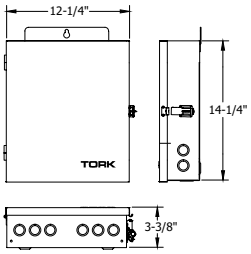
STANDARD FOR MODELS		METAL INDOOR NEMA 1 ENCLOSURE #63016-1
TZ220L	TW220L	
TZ300L	TW300L	
W300	T920L	
W302	T930L	
W300L	TW222L	
W302L	TW302L	
#62158 "E" DOOR		
T920L-E	T930L-E	
TW220L-E		



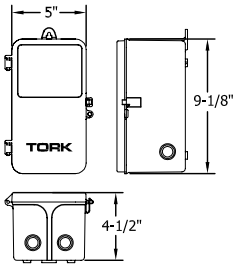
STANDARD FOR MODELS			METAL INDOOR NEMA 1 ENCLOSURE #63100-6
7220	1847AZL	DGM100A-Y	
7222	8007	DGU100A-Y	
7200L	8007L	DGUM100A-Y	
7202L	8007V	LC200	
7120L	8007U		
1847A	8007VL		
1848A	8008		
1847AZ	8008L		
1847AL	LDS-A		
DG100A-Y	LDSH-A		



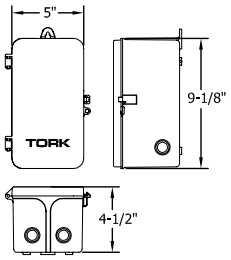
STANDARD FOR MODELS	DLC400BP
DLC400BP	



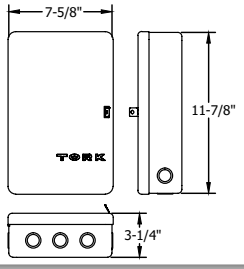
STANDARD FOR MODELS		NORYL® & LEXAN® INDOOR/OUTDOOR NEMA 3R MODEL #9000NC
1101NC	DGLC100A-NC	
1103NC	DGLC200A-NC	
1104NC		
8001-NC		



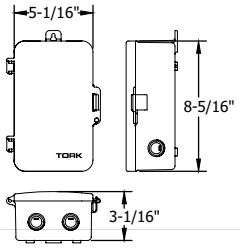
STANDARD FOR MODELS		NORYL® INDOOR/OUTDOOR NEMA 3R MODEL #9000N
7200Z, ZL		
7202Z, ZL		
7120Z, ZL		
7122Z, ZL		
DG Series	DZS Series	
8001-N	DTS Series	
8001U-N	DW Series	
SMC-3D	DWZ Series	
DZM Series		



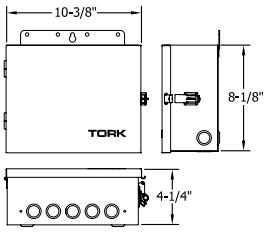
STANDARD FOR MODELS		METAL INDOOR NEMA 1 ENCLOSURE #70100
W100	W220L	
W200	W222L	
W202	1847AW	
W120	1847AWL	
W220	W400B	
W222	W402B	
	W400BL	



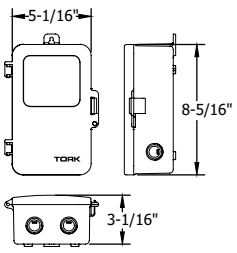
MODELS		PLASTIC INDOOR/OUTDOOR NEMA 3R #9000P
TU40	DTU40	
1101B-P	E101PB	
1103B-P	E Series	
1104B-P	EW Series	
EH20C	EWZ Series	



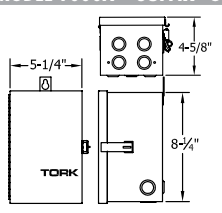
STANDARD FOR MODELS		METAL DUPLEX INDOOR/OUTDOOR MODEL #9004L
1101D	1101DF	
1114D	1114DF	
1104D	1104DF	



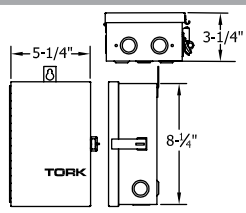
MODELS		PLASTIC INDOOR/OUTDOOR NEMA 3R WITH CLEAR COVER
EW103B-C	EW120B-C	
NEMA 1 ENCLOSURE STANDARD FOR MODELS		
DTWH40		



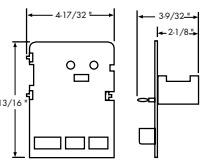
STANDARD FOR MODELS		METAL INDOOR/OUTDOOR NEMA 3 MODEL 9000A – SUFFIX "O"
7300, L, Z, ZL	8001-O	
7302, L, Z, ZL	8001U-O	
8007U-O	8007-O	
DZS100BP-O	DZS200BP-O	
DZS200BP	DW200B-O	
DZM200BP-O	5401A	



STANDARD FOR MODELS		METAL INDOOR/OUTDOOR MODEL 9000B – SUFFIX "O"
1101-O	1104B-O	
DPC201	7200-O	
1103-O	7202-O	



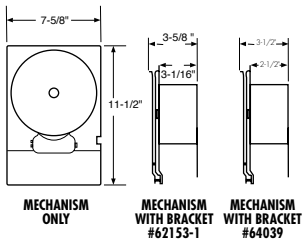
MODELS	LC200M MOUNTING WITH BRACKET
LC200M	



TORK® nsi

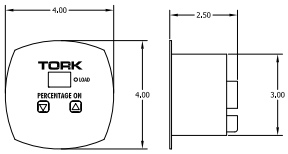
MECHANISM & MOUNTING BRACKET #62153-1

MODELS	
Use Bracket #64039	
W100	W120
W200	W220
W202	W222
Use Bracket #62153-1	
W300	W302



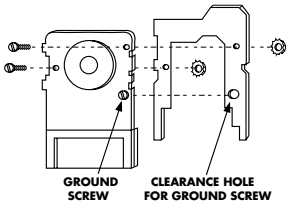
PCT15M

PCT15M



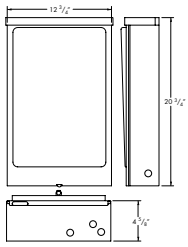
IAP BRACKET INTERMATIC ADAPTER PLATE

1101BM-IAP	7200
1104BM-IAP	7202
1102	7120
1103	7122
7100	E Series
7102	EW Series
	EWZ Series



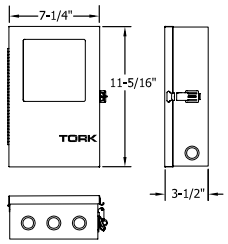
MODELS — 5441A ENCLOSURE

5441A



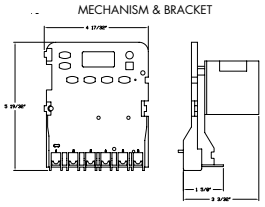
ELC74 ENCLOSURE

ELC74



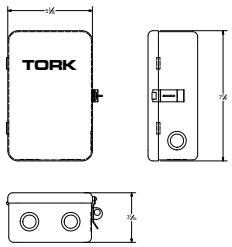
E/EW/EWZ SERIES

EWZ101-MB
EWZ103-MB
EWZ120-MB
EWZ201-MB



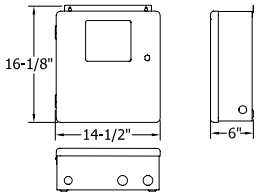
MODELS — METAL INDOOR

SA300
SA306



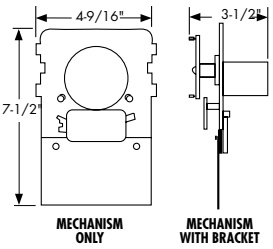
ELC78 & ELC712 ENCLOSURE

ELC78
ELC712



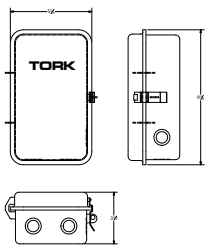
MECHANISM & MOUNTING BRACKET #65447

1101-M	1102-M
1103-M	1104-M
7000 Series	1847A, Z
1848A	8001-LC/WB
8601	8121
8602	8061
8301	



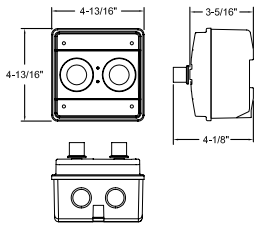
MODELS — METAL INDOOR

SA400



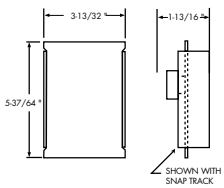
EWJT & E500T SERIES ENCLOSURE

EJWT
E500T
E501T
E502T
ACT30MA

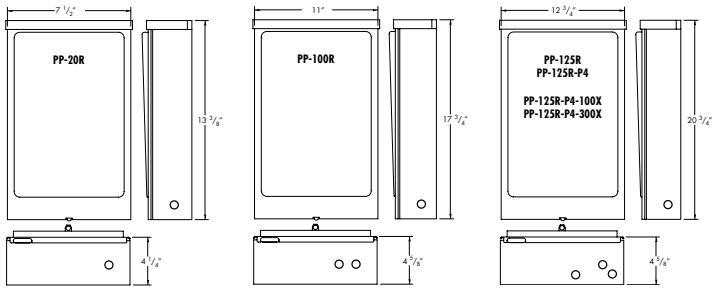


MODELS — LDS SERIES MOUNTING WITH BRACKET

LDS	LDSH



POOL PANEL SERIES



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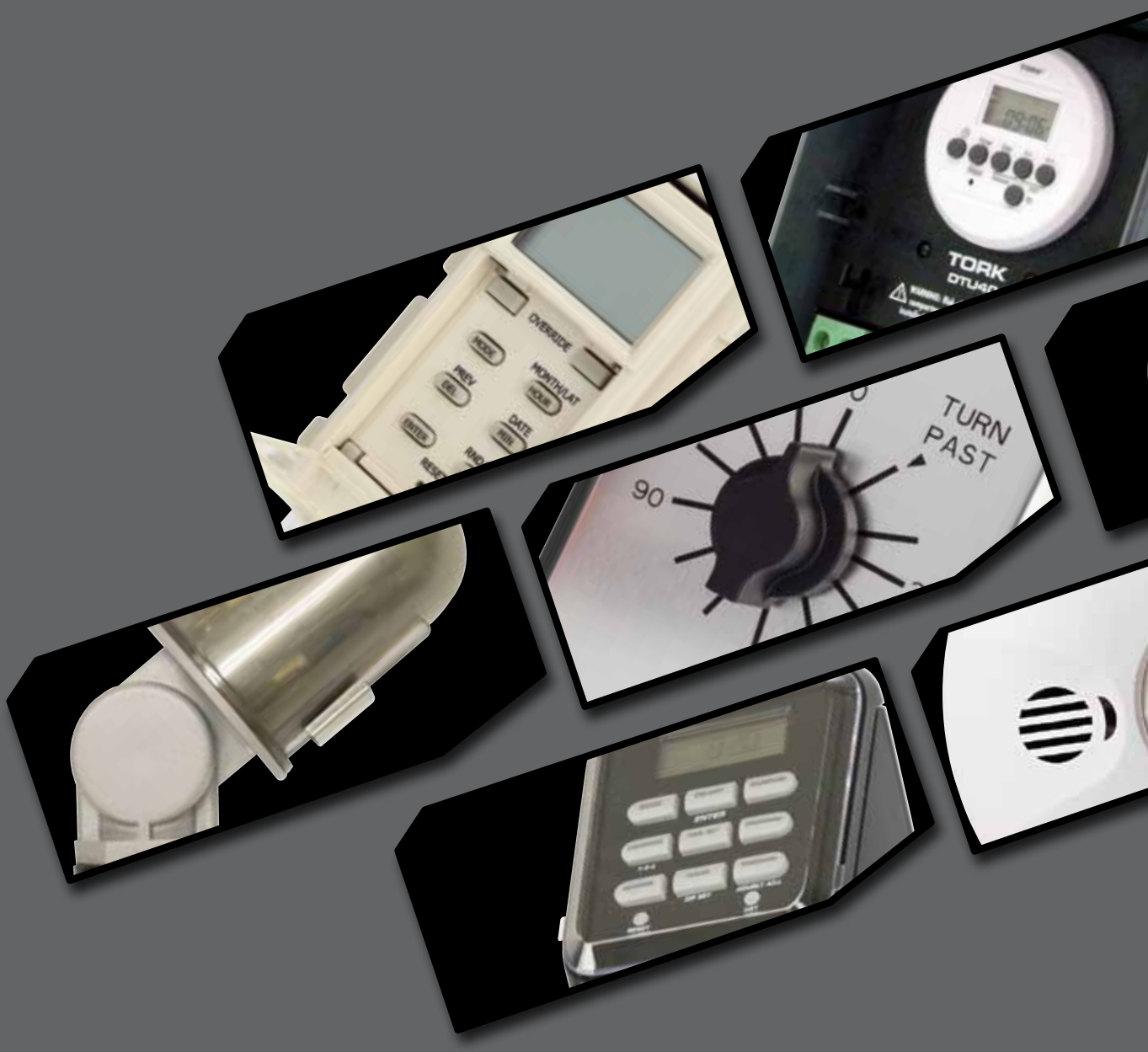


4 HOUR
8 HOUR
12 HOUR
SET
AM
PM
OFF
TURN PAST
HOLD
TIME
TORK
ON
OFF
TORK
E101B
TORK
TIMER

< ***Responsible Energy*** is the mark of TORK's commitment to developing and manufacturing energy saving, environmentally friendly products.

EXTERIOR LIGHTING ZONES

When ambient light levels drop at dusk, lighting is needed to provide safety and security. BUT: Does all lighting need to be on all night long? The proper selection of lighting controls is essential to ensuring that energy is only used when needed. An efficient lighting control design creates zones of light levels that can be varied by time at night.

ZONE 1 - DUSK TO DAWN - All night Security Lighting
Photocontrols and Photosensors

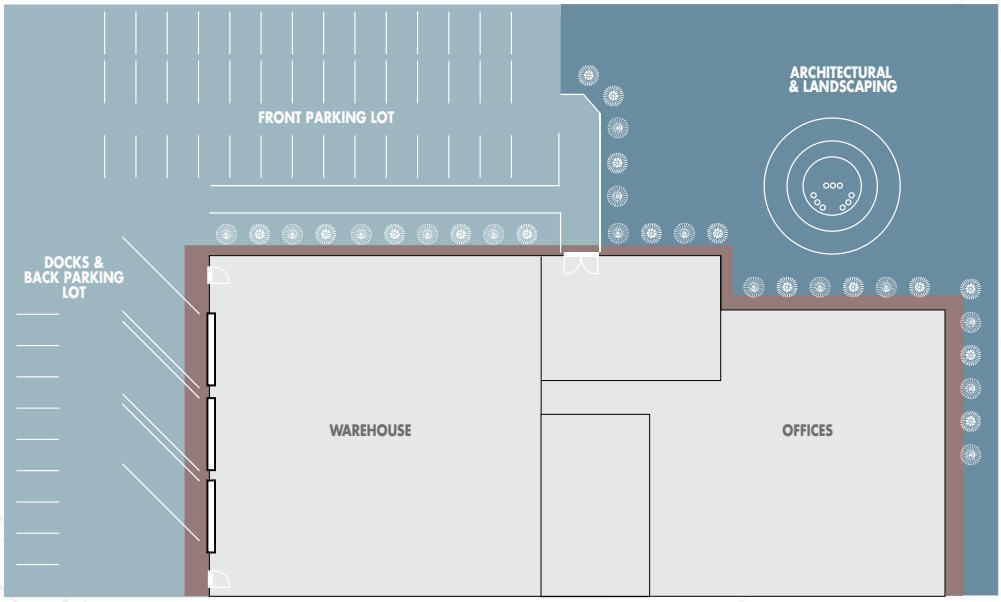
The first zone gives a minimum light level where security is the primary need. Determine what lighting is necessary, such as building-mounted wallpacks and a portion of the parking lot lighting. These should be on from dusk to dawn, and are best controlled by a photosensor device.

ZONE 2 - DUSK TO TIME OFF - Safety and Architectural Lighting
Photosensor/Time-based controls, Astronomic controls

The second zone provides a higher light level for safety, when people are normally present. Maximum levels for the parking lot and all walkway lighting are needed. These lights are best controlled by a combination photosensor and time-based device to allow shut-off during the night. The astronomic-calculated sunset/time control can also be useful.

ZONE 3 - ARCHITECTURAL - Building Facade, Landscape and Signage
Astronomic controls

The third zone covers architectural lighting for building facade or landscape and signs. These are best controlled with an astronomic-calculated sunset/time control.



CALIFORNIA Title 24
ASHRAE 90.1

< Use the Quick Reference ***Energy Code Guide*** for approved products.

Responsible Energy
Each of these marked products have features that decrease energy consumption and/or damage to the environment by one or more of the following:

- Timed control, Photocontrol and/or Astronomic control of on and off functions of lighting, fans, pumps and appliances
- Timed control of systems or multiple zones of lighting
- Photo or occupancy sensing control of lighting
- Supercapacitor backup, no batteries to replace or dispose.
- Helps meet CA Title 24, ASHRAE , IECC and other standards for responsible building products

INTERIOR LIGHTING ZONES

The first way to save energy begins with eliminating lighting when it isn't needed. As with exterior lighting, an efficient design matches controls to the typical use of the area.

ZONE A - SMALL SPACES - Meeting rooms, restrooms, storage spaces

Occupancy sensors, interval timers

The first zone includes small spaces such as offices, restrooms and storage areas – places where people may not occupy the space continuously. Individual wall switch replacement provides low cost installation, with occupancy sensors and interval timers as the best solution. In the event that wall switches do not provide proper coverage for the occupancy sensor, ceiling mounted options are available.

ZONE B - LARGE SPACES - Open offices, public spaces, hallways, warehouses

Time of Day with Override, Occupancy Sensors

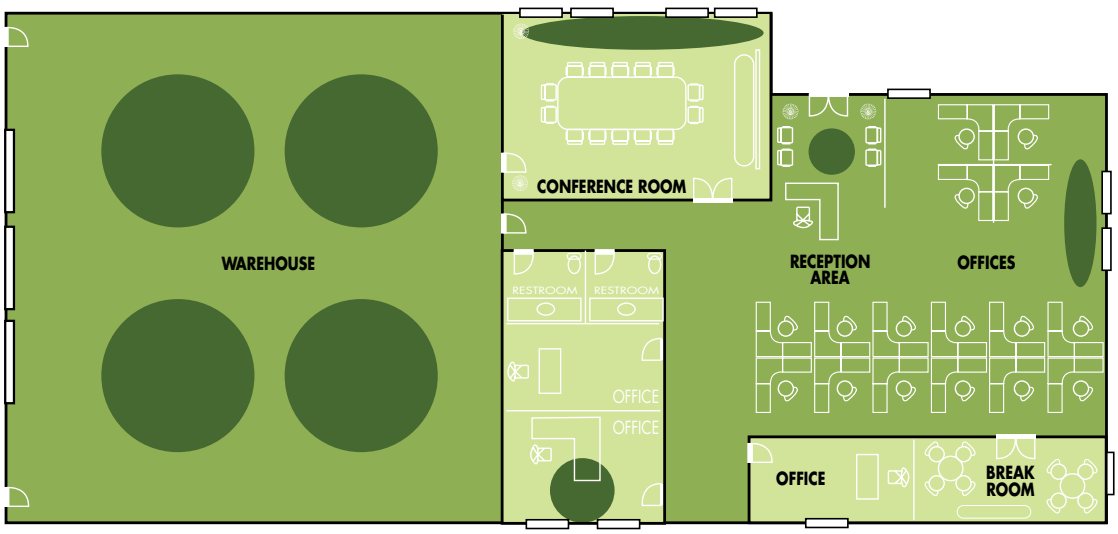
The second zone is for common areas, such as hallways, reception spaces or large spaces for open offices. These places are commonly controlled with time-of-day devices and must include an after-hours override. A conveniently placed switch should provide a limited override with a maximum length of two or four hours*, or occupancy sensors can be used to ensure that lights are shut off when people have left the building.

* Energy codes vary on the stated maximum time, but shorter times can give more energy savings.

ZONE C - DAYLIGHT HARVESTING - Large or small spaces with natural light

Light Sensors, Light Sensors with Occupancy, Astronomic Timers

A third zone that uses daylighting control can be added to either of the first two zones. Light sensors can shut off a portion of the lighting when windows or skylights contribute sufficient natural light to the area. This "harvesting" of light is an excellent, green way to conserve energy.



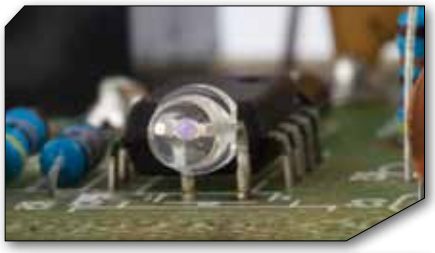
TORK® PHOTOCONTROLS

QUICK REFERENCE GUIDE

	2100 SERIES	2110 SERIES	2000 SERIES	2001/ 2020 SERIES	3000 SERIES	5000M SERIES	2005A SERIES	2005B SERIES	5200 SERIES	5200-UL SERIES	5737 SERIES
Page	403	404	405	406/407	408	409	411	412	413	414	415
Mounting	Conduit	Conduit	Conduit	Conduit	Flush	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock	Turn-Lock
Adjustable Swivel				Yes							
Housing	Die Cast Zinc	Die Cast Aluminum	Lexan®	Lexan®	Lexan®	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic	UV Stabilized Plastic
Turn ON Light Level	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 - 5 fc	1 to 3 fc	1 to 3 fc	1.5 fc	1.5 fc	1.5 fc	5 fc
Adjustable light level adjustment	Yes	Yes	Yes	Yes (2001)							
Turn OFF Ratio	3:1	3:1	3:1	3:1	3:1	5:1	3:1	1.5:1	1.5:1	1.5:1	1.5:1
Time Delay ON	Yes	Yes	Yes	Yes	Yes	Yes	Instant	Instant	Instant	Instant	Instant
Time Delay OFF	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Light Sensor	CdS	CdS	CdS	CdS	CdS	CdS	CdS	Filtered Silicon Sensor	Silicon Sensor	Filtered Silicon Sensor	Silicon Sensor
CFL Compatible	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LED Driver Listed										Yes	
Surge Protection						Yes	Yes	Yes	Yes	Yes	Yes
Photo Timer											Yes

FEATURES

CHOICE OF PHOTOCELLS



Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. Available on turn-lock photocontrols. IR Filtering responds to the light spectrum near to that of a human eye.

Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Available in 1/2" and 1" size on both wired and turn-lock photocontrols. Photocell responds to the light spectrum near to that of a human eye.

TOUGH ENCLOSURES

All conduit and flush mounted models utilize die-cast zinc, die cast aluminum, or genuine Lexan® materials. All turn-lock models utilize high impact UV stabilized polypropylene, ABS, PBT or polycarbonate materials.

TURN-LOCKS MEET ANSI C136.10

All models meet the current ANSI requirements for locking-type prongs and color coded voltage designations. Locking prongs are solid brass.

Color-Coded Dome

Grey	105-130VAC
Maroon	208-277VAC
Blue	105-285VAC
Yellow	480VAC
Green	347VAC

CHOICE OF MOUNTING ORIENTATION

Models are available in fixed position or 180° swivel.

DEPENDABLE PERFORMANCE

Built-in time delay prevents false switching due to light from passing vehicles, lightning, etc.

QUALITY ASSURANCE

TORK® *Photocontrols are designed and manufactured with components which adhere to the highest industry standards. Trained personnel and in-process quality procedures ensure that every unit meets our strictest quality standards.*

2100 SERIES
SPECIFICATION GRADE
1/2" CONDUIT MOUNTING
DIE CAST ZINC
PHOTOCONTROL

APPLICATIONS

- Parking lot lighting
- Building perimeter lighting
- Outdoor signage

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc, Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

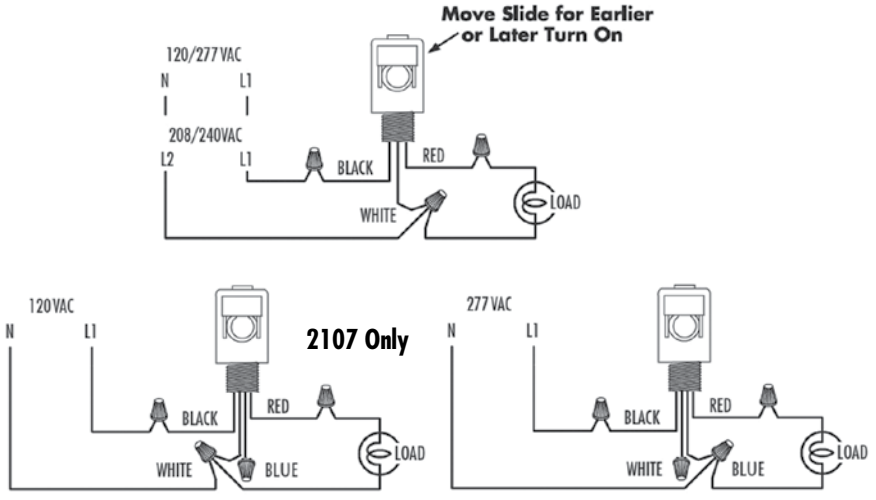
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A.

HOUSING: Heavy Duty die cast zinc housing and base. Gasketed for maximum weather protection.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2101	60012	120	SPST	2000W	1800VA
2104	60013	208-277	SPST	2000W	1800VA
2107	60031	120/277	SPST	2000W	1800VA
73866	62020	Mounting Bracket			



2110 SERIES
SPECIFICATION GRADE
1/2" CONDUIT MOUNTING
DIE CAST ALUMINUM PHOTOCONTROL

2117

2115 & 2116

APPLICATIONS

- Parking lot lighting
- Building perimeter lighting
- Outdoor signage

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

STANDARDS: Meets ANSI/UL773A.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

HOUSING: Die cast aluminum housing and base. Gasketed for weather protection.

ENERGY SAVINGS: Works with screw base CFLs.

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc, Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1/2" diameter. MODEL 2117 is 1" cell.

CONTACTS: Remain closed between dusk and dawn (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C. (2117 #10AWG red and black).

POWER CONSUMPTION: Averages under 1 watt.

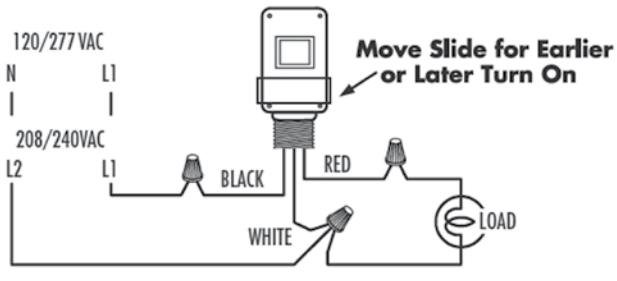
TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2115	60032	120	SPST	2000W	1800VA
2116	60033	208-277	SPST	3470-4620W	2080-2770VA
2117*	60037	120	SPST	3000W	3000VA
73866	62020	Mounting Bracket			

*Not UL or CSA rated.



2000 SERIES

1/2" CONDUIT MOUNTING
FIXED POSITION, LEXAN® HOUSING
WITH WEATHERPROOF SEALANT
PHOTOCONTROL

APPLICATIONS

- Flood lamp
- Patio lamp
- Decorative lighting

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy comformal coated 1/2" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

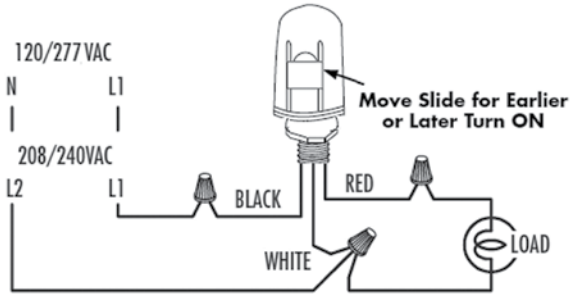
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant. Translucent Lexan® Dome prolongs cell life by further screening out ultraviolet rays. Dome and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2000	60017	120	SPST	2000W	1800VA
2000-2	60018	208-277	SPST	3470-4620W	2080-2770VA
73866	62020	Mounting Bracket			



2001 SERIES
1/2" CONDUIT MOUNTING
180° SWIVEL, LEXAN® HOUSING
PHOTOCONTROL

APPLICATIONS

- Flood lamp
- Patio lamp
- Decorative lighting

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc, without the slide in position. ON/OFF adjustment is easily made by moving a slide cover. No tools required.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy comformal coated 1/2" diameter.

CONTACTS: Remain closed between dusk and dawn. (The unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

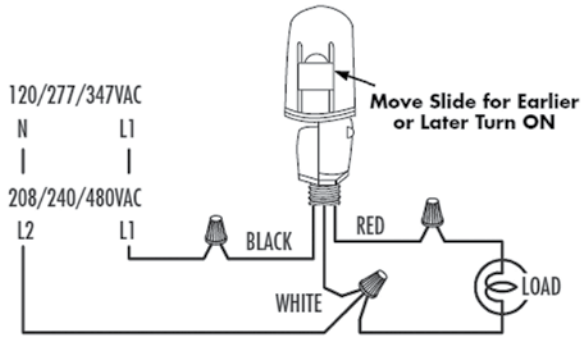
STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant. Translucent Lexan® Dome prolongs cell life by further screening out ultraviolet rays. Dome and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2001	60015	120	SPST	2000W	1800VA
2002	60016	208-277	SPST	3470-4620W	2080-2770VA
NEW! 2006*	60028	347	SPST	5760W	3470VA
NEW! 2018**	62021	480	SPST	7500W	4800VA
73866	62020	Mounting Bracket			

*CSA certified only. **Not UL or CSA rated.



2020 SERIES
1/2" CONDUIT MOUNTING
180° SWIVEL, LEXAN® HOUSING
PHOTOCONTROL

APPLICATIONS

- Flood and patio lamps
- Decorative lighting
- Ideal for applications where it is essential to aim the photocell in an exact direction to sense natural light but avoid artificial light.

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, epoxy conformal coated 1/2" diameter.

CONTACTS: Normally closed (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 6" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

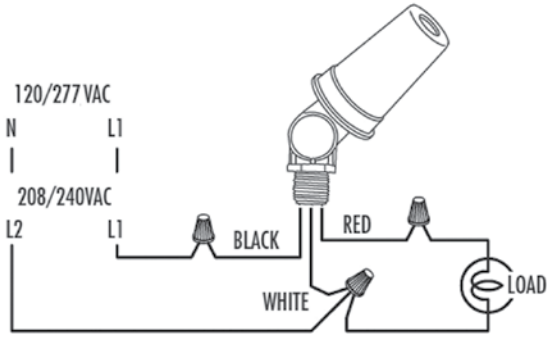
OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

STANDARDS: Meets ANSI/UL773A

HOUSING: All Lexan® enclosures are impact and vandal resistant, cover and base are ultrasonically welded for maximum strength.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
2021	60024	120	SPST	2000W	1800VA
2022	60025	208-277	SPST	3470-4620W	2080-2770VA
73866	62020	Mounting Bracket			



3000 SERIES
FLUSH MOUNTING LEXAN® HOUSING PHOTOCONTROL

APPLICATIONS

- Pole lanterns
- Lawn lighting
- Walkways

SPECIFICATIONS

ON/OFF: Turn ON is 1 to 5fc. Turn OFF is 3 to 15fc.

TIME DELAY: ON and OFF.

CELL: Cadmium sulphide, conformal coated 1/2" diameter.

CONTACTS: Normally closed (the unit fails in the ON position).

LEAD WIRES: Three color coded, minimum 9" wire leads, #16AWG, rated for 105˚C.

POWER CONSUMPTION: Averages under 1 watt.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

FEATURES

SENSOR: Conformal coated cadmium sulphide photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delay of up to two minutes to prevent false switching due to light from passing vehicles, lightning, etc.

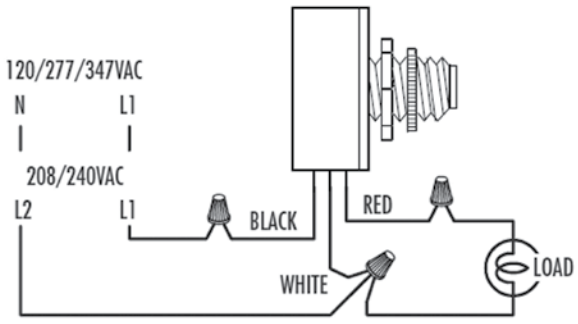
STANDARDS: Meets ANSI/UL773A

HOUSING & MOUNTING: Control housing is weather-resistant molded Lexan® with ultrasonically welded seams.
MODEL 3000: Flush mounting through .6875" hole in post lantern or lighting fixture, 3⁄8" NPT, stem 3⁄4" long. Gasket and nut supplied.
MODEL 3010: flush mounting into standard, raintight junction box. Includes aluminum plate and gasket to fit FS type outdoor junction box.

ENERGY SAVINGS: Works with screw base CFLs.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	SWITCH	RATING	
				TUNGSTEN	BALLAST
3000	60020	120	SPST	2000W	1800VA
3002	60019	208-277	SPST	3470-4620W	2080-2770VA
NEW! 3006*	60026	347	SPST	5760W	3470VA
3010	60021	120	SPST	2000W	1800VA

*CSA certified only.



5000M SERIES
DELAYED RESPONSE UTILITY GRADE MOV SURGE ARRESTOR PHOTOCONTROL

APPLICATIONS

- For use on streets, highways and other luminaries equipped with locking type receptacles, where most stringent surge protection is needed.

SPECIFICATIONS

ON/OFF: Turn-ON is 1 to 3 fc. Turn-OFF to Turn-ON ratio is 5 max.

TIME DELAY: ON and OFF.

CELL: CdS, epoxy conformal coated ½" and 1" diameter models.

SURGE ARRESTOR: 380 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +140˚F (-40˚ to +60˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

FEATURES

SENSOR: Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

OPERATION: Delayed response prevents false switching due to light from vehicles or lighting, etc.

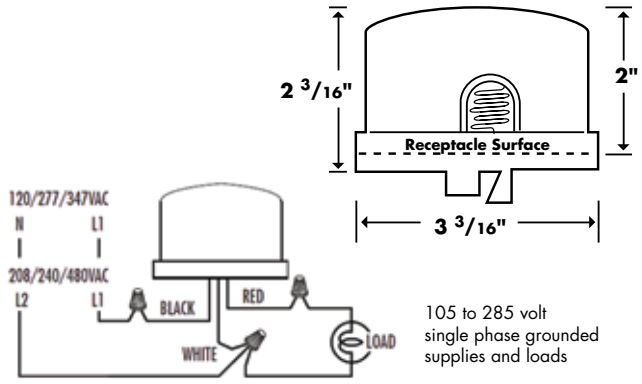
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: Bi-metal provides positive snap action switching, reducing bounce and prolonging contact life.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	LIGHT SENSOR	RATING	
				TUNGSTEN	BALLAST
5001M	61012	105-130	1"	2000W	1800VA
5004M	61013	208-277	1"	3470-4620W	2080-2770VA
5007M	61014	105-130/208-285	1/2"	2000W 3470-4620W	1800VA 2080-2770VA
5008M*	61017	480	1"	7500W	4800VA
5021M	61015	105-130	1/2"	2000W	1800VA
5024M	61016	208-277	1/2"	3470-4620W	2080-2770VA
NEW! 5026M**	61045	347	1/2"	5760W	3470VA

*Not UL listed or CSA certified.
**CSA certified only.



105 to 285 volt single phase grounded supplies and loads

5400A SERIES
CONTACTORS WITH TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For street lighting. Controls all lighting loads in excess of the capacity of the photoelectric control contacts.

SPECIFICATIONS

RECEPTACLE: 3-prong turn-lock meets the requirements of EEI NEMA.

POWER CONSUMPTION: Maximum 3 watts during daylight.

CAT. NO.	UPC CODE	PHOTOCONTROL INCLUDED	VOLTAGE (VAC) 60Hz	SWITCH
5403A	81012	2005B	120	DPST
5404A	81013	2007B	208-240	DPST
5404-3A	81014	2007B	277	DPST

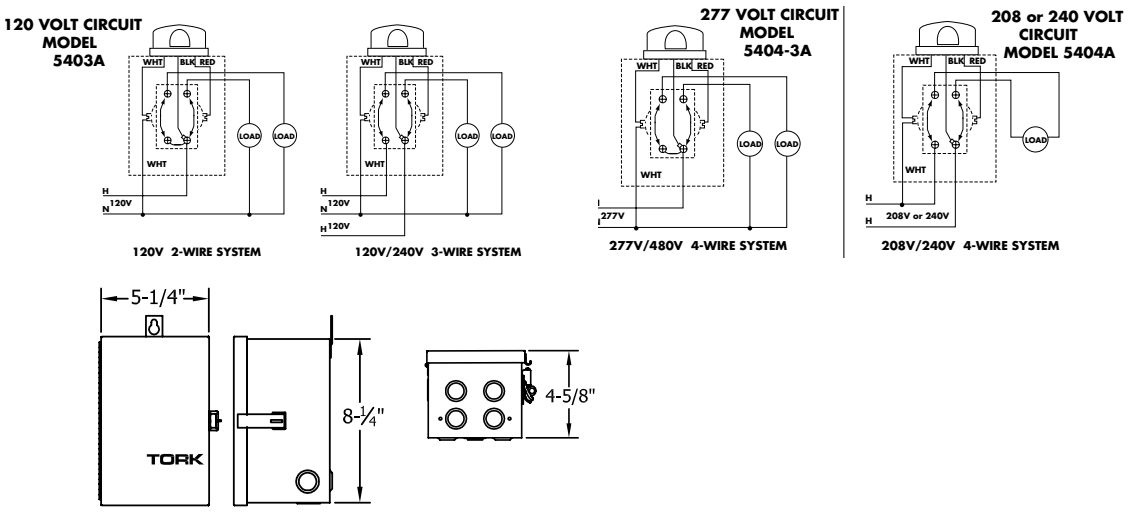
FEATURES

OPERATION: Delay up to two minutes to prevent false switching due to light from passing vehicles, lighting, etc. Photocontrol provides dusk to dawn control of lighting contactor for heavy duty switching.

STANDARDS: Meets UL773 and ANSI C136.10 for photocontrols.

HOUSING: Outdoor NEMA Type 3R. Beige enamel finish. Two ½"– ¾" combination KO in bottom.

TYPE	VOLTAGE (VAC)	CONTACT RATING PER POLE
Resistive	120-277	40A
Tungsten	120	30A
Ballast	120-277	40A
LED Driver	120-277	40A
Motor	120 240	3HP 7.5HP



2005A SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For state and county DOT & municipalities use on roadway and bridges. Also use for general commercial facilities.

SPECIFICATIONS

ON/OFF: Turn-ON is 1.5 foot candle +/-0.5 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: CdS, epoxy conformal coated ½" diameter.

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joules MOV exceeds NEMA and ANSI requirements.

LOCKING PRONGS: Solid brass prongs for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

FEATURES

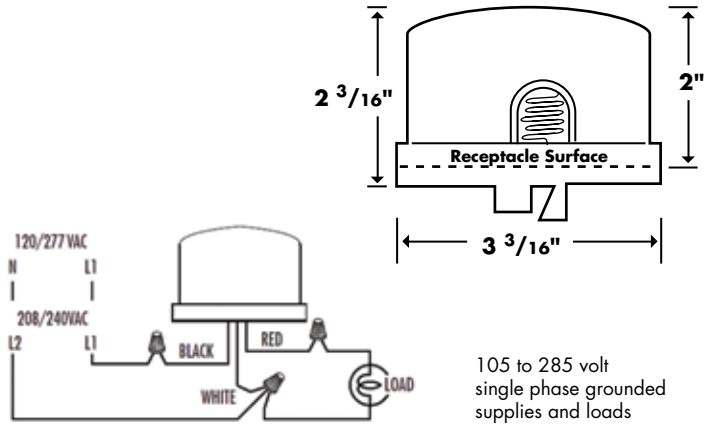
SENSOR: Conformal coated CdS photocell resists effects of moisture and airborne contaminants. Photocell responds to the light spectrum near to that of a human eye.

STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polypropylene, UV stabilized, permanent color with UV resistant clear acrylic window. Provides high impact, flammability resistance and electrically save operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
2005A	62012	105-130	Grey	1000W	1800VA
2007A	62013	105-285	Blue	1000W	1800VA



105 to 285 volt single phase grounded supplies and loads

2005B SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- For state and county DOT & municipalities use on roadway and bridges. Also use for general commercial facilities.

SPECIFICATIONS

ON/OFF: Turn-ON is 1.5 foot candle +/-0.2 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: Molded sealed IR filtered sensor

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joules MOV exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass prongs for maximum corrosion resistance and electrical conductivity.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 4 years.

FEATURES

SENSOR: Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. IR filter responds to the light spectrum near to that of a human eye.

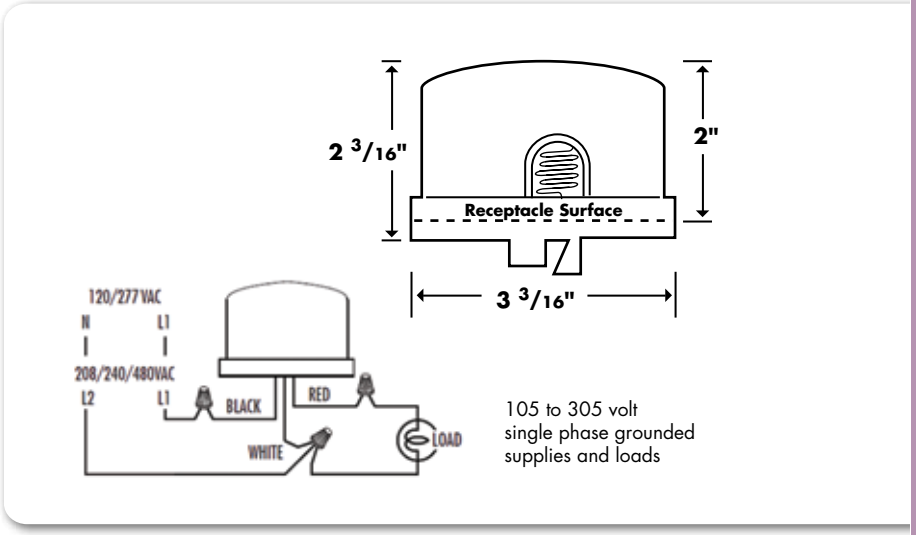
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

CAT.. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
2005B	60015	105-130	Grey	1000W	1800VA
2007B	60016	105-305	Blue	1000W	1800VA
2008B*	62017	400-550	Yellow	1000W	1800VA

*Not UL listed.



105 to 305 volt single phase grounded supplies and loads

5200 SERIES
UTILITY GRADE ELECTRONIC WITH FAIL ON MODE PHOTOCONTROL

APPLICATIONS

- Designed meet local utility standards for street and highway lighting controls.

FEATURES

SENSOR: Molded sealed silicon sensor resists effects of moisture and airborne contaminants.

STANDARDS: Meets ANSI C136 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

SPECIFICATIONS

ON/OFF: Turn ON is 1.5 foot candle +/- 0.2 OFF/ON ratio is 1.5:1 average*.

TIME DELAY: Instant ON/3-5 second OFF.

CELL: Molded sealed silicon sensor

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life.
Fail ON for safety.

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

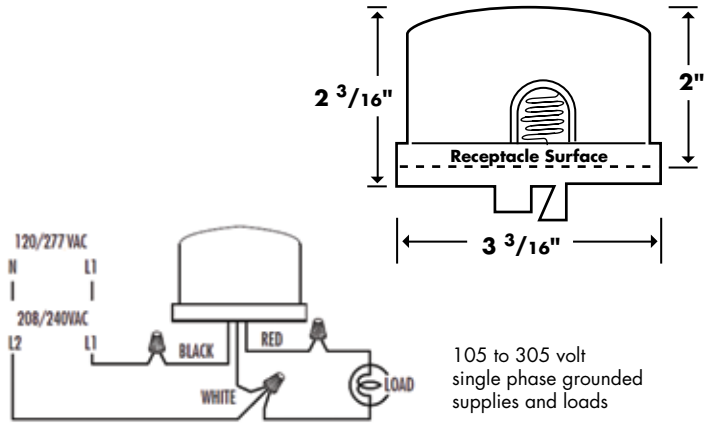
CUSTOM: Available for custom design to meet specific utility specification.

TEMPERATURE RANGE:
-40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 5 years.

CAT.NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING	
				TUNGSTEN	BALLAST
5231	78885	105-130	Grey	1000W	1800VA
5237	78886	105-305	Blue	1000W	1800VA



105 to 305 volt single phase grounded supplies and loads

5200-UL SERIES
INSTANT RESPONSE TURN-LOCK PHOTOCONTROL

APPLICATIONS

- Designed meet local utility standards for street and highway lighting controls.

SPECIFICATIONS

ON/OFF: Turn ON is 1.5 foot candle +/- 0.2 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 second OFF.

CELL: Molded sealed IR filtered sensor

RELAY: Rated life 6,000 operations

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

LOCKING PRONGS: Solid brass for maximum corrosion resistance and electrical conductivity.

CUSTOM: Available for custom design to meet specific utility specification.

TEMPERATURE RANGE: -40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 6 years.

FEATURES

SENSOR: Molded sealed IR filtered sensor resists effects of moisture and airborne contaminants. IR filter responds to the light spectrum near to that of a human eye.

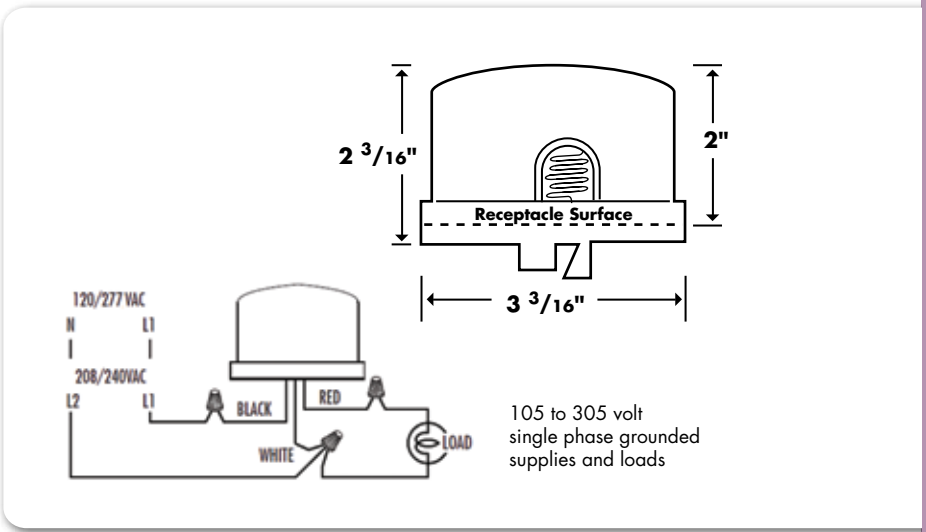
STANDARDS: Meets UL773 and ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: Polycarbonate housing and window, UV stabilized for permanent color. Polycarbonate provides high impact performance, flammability resistance, and electrically safe operations.

ENERGY SAVINGS: Listed for use with LED lamp drivers

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	RATING		LED DRIVER
				TUNGSTEN	BALLAST	
NEW! 5237-UL	78895	105-305	Blue	1000W	1800VA	1000W



105 to 305 volt single phase grounded supplies and loads

5737 SERIES

ON AT DUSK, OFF AT MIDNIGHT
ON EARLY MORNING,
OFF AT DAWN
PHOTO-TIMERS

APPLICATIONS

- Offices
- Restaurant signage
- Billboards
- Landscape and yard lighting
- Ideal for situations when visible traffic is reduced – lights ON at dusk and OFF at 10pm or later, then on again for early morning illumination.

FEATURES

OPERATION: Microprocessor tracks the dusk and dawn times with the seasons and automatically determines midnight, NO PROGRAMMING REQUIRED. Automatically "re-learns" and resets after power outage, eliminating costly maintenance. DST correction built in.

STANDARDS: Meets ANSI C136.10 including color designations. Also meets EEI NEMA standards.

HOUSING: UV stabilized, ANSI color-coded polypropylene dome. UV stabilized, clear acrylic window. ABS base. Cross-linked, polypropylene gasket.

CONTACTS: DC relay has positive snap action switching, reducing bounce and prolonging contact life. Fail ON for safety

SPECIFICATIONS

ON/OFF: Turn ON at dusk is 5.0 foot candle +/- 0.5 OFF/ON ratio is 1.5:1 average.

TIME DELAY: Instant ON/3-5 seconds OFF.

CELL: Silicon photosensor

SURGE ARRESTOR: 360 joule MOV (metal oxide varistor) exceeds ANSI and NEMA requirements.

5737TM HALF-NIGHT FUNCTION: Allows user to adjust OFF time during the night. OFF time can be set for up to two hours before (for extra energy savings) or up to two hours after midnight. Use to stagger groups of lights to go OFF at different times during the night.

5737TZ TWO FUNCTION:
1) Standard: Set as a Dusk to Dawn photocontrol.
2) Half-night & Pre-Dawn: Turns on at Dusk. User adjusts OFF time for up to two hours before or after midnight. Then set countdown to Pre-dawn ON again 2 - 10 hours later. It always turns OFF at Dawn.

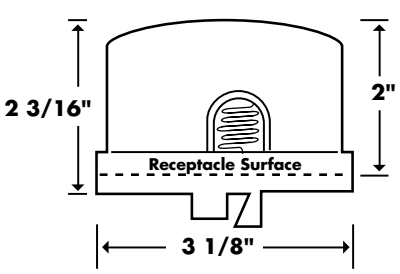
LOCKING PRONGS: Solid brass Prongs for maximum corrosion resistance and electrical conductivity.

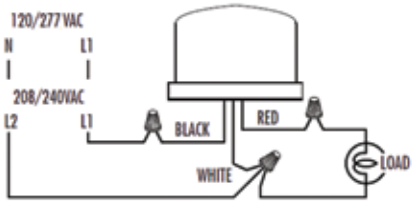
TEMPERATURE RANGE:
-40˚ to +158˚F (-40˚ to +70˚C).

FAIL MODE: ON.

WARRANTY: 3 years.

CAT. NO.	UPC CODE	VOLTAGE (VAC) 50-60Hz	COLOR	SWITCH	RATING	
					TUNGSTEN	BALLAST
5737TZ	62010	105-305	Blue	SPST	1000W	1800VA
5737TM	62009	105-305	Grey	SPST	1000W	1800VA





105-305 VAC
single phase grounded supplies and loads

PHOTOCONTROL ACCESSORIES
FOR TURN-LOCK CONTROLS

MOUNTING BRACKET
Utility mounting bracket for 1/2" threaded conduit photocontrols.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	73866	62020	Mounting Bracket

REPLACEMENT CAPS
5500 replaces photocontrol to change light fixture to always ON.
5500-OC replaces photocontrol to change light fixture to always OFF.
Durable materials and gasket provide longevity and weatherproof protection.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	5500	61130	Shorting cap 480VAC max 1800W Tungsten 1800VA Ballast
	5500-OC	61132	Open cap 480VAC max (Black housing)

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, gasket and two mounting screws.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2223	61025	Receptacle with gasket

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, mounting bracket and one mounting screw.

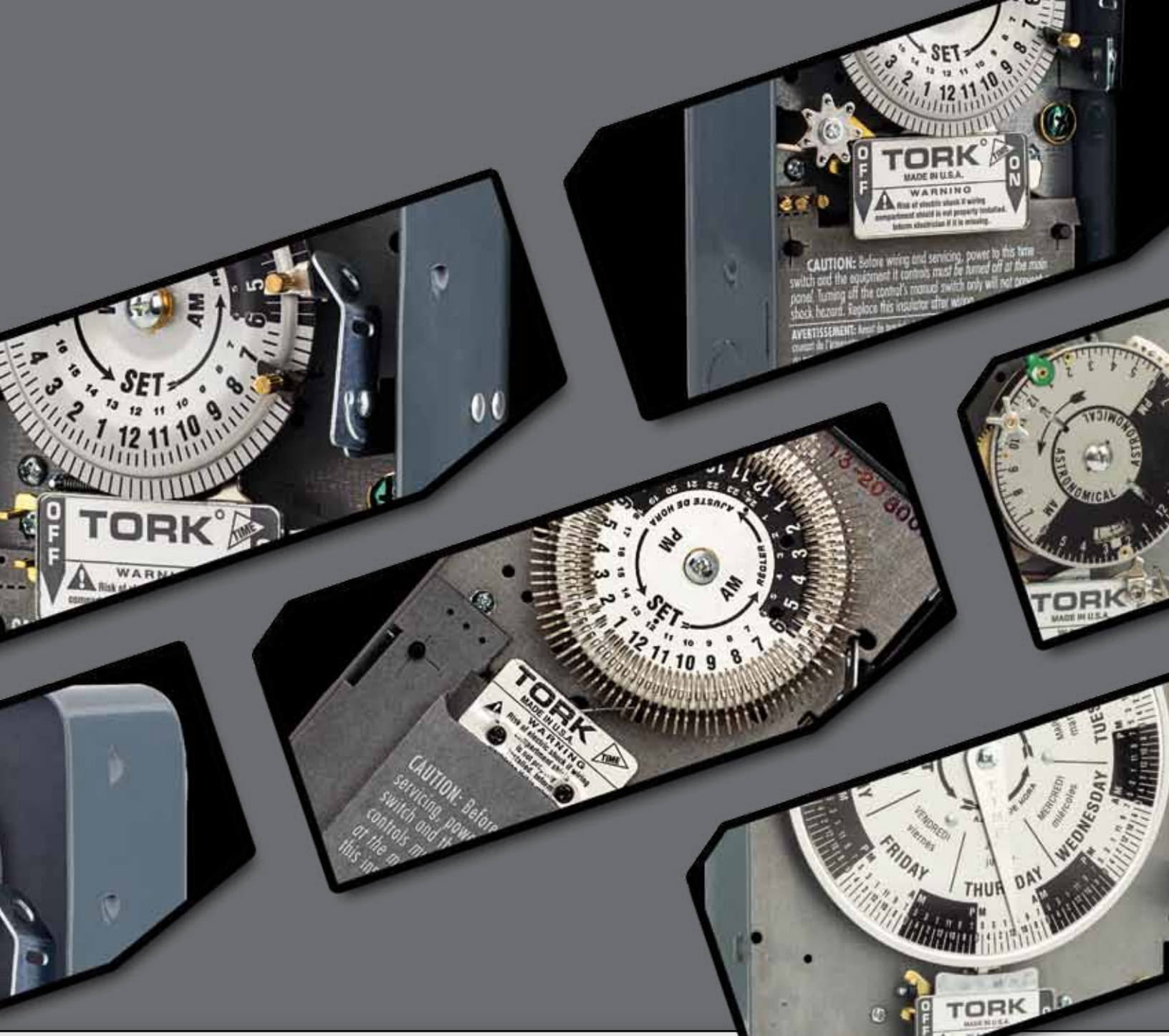
DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2224	61026	Receptacle and mounting bracket

RECEPTACLE
120-480V 50/60 Hz 15 amp maximum receptacle with color-coded 12" long, #14 leads, plastic housing, lock nut (with 1⁄2" NPT) and a mounting bracket.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION
	2421	61021	Receptacle with plastic housing and bracket

NSi offers many splicing options to complete the pole installation.
See the splicing section pages 211- 232.

12
9
6
POWER



TORK® ELECTROMECHANICAL TIME SWITCHES

QUICK REFERENCE GUIDE

SERIES	PAGE NO.	CLOCK DIAL	MINIMUM SETTINGS (MINUTES) ON	MINIMUM SETTINGS (MINUTES) OFF	SKIP A DAY	MANUAL OVERRIDE	SUNRISE/ SUNSET	MAX ON & OFF EVENTS PER DAY	SWITCH TYPES	RATINGS (AMPS)	RESERVE POWER
TU40	421	24 Hour	15	15		Permanent		48	SPST, DPST, SPDT, DPDT	40	
1100	423	24 Hour	20	75		Yes		12	SPST, DPST	40	
7000	425	24 Hour	20	75	Yes	Yes		12	SPST, DPST, SPDT, DPDT, 3PST	40	Available
7000Z	427	24 Hour	20 or 40 Minute Offset		Yes	Yes	SunSet	1	SPST, DPST, SPDT, DPDT, 3PST	40	Available
TZ	441	24 Hour	20 or 40 Minute Offset		Yes	Permanent by circuit	SunSet	1	DPDT, 3PST	20	Standard
W	435	7 Day	60	120	Yes	Yes		2	SPST, DPST, SPDT, DPDT, 3PST 4PST	40	Available
TW	439	7 Day	60	120	Yes	Permanent by circuit		2	DPDT, 3PST	20	Standard
T900	437	7 Day	60	120	Yes	Permanent by circuit	Photo Control	2	2 SPDT 3 SPDT	20	Standard
1847A	433	24 Hour	20	75	Yes			12	SPDT, Momentary Contact	10	Available
1847AZ	433	24 Hour	20 or 40 Minute Offset		Yes	Yes	SunSet	1	SPDT, Momentary Contact	10	Available
1847AW	433	7 Day	60	120	Yes	Yes		2	SPDT, Momentary Contact	10	Available
8000	429	24 Hour	15	15	Available			48	SPDT	20	Available
8000	431	6, 12, 30 & 60 Min.	Varies by dial 6 sec. to 1 min.					30/dial	SPDT	20	
WH2B	432	24 Hour	20	75		Yes		12	DPST	40	

FEATURES

EASY TO SET DIAL ASSEMBLY

Tork's 24 hour dial assembly allows the user to set the time switch more accurately, easily moving it by hand in small increments. Dial can provide up to 12 ON/OcFFs per day with cycles as short as 20 minutes. AM and PM settings are easy to see by the light and dark areas of the dial.

CAPTIVE TABS – DUTY CYCLE DIAL

For applications requiring many ON/OFF cycles per day, captive tabs on this dial tilt in and out just using your fingertip!

FIELD UPGRADEABLE TO SunSet DIALS

All Tork 24 hour time switches can be upgraded in the field to a SunSet timer dial.

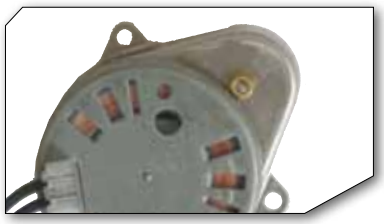
SPRING WOUND RESERVE

During power outages, precision spring mechanism takes over instantly and automatically. Keeps the mechanism on time up to 16 hours on 24 hour models and up to 24 hours on 7 day models. No resetting is needed after power resumes, and field installation is easy!

REMOVABLE DOOR

Tork time switches feature removable doors to provide easy access for installation and wiring.

ENCLOSED MOTOR



Time switch motors are enclosed to protect from dust and damage.

QUALITY ASSURANCE

TORK® *Electromechanical Controls are designed and manufactured with components which adhere to the highest industry standards. Trained personnel and in-process quality procedures ensure that every unit meets our strictest quality expectations.*

TU40 SERIES
UNIVERSAL MULTI-VOLTAGE
SAME ON/OFF TIMES EACH DAY
24 HOUR TIME SWITCH

ALL PURPOSE CONTACTS, HOUSING, & VOLTAGES!

APPLICATIONS

- Lighting
- Pumps
- Signs
- Air conditioning
- Water heaters
- Fans

FEATURES

MULTI-VOLTAGE: Automatic input voltage detection.

EASY SET: Real time clock face and day/night markings for setting trippers.

SCHEDULING: Minimum ON is setting 15 minutes. Dial has 96 captive trippers.

4 in 1 CONTACTS: DPDT can also wire as SPST, SPDT, & DPST.

BYPASS SWITCH: Sets timer to permanent ON, OFF or timer operation.

VACATION MODE: Set timer OFF with no change of tripper settings.

INDICATING LIGHTS: Power ON green and load ON red and LED indicators.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 60Hz	DRY CONTACTS (UNPOWERED)	ENCLOSURE TYPE
TU40	24000	120/208-240/277	DPDT	Plastic Indoor/Outdoor NEMA 3R
TU40-Y	24001	120/208-240/277	DPDT	Metal Indoor NEMA 1

SPECIFICATIONS

INPUT VOLTAGE: 120/208-240/277VAC, 60Hz (auto detection).

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #18 AWG.

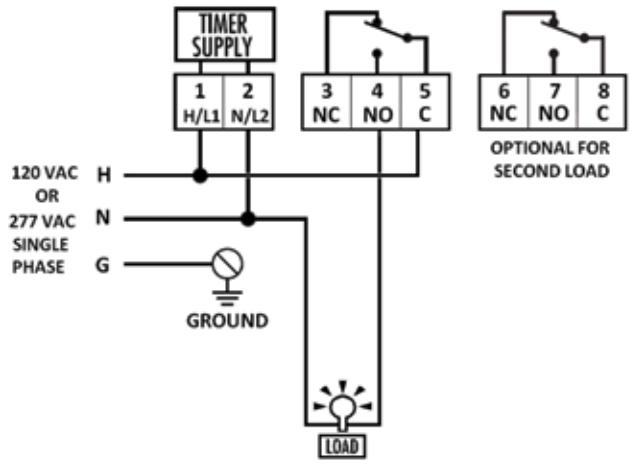
OPERATING TEMPERATURE: -31°F to 116°F (-35°C to +47°C).

POWER CONSUMPTION: 6 watts maximum.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R or -Y suffix metal indoor NEMA 1 enclosure. Both with lockable hasp standard (see page 557 for enclosure dimensions).

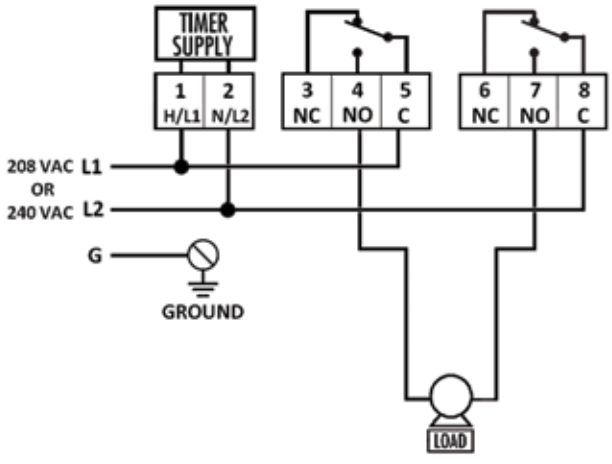
TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	30A
Inductive	120-277	30A	15A
Ballast	120	30A	10A
	277	20A	10A
Tungsten	120	15A	
Motor Load	120	1HP, 30FLA, 90LRA	¼HP, 12FLA, 30LRA
	240	2HP, 20FLA, 60LRA	½HP, 12FLA, 33LRA
Pilot Duty	120	720VA	290VA
	240	720VA	360VA
Resistive	28VDC	20A	
Max above 104°F	120-277	30A	

TYPICAL SPST WIRING - LOAD SAME VOLTAGE AS TIMER SUPPLY



CONNECT LINE VOLTAGE (H) TO TERMINAL 5

TYPICAL DPST WIRING - LOAD SAME VOLTAGE AS TIMER SUPPLY



CONNECT LINE VOLTAGE (L1) TO TERMINAL 5
CONNECT LINE VOLTAGE (L2) TO TERMINAL 8

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1100 SERIES
SAME DAY ON/OFF TIMES EACH DAY
24 HOUR TIME SWITCH

APPLICATIONS

- Lighting
- Pumps
- Signs
- Air conditioning
- Water heaters
- Fans

- Automatic ON/OFF control when operation is required at the same time every day.

FEATURES

SCHEDULING: Minimum ON is setting 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
1101	10011	120	SPST	Metal Indoor NEMA 1
1101B-P *	10068	120	SPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1101-NC	10053	120	SPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1101-O	10015	120	SPST	Metal Indoor/Outdoor NEMA 3
1101BM-IAP *	10073	120	SPST	Mechanism and retrofit plate
1101-7 **	10033	347	SPST	Metal Indoor NEMA 1
1102B	10065	208-277	SPST	Metal Indoor NEMA 1
1103	10013	120	DPST	Metal Indoor NEMA 1
1103B-P *	10069	120	DPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1103-NC	10054	120	DPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1103-O	10016	120	DPST	Metal Indoor/Outdoor NEMA 3
1103M	10023	120	DPST	Mechanism
1104	10014	208-277	DPST	Metal Indoor NEMA 1
1104B-P *	10070	208-277	DPST	Polycarbonate Indoor/ Outdoor NEMA 3R
1104-NC	10055	208-277	DPST	Noryl® Indoor/Outdoor w/ clear Lexan® cover
1104B-O *	10075	208-277	DPST	Metal Indoor/Outdoor NEMA 3
1104BM-MB *	10076	208-277	DPST	Mechanism and surface mounting bracket
1104BM-IAP *	10074	208-277	DPST	Mechanism and retrofit plate
Replacement Trippers	Order #P47 for a pair of ON/OFF trippers			
Replacement Motor	#101 (120V) & #201 (208-277V)			
SunSet Conversion	Astronomic dial. Consult factory for correct number for your latitude			

* B suffix units cULus

** 1101-7 CSA only

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts maximum.

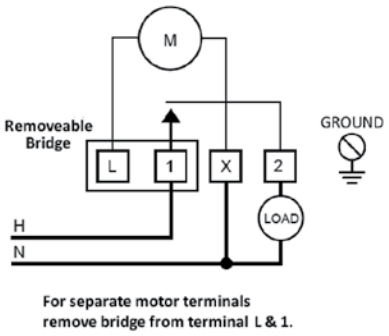
ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows any 1100 series to fit into an Intermatic case.

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
NEW! LED Driver*	120-277	20A
Pilot Duty	120 -277	1000VA**
Motor	120	2HP
	240	5HP
277VAC Single Phase		

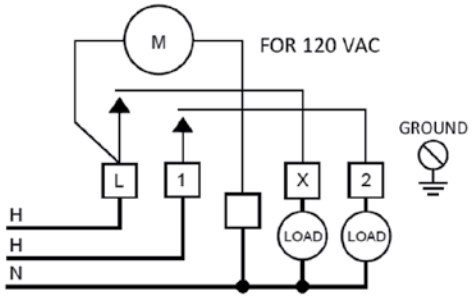
* LED rating UL only or cULus on B suffix units
** B suffix units 120VAC 1000VA / 240VAC 2000VA
1101-7 is 30 AMP inductive at 347 volts and CSA only

1101 & 1102

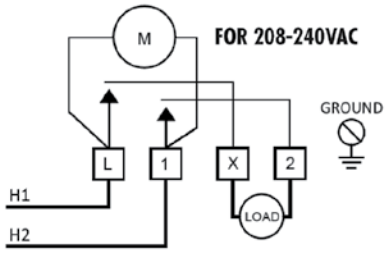


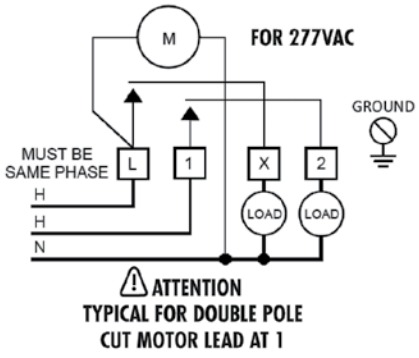
For separate motor terminals remove bridge from terminal L & 1.

1103



1104





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7000 SERIES
WITH SKIP-A-DAY FEATURE
RESERVE POWER OPTIONAL
24 HOUR TIME SWITCH

SKIP-A-DAY
24 HOUR!

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Lighting
- Heating
- Pumps
- Air conditioning
- Signs

- Automatic ON/OFF control when operation is required at the same time every day, with optional versatility of one to six days omission.

FEATURES

SCHEDULING: Minimum ON setting is 20 minutes with minimum OFF setting at 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

SKIP-A-DAY: Omit operations on any day with a 7-spoke wheel marked with days of week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
7100	10001	120	SPST	Metal Indoor NEMA 1
7102	10002	208-277	SPST	Metal Indoor NEMA 1
7200	11001	120	DPST	Metal Indoor NEMA 1
7200-O	10512	120	DPST	Metal Indoor/Outdoor NEMA 3
7202	11002	208-277	DPST	Metal Indoor NEMA 1
7202-O	10509	208-277	DPST	Metal Indoor/Outdoor NEMA 3
7300	12001	120	3PST	Metal Indoor/Outdoor NEMA 3
7302	12002	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120	13001	120	SPDT	Metal Indoor NEMA 1
7122	13002	208-277	SPDT	Metal Indoor NEMA 1
7220	14001	120	DPDT	Metal Indoor NEMA 1
7222	14002	208-277	DPDT	Metal Indoor NEMA 1
WITH RESERVE POWER				
7200L	19003	120	DPST	Metal Indoor NEMA 1
7202L	19004	208-277	DPST	Metal Indoor NEMA 1
7300L	19005	120	3PST	Metal Indoor/Outdoor NEMA 3
7302L	19006	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120L	19007	120	SPDT	Metal Indoor NEMA 1
7220L	19009	120	DPDT	Metal Indoor NEMA 1
7222L	19011	208-277	DPDT	Metal Indoor NEMA 1
Replacement Trippers	Order #P49 for a pair of ON/OFF per dial. Additional ON/OFF trippers per dial order #P47. 3 omitting screws #53005 supplied.			
Replacement Motor	#101 (120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V). For Astronomic Conversion: Order #Z KIT for 7000 Series.			
SunSet Conversion	Astronomic dial. Consult factory for correct number for your latitude			

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

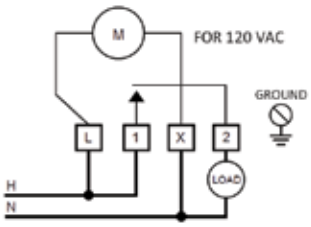
ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows any 7100 and 7200 series (except "L" models) to fit into an Intermatic case.

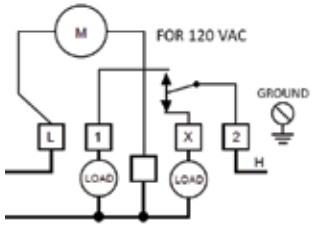
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP

277 volt Single Phase

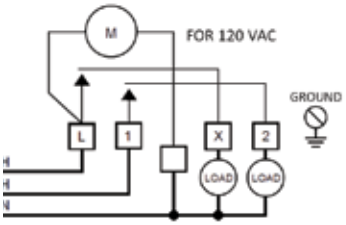
7100 & 7102



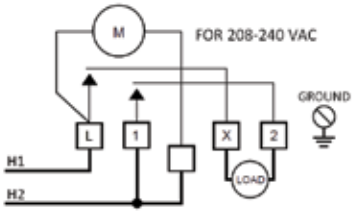
7120 & 7122



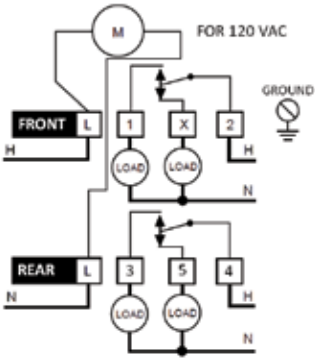
7200



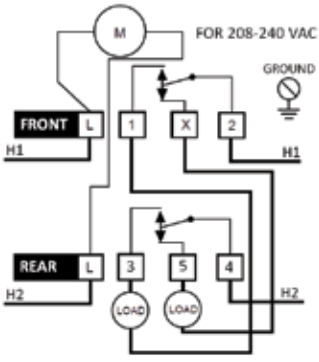
7202

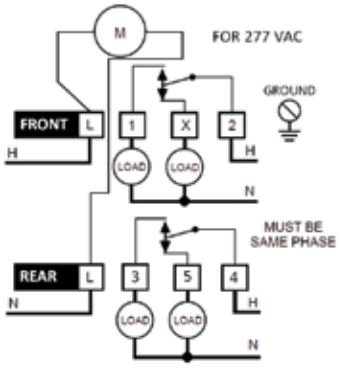


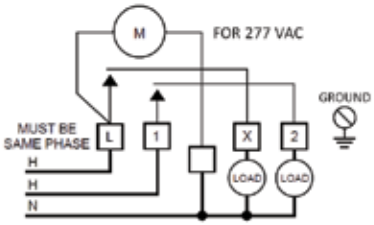
7220



7222







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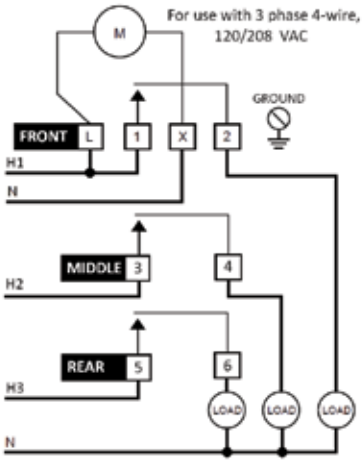

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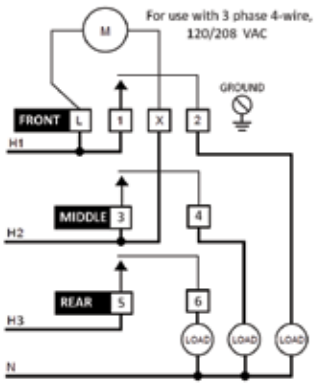

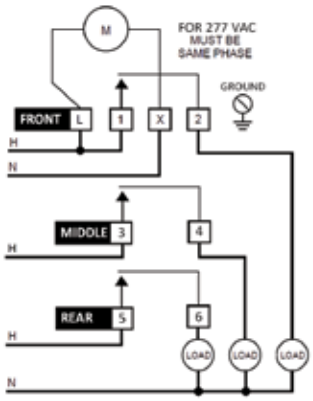

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7000Z SERIES

SunSet WITH SKIP-A-DAY FEATURE
RESERVE POWER OPTIONAL
ASTRONOMIC TIME SWITCH

SunSet

CALIFORNIA Title 24

ASHRAE 90.1

ADJUSTS TO DAILY CHANGES IN SUNSET TIMES!

APPLICATIONS

- Parking lots
- Walkways
- Outdoor signage
- Window displays
- Canopy lighting
- Landscape lighting

- Automatic ON at dusk, OFF at dawn. Control of outdoor lighting.

FEATURES

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times. Available from 18° - 45° northern latitudes.

SKIP-A-DAY: Omit operations on any day with a 7 spoke wheel marked with days of the week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
7200Z–*	**	120	DPST	Noryl® Indoor/Outdoor NEMA 3R
7202Z–*	**	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R
7300Z–*	**	120	3PST	Metal Indoor/Outdoor NEMA 3
7302Z–*	**	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120Z–*	**	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
WITH RESERVE POWER				
7200ZL–*	**	120	DPST	Noryl® Indoor/Outdoor NEMA 3R
7202ZL–*	**	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R
7300ZL–*	**	120	3PST	Metal Indoor/Outdoor NEMA 3
7302ZL–*	**	208-277	3PST	Metal Indoor/Outdoor NEMA 3
7120ZL–*	**	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
7122ZL–*	**	208-277	SPDT	Noryl® Indoor/Outdoor NEMA 3R
Replacement Motor		#101 (120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V)		

*Add degrees latitude to complete number (18, 30, 34, 38, 40, 42, or 45).
**Consult factory for UPC number.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277 VAC 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14 AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

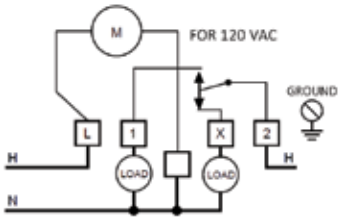
POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

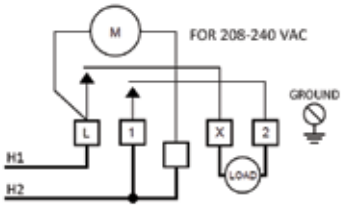
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP
	277VAC Single Phase	

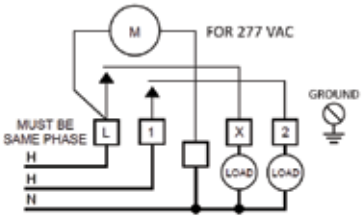
ASTRONOMIC LATITUDE ZONES

7120Z

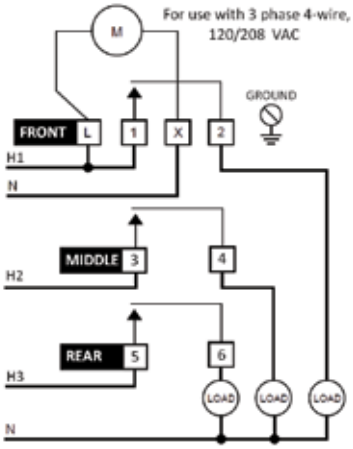


7200Z

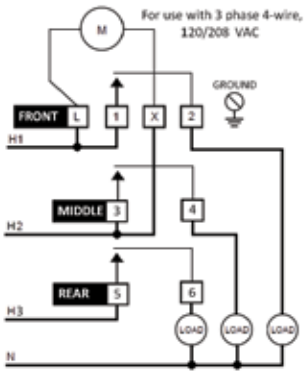


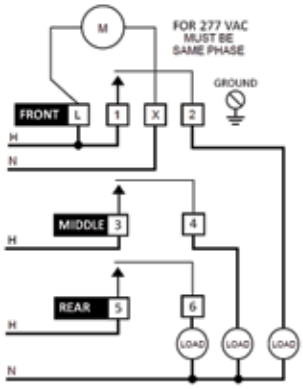


7300Z



7302Z





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8000 SERIES

MANY DAILY ON/OFF OPERATIONS PER DAY

DUTY CYCLE

24 HOUR TIME SWITCH

DUTY CYCLE FOR MULTIPLE ON/OFF OPERATIONS!

APPLICATIONS

- Duty cycling
- Ventilating fans
- Pumping
- Irrigation
- Process control
- Laboratory experiments

- For one or multiple daily ON/OFF operations.

FEATURES

SCHEDULING: Minimum ON setting is 15 minutes with minimum OFF setting at 15 minutes. Dial has 96 captive tabs.

DUTY CYCLE: Adjustable from ½, 1, 2, 3, 4, 6, 12, and 24 hours.

SKIP-A-DAY: Some models include 7 day or 14 day wheel to omit selected days of the week.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
8001	70001	120	SPDT	Metal Indoor NEMA 1
8001-N	70025	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R
8001-NC	70009	120	SPDT	Noryl® Indoor/Outdoor NEMA 3R w/ clear Lexan® cover
8001-LC/WB	70010	120	SPDT	Mechanism and bracket
8001-O	70029	120	SPDT	Metal Indoor/Outdoor NEMA 3
8004	70002	208-277	SPDT	Metal Indoor NEMA 1
8001U	70003	480/120 Trans.	SPDT	Metal Indoor NEMA 1
8001U-N	70014	480/120 Trans.	SPDT	Noryl® Indoor/Outdoor NEMA 3R
8001U-O	70011	480/120 Trans.	SPDT	Metal Indoor/Outdoor NEMA 3
24 HOUR WITH 7 DAY OMIT				
8007	70005	120	SPDT	Metal Indoor NEMA 1
8007-O	70012	120	SPDT	Metal Indoor/Outdoor NEMA 3
8008	70006	208-277	SPDT	Metal Indoor NEMA 1
8007U	70008	480/120 Trans.	SPDT	Metal Indoor NEMA 1
8007U-O	70028	480/120 Trans.	SPDT	Metal Indoor/Outdoor NEMA 3
24 HOUR WITH 7 DAY OMIT & RESERVE POWER				
8007L	70015	120	SPDT	Metal Indoor NEMA 1
8008L	70016	208-277	SPDT	Metal Indoor NEMA 1
24 HOUR WITH 14 DAY OMIT				
8007V	70007	120	SPDT	Metal Indoor NEMA 1
24 HOUR WITH 14 DAY OMIT & RESERVE POWER				
8007VL	70017	120	SPDT	Metal Indoor NEMA 1
Replacement Motor		#101(120V) & #201 (208-277V). For "L" models #36 (120V) & #46 (208-277V)		

SPECIFICATIONS

INPUT VOLTAGE: 120, 208-277VAC or 480VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

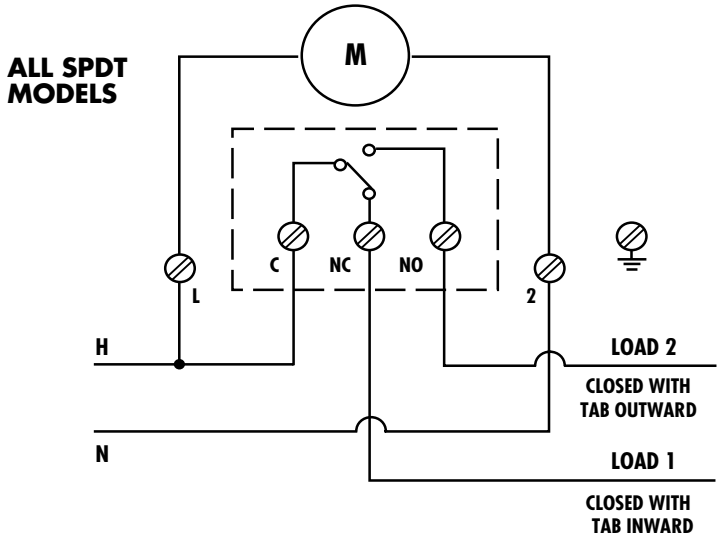
OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Lockable hasp. Type varies by model (see page 557 for enclosure dimensions).

OTHER MOUNTINGS: Intermatic® Adaptor Plate model #IAP allows 8001 & 8004 to fit into an Intermatic case.

TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	120 or 240 480	20A 20A
Motor	120	3/4 HP



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8000 SERIES
MULTIPLE ON/OFF CYCLES
REPEATING VARIABLE CYCLE
TIME SWITCH

APPLICATIONS

- Duty cycling
- Ventilating fans
- Pumping
- Irrigation
- Process control
- Laboratory experiments
- For one or many daily ON/OFF operations.

FEATURES

SCHEDULING: 60 captive tabs per dial with minimum ON/OFF settings:
– 60 minute dial with 1 minute tabs.
– 30 minute dial with 30 second tabs.
– 12 minute dial with 12 second tabs.
– 6 minute dial with 6 second tabs.

DUTY CYCLE: Settings of 1/60 th of dial speed.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 60Hz.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

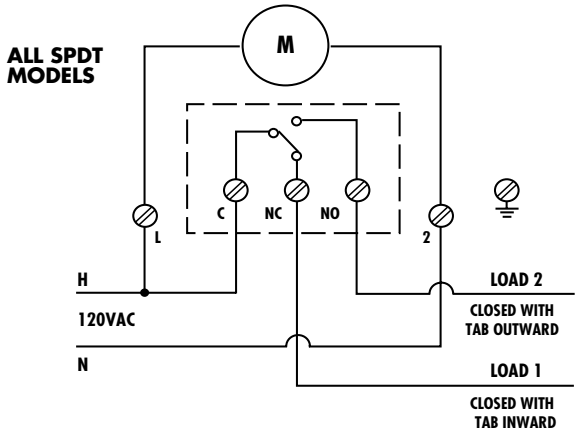
OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION:
3 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	TYPE
8601	70034	120	SPDT	60 Minute
8301	70033	120	SPDT	30 Minute
8121	70032	120	SPDT	12 Minute
8061	70031	120	SPDT	6 Minute
Replacement Motor	For 8601 #102, for 8301 #108, for 8121 #107, and for 8061 #105.			

TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	120 or 240 480	20A 20A
Motor	120	3/4 HP



WH2B
24 HOUR WATER HEATER TIME SWITCH

Avoid utility peak rates
Turn off when not needed

APPLICATIONS

Automatic ON/OFF control of electric water heaters. Schedules the water heater to turn ON only when needed, avoiding energy waste when hot water is not needed.

SPECIFICATIONS

INPUT VOLTAGE: 208 – 250V 60 Hz.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
WH2B	70044	208-250	DPST	Metal Indoor NEMA 1

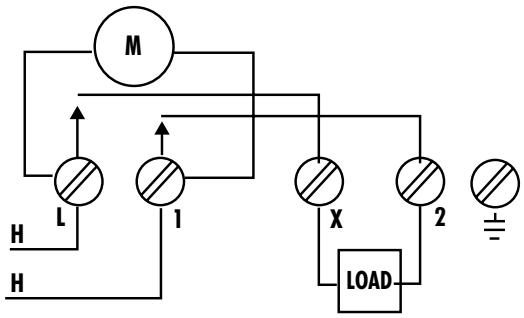
TYPE	VOLTAGE (VAC)	CONTACT RATING
Resistive	208-250	40 A 10,000W
Replacement Motor	#201 (208-277)	
Replacement Trippers	Order #P47 for a pair of ON/OFF trippers	

FEATURES

SCHEDULING: Minimum ON is setting 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs. 3 pairs of trippers supplied.

EXTERNAL MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

TYPICAL FOR 240 VOLT SUPPLY



1800 SERIES

FOR MECHANICALLY HELD CONTACTORS AND LOW VOLTAGE REMOTE CONTROL MOMENTARY CONTACT TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Mechanically-held contactors
- 3-wire momentary
- lighting systems
- Remote station switching

FEATURES

SCHEDULING: Choice of three types.

24 HOUR SKIP-A-DAY: Minimum ON setting is 20 minutes with minimum OFF setting at 75 minutes. Dial accommodates up to 12 pairs of trippers. Omit operations on any day with a 7 spoke wheel marked with days of week.

ASTRONOMIC SCHEDULING: Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times.

7 DAY SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial will accomodate up to 2 pairs on ON/OFF trippers per day - 7 pairs are supplied.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 16 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	TYPE
1847A	52001	120	SPDT Momentary	24 Hour
1848A	52014	208-277	SPDT Momentary	24 Hour
1847AZ*	**	120	SPDT Momentary	Astronomic
1847AW	52005	120	SPDT Momentary	7 Day
WITH RESERVE POWER				
1847AL	52006	120	SPDT Momentary	24 Hour
1847AZL*	**	120	SPDT Momentary	Astronomic
1847AWL	52010	120	SPDT Momentary	7 Day
Replacement Trippers	For 24 hour models order #P49 for a pair ON/OFF per dial. Additional ON/OFF trippers per dial order #P47. 3 omitting screws #53005 supplied. 7 day models order #P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#101(120V) & #201 (208-277V). For "L" models #36 (120V)			

*Add degrees latitude to complete number (18, 30, 34, or 42).
**Consult factory for UPC number.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC or 208-277VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

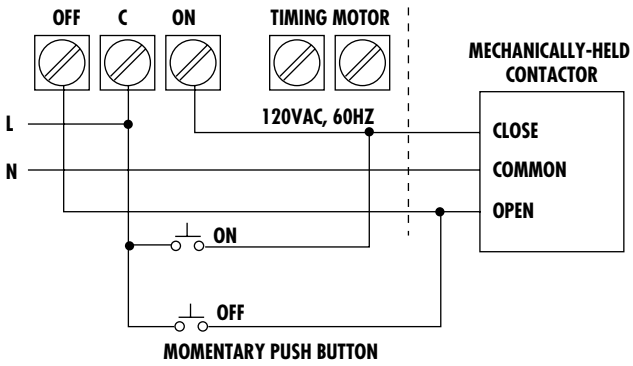
TERMINAL RANGE: #12 - #22AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	24-277	10A
Pilot Duty	24-277	360VA



ASTRONOMIC LATITUDE ZONES

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W SERIES
DIFFERENT SCHEDULES EACH DAY
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Heating
- Air conditioning
- Display lighting
- Ventilating systems
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. Models W400A and W402A offer minimum ON/OFF settings of 3½ hours. 7 day calendar dial accommodates up to 2 pairs of ON/OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

OPTIONAL RESERVE POWER: "L" models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
W100	30001	120	SPST	Metal Indoor NEMA 1
W120	33001	120	SPDT	
W200	31001	120	DPST	
W202	31011	208-277	DPST	
W220	34001	120	DPDT	
W222	34011	208-277	DPDT	
W300	32001	120	3PST	
W300-0	32003	120	3PST	Metal Indoor/Outdoor NEMA 3
W302	32002	208-277	3PST	Metal Indoor NEMA 1
W400B*	35003	120	4PST	
W402B*	35004	208-277	4PST	
WITH RESERVE POWER				
W220L	39009	120	DPDT	Metal Indoor NEMA 1
W222L	39010	208-277	DPDT	
W300L	39005	120	3PST	
W302L	39006	208-277	3PST	
W400BL*	39008	120	4PST	
Replacement Trippers	Order #P69 for 7 pairs of ON/OFF trippers			
Replacement Motor	#101 (120V) & #201 (208-277V). For "L" models order #36 (120V) and #46 (208-277V).			

*UL Listed only.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60Hz, varies by model.

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

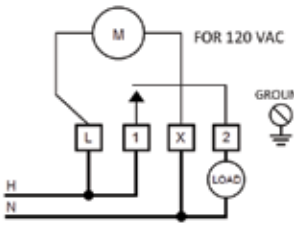
POWER CONSUMPTION: 3 watts, 5 watts for "L" models maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp. Other enclosures include metal Indoor/Outdoor NEMA 3 with suffix "O" (see page 557 for enclosure dimensions).

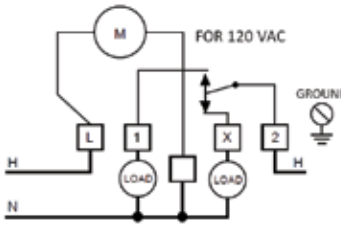
TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120 -277	40A
Resistive	120 -277	40A
Tungsten	120	40A
Ballast	120-277	20A
Pilot Duty	120 -277	1000VA
Motor	120 240	2HP 5HP

277VAC Single Phase

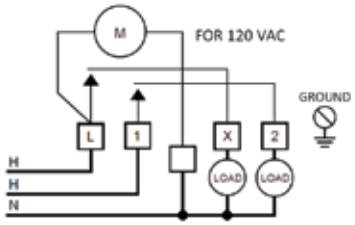
W100



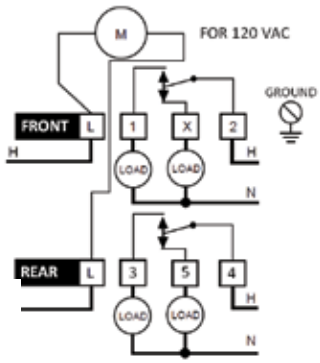
W120



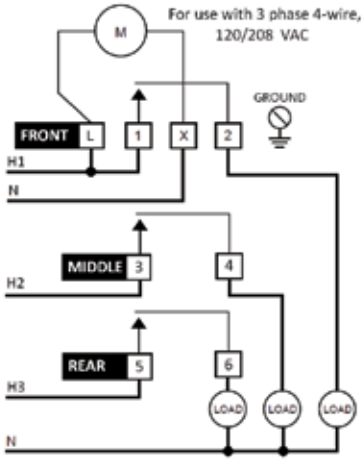
W200



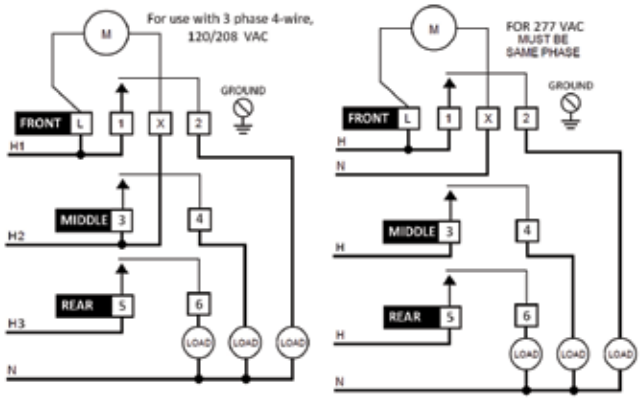
W220



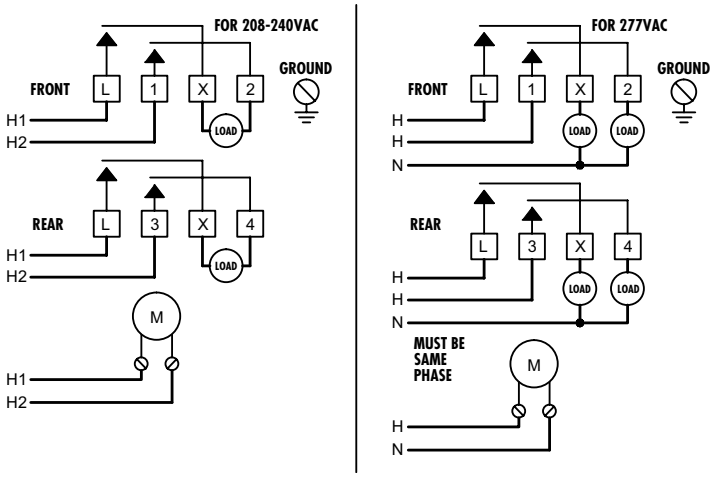
W300



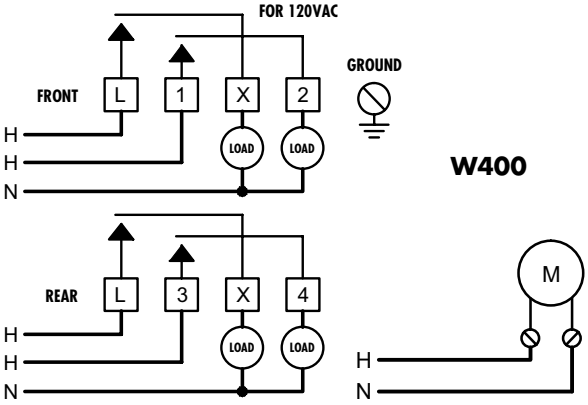
W302



W402



W400



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T900 SERIES

PHOTOELECTRIC & 7 DAY CONTROL COMBO
DIFFERENT SCHEDULES EACH DAY
RESERVE POWER STANDARD
2 & 3 CIRCUIT CONTROL CENTERS

Optional "E" cover

Model 2101 supplied with unit.

APPLICATIONS

- Parking lot lighting
- HVAC
- Display lighting
- Security lighting
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING:

CIRCUIT 1: ON automatically at dusk, OFF at individual preset times each day, including skipping days when desired. Unit can be set to turn ON before dawn for early morning lighting.

CIRCUIT 2: ON at dusk, OFF at dawn automatically, daily.

CIRCUIT 3: Individual daily ON and OFF settings at desired times, including skipping any desired day or days Minimum ON is setting 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial will accommodate up to 2 pairs of ON-OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL BY-PASS SWITCHES: Single pole, 20 Amps – one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent – will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
T920L	41033	120	2 SPDT	Metal Indoor NEMA 1
T920L-E	41034	120	2 SPDT	Metal Indoor NEMA 1 with switch access
T920L-O	41035	120	2 SPDT	Metal Indoor/outdoor NEMA 3
T930L	41055	120	3 SPDT	Metal Indoor NEMA 1
T930L-E	41056	120	3 SPDT	Metal Indoor NEMA 1 with switch access
T930L-O	41057	120	3 SPDT	Metal Indoor/outdoor NEMA 3
Replacement Trippers	#P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#36 (120V)			
Replacement Bypass Switch	#66061			

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60 Hz, varies by model.

TIMING ACCURACY: Line frequency.

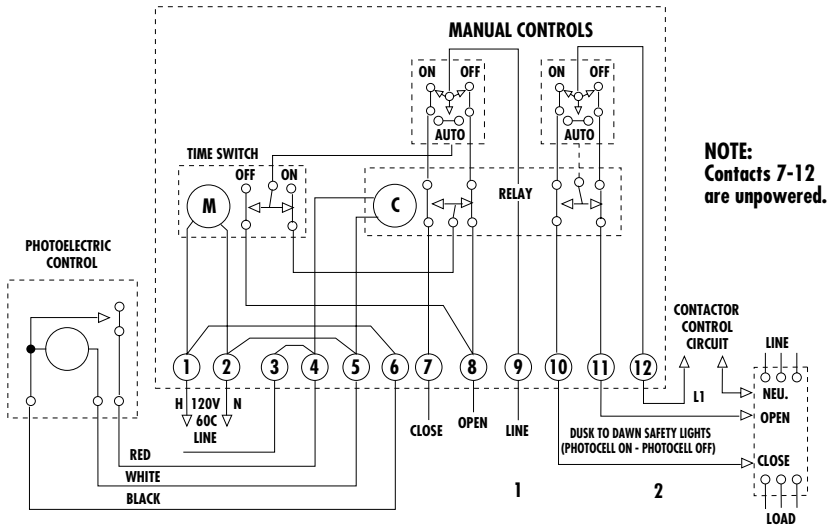
TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40˚ to 165˚F (-40˚ to +74˚C).

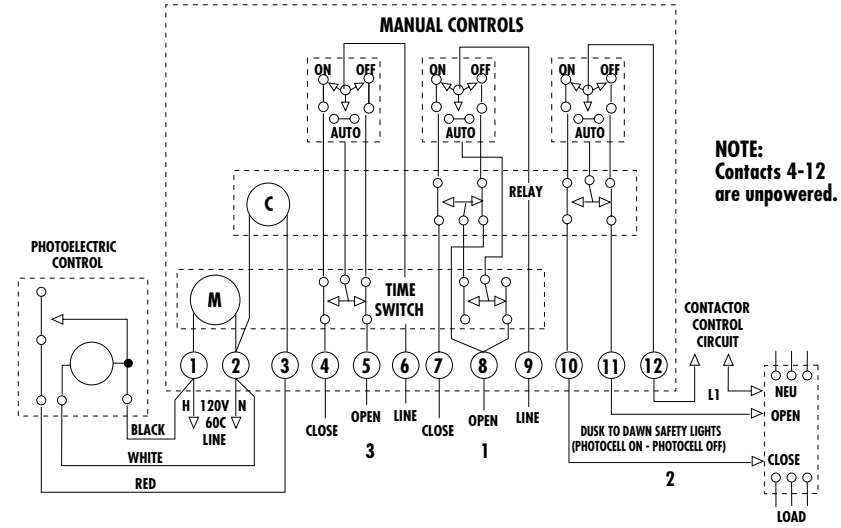
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp. Other enclosures include cover for access to by-pass switches with suffix "E" or Indoor/Outdoor NEMA 3 metal with suffix "O" (see page 557 for enclosure dimensions).

T920L
ONLY CIRCUITS 1 AND 2 ARE INCLUDED IN T920L



T930L
ALL 3 CIRCUITS ARE INCLUDED IN T930L



NOTE 1: All models designed to control mechanically-held and magnetic contactors, when wired in accordance with manufacturers recommendations. Contacts are unpowered control circuits rated for 24-277V contactor coils. See notes on wiring schematics.

NOTE 2: For momentary Contact of contactor coils, use TORK Model SMC-3D, in our Digital Controls Catalog.

For Specification Writers' Guides, please visit our website: http://www.nsiindustries.com/support-downloads/technical-library.aspx

TW SERIES

DIFFERENT SCHEDULES EACH DAY
MANUAL BYPASS SWITCHES
RESERVE POWER STANDARD
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

Optional "E" cover

APPLICATIONS

- Heating
- Air conditioning
- Display lighting
- Ventilating systems
- Lighted signage
- Storefront lighting

FEATURES

SCHEDULING: Minimum ON setting is 1 hour with a minimum OFF setting of 2 hours. Minimum 8 hours between 2 OFF settings. 7 day calendar dial accommodates up to 2 pairs of ON-OFF trippers per day – 7 pairs are supplied.

SKIP-A-DAY: Omit operations on any day.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL BY-PASS SWITCHES: Single pole, 20 Amps – one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent – will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
TW-220L	39013	120	DPDT	Metal Indoor NEMA 1
TW-220L-E	39021	120	DPDT	Metal Indoor NEMA 1 with switch access
TW-222L	39014	208-277	DPDT	Metal Indoor NEMA 1
TW-300L	39015	120	3PST	Metal Indoor NEMA 1
TW-302L	39016	208-277	3PST	Metal Indoor NEMA 1
Replacement Trippers	Order #P69 for 7 pairs of ON/OFF trippers.			
Replacement Motor	#36 (120V) & #46 (208-277V)			
Replacement Bypass Switch	#66061			

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE:
120 or 208 - 277VAC, 60Hz, varies by model.

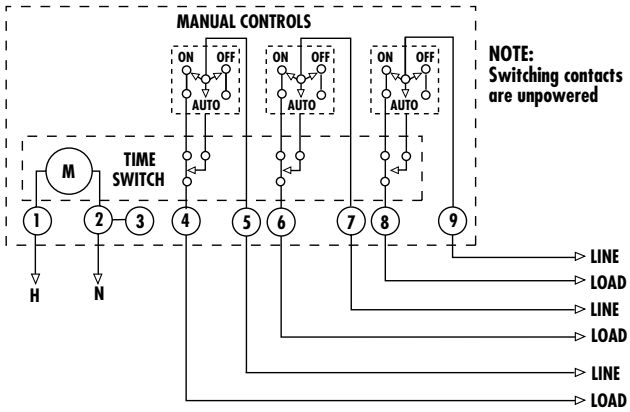
TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

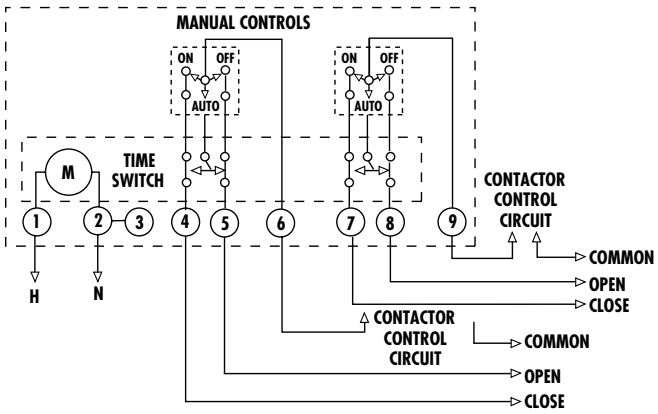
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp (see page 557 for enclosure dimensions).



TW300L

When single line source is used, jumper terminals 1-5-7-9 and connect all commons to terminals 2 and 3.



TW220L

Wiring shown is for mechanically-held contactors. Use CLOSE terminal only for magnetically-held contactors and to control direct loads not exceeding 2000 watts.

For Specification Writers' Guides, please visit our website: http://www.nsiindustries.com/support-downloads/technical-library.aspx

TZ SERIES SunSet

MANUAL BYPASS SWITCHES
RESERVE POWER STANDARD
ASTRONOMIC TIME SWITCH

SunSet

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Schools
- Industrial yards
- Shop windows
- Parking lots
- Highway signs
- Bridges

FEATURES

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Turn ON at sunset and OFF at sunrise daily. OFF time can be set from 8:30PM to 2:30AM. Can be individually offset +/- 20 or 40 minutes from both sunset and OFF times. Available from 18° - 45° northern latitudes.

SKIP-A-DAY: Omit operations on any day with a 7 spoke wheel marked with days of the week. 3 omitting screws included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL BYPASS SWITCHES: Single pole, 20 Amps - one per circuit. Factory pre-wired to terminal strip. ON/OFF/AUTO positions for each circuit is independent, will not disturb automatic settings.

RESERVE POWER: Standard feature on all models keep dial on time up to 24 hours during power outage.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
TZ220L*	**	120	DPDT	Metal Indoor NEMA 1
TZ220L-O*	**	120	DPDT	Metal Indoor/outdoor NEMA 3
TZ222L*	**	208 - 277	DPDT	Metal Indoor NEMA 1
TZ300L*	**	120	3PST	Metal Indoor NEMA 1
TZ300L-O*	**	120	3PST	Metal Indoor/outdoor NEMA 3
TZ302L*	**	208 - 277	3PST	Metal Indoor NEMA 1
Replacement Motor	For "L" models #36 (120V) & #46 (208-277V)			
Replacement Bypass Switch	#66061			

*Add degrees latitude to complete number (18, 30, 34, 38, 40, 42, or 45).
**Consult factory for UPC number.

TYPE	VOLTAGE (VAC)	CONTACT RATING
General Purpose	120/277	20A
Motor	120 240	1HP 2HP

NOTE: All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

SPECIFICATIONS

INPUT VOLTAGE:
120 or 208 - 277VAC, 60Hz, varies by model.

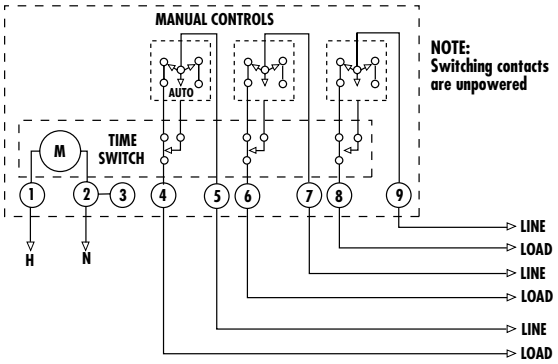
TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE:
-40˚ to 165˚F (-40˚ to +74˚C).

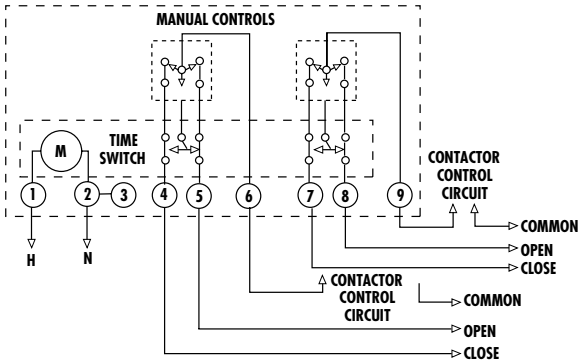
POWER CONSUMPTION: 5 watts maximum.

ENCLOSURE: Indoor NEMA 1 Metal with lockable hasp and for some models enclosures is Indoor/Outdoor NEMA 3 metal with suffix "O" (see page 557 for enclosure dimensions).



TZ300L

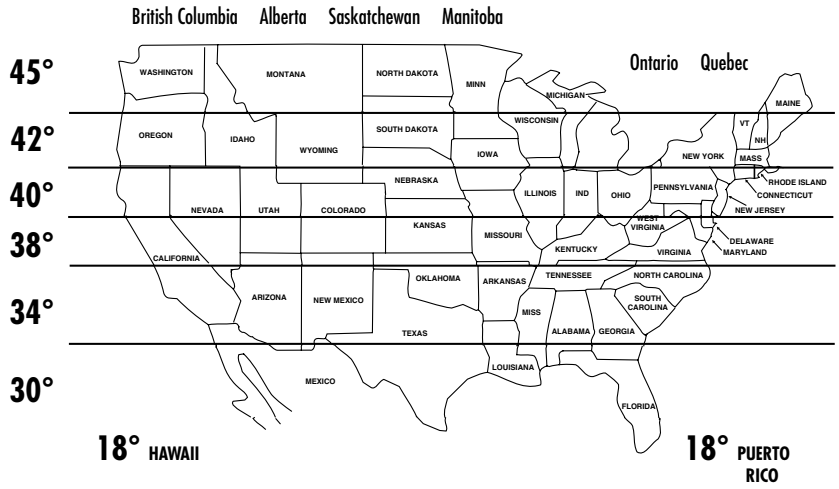
When single line source is used, jumper terminals 1, 5, 7, 9 and connect all commons to terminals 2 and 3.



TZ220L

Wiring shown is for mechanically held contactors. Use CLOSE terminal only for magnetically held contactors and to control direct loads not exceeding 2000 watts.

ASTRONOMIC LATITUDE ZONES



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1CH
2CH
4CH
LAT
HOUR
MONTH
MIN
DATE
SEASON
DAY
YEAR
SEC
EVENT
MODE
DEL
PREV

TORK® DIGITAL TIME SWITCHES

QUICK REFERENCE GUIDE

	DTU40 DTWH40	EH20C	SA300	E-PB	E	EW	EWZ	DG	DGM	DW	DWZ	DTS
Page No.	447	449	451	453	453	455	457	459	459	461	461	463
Number of Channels	1	1	1	1	1 or 2	1 or 2	1 or 2	1 or 2	1	2	1	1, 2 or 4
ON/OFF Set Points	7 pair	14	1 pair	20	20	20	20	56	56	99	99	99
365 Day/7 Day Scheduling	7 day	7 day	7 day	24 hour	24 hour	7 day	7 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day
Automatic Daylight Savings Adjustment	Manual	Yes	Manual	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Leap Year		Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Holiday Schedules										24	24	24
Block Holiday		Yes						9	9			
Season Scheduling												4
SunSet (Astronomic)			ZipSet				Yes				Yes	
Photosensor Input												
Remote Override Input												
Signal/Pulse Duration												Yes
Momentary for Contactors					Option	Option	Option		Yes			
Duty Cycle												
31 Day Cycle												
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clock Format	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	AM/PM	12/24	12/24	12/24	12/24	12/24
Power Outage Backup	Rechargeable Battery	4 day Super Capacitor	Battery	4 day Super Capacitor	4 day Super Capacitor	4 day Super Capacitor	4 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor
Schedule Retention without power	Battery	Permanent	Battery	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent
Staggered Start					Yes	Yes	Yes	Yes	Yes	Yes		Yes
Memory Module												
Computer Programming Software												
Output Contacts: Amps Resistive or General Purpose	40A	40A	40A	30A	40A	40A	40A	20A	20A	30A	30A	30A
Contact Type: Dry Unpowered	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voltage Input AC	120/208-240/277	120-277	120 or 120/277	120	120-277	120-277	120-277	120-277	120-277	120/208-240/277	120/208-240/277	120/208-240/277
Other Voltage Inputs Available												

			LIGHTING CONTROLS					CYCLE - SIGNAL TIMER		
	DZS	DZM	ELC74/78/712	DGU	DGUM	DGLC	DLC400	DG	DGS	DIN
Page No.	465	467	473	471	471	471	475	479	479	485
Number of Channels	1, 2, or 4	2	4, 8, or 12	1	1	1 or 2	4	1 or 2	1	1 or 2
ON/OFF Set Points	99	99	128	56	56	56	99	56	56	8 pair 3 pair/ch
365 Day/7 Day Scheduling	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	7/365 day	24 Hour	7 Day	7 Day
Automatic Daylight Savings Adjustment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Leap Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Individual Holiday Schedules	24	24	26				24			
Block Holiday			10	9	9	9				
Season Scheduling	4	4					4			
SunSet (Astronomic)	Yes	Yes	Yes	Yes	Yes	Yes	Yes			
Photosensor Input			Yes	Yes	Yes	Yes	Yes			
Remote Override Input			Yes	Yes	Yes	Yes	Yes			
Signal/Pulse Duration	Yes		Yes					Yes	Yes	
Momentary for Contactors		Yes	Yes		Yes					
Duty Cycle			Yes					Yes	Yes	
31 Day Cycle								Yes		
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Clock Format	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	12/24	AM/PM
Power Outage Backup	7 day Super Capacitor	7 day Super Capacitor	2 day Capacitor 1 year battery	7 day Super Capacitor	7 day Super Capacitor	7 day Super Capacitor	6 month battery	7 day Super Capacitor	7 day Super Capacitor	8 year battery
Schedule Retention without power	Permanent	Permanent	Battery	Permanent	Permanent	Permanent	Permanent	Permanent	Permanent	Battery
Staggered Start	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Memory Module	Yes	Yes					Yes			
Computer Programming Software	Yes	Yes					Yes			
Output Contacts: Amps Resistive or General Purpose	30A/20A	30A	20A	20A	20A	20A	30A	20A	20A	16A
Contact Type: Dry Unpowered	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voltage Input AC	120/208-240/277	120/208-240/277	24/120/208 240/ 277	120-277	120-277	120-277	120/208-240/277	120-277	120-277	120
Other Voltage Inputs Available	12VDC 24VAC		24VAC All Models					12VDC 24VAC	24VAC	

DT SERIES
AUTOMATIC VOLTAGE DETECTION
7 DAY TIME SWITCH AND WATER HEATER TIMER

MORE WIRING SPACE!

DTU40

DTWH40

Avoid utility peak rates
Turn off when not needed

APPLICATIONS

- **DTU40**
  - Pumps, motors, fans
  - Signs and lighting
  - Water heaters
  - Heating and air conditioning
- **DTWH40**
  - Water Heaters
  - This timer turns OFF when rates are high and turns OFF when no one is home.

FEATURES

SCHEDULING: 7 ON & OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

DAYLIGHT SAVING: Manual button push for one hour adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

EXTERNAL MANUAL OVERRIDE: DTWH40 only on clear door. Override without opening case.

RANDOM MODE: Varies ON and OFF times to create "lived-in" look when away.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Battery retains time and schedule.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DTU40	24004	120/208-240/277	1	DPDT
DTWH40	24005	120/240	1	DPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	120-277	40A	30A
Inductive	120-277	30A	15A
Ballast	120 277	30A 20A	10A 10A
Tungsten	120	15A	
Motor	120 240	1HP/30FLA/90LRA 2HP/20FLA/60LRA	1/4HP/12FLA/30LRA 1/2HP/12FLA/33LRA
Pilot duty	120 240	720VA 720VA	290VA 260VA
Resistive	28VDC	20A	
Max above 104°F	120-277	30A	

SPECIFICATIONS

INPUT VOLTAGE: 120/208-240/277 VAC, 50/60 Hz (auto detection). DTWH40 is 120/240VAC 50/60Hz (auto detection).

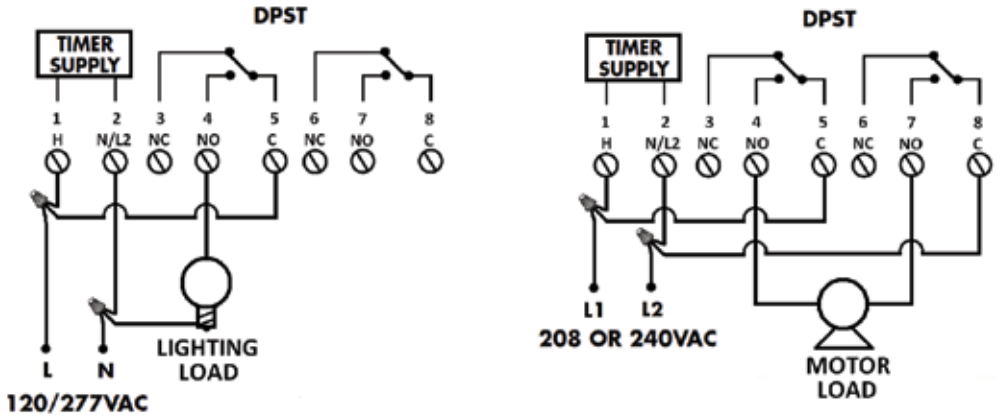
TERMINAL RANGE: #8 - #18AWG.

OPERATING TEMPERATURE: -31°F to 116°F (-35°C to +47°C).

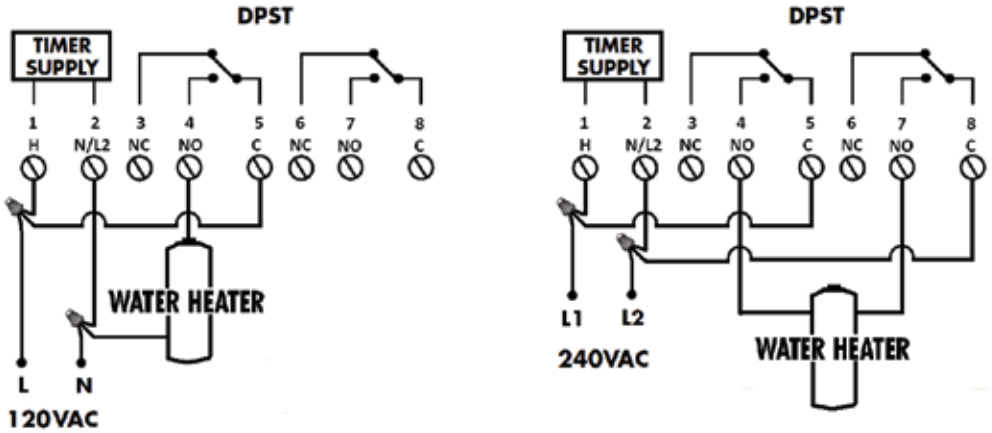
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: DTU40 polycarbonate Indoor/ Outdoor NEMA 3R. DTWH40 polycarbonate indoor NEMA 1 enclosure with clear cover. Both with lockable hasp (see page 557 for enclosure dimensions).

DTU40



DTWH40



EH20C
AUTOMATIC VOLTAGE DETECTION WATER HEATER TIMER WITH SUMMER LOAD SHED

responsible energy

Avoid utility peak rates
Turn off when not needed

PRE PROGRAMMED FOR EASY SET-UP

APPLICATIONS

c UL us

- Electric water heaters for residential or commercial.

FEATURES

PRE-PROGRAMMED: Unit preset for daily OFF time from 12:00am to 4:00am daily.

SUMMER LOAD SHED: Additional OFF time from 3:00pm to 7:00pm during Summer time (6/1 to 9/30) annually to avoid peak usage.

SCHEDULING: Additional 14 ON or OFF set points for individual programs for each day of the week. Minimum setting 1 minute.

HOLIDAY SCHEDULE: Extend to the load shed date throughout the year or preset extra load shed schedules while on vacation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF. Override during pre-programed times limited to 60 minutes per day.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Lithium battery. Non-rechargeable with 8 year expected life.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50-60Hz	OUTPUT CONTACTS
EH20C	82314	120-277	DPST

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120-277	40A
Inductive	120-277	40A
Pilot duty	120-277	720VA
Motor	120 208 240-277	1 HP 1 1/2 HP 2 HP

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

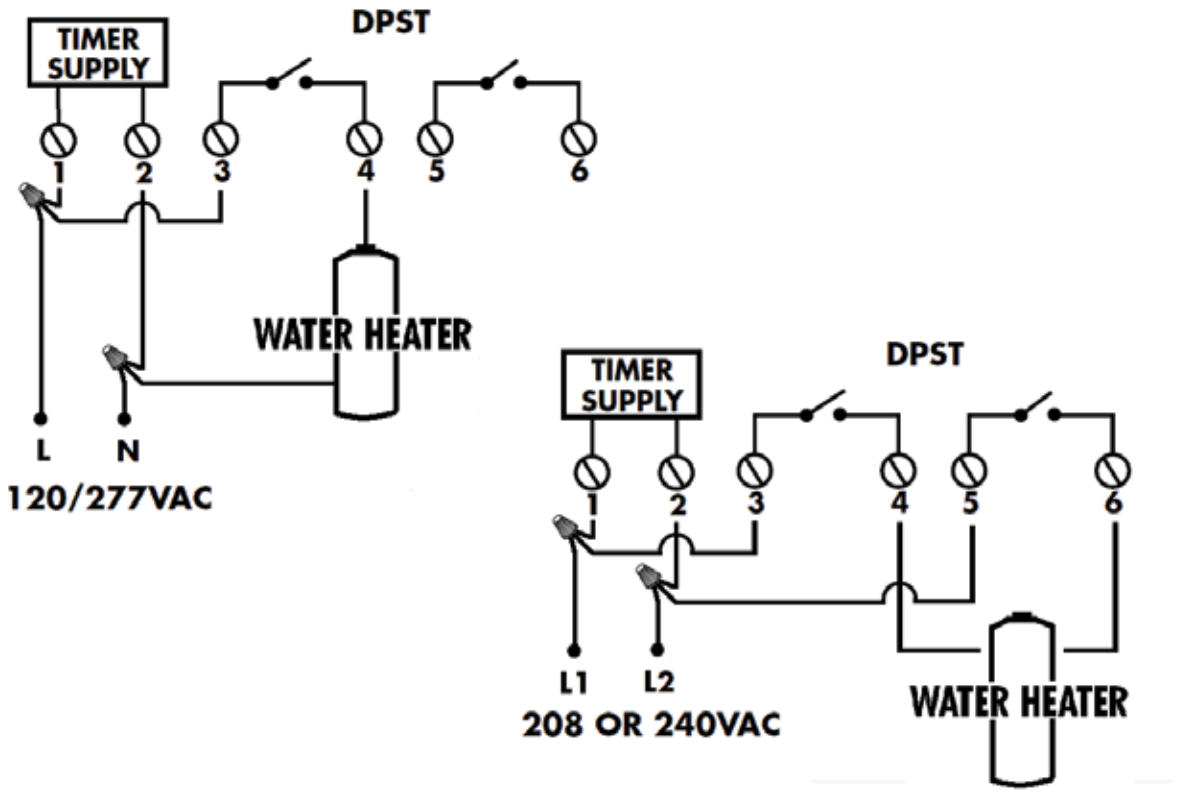
INPUT VOLTAGE: 120-277VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE: -40˚ to +149˚F (-40˚ to +65˚C).

POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Indoor/Outdoor NEMA 3R Polycarbonate with locking hasp. (see page 557 for enclosure dimensions).



SA300 SERIES
Zip-Set™
DIGITAL TIME SWITCH

responsible energy

AREA CODE ENTRY FOR FAST SET-UP

APPLICATIONS

- Outdoor lighting
- Electric motors
- Indoor lighting or signs

FEATURES

ZIP-SET: Fast and easy. Just enter area code and timer adjusts to your time with preset program of Sunset ON and time off program.

SCHEDULING: One On/Off set point pair is active at a time. Only one schedule may be active at a time: Schedule 1, Schedule 2, a combination of 1 & 2, or ZipSet™. Day combinations for 7-5-2 speed programming.

MANUAL DAYLIGHT SAVING: Simple switch adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

RANDOM FEATURE: Varies on time +/-90 minutes each day for lived in look.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Replaceable batteries

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS
SA300	16546	120	SPST
SA306	16549	120	DPST
SA400	16552	120/277	SPST

TYPE	VOLTAGE (VAC) 60Hz	RATING
Resistive	120*	40A
Inductive	120*	40A
Tungsten	120*	40A
Incandescent	120*	40A
Motor	120	1 1/2HP
*SA400	120/277	

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 60Hz
SA400 120/277VAC, 60Hz

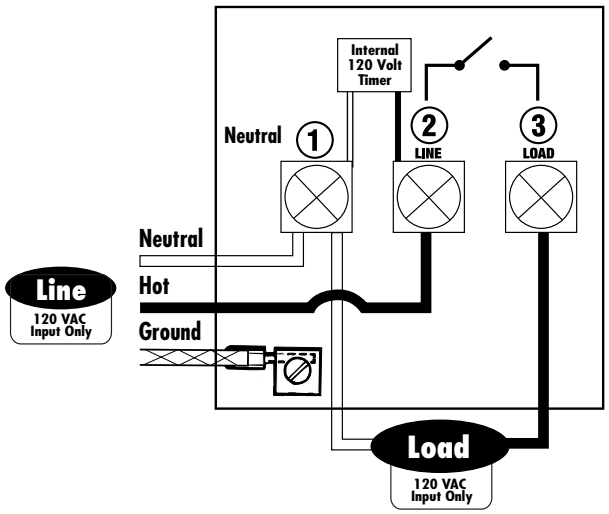
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
32˚ to +100˚F (0˚ to +37˚C).

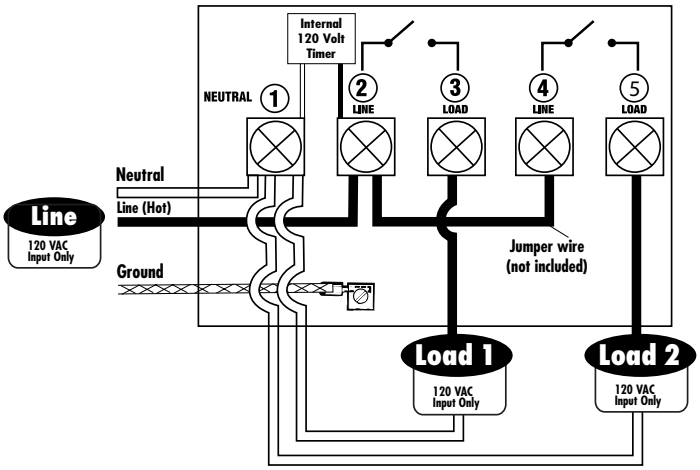
POWER CONSUMPTION: 5VA Max.

ENCLOSURE: Indoor Metal with locking hasp.
SA400 Outdoor Metal with locking hasp.
(see page 557 for enclosure dimensions).

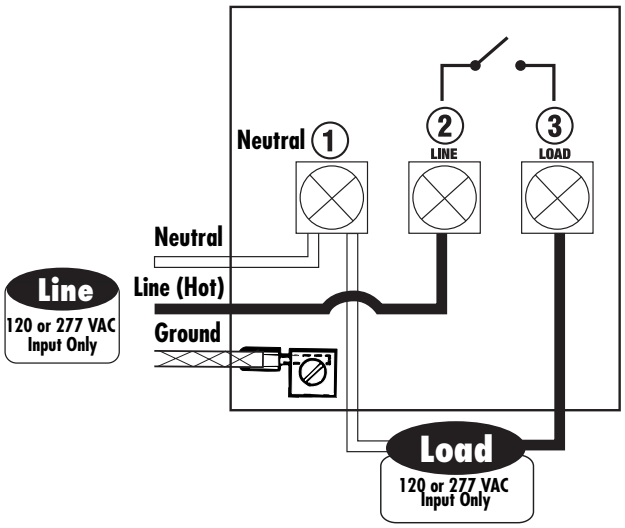
SA300



SA306



SA400



E & E-PB SERIES

MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
24 HOUR TIME SWITCH

BACKUP *WITHOUT* BATTERY, ECO FRIENDLY!

APPLICATIONS

- Signs
- Air conditioning
- Lighting
- Sump pumps
- Ventilating fans

FEATURES

SCHEDULING: 20 ON/OFF set points repeat each day. Minimum setting 1 minute.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contractors: Model E201B only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
E101B	82401	120-277	1	SPST
E103B	82411	120-277	1	DPST
E120B	82406	120-277	1	SPDT
E201B	82466	120-277	2	SPST
E101PB	82461	120	1	SPST

TYPE	E101B, E103B, E201B		E120B		E101PB	
	VOLTAGE (VAC)	RATING NO	RATING NO	RATING NC	VOLTAGE (VAC)	RATING NO
General Purpose	120-277	40A	30A	30A	120/240 277	30A 12A
Inductive	120-277	40A	30A	30A	120/240 277	30A 12A
Ballast	120 208-277	30A 20A	30A 20A	10A 10A	120 277	20A 6A
Tungsten	120	15A	15A	2A	120	5A
Pilot Duty	120-277	720VA	720VA	720VA	120-240 277	470VA 690VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP	120 240	1HP 2HP
Resistive	28VDC	30A	30A	30A	28VDC	20A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
E SERIES
120 - 277VAC, 50/60Hz (automatic detection).
E-PB
120VAC, 50/60Hz.

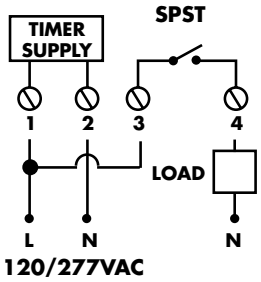
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

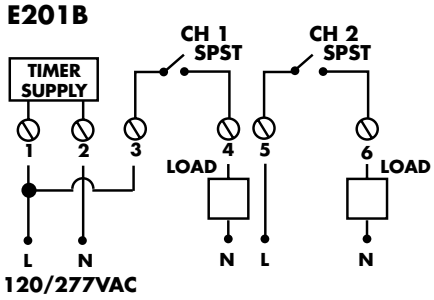
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R is standard with lockable hasp (see page 557 for enclosure dimensions).

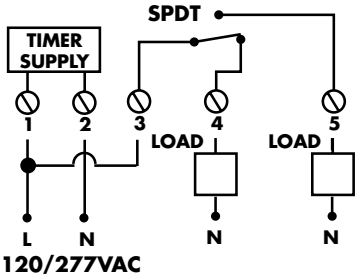
E101B

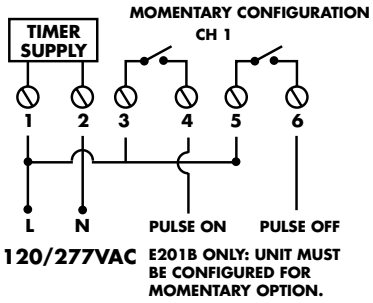


E201B

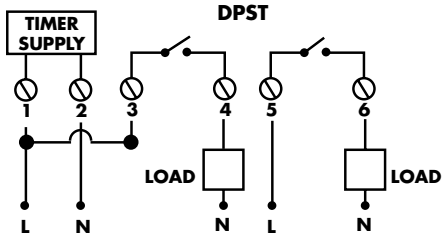


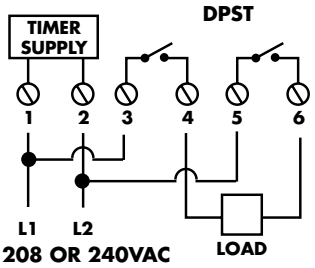
E120B



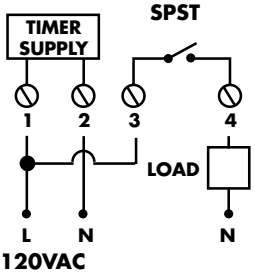


E103B





E101PB



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EW SERIES
MULTIPURPOSE CONTROL
1 OR 2 CHANNEL
7 DAY TIME SWITCH

AUTOMATIC DST SAVES TIME CHANGES TWICE A YEAR!

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Outdoor signs
- Lighting security
- Heating and air conditioning

FEATURES

SCHEDULING: 20 ON & OFF set points for individual programs for each day of the week. Minimum setting is 1 minute.

DAYLIGHT SAVING: Automatic (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contractors: Model EW201B only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
EW101B	82431	120-277	1	SPST
EW103B	82441	120-277	1	DPST
EW120B	82436	120-277	1	SPDT
EW201B	82467	120-277	2	SPST
EW101B-Y	82249	120-277	1	SPST
EW103B-C	82253	120-277	1	DPST
EW103B-Y	82255	120-277	1	DPST
EW120B-C	82437	120-277	1	SPDT
EW120B-Y	82261	120-277	1	SPDT
EW201B-Y	82299	120-277	2	SPST

TYPE	EW101B, EW103B, EW201B		EW120B		
	VOLTAGE (VAC)	RATING NO	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	120-277	30A	30A
Inductive	120-277	40A	120-277	30A	30A
Ballast	120 208-277	30A 20A	120 208-277	30A 20A	10A 10A
Tungsten	120	15A	120	15A	2A
Pilot Duty	120-277	720VA	120-277	720VA	720VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP
Resistive	28VDC	30A	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

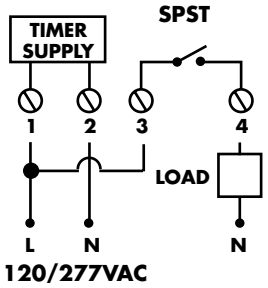
TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

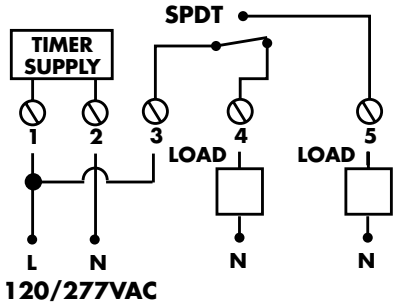
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R. Suffix -C plastic clear cover Indoor/Outdoor NEMA 3R. Suffix -Y metal Indoor enclosure NEMA 1. All with lockable hasp (see page 557 for enclosure dimensions).

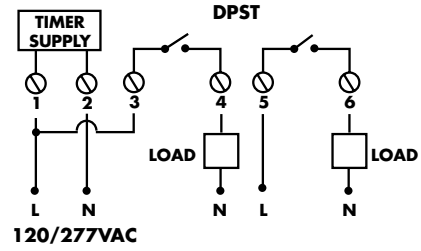
EW101B

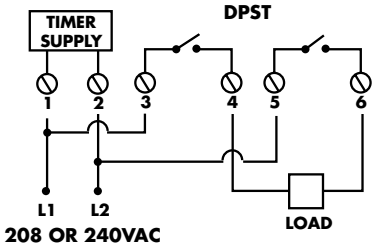


EW120B

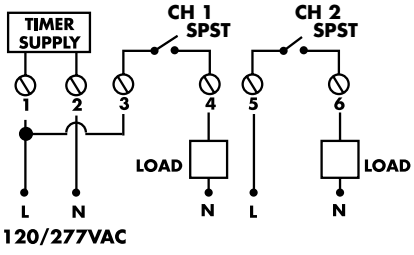


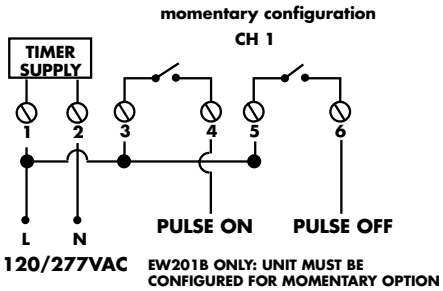
EW103B





EW201B





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EWZ SERIES

SunSet 1 OR 2 CHANNEL 7 DAY TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

PREFERRED FOR OUTDOOR LIGHTING!

APPLICATIONS

- Outdoor signs
- Lighting security
- Heating and air conditioning

FEATURES

SCHEDULING: 20 ON & OFF set points for individual programs for each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes from both sunset and sunrise times.

DAYLIGHT SAVING: Automatic (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 4 days of real time backup.

MOMENTARY OPTION: For mechanically held contactors: Model EWZ201 only. Configure with simple jumper change for single-channel momentary operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT DRY CONTACTS
EWZ101	82470	120-277	1	SPST
EWZ103	82473	120-277	1	DPST
EWZ120	82471	120-277	1	SPDT
EWZ201	82472	120-277	2	SPST
EWZ101-MB	82263	120-277	1	SPST
EWZ103-MB	82269	120-277	1	DPST
EWZ120-MB	82275	120-277	1	SPDT
EWZ201-MB	82281	120-277	2	SPST

TYPE	EWZ101,EWZ103, EWZ201		EWZ120		
	VOLTAGE (VAC)	RATING NO	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-277	40A	120-277	30A	30A
Inductive	120-277	40A	120-277	30A	30A
Ballast	120 208-277	30A 20A	120 208-277	30A 20A	10A 10A
Tungsten	120	15A	120	15A	2A
Pilot Duty	120-277	720VA	120-277	720VA	720VA
Motor	120 208 240-277	1HP 1 1/2HP 2HP	120 208 240-277	1HP 1 1/2HP 2HP	1HP 1 1/2HP 2HP
Resistive	28VDC	30A	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #8 - #16AWG.

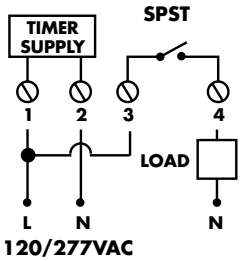
OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

POWER CONSUMPTION: 6VA Max.

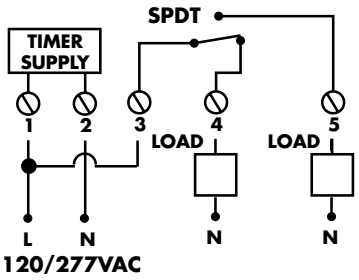
ENCLOSURE: Polycarbonate Indoor/Outdoor NEMA 3R is standard with lockable hasp (see page 557 for enclosure dimensions). Suffix -MB without enclosure and includes mounting bracket.

OPTIONS: Suffix -Q Quartz crystal timing. Maintains accurate timing where 50 or 60 Hz is not consistent such as on-site generator produced power. Consult factory for minimum order size.

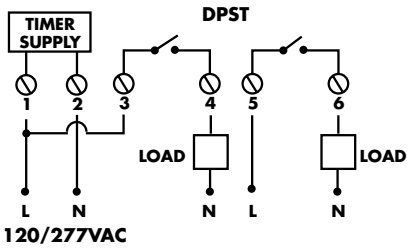
EWZ101

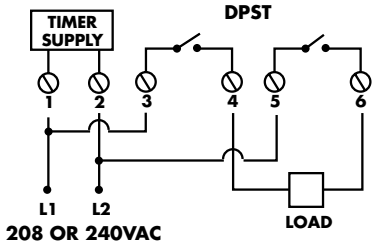


EWZ120

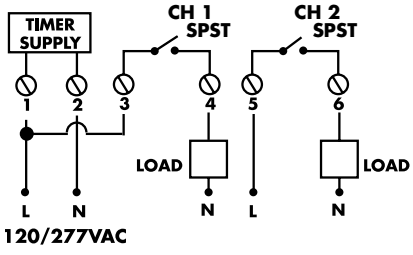


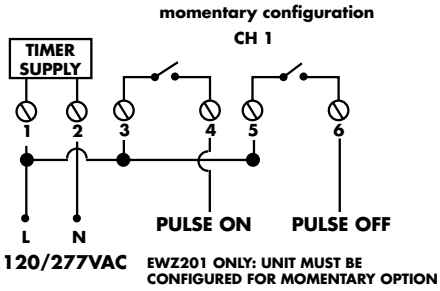
EWZ103





EWZ201





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DG100 SERIES
MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
365/7 DAY
TIME SWITCH

HOLIDAY PROGRAMMING FOR MORE SAVINGS!

c UL us

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Indoor/Outdoor lighting
- HVAC equipment
- School warning and other
- Traffic lights
- Water heaters in offices, churches and factories

FEATURES

SCHEDULING: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

MOMENTARY CONTACT: DGM100A has 2 second contact closures for ON & OFF control of mechanically held contactors or latching relays.

BLOCK HOLIDAY: 9 holiday blocks can be set for individual days or for duration of any number of days.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour format.

POWER OUTAGE BACKUP: Permanent schedule retention is provided. Supercapacitor provides 7 days of real time back up.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DG100A	82201	120-277	1	DPDT
DG200A	82209	120-277	2	SPDT
DGM100A	82210	120-277	1	SPDT Momentary
DG100A-Y	82221	120-277	1	DPDT
DGM100A-Y	82222	120-277	1	SPDT Momentary

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	24-277	20A	10A
Ballast	120-277	20A	10A
Tungsten	120	15A	
Pilot Duty	120 240	720VA	290VA 360VA
Motor	120 240	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE:
120 - 277VAC, 50/60Hz (automatic detection).

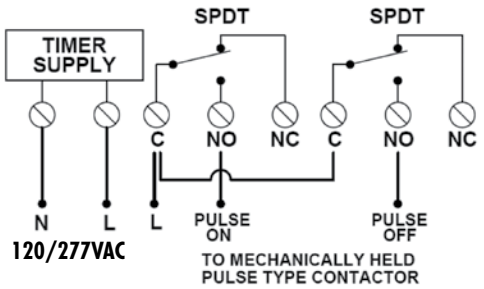
TERMINAL RANGE: #12 - #18AWG.

OPERATING TEMPERATURE:
-31° to +131°F (-35° to +55°C).

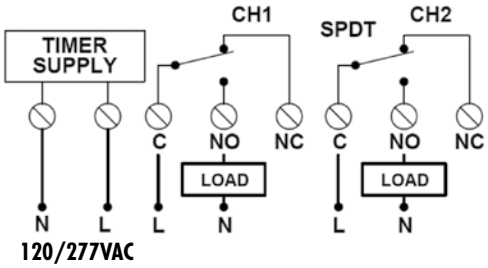
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -Y metal indoor enclosure NEMA 1. All with lockable hasp (see page 557 for enclosure dimensions).

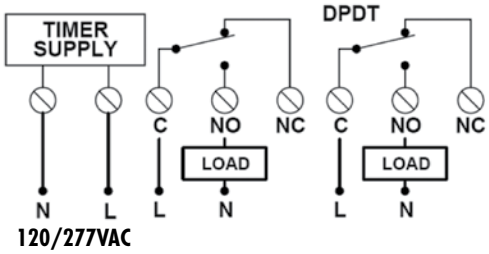
DGM100A

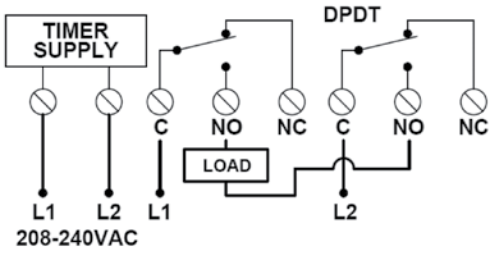


DG200A



DG100A





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DW SERIES
MULTIPURPOSE CONTROLS
1 OR 2 CHANNEL
365 / 7 DAY ADVANCE TIME SWITCHES

SunSet

SPECIFICATION FAVORITE!

APPLICATIONS

- **1 CHANNEL**
- Outdoor lighting
- Security lighting
- Parking lot lighting
- Canopy lighting

- **2 CHANNEL**
- HVAC equipment
- Interior lighting
- Electric motors
- Refrigerator defrost control: condensers, heaters.

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC (DWZ100B only): Adjusts daily to changes in sunset times. Adjustable 10°- 60° Northern or Southern latitudes. Can be individually offset +/- 1 to 240 minutes from both sunset and sunrise times.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation scheduled ON or OFF, automatic operation then resumes.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour Format

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DWZ100B	82189	120/208-240/277	1	SPDT
DW200B	82190	120/208-240/277	2	SPDT
DW200B-0	82231	120/208-240/277	2	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24-277	30A	30A
Ballast	120 277	30A 20A	10A 10A
Tungsten	120-277	15A	2A
Pilot Duty	120-277	720VA	720VA
Motor Load	120 208-277	1HP 2HP	1HP 2HP
Resistive	28VDC	30A	30A

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

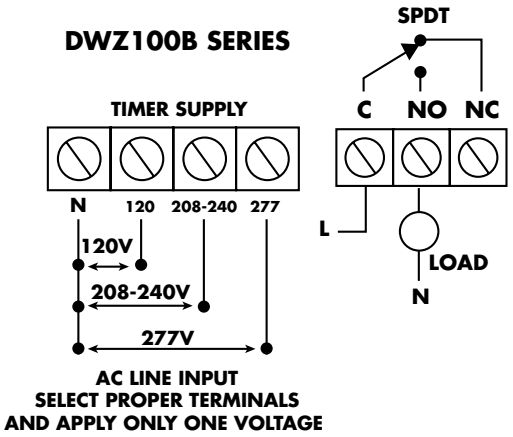
INPUT VOLTAGE:
120/208-240-277VAC, 50/60Hz.

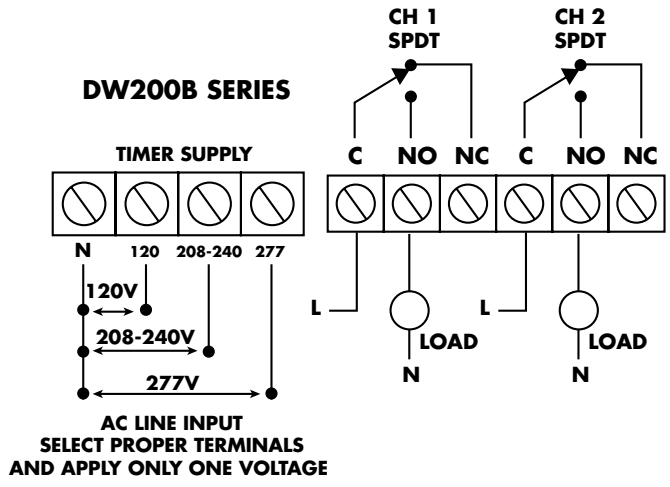
TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +158°F (-40° to 70°C).

POWER CONSUMPTION: 5VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for enclosure dimensions).





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DTS SERIES
MULTIPURPOSE CONTROLS
1, 2 OR 4 CHANNEL
365 / 7 DAY ADVANCE TIME SWITCH

MAINTAINED AND SIGNAL TIMING!

CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

- Indoor and outdoor lighting
- Heating and air conditioning
- Security systems
- Horns and bells
- Low voltage lighting
- Misting and spraying
- Roof cooling
- Clock correction systems
- Process functions

FEATURES

SCHEDULING: 99 ON/OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

SIGNAL/PULSE DURATION: 2 different settings per channel: each 1-99 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes. In signal mode, activates pulse.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time back up.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DTS100B	82185	120/208-240/277	1	DPDT
DTS200B	82186	120/208-240/277	2	SPDT
DTS400B	82187	120/208-240/277	4	SPDT

TYPE	DTS100B, DTS200B VOLTAGE (VAC)	RATING NO	RATING NC	DTS400B VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24-277	30A	30A	24-277	20A	20A
Ballast	120 277	30A 20A	10A 10A	120-277	13A	
Tungsten	120-277	15A	2A	120	8A	
Pilot Duty	120-277	720VA	720VA	120-277	720VA	360VA
Motor Load	120 208-277	1HP 2HP	1HP 2HP	120/240	1/2HP	1/2HP
Resistive	28VDC	30A	30A	-	-	-

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

INPUT VOLTAGE: 120/208-277VAC, 50/60Hz.

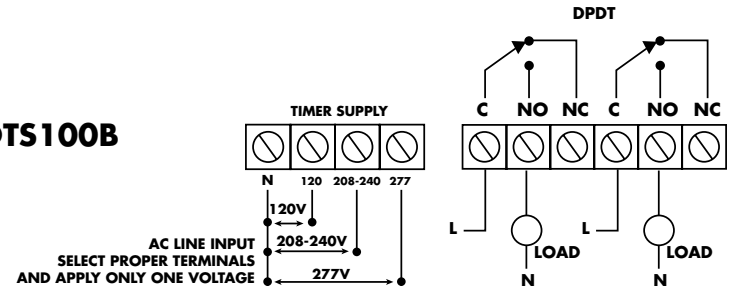
TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +149°F (-40° to +65°C).

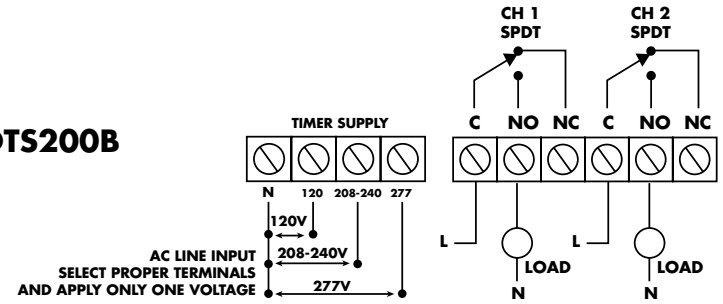
POWER CONSUMPTION: 6VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for enclosure dimensions).

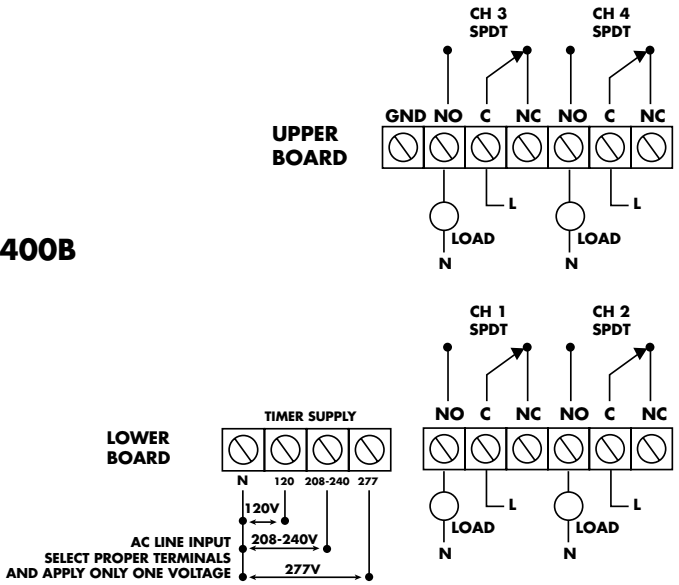
DTS100B



DTS200B



DTS400B



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DZS SERIES
MULTIPURPOSE CONTROLS
1, 2 OR 4 CHANNEL
365 / 7 DAY ADVANCED TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

REMOVABLE **MEMORY MODULE FOR COMPUTER PROGRAMMING!**

APPLICATIONS

c UL us

- HVAC equipment
- Horns and bells
- Interior lighting
- Electric motors
- Outdoor lighting and signs

Memory Module Programmer optional

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10˚ - 60˚ Northern or Southern latitudes can be individually offset +/-1 to 240 minutes from both sunset and sunrise times.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

SIGNAL/PULSE DURATION: 2 different settings per channel: 1-99 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes. In signal mode, activates pulse.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent schedule retention with memory module. Supercapacitor provides 7 days of real time backup.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZS series unit.

COPY FEATURE: Unit can be configured to copy program schedule to multiple memory modules.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DZS100BP	82182	120/208-240/277	1	DPDT
DZS200BP	82183	120/208-240/277	2	SPDT
DZS400BP	82184	120/208-240/277	4	SPDT
DZS100BP-0	82215	120/208-240/277	1	DPDT
DZS200BP-0	82227	120/208-240/277	2	SPDT
DZS200BP-12	82228	12VDC	2	SPDT
DZS200BP-24	82229	24VAC	2	SPDT
DZS400BP-0	82230	120/208-240/277	4	SPDT
USB-MMP	82196		Memory Module Programmer	Includes software

TYPE	DZS100BP, DZS200BP VOLTAGE (VAC)	DZS100BP, DZS200BP RATING NO	DZS100BP, DZS200BP RATING NC	DZS400BP VOLTAGE (VAC)	DZS400BP RATING NO	DZS400BP RATING NC
General Purpose	24-277	30A	30A	24-277	20A	20A
Ballast	120 277	30A 20A	10A 10A	120-277	13A	- -
Tungsten	120-277	15A	2A	120	8A	-
Motor Load	120 208-277	1HP 2HP	1HP 2HP	120/240	1/2HP	1/2 HP
Pilot Duty	120-277	720VA	720VA	120-277	720VA	360VA
Resistive	28VDC	30A	30A	-	-	-

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120/208-240/277VAC, 50/60Hz.

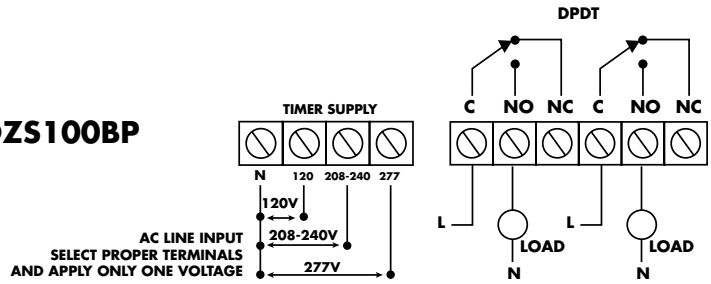
TERMINAL RANGE:
#14-#16AWG for line input.
#12-#16AWG load outputs.

OPERATING TEMPERATURE:
-40° to +158°F (-40° to 70°C).

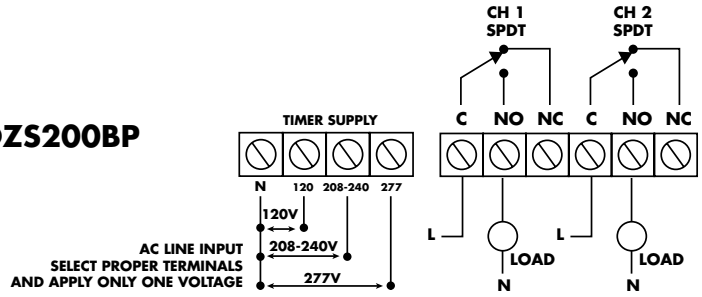
POWER CONSUMPTION:
5VA Max: DZS100/200BP.
6VA Max: DZS400BP.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for enclosure dimensions).

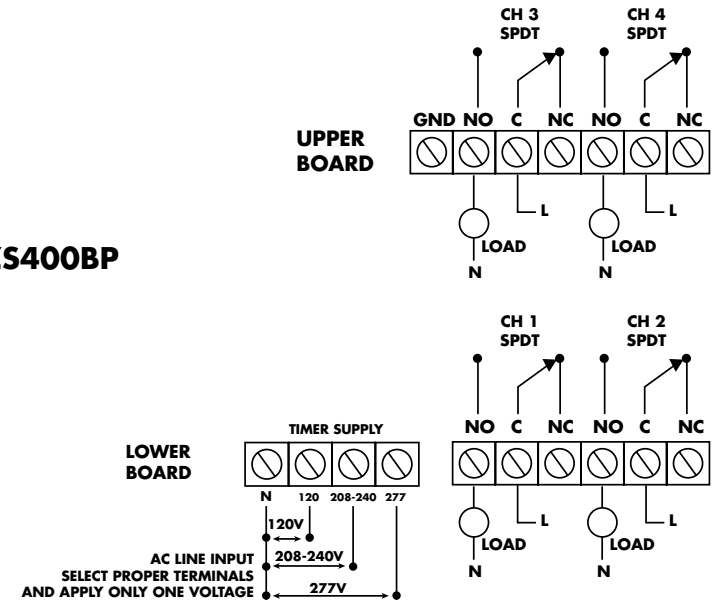
DZS100BP



DZS200BP



DZS400BP



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DZM SERIES
MOMENTARY OUTPUT
365 / 7 DAY ADVANCED LIGHTING CONTROL TIME SWITCH

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

Memory Module Programmer optional

GREAT FOR LATCHING CONTACTORS!

APPLICATIONS

c UL us

- Low voltage latching relays
- Direct wire to mechanically held contactors

FEATURES

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week at a minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes can be individually offset +/- 1 to 240 minutes from both sunset and sunrise times.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 Hour Format.

POWER OUTAGE BACKUP: Permanent scheduled retention with memory module. Supercapacitor provides 7 days of real time backup.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZM series unit.

COPY FEATURE: Unit can be configured to copy program schedule to multiple memory modules.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	DRY CONTACTS (UNPOWERED)
DZM200BP	82188	120/208-240/277	2	SPDT Momentary
DZM200BP-0	82232	120/208-240/277	2	SPDT Momentary
USB-MMP	82196		Memory Module Programmer	Includes software

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120-277	20A
Pilot Duty	120-277	720VA

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

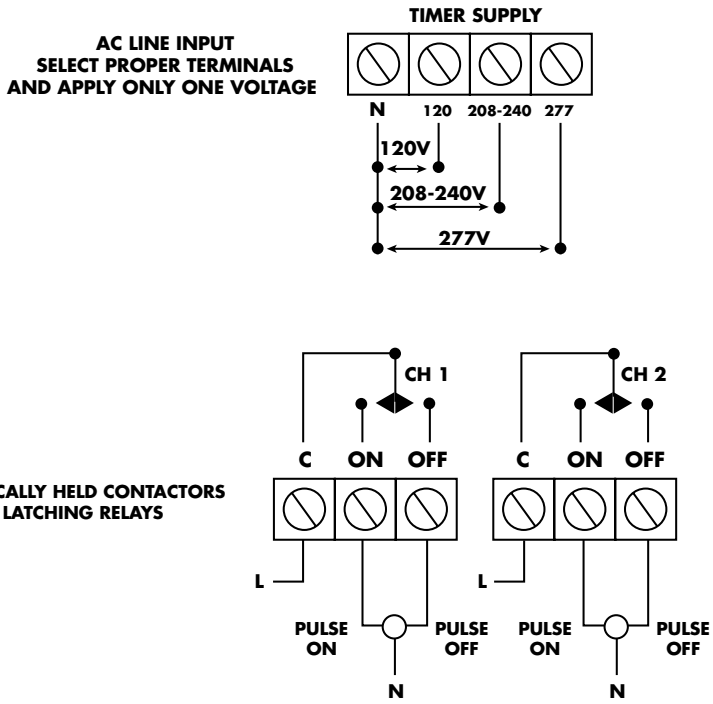
INPUT VOLTAGE: 120/208-240/277VAC, 50/60Hz.

TERMINAL RANGE:
#14 - #16AWG for line input.
#12 - #16AWG load outputs.

OPERATING TEMPERATURE:
-40˚ to 158˚F (-40˚ to +70˚C).

POWER CONSUMPTION: 4VA Max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R. Suffix -0 metal Indoor/Outdoor NEMA 3. All with lockable hasp (see page 557 for dimensions).



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LC200 SERIES
LIGHT LEVEL / TIME OF DAY OPTION
2 ZONES LIGHTING CONTROL

responsible energy

ASHRAE 90.1

STAGE LIGHTING TURN ON LEVEL

APPLICATIONS

- 24 hour convenience stores
- Open wall parking structures
- Large canopies
- Building perimeters
  Atriums

- Use to control two different outdoor lighting circuits utilizing one photocell. Sign lighting can turn ON at one ambient light level while parking lot lighting turns ON at a different light level.

FEATURES

PHOTOSENSOR INPUT: EPC1 included.

DUAL OUTPUTS: with independent turn-ON adjustment for Stage1 and Stage 2.

LIGHT LEVEL ACTIVATION: Turn ON is user settable from 2 to 100 footcandle; Independent light level adjustment for each zone. Turn OFF is a maximum of 2 times turn ON level. Built-in delay OFF of 30 seconds to avoid reaction to lightning or headlights.

SWITCHED INPUT: Turns off loads. Can be used for photocell ON and time switch OFF operation.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	NO. OF ZONES	OUTPUT CONTACTS
LC200	82111	120/240/277	2	SPDT
LC200M	82113	120/240/277	2	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
Resistive	120/240 277	20A 12A	10A
Ballast	120 240/277	20A 6A	10A 3A
Tungsten	120/240/277	5A	3A
Pilot Duty	120/240 277	470VA 690VA	275VA

SPECIFICATIONS

INPUT VOLTAGE:
120/240/277VAC, 50/60Hz.

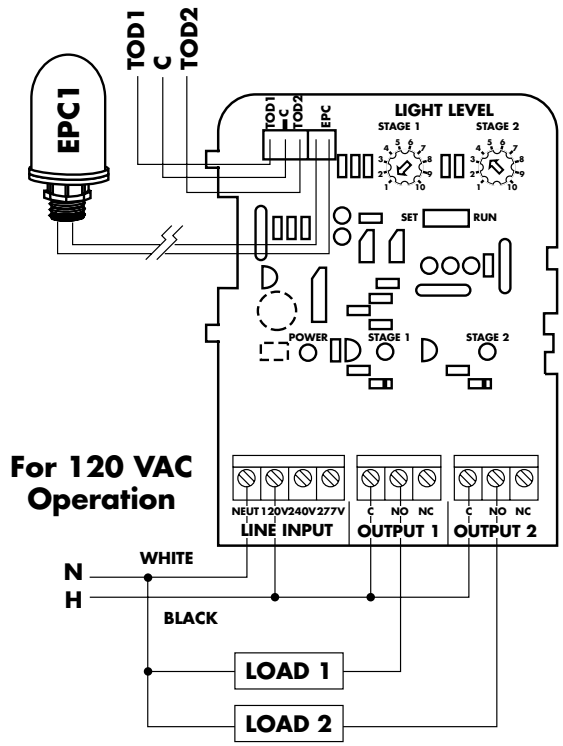
TERMINAL RANGE: Relay #12AWG; input power terminals #14 - #22AWG; TOD/sensor terminals accept #18 - #22AWG.

OPERATING TEMPERATURE:
-40°F to +140°F (-40°C to + 60°C).

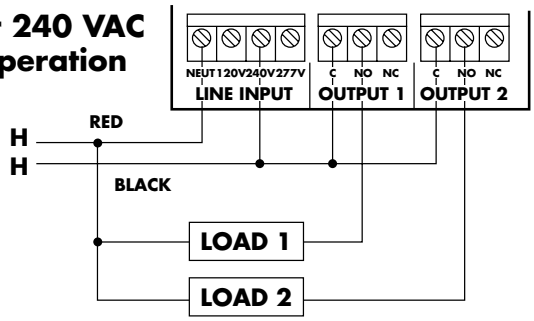
POWER CONSUMPTION: 5VA Maximum.

ENCLOSURE: LC200 includes metal Indoor NEMA 1 with lockable hasp (see page 557 for dimensions).

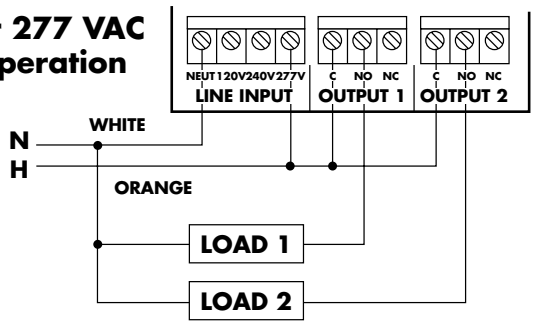
OTHER MOUNTINGS:
LC200M mechanism only.



For 120 VAC Operation



For 240 VAC Operation



For 277 VAC Operation

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DGU & DGLC SERIES

LIGHTING CONTROL WITH PHOTO OR OVERRIDE INPUT
7 DAY LIGHTING CONTROL TIME SWITCH

SMALL BUSINESS ENERGY CODE PANEL

Model EPC-A supplied with DGLC-A unit.

With optional Timed Override

APPLICATIONS

INTERIOR LIGHTING
- Open office zoning
- Hallways
- Meeting and sales areas
- Stock rooms and warehouses

EXTERIOR LIGHTING
- Signage and store windows
- Security
- Parking lots

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DGU100A-Y	82211	120-277	1	DPDT
DGUM100A	82212	120-277	1	SPDT Momentary
DGUM100A-Y	82224	120-277	1	SPDT Momentary
DGLC100A-NC	82223	120-277	1	DPDT
DGLC200A-NC	82213	120-277	2	SPDT
EPC-A	82112	Accessory Photo Sensor	-	-
SS410	14033	24VAC/24VDC	-	SPDT
TRP-24B	98225	120/277	Transformer Power Pack	SPST

FEATURES

SCHEDULING: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes from both sunset and sunrise times.

PHOTOSENSOR INPUT: Unique push button set-up assures accurate operation with automatic calibration that adjusts for wire size and distance. EPC-A photo sensor is included with the DGLC-A and may be ordered as an option for use with model DGU100A & DGUM100A.

LIGHT LEVEL ACTIVATION: Turn ON is user settable from 1 to 100 footcandle; Turn OFF is a maximum of 2 times turn ON level. Each channel has an independent setting. Includes a user settable delay before ON and OFF between 1 – 90 seconds.

REMOTE OVERRIDE ON: Each channel has independent input for a maintained dry-contact closure. May use TORK model SS410 and TRP-24Bfor timed override. May use with occupancy sensor with dry contacts as override.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MOMENTARY CONTACT - DGUM100A: 2 second contact closure ON & OFF to control mechanically held contactors or latching relays.

BLOCK HOLIDAY: 9 holiday blocks can be set for individual days or for duration of any number of days.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

CLOCK FORMAT: AM/PM or 24 Hour format.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120-277VAC, 50/60Hz (auto detection).

TERMINAL RANGE:
#12 - #18AWG for line/load.
#18 - #26AWG sensor/switch input.

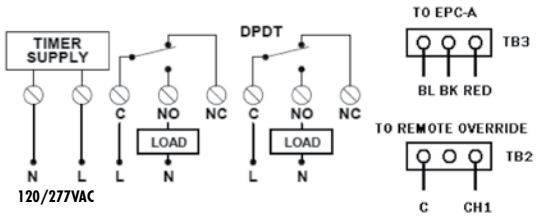
OPERATING TEMPERATURE:
-31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA Maximum.

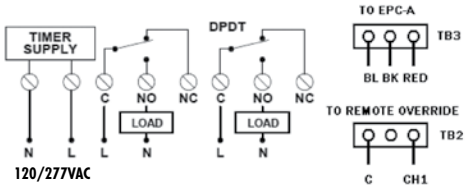
ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R . Suffix -NC Noryl® Indoor/Outdoor NEMA 3R with clear Lexan® cover. Suffix -Y metal Indoor enclosure NEMA 1. All with lockable hasp (see page 557 for dimensions).

TYPE	VOLTAGE	RATING NO	RATING NC
Resistive	24-277VAC	20A	10A
Ballast	120-277VAC	20A	10A
Tungsten	120VAC	15A	
Pilot Duty	120VAC 240VAC	720VA	290VA 360VA
Motor	120VAC 240VAC	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

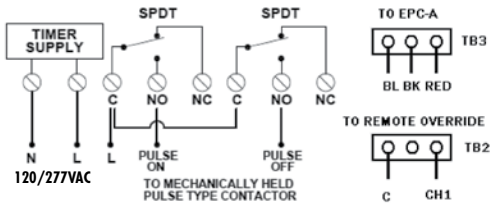
DGU100A



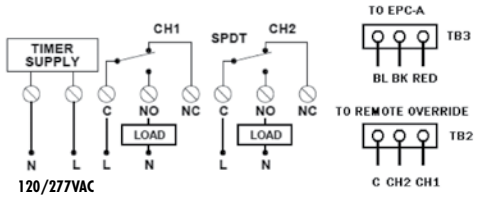
DGLC100A



DGUM100A



DGLC200A



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ELC SERIES
ENERGY AND LIGHTING CONTROL
4, 8 & 12 ZONE
LIGHTING CONTROL

THE *DO-IT-ALL* ENERGY & LIGHTING CONTROLLER

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

c UL us

APPLICATIONS

- HVAC equipment
- Indoor/Outdoor lighting
- Meets indoor/outdoor lighting energy code requirements

CATALOG NO.	UPC CODE	TIMER SUPPLY (VAC) 50/60Hz	NO. OF CHANNELS	OUTPUT CONTACTS
ELC74	82523	24/120/208-240/277	4	SPDT
ELC78	82524	24/120/208-240/277	8	SPDT
ELC712	82525	24/120/208-240/277	12	SPDT
EPC-LC	82233	Accessory Photo Sensor	-	-
LCS115M	82082	Accessory Momentary Switch	-	SPST

FEATURES

SCHEDULING: 128 time based events allow individual programs for each day of the week at a minimum 1 minute apart. Event types include ON, OFF, Duration, or Duty Cycle.

SENSOR EVENT: 32 sensor driven events allow individual programs for each day of the week.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Adjustable 10° - 70° Northern or Southern latitudes. Settings can be offset from both sunset and sunrise times.

UNIVERSAL INPUT: 8 inputs may be assigned to any channel. ELC74 includes 4.
SWITCHED INPUT: Accepts input from optional momentary or maintained switch for a timed override.
PHOTOSENSOR INPUT: Accepts input from optional sensor. EPC-LC (indoor/outdoor) has a range from 0 - 250 foot-candels.

MOMENTARY CONTACT: May be configured for momentary ON/OFF operation to control latching contactors. The ELC74 operates as a two channel unit. The ELC78 operates as a four channel unit. The ELC712 operates as a six channel unit.

HOLIDAYS: 26 holidays may be set using 10 individual dates, 10 month type (last Monday in May), or 6 specific holidays with one of 3 independent holiday schedules.

BLOCK HOLIDAY: 10 holiday blocks can be set for individual days or for duration of any number of days and may use one of 3 holiday schedules.

PULSE/TIME DURATION: 4 different ON settings from 1 second to 23 hours, 59 minutes, 59 seconds.

DUTY CYCLE: 4 different ON and OFF patterns from 1 second to 23 hours, 59 minutes, 59 seconds.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

REMOTE OVERRIDE: Universal input may be programmed for timed override from a momentary or maintained dry contact switch.

MANUAL OVERRIDE: Keyboard button control until the next regularly scheduled ON or OFF, automatic operation then resumes.

STAGGERED START: Optional stagger up time between channels, after a power outage; selectable from 5 seconds, 15 seconds, 30 seconds, 1 minute, 5 minutes, 10 minutes, and 15 minutes.

CLOCK FORMAT: AM/PM or 24 hour format.

POWER OUTAGE BACKUP: The program and time of day are maintained for a minimum of 2 days by means of a capacitor. After two days, a lithium battery takes over and provides a minimum accumulated time of 1 year. The lithium battery should provide over 10 years of protection.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
24/120/208-240/277VAC, 50/60Hz.

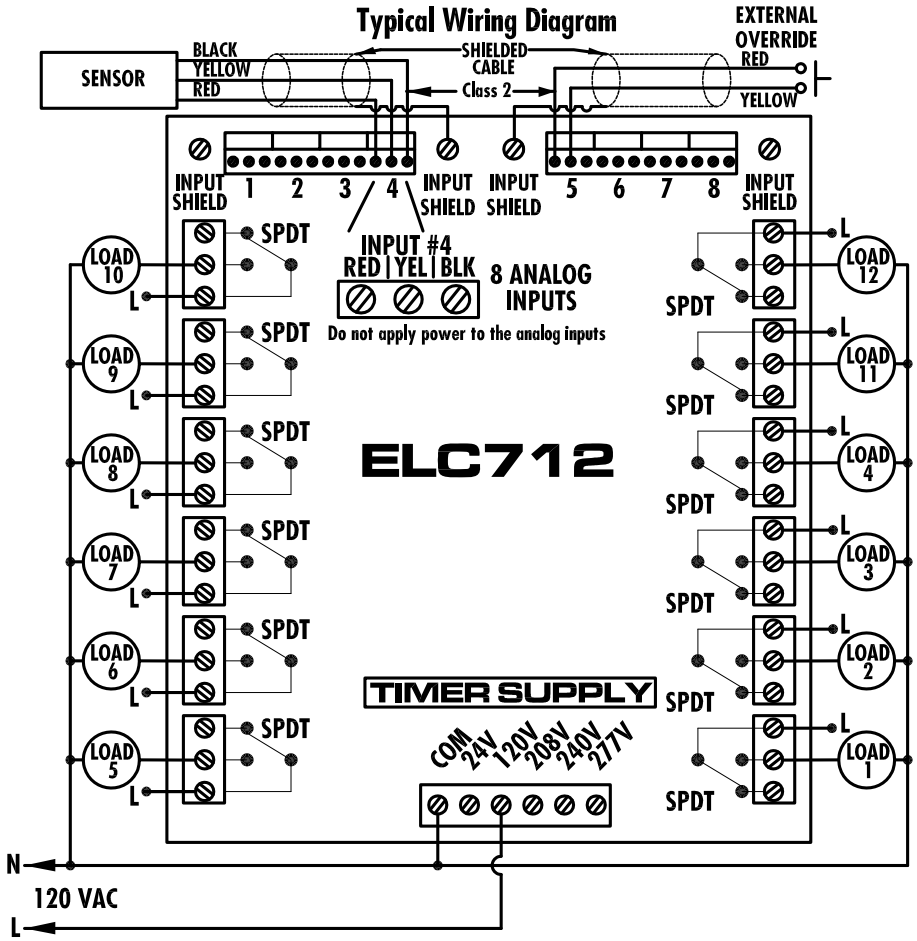
TERMINAL RANGE:
#10 - #16AWG for line input.
#10 - #16AWG for load output.
#14 - #22AWG universal input.

OPERATING TEMPERATURE:
-20°F to +140°F (-29°C to + 60°C).

POWER CONSUMPTION: 10VA Maximum.

ENCLOSURE: Metal Indoor NEMA 1 with lockable hasp (see page 558 for dimensions).

TYPE	VOLTAGE	RATING	
		NO	NC
General Purpose	24/120 - 277VAC	20A	15A
Ballast	120-277VAC	20A	20A
Tungsten	120-277VAC	5A	-
Pilot Duty	120-240VAC	470VA	275VA
Motor	120VAC 208-277VAC	1HP 2HP	1/4HP 1/2HP



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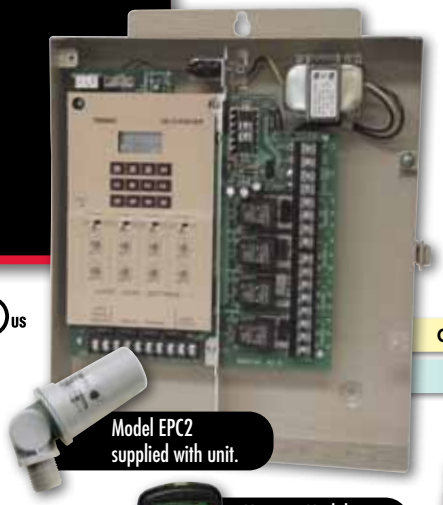
DLC400BP
4 ZONE LIGHTING CONTROL TIME SWITCH

FLEXIBLE INDOOR & OUTDOOR LIGHTING CONTROLLER



CALIFORNIA Title 24

ASHRAE 90.1

APPLICATIONS

INTERIOR LIGHTING
- Open office zoning
- Hallways
- Meeting and sales areas
- Stock rooms and warehouses

EXTERIOR LIGHTING
- Signage and store windows
- Security
- Parking lots

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
DLC400BP	82191	120/208-240/277	4	SPDT
USB-MMP	82196	Memory Module Programmer	Includes Software	
SS410	14033	24VAC/24VDC	-	SPDT

FEATURES

CONFIGURABLE ZONES: Simple three position slide switch sets logic for each zone: Time ON/Time OFF, Photo ON/Photo OFF, or Photo ON/ Time OFF.

SCHEDULING: 99 ON & OFF set points allow individual programs for each day of the week. Minimum 1 minute apart.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. **1.** Adjustable 10° - 60° Northern or Southern latitudes. **2.** Can be individually offset +/-1-240 minutes from both sunset and sunrise times.

PHOTOSENSOR INPUT: EPC2 photo sensor included.

LIGHT LEVEL ACTIVATION: Turn ON and OFF level is user settable from 1 to 100 footcandle. Each channel has an independent setting.

REMOTE OVERRIDE: Maintained dry contact closure or use TORK Model SS410 for timed override with flash warning before OFF. May use with occupancy sensor as override.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

SEASONS: 1 to 4 with different daily schedules which can wrap around into the new year.

HOLIDAYS: 1 to 24 individual dates.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

POWER OUTAGE BACKUP: Permanent schedule retention with memory module. Battery provides real time backup for 6 months cumulative.

MEMORY MODULE: Removable MM can be programmed at any one location and inserted into another DZS series unit.

OPTION: Memory Module Programmer with software for computer connection programming. Also allows stand alone battery operation for portable copy feature.

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
120/208 - 240/277VAC, 50/60Hz.

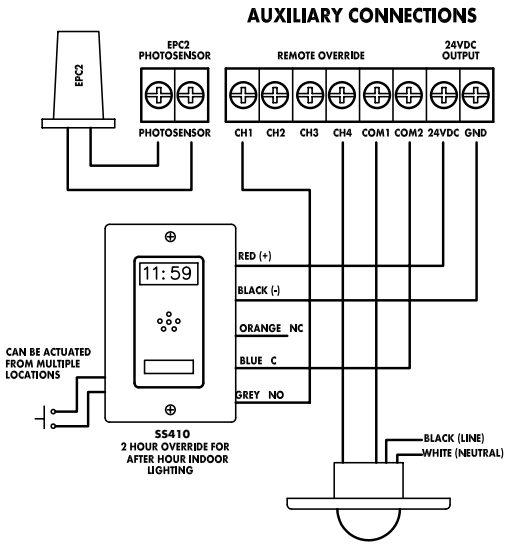
TERMINAL RANGE: #10 - #14AWG.

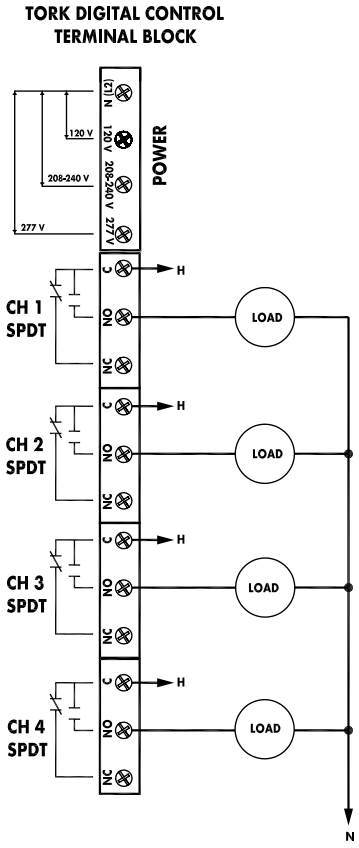
OPERATING TEMPERATURE:
-40°F to +158°F (-40°C to + 55°C).

POWER CONSUMPTION: 30VA Maximum.

ENCLOSURE: Metal Indoor/Outdoor NEMA 3 with lockable hasp (see page 557 for dimensions).

TYPE	VOLTAGE	RATING	
		NO	NC
General Purpose	24-277VAC, 30VDC	30A	30A
Ballast	120-277VAC	20A	10A
Tungsten	120VAC	10A	
Pilot Duty	120-277VAC	720VA	720VA





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LD SERIES
EXTENDED LIGHTING CONTROL LIGHTING DELAY TIME SWITCH

ASHRAE 90.1

ADD A WARNING BLINK TO ANY CONTROL

APPLICATIONS

- Open offices
- Gymnasiums
- Warehouses
- Outdoor recreation courts
- User-activated lights with time limits
- Match with photocontrol and timer to limit hours of use

SPECIFICATIONS

INPUT VOLTAGE:
120/208/240/277VAC, 50/60Hz.

TERMINAL RANGE: #10 - #16AWG for line/load. #18 - #26AWG switch input.

OPERATING TEMPERATURE:
-22° to 150°F (-30° to +65°C).

POWER CONSUMPTION:
5VA Maximum.

ENCLOSURE: Metal Indoor NEMA 1 with lockable hasp (see page 557 for dimensions).

FEATURES

MAINTAINED INPUT WITH LOAD WARNING BLINK:
LDS Series controls output load contacts based on power applied to the time switch input contact. At removal of power from the time switch input, LDS Series provides 1 second blink then keeps load contacts closed for an extra 1 or 5 minutes (user selectable) before turn off.

MAINTAINED INPUT WITH AUXILARY WARNING:
LDSH Series controls output load contacts based on power applied to the time switch input contact. At removal of power from the time switch input, LDSH Series closes a second set of contacts for a user supplied audible or visual warning device. The warning circuit closes for a selected time of 4 seconds (best for audible device or continuous, then keeps load contacts closed for an extra 1 or 5 minutes (user selectable) before turn OFF.

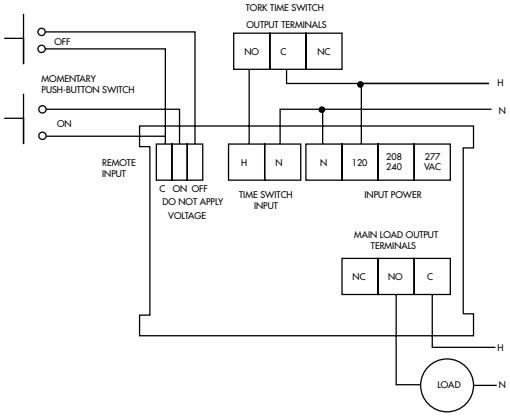
MOMENTARY INPUT: Provides timed override when time switch input contact is unpowered (timer OFF). When activated during the warning period, load contacts are kept closed and timing starts. Both series can accept momentary input contact closure for ON to start the timing and OFF to end the timing.

TIMED OVERRIDE SETTINGS: User may select override times of ½, 1, 1½, 2, 6, 9, or 12 hours. Warning before OFF is always active after override time.

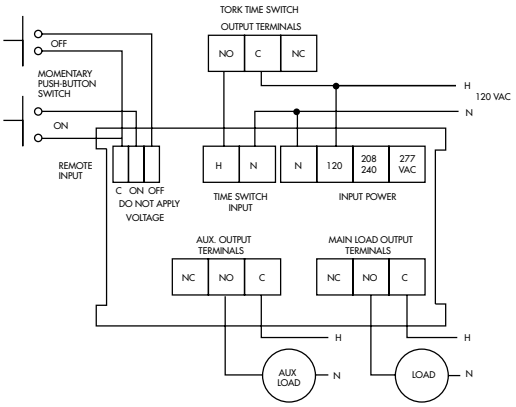
CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
LDS-A	81026	120/208-240/277	SPDT	Metal Indoor NEMA 1
LDS	81025	120/208-240/277	SPDT	Mechanism
LDSH-A	81031	120/208-240/277	SPDT	Metal Indoor NEMA 1
LDSH	81028	120/208-240/277	SPDT	Mechanism

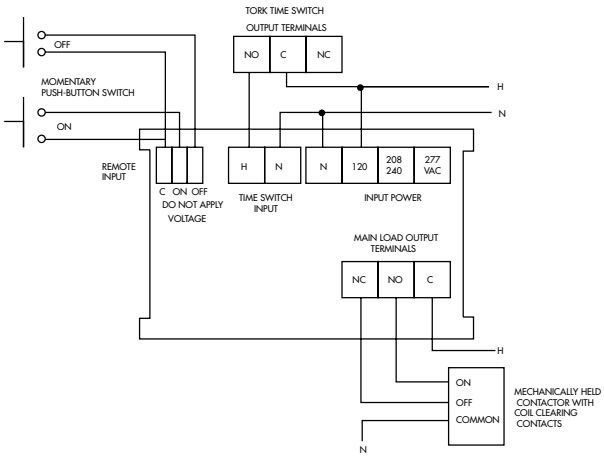
TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	24/240 277	20A 20A	10A 3A
Ballast	120 208-277	20A 10A	10A 3A
Tungsten	120-277	5A	3A
Pilot Duty	120-240 277	470VA 690VA	275VA
Resistive	28VDC	20A	10A

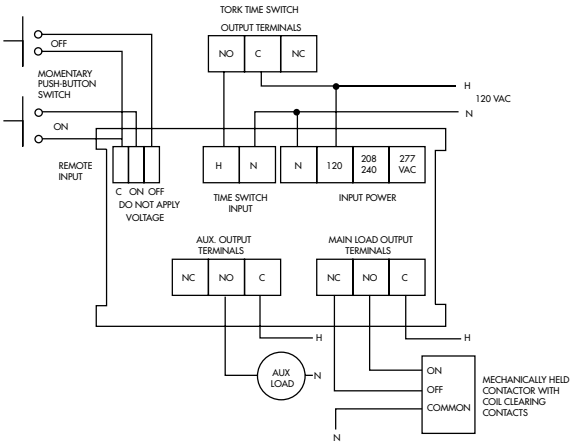
LDS WIRING



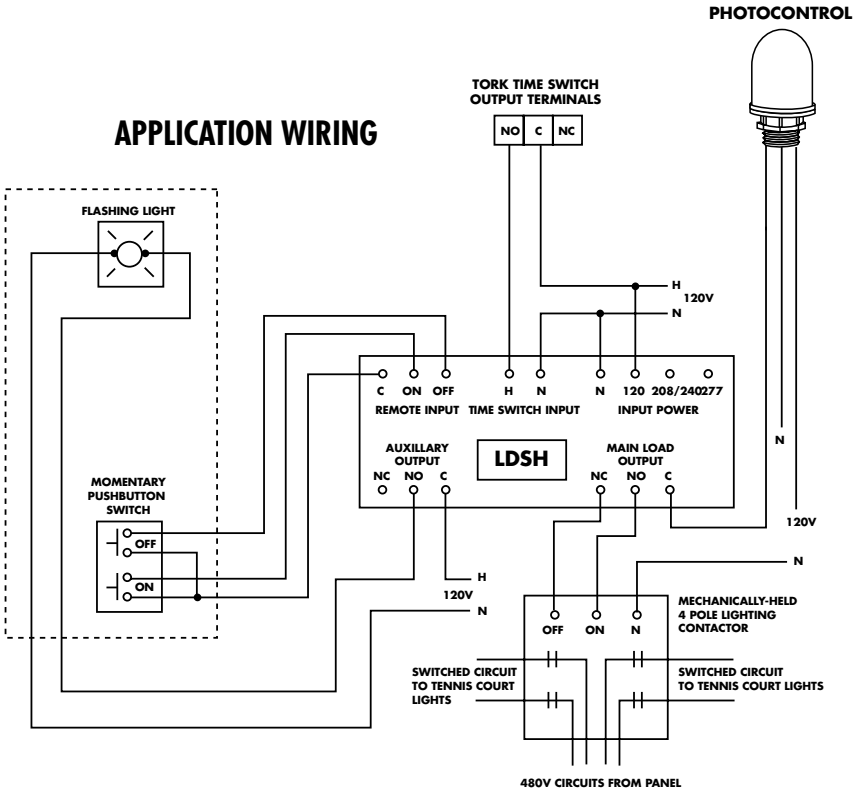
LDSH WIRING







APPLICATION WIRING



DGS SERIES
SIGNALING AND DUTY CYCLE 24 HOUR OR 7 DAY TIME SWITCH

31 DAY CYCLE TIME: AN INDUSTRY FIRST!

APPLICATIONS

- Signaling
- Duty cycle

FEATURES

DG180A & DG280A: 56 ON & OFF set points provide daily repeated programs. Minimum setting is 1 minute.

DGS100A: 56 ON & OFF set points provide individual programs for each day of the week. Minimum setting is 1 minute.

DUTY CYCLE & SIGNALING: Two different ON/OFF patterns or signal durations may be programmed. The durations can be up to 23 hours, 59 minutes and 59 seconds in length.

SKIP FUNCTION (24 HOUR UNITS ONLY): Each channel can be set for ACTIVE/SKIP operations that alternate from 1 - 31 days. This becomes an effective way to cycle loads on varying days within the month. Using the two-circuit DG280A, two loads can be set to operate on alternate days in a simple manner.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM or 24 hour.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 7 days of real time backup.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	NO. OF CHANNELS	OUTPUT CONTACTS
24 HOUR MODELS				
DG180A	82206	120-277	1	DPDT
DG280A	82207	120-277	2	SPDT
DG280A-24	82220	24VAC	2	SPDT
7 DAY MODELS				
DGS100A	82205	120-277	1	DPDT
DGS100A-12	82218	12VDC	1	DPDT
DGS100A-24	82219	24VAC	1	DPDT

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE:
120 - 277 VAC, 50/60 Hz (auto detection).

TERMINAL RANGE: #12 - #18AWG.

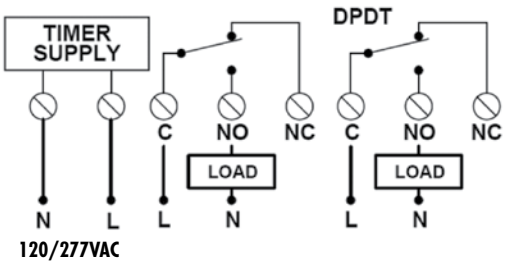
OPERATING TEMPERATURE:
-31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA Maximum.

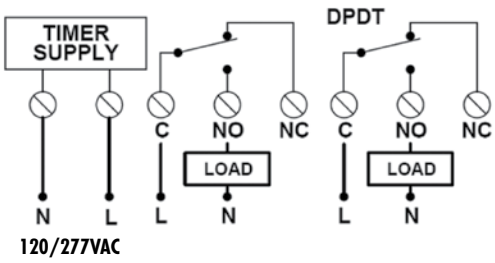
ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	24-277	20A	10A
Ballast	120-277	20A	10A
Tungsten	120	15 A	
Pilot Duty	120 240	720VA	290VA 360VA
Motor	120 240	1HP 2HP	1/4HP 1/2HP
Resistive	28VDC	20A	10A

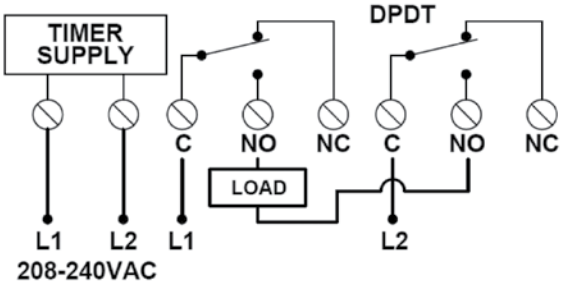
DGS100A
FOR 120V/277VAC



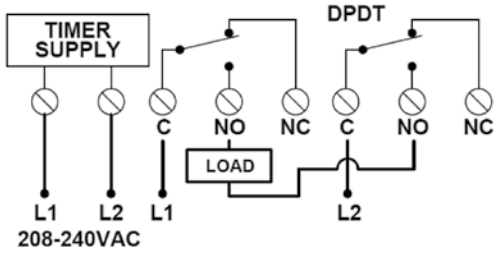
DG180A
FOR 120V/277VAC



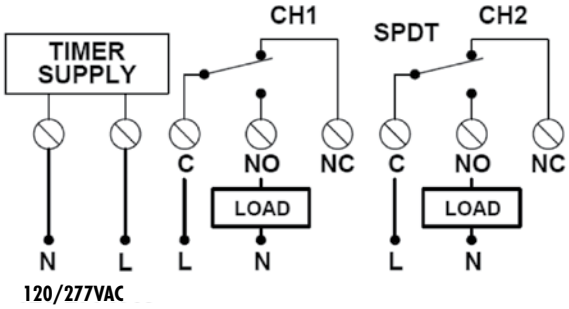
DGS100A
FOR 208-240VAC



DG180A
FOR 208-240VAC



DG280A



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EJWT & E500T SERIES

DELAY, INTERVAL & PERCENTAGE TIME CYCLE TIME SWITCHES

PERFECT FOR PROCESS CONTROL

EJWT

E502T

E501T

APPLICATIONS

- Poultry and livestock
- Agriculture or greenhouse
- Oil well pumping
- Ventilation
- Process control

FEATURES

EJWT – PERCENTAGE TIMER
960 time combinations with two dials.
Cycle Time Dial sets 32 repeating cycles from 15 seconds to 24 hours.
Percentage ON Dial has 32 steps from 0% to 100%.
Repeats cycle as long as power is applied.

E500T – ON DELAY TIMER
Dial sets 30 time delay durations from 5 seconds to 3 hours.
External switch activated starts delay to ON.
Runs until external switch turns OFF.

E501T – AUTO OFF INTERVAL TIMER
Dial sets 30 time durations from 10 seconds to 12 hours.
Start/Stop button or External switch starts interval ON.
Automatically turns OFF at end of preset time.
START/STOP or External switch turns OFF.

E502T – OFF DELAY TIMER
Dial sets 30 time durations from 5 seconds to 3 hours.
External switch starts interval ON.
Automatically turns OFF at end of preset time.
External switch turns OFF.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
EJWT	82513	120-240	SPDT
E500T	82514	120-240	SPDT
E501T	82515	120-240	SPDT
E502T	82516	120-240	SPDT

TYPE	VOLTAGE (VAC)	RATING NO	RATING NC
General Purpose	120-240	20A	10A
Resistive	120-240	20A	10A
Motor	120 208-240	1HP 2HP	1/4HP 1/2HP
Pilot Duty	120/240	470VA	275VA

SPECIFICATIONS

TIMING ACCURACY: 1% of timing range.

INPUT VOLTAGE: 120/240VAC, 60Hz.

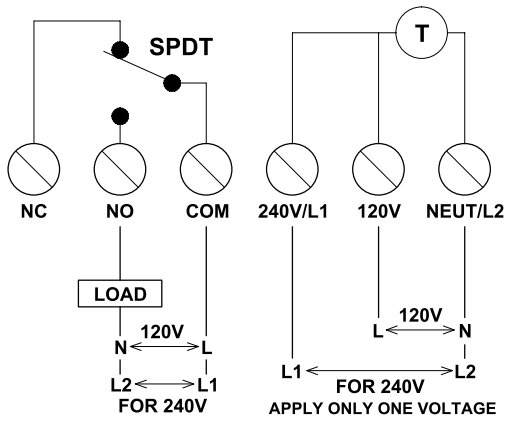
TERMINAL RANGE: #12 - #18AWG.

OPERATING TEMPERATURE:
32°F to +122°F (0°C to + 50°C).

POWER CONSUMPTION: 16VA Maximum.

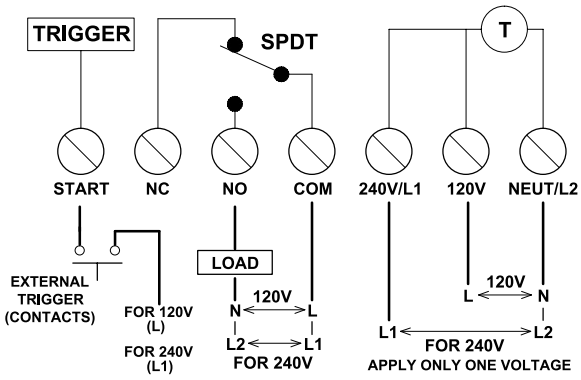
ENCLOSURE: Indoor NEMA 4X is standard (see page 558 for enclosure dimensions).

EJWT



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

E500T / E501T / E502T



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

PCT SERIES
PANEL MOUNT CYCLE TIME SWITCHES

NEW!

APPLICATIONS

- Oil field pumping stations
- Poultry and livestock feeding and watering
- Ventilation
- Process control

SPECIFICATIONS

TIMING ACCURACY: 1% of timing range.

INPUT VOLTAGE: 120-240VAC, 50/60Hz (automatic detection).

TERMINAL RANGE: #14 - #16AWG for line input, #12 - #16AWG for load output.

OPERATING TEMPERATURE: -40˚ to +149˚F (-40˚ to +65˚C).

POWER CONSUMPTION: 5VA Max.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
PCT15M	82528	120-240	SPDT

TYPE	RATINGS	
	NO	NC
120-240VAC General Purpose & Resistive	20A	20A
120VAC Motor	1HP	1/4HP
240VAC Motor	2HP	1/2HP

FEATURES

FIXED TIMER CYCLE: 15 minutes repeating cycle when unit is powered.

PERCENTAGE ON: 1% to 99% increments.

DISPLAY: Digital percentage reading.

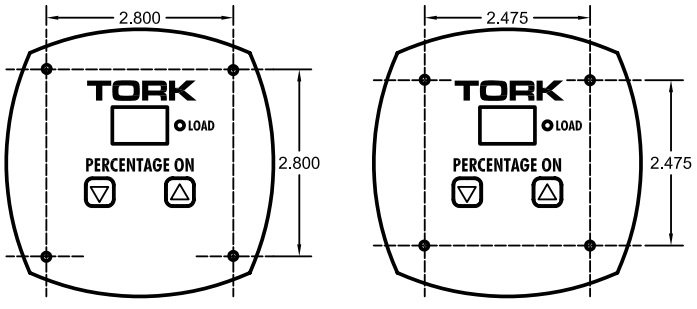
ON SETTING: Hold ON.

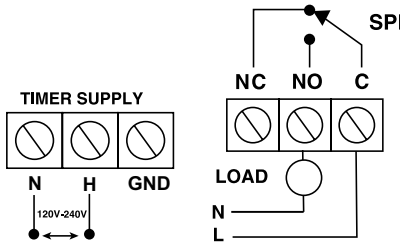
OFF SETTING: Hold OFF.

POWER OUTAGE BACKUP: Remembers place in cycle when power resumes.

TEST MODE: For temporary ON/OFF cycle verification.

PANEL MOUNTING: 3" diameter back housing retrofits to existing mechanical timer dimensions. Two sets of mounting dimensions to choose from. (see page 558 for enclosure dimensions).





ACT30MA SERIES
ADJUSTABLE CYCLE TIMER TIME SWITCHES

APPLICATIONS

- Poultry and livestock feeding and watering
- Agriculture irrigation for field or greenhouse
- Oil well pumping daily cycle
- Ventilation
- Process control

FEATURES

960 time combinations with two dials

ON time dial sets 30 time steps from 30 seconds to 15.5 minutes

OFF dial has 30 steps time steps from 30 seconds to 15.5 minutes

Repeats cycle as long as power is applied

Hold On or Hold Off positions included

SPECIFICATIONS

INPUT VOLTAGE: 120-240VAC

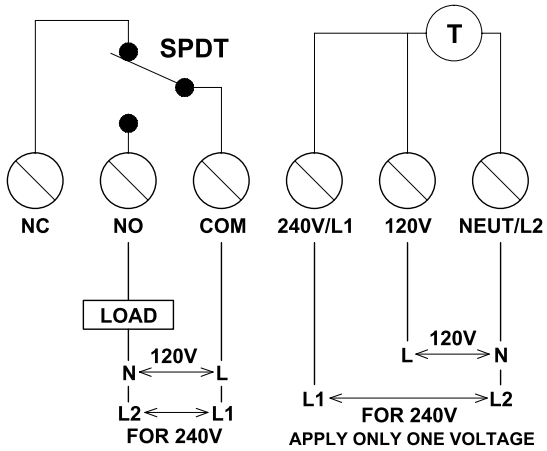
TERMINAL RANGE: #18 - #12AWG

CONTACTS: SPDT

ENCLOSURE:
Indoor NEMA 4X is standard (see page 558 for enclosure dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	OUTPUT CONTACT
ACT30MA	82527	120-240	SPDT

TYPE	RATINGS NO	RATINGS NC
120-240VAC General Purpose & Resistive	20A	10A
120VAC Motor	1HP	1/4HP
208-240VAC Motor	2HP	1/2HP
120-240VAC Pilot Duty	470VA	275VA



Use copper conductors. For supply connections use AWG #12 wire rated for at least 90°C (194°F) or equivalent.

DIN SERIES
1 OR 2 CHANNEL
7 DAY TIME SWITCH

CALIFORNIA Title 24

ASHRAE 90.1

DIN100B

CALIFORNIA Title 24

ASHRAE 90.1

DIN200B

PANEL BUILDERS' CHOICE

APPLICATIONS

- Panel builders
- Indoor/Outdoor lighting
- Security systems
- HVAC equipment

FEATURES

SCHEDULING: 8 ON and OFF pairs of set points for DIN100B. 4 ON and OFF (CH A) and 3 ON and OFF (CH B) pairs of set points for DIN200B. Individual programs on each day of the week. Minimum setting is 1 minute.

MANUAL OVERRIDE: Until the next regular scheduled ON or OFF, automatic operation then resumes.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Battery retains time and schedule.

CATALOG NO.	UPC CODE	DRY CONTACTS	CLOCK INPUT (VAC)50/60 Hz	NO. OF CHANNELS	NUMBER OF ON/OFF
DIN100B	82193	SPDT	120	1	8
DIN200B	82192	SPDT	120	2	4 Channel A 3 Channel B

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	120	16A	16A
General Purpose	120	8A	8A
Motor (DIN100 only)	120	1/2HP	

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 50/60Hz.

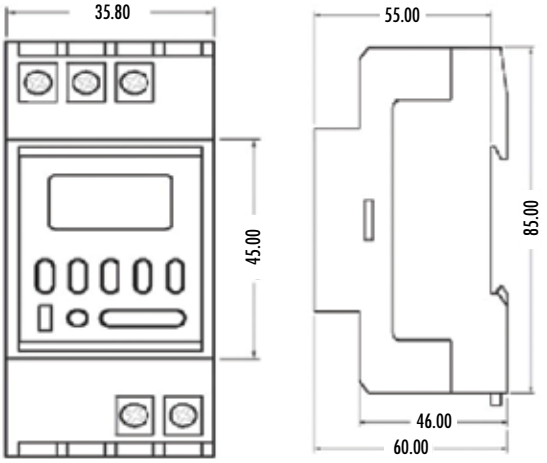
TERMINAL RANGE: #12 - #18AWG.

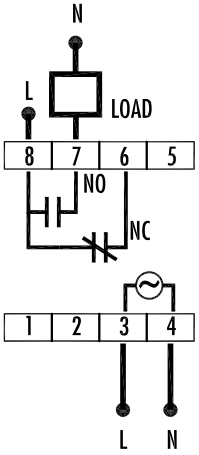
OPERATING TEMPERATURE:
DIN100B: 14°- 131°F (-10°- +55°C).
DIN200B: 14°- 113°F (-10°- +45°C).

POWER CONSUMPTION: 4VA Maximum.

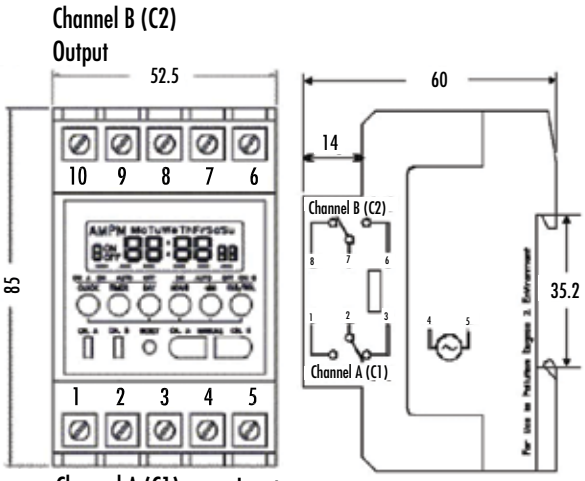
MOUNTING: DIN rail #50022 (35mm) or flat surface using supplied adapter.

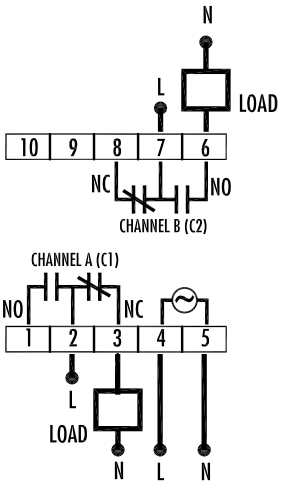
DIN100B





DIN200B





SMC SERIES
MOMENTARY CONTACT ADAPTER

APPLICATIONS

- Converts maintained contacts for pulse switching
- Timer to latching contactor control
- Photocell to latching contactor control Signaling

FEATURES

MAINTAINED INPUT: SMC3D accepts maintained input power from any 120 volt control. When power is applied or removed a short contact closure (pulse) is created on the dry output contacts.

MOMENTARY OUTPUT: SMC3D provides two dry output contacts. The ON contact provides a 2 second contact closure (pulse) when power is applied to the input contacts. The OFF contact provides a 2 second pulse when power is removed from the input contacts.

SPECIFICATIONS

INPUT VOLTAGE: 120VAC, 50/60Hz.

TERMINAL RANGE: #12 - #18AWG.

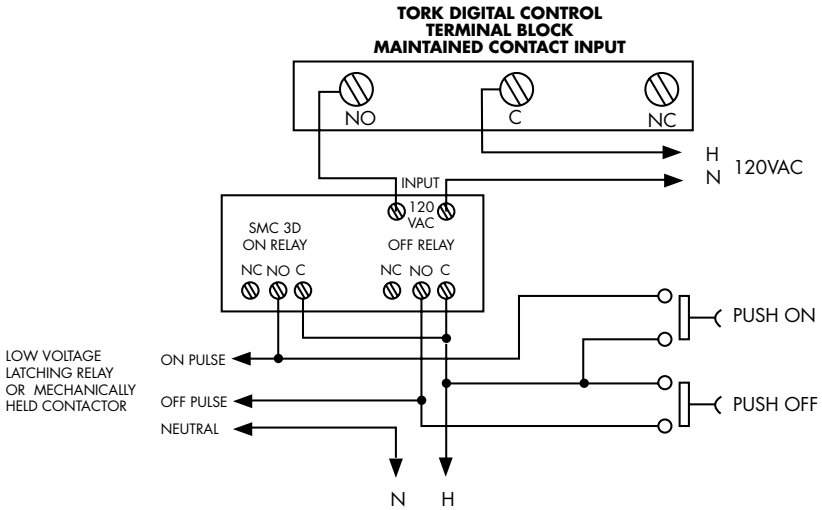
OPERATING TEMPERATURE: -31°F to +131°F (-35°C to + 55°C).

POWER CONSUMPTION: 6VA max.

ENCLOSURE: Noryl® Indoor/Outdoor NEMA 3R with lockable hasp (see page 557 for dimensions).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	OUTPUT CONTACTS
SMC3D	52011	120	SPDT Momentary

TYPE	VOLTAGE (VAC)	RATING	
		NO	NC
Resistive	120	10A	10A
General Purpose	120	10A	10A
Motor	120	1/4HP	



5401 SERIES
INCREASED AMPERAGE & VOLTAGE SWITCHING 40 AMP CONTACTORS

5401A 5441A

APPLICATIONS

- Lighting loads
- Exhaust fans
- Electric and hot water heaters
- Refrigeration and defrosting

CATALOG NO.	UPC CODE	COIL VOLTS	NO. OF CONTACTORS	OUTPUT CONTACTS
5401A	81019	120	1	3PST
5441A	81020	120	4	3PST

FEATURES

CONTACT RATINGS: Can switch up to 40 AMPS per pole from 120VAC to 277V lighting loads, one to three circuits simultaneously.

EASY WIRING: Includes 120 volt control wiring compartment. 5441 has terminal strip pre-mounted for quick connection.

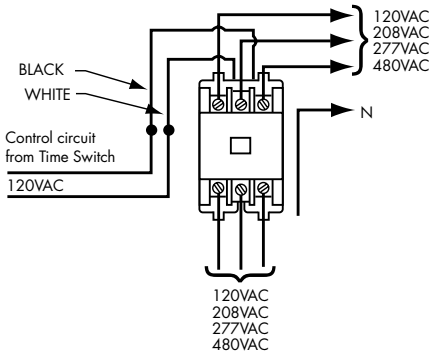
ENCLOSURE: Metal NEMA 1 Indoor enclosure (see page 557 for enclosure dimensions).

TYPE	VOLTAGE (VAC)	FLA	RATING
Tungsten*	120	-	30A
Ballast*	120/277	-	40A
LED Driver*	120/277	-	40A
Motor (Single Phase)	120 240	40 40	3HP 7.5HP
Motor (3 Phase)	240 480	40 40	10HP 20HP

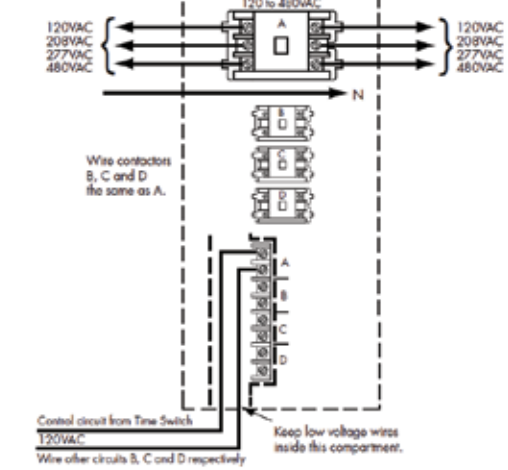
Coil Data: 120VAC @ 60Hz
6VA Holding/seal; 60VA inrush

* Ratings for single phase load

5401A



5441A



HPS STARTER
FOR HIGH PRESSURE SODIUM LAMPS
STARTING AID

APPLICATIONS

- Designed to operate as a starting aid, for all H.P.S. ballasts from 35 to 400 watts, with lamp voltage of 55 or 100 volts.

SPECIFICATIONS

LINE VOLTAGE: 105 - 347VAC.

LAMP VOLTAGE: 55 or 100VAC.

LAMP WATTAGE: 35 to 400 watts.

OPERATING TEMPERATURE: -40°F to +221°F (-40°C to + 105°C).

LEAD LENGTH: 9 inches.

ENCLOSURE: Durable, high temperature Lexan® housing.

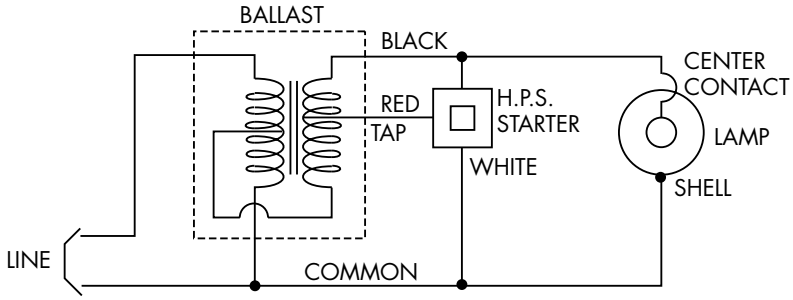
FEATURES

SMART VOLTAGE: Delivers appropriate trigger spikes for lamp ignition, then reduces voltage to good lamps. Continues to feed voltage spikes to old or poorly working lamps.

HIGH GRADE MATERIAL: All components are sealed with high grade die-electric material to protect against contaminants and other adverse environmental conditions.

EASY INSTALLATION: Universal 3 wire design, color coded for ease of installation.

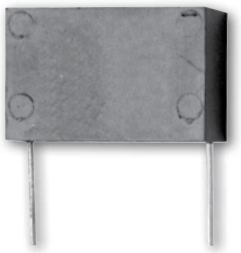
CATALOG NO.	UPC CODE	DESCRIPTION
HPS30	81030	High Pressure Sodium Starter



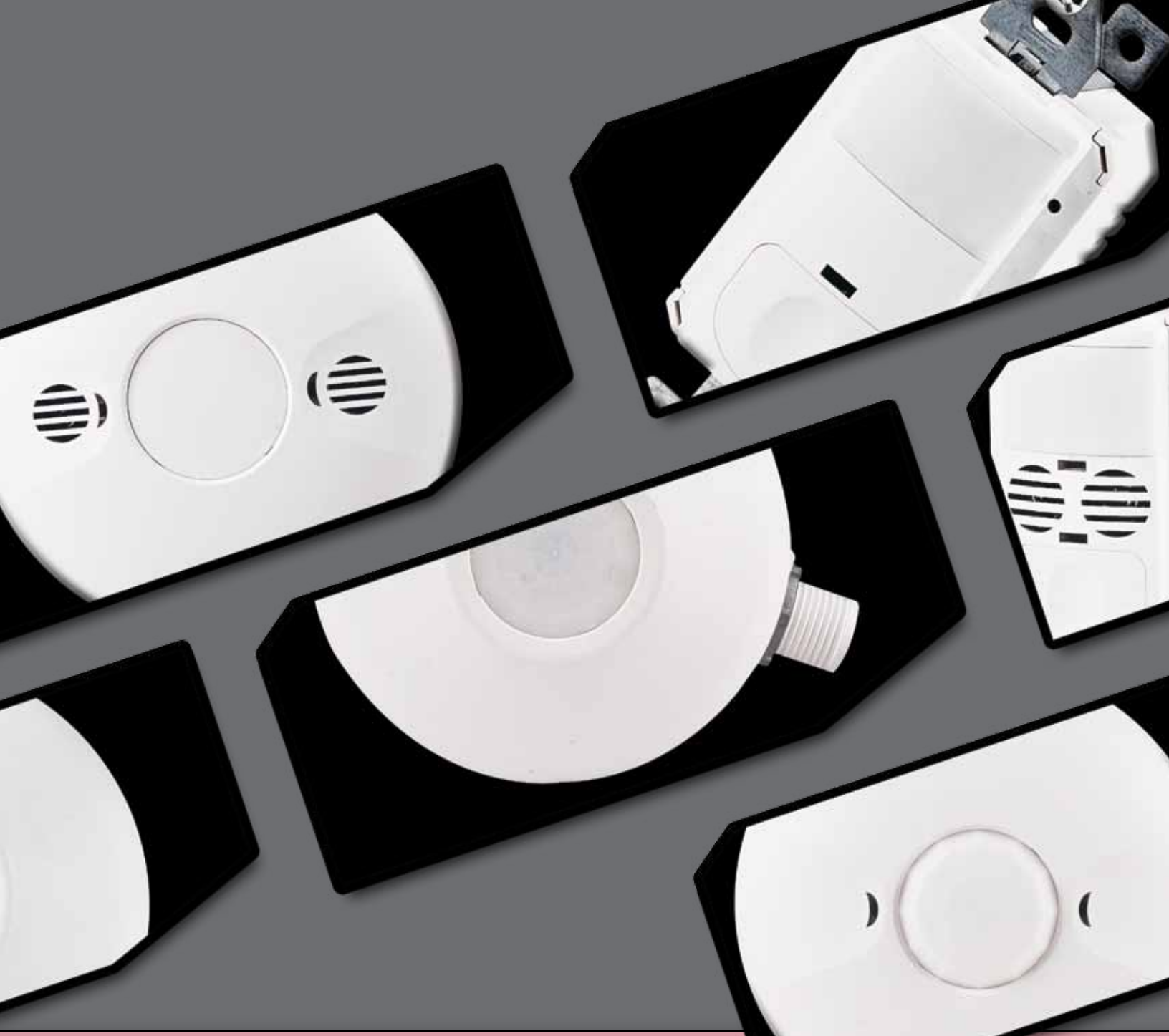
SURGE SUPPRESSOR
FOR HIGH ELECTRICAL NOISE

APPLICATIONS

- For high electrical noise interference, recommended for all digital controls.



CATALOG NO.	UPC CODE	DESCRIPTION
90058-1	81024	Surge Suppressor



TORK® OCCUPANCY SENSORS

SENSOR TECHNOLOGY & PLACEMENT GUIDE

TECHNOLOGY
PIR AND ULTRASONIC

A ***Passive Infrared Sensor*** (PIR sensor), is a device that measures infrared radiation (IR), or heat, from objects in its field of view. Because it only receives information, it is considered passive. The IR sensor views a human body as an IR generating object. The lens of the occupancy sensor breaks up the field of view into IR sensitive bands. The occupancy sensor is designed to only react when heat is sensed moving from band to band. For PIR occupancy sensors to work object must have direct "line of sight" to the PIR sensor.

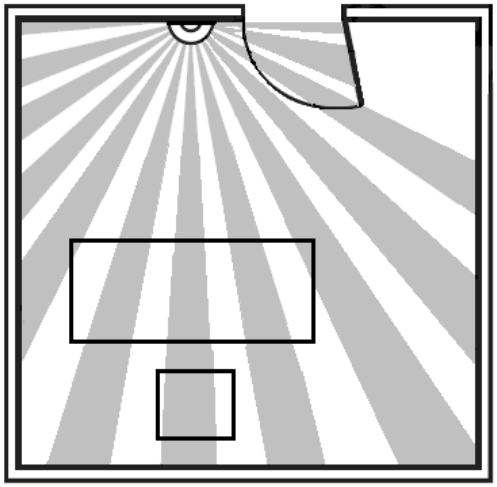
An ***Ultrasonic Sensors*** (US sensor) is a technology that works on a principle similar to radar or sonar. It is an active technology that sends and receives. It emits an inaudible high-frequency sound wave and evaluates the echo which is received back after bouncing around in the room. This allows the sensor to evaluate the whole room and can "look" over walls and obstructions to identify movement.

Both technologies show higher sensitivity closer to the sensor to allow small movements to be noticed. Sensitivity reduces further away from the sensor and may require a walking step to activate the sensor.

PLACEMENT GUIDELINES
WALL SENSOR

A ***Wall Switch Sensor*** provides a 180° coverage pattern, extending outward from the sensor. This will allow for instant turn ON when an occupant enters the space. Total area covered will be over 400 square feet.

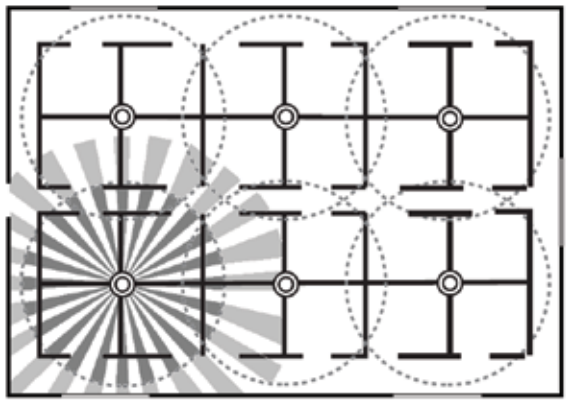
- Proper placement gives the sensor a clear line of sight to the entry door without viewing the hallway.
- The occupant must be able to see the sensor from their normal work position otherwise the sensor will not be able to detect their presence.
- For offices where there are other obstructions between the sensor and the occupant or the entry door, a ceiling sensor is required.

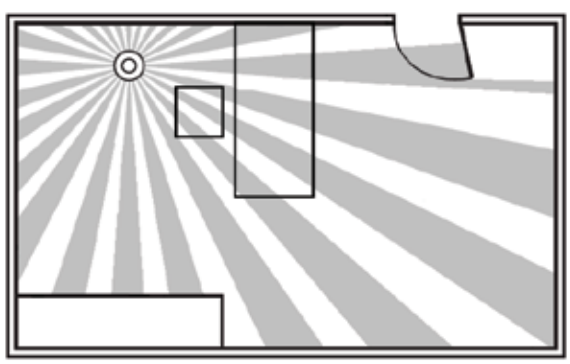


PLACEMENT GUIDELINES
CEILING SENSOR

A ***Ceiling Sensor*** provides a 360° coverage pattern of up to 1200 square feet when using passive infrared only. When using dual technology the coverage pattern extends to over 2000 square feet. Barriers within the space that block line-of-sight to sensor detection will decrease coverage area when using passive infrared by itself, ultrasonic dual technology will allow the sensor to get around the obstructions.

- Designed for ceiling mounting at a height of 8-10 feet (mounting sensor at greater heights decreases the sensitivity to motion, while lower mounting height will decrease range).
- The sensor needs a visually unobstructed view of the normally occupied workspace and entry door(s).
- Avoid sensor placement with a direct view out a doorway. Placing the sensor offset from the center and away from the door is recommended.
- If the occupant cannot see a PIR sensor from their normal work position, the sensor will not be able to detect their presence.
- File cabinets, partitions, or walls are typical types of obstructions. If there are other obstructions between the sensor and the occupant, an ultra-sonic or dual technology ceiling sensor is recommended.
- When the light level feature is used, mount within 15 feet of the widows or skylight and avoid mounting the sensor close to lighting fixtures.
- Place the sensor no closer than 5 feet to an HVAC air duct when using dual technology sensors.
- Open office designs encourage placement of the sensors to allow overlapping coverage of small motion range and a clear view into each cubicle. Walking step motion may cover the entry to the space. Dual technology units provide added sensitivity to small motion.





WOS SERIES
PIR WALL SWITCH OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 3 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Two selectable modes: Automatic On/Off or energy saving Walk Through. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

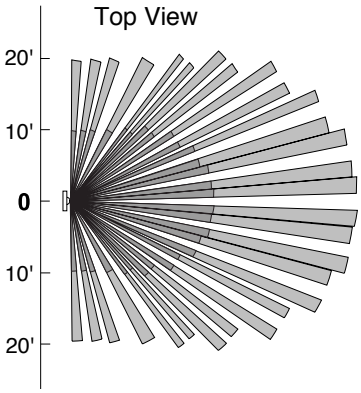
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas. Use in bathrooms to avoid manual off condition for occupant as another person leaves.

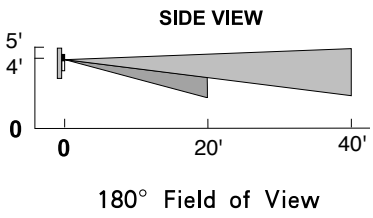
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

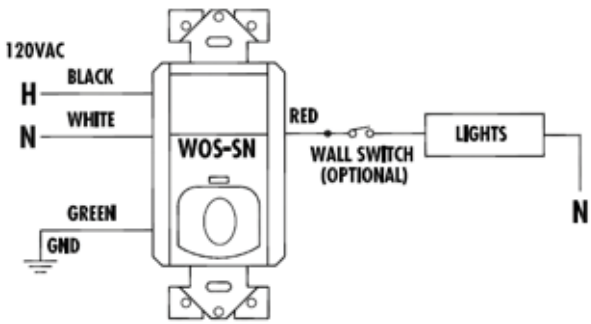
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-SN	98213	120	Requires Neutral







WOS-M SERIES
PIR WALL SWITCH OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-M	98217	120/230/277	No Neutral Required
WOS-MN	98215	120/230/277	Requires Neutral

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

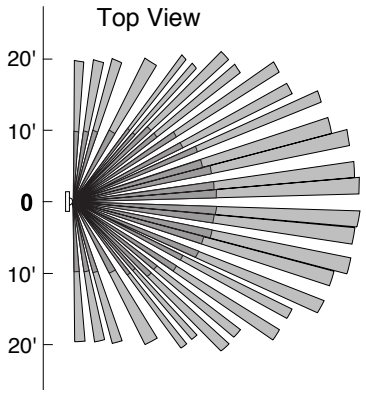
FLASH WARNING: Optional load flicker 2 minutes before Off.

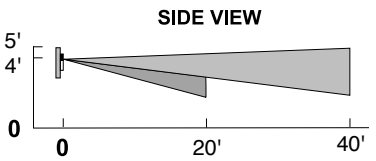
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas. Use in bathrooms to avoid manual off condition for occupant as another person leaves.

COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

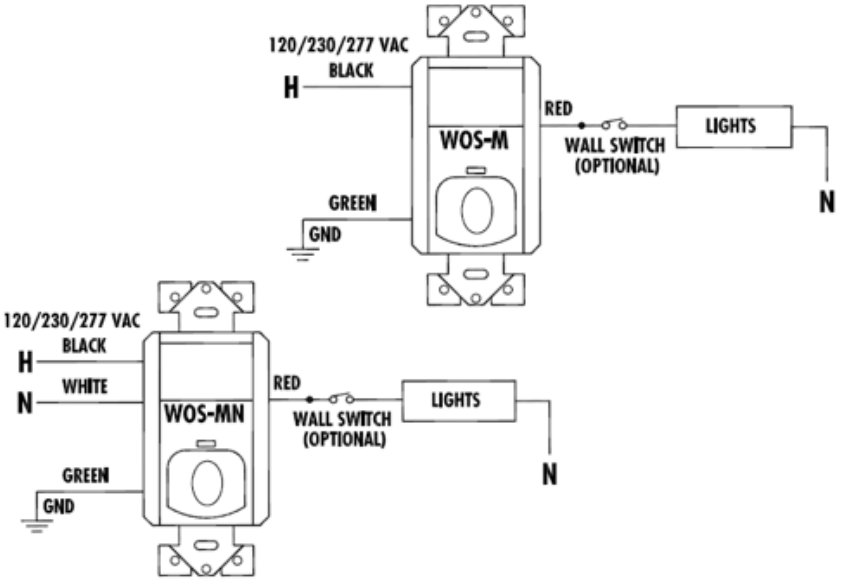
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).





180° Field of View



WOS-M2R SERIES
PIR WALL SWITCH TWO RELAY OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-M2R	98221	120/230/277	No Neutral Required
WOS-MN2R	98219	120/230/277	Requires Neutral

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming. Each relay can have different settings.
- BATHROOM MODE: set fan relay time delay longer than lighting relay.
- TWO STEP LIGHT LEVEL: set each relay to turn off at different daylighting levels
- PUBLIC AREAS: Disable one relay button manual OFF function. Use in bathrooms to avoid full off condition for occupant as another person leaves.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Facto ry default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

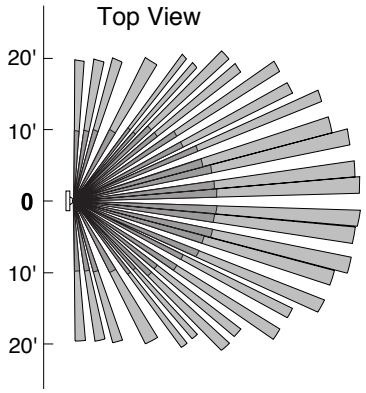
FLASH WARNING: Optional load flicker 2 minutes before Off.

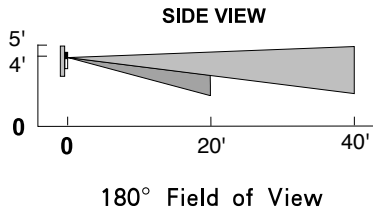
TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas.

COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

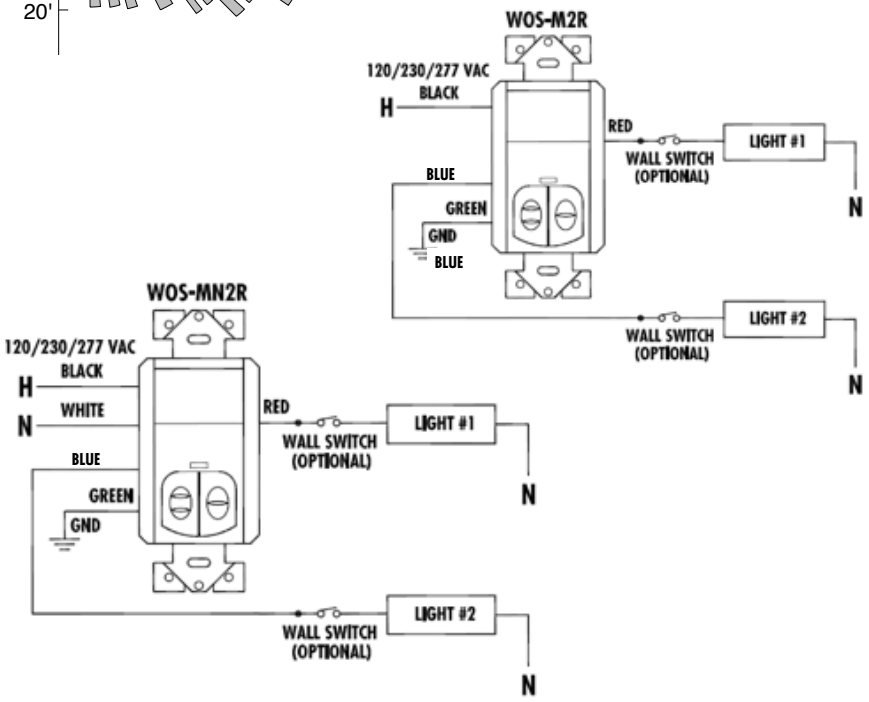
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).





180° Field of View



WOS-M2T SERIES
ULTRASONIC AND PIR WALL SWITCH OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Offices areas
- Meeting rooms
- Equipment room & storage spaces
- New construction & retrofit

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60 Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE:
PIR 1200 sq. ft.
Ultra-Sonic 400 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming. Each relay can have different settings.
- INITIAL ON: customize and set one technology only to trigger turn on.
- MAINTAIN ON: customize and set one technology to keep lights on.
- PUBLIC AREAS: Disable button manual OFF function. Use in bathrooms to avoid full off condition for occupant as another person leaves.

MODES: Four selectable modes: Automatic On/Off, Manual on (vacancy), energy saving Walk Through, or Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

DAYLIGHT PHOTOSENSOR: Optional light-level turn off from 5 to 200fc. Save energy if windows provide enough light.

FLASH WARNING: Optional load flicker 2 minutes before Off.

TAMPER RESISTANT: Captive button, rugged lens, and optional disable button function for public areas.

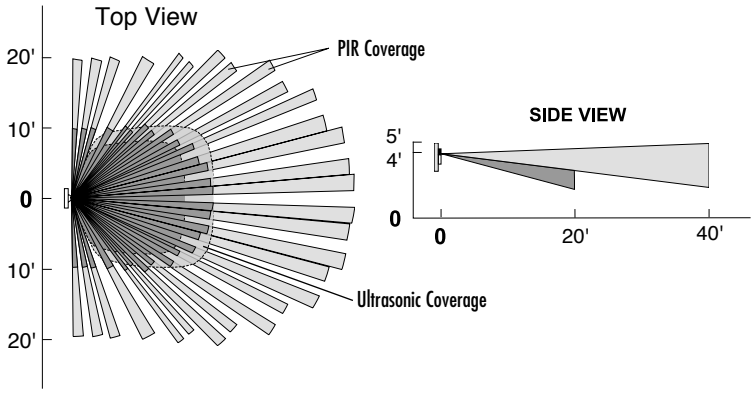
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

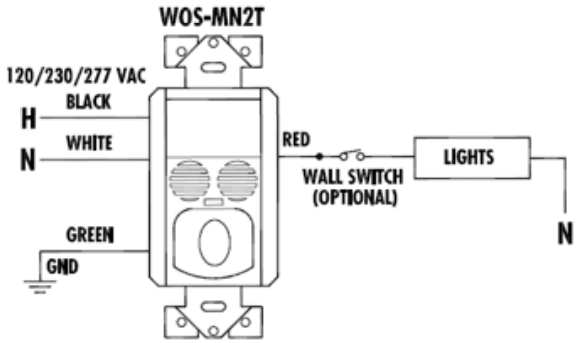
SENSOR CHOICES: Factory default setting allows either technology to trigger the unit. Optional is a disable function of one technology for initial and/or maintain on operations.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

COLOR: White (single gang decorator wall plate included).

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	WIRING
WOS-MN2T	98223	120/230/277	Requires Neutral





COS-L2T SERIES
ULTRASONIC AND PIR CEILING MOUNTING OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

c UL us

- Large offices areas
- Larger meeting rooms
- Classrooms
- Bathroom & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE:
PIR 1200 sq. ft.
Ultra-Sonic 900 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-L2T	98207	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.
- INITIAL ON: customize and set one technology only to trigger turn on.
- MAINTAIN ON: customize and set one technology to keep lights on.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

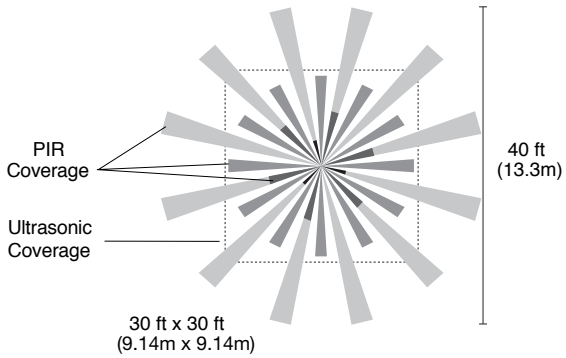
FLASH WARNING: Optional load flicker 2 minutes before Off.

COVERAGE AREA: Adjustable for three steps of sensitivity for ultrasonic and two steps for PIR.

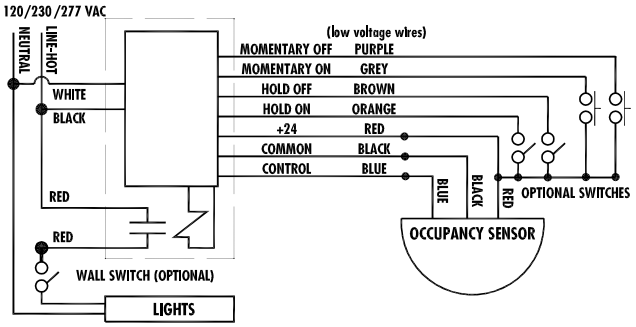
SENSOR CHOICES: Factory default setting allows either technology to trigger the unit. Optional disable function of one technology for initial and/or maintain on operations.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



TRP-24I POWER PACK



COS-L SERIES
PIR CEILING MOUNTING OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

APPLICATIONS

c UL us

- Large offices areas
- Larger meeting rooms
- Classrooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-L	98203	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

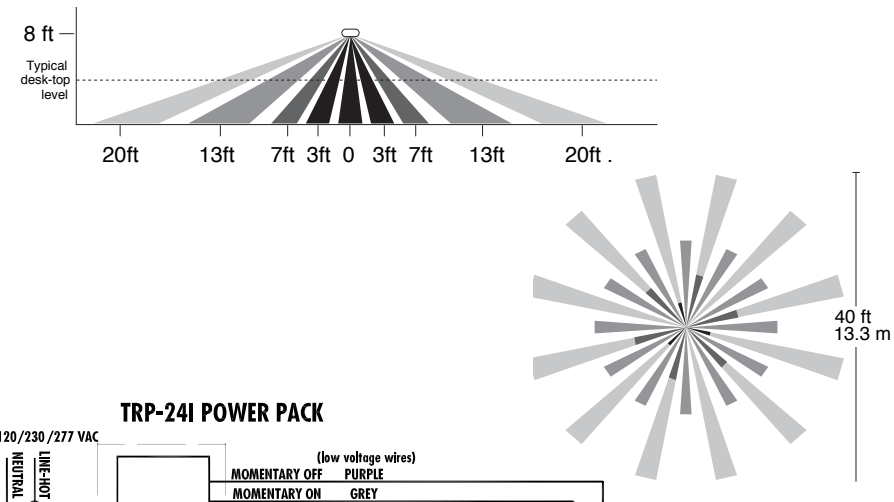
TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

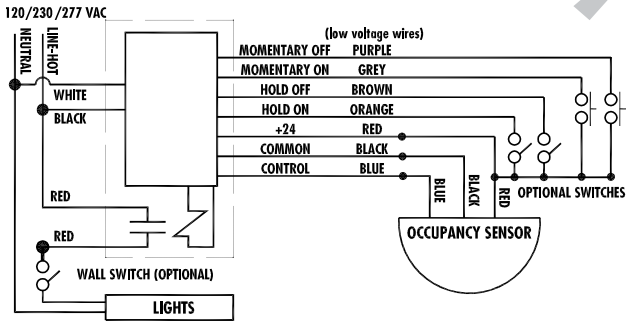
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



TRP-24I POWER PACK



COS-LU SERIES
ULTRASONIC CEILING MOUNTING OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Large offices areas
- Larger meeting rooms
- Classrooms
- Bathroom & storage spaces

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24I or TRP-24B Power Packs provided separately.

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 900 sq. ft.

WARRANTY: 5 YRS.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
COS-LU	98205	24VDC	White
TRP-24I	98227	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

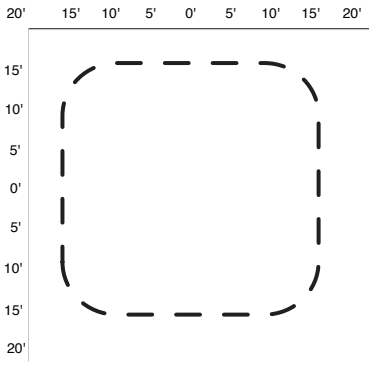
TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

FLASH WARNING: Optional load flicker 2 minutes before Off.

COVERAGE AREA: Adjustable for three steps of sensitivity.

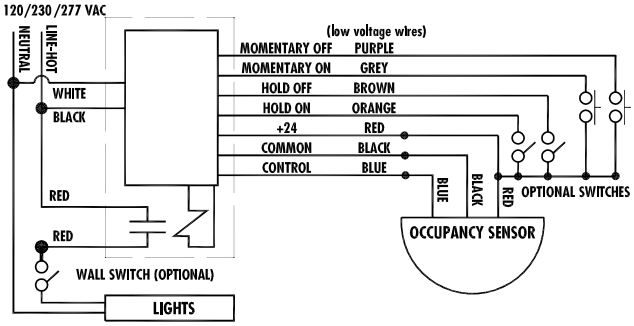
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.



30 ft x 30 ft
(9.14m x 9.14m)

TRP-24I POWER PACK



COS-M SERIES
PIR CEILING MOUNTING
LINE VOLTAGE
OCCUPANCY SENSOR

responsible energy

ASHRAE 90.1

c UL us

APPLICATIONS

- Large offices areas
- Larger meeting rooms
- Classrooms
- Equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

POWER SUPPLY:
Built-in

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1200 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

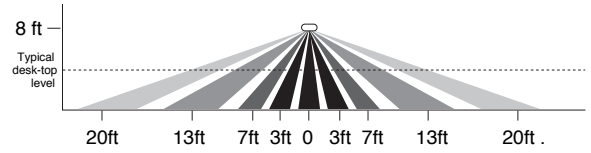
FLASH WARNING: Optional load flicker 2 minutes before Off.

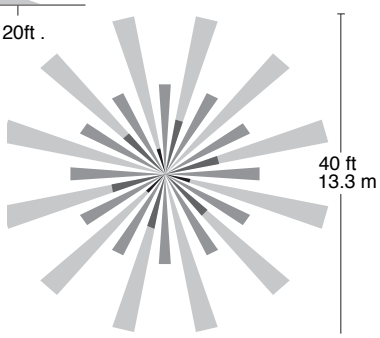
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

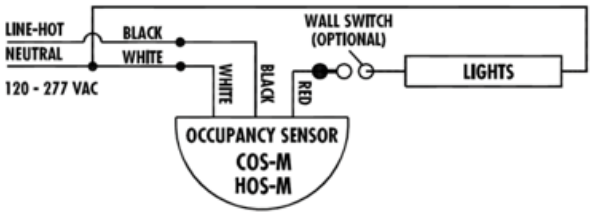
TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Mounts direct to a box. Available is optional adapter for pendant or side mounting with ½" threaded nipple.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC)	DESCRIPTION
COS-M	98201	120/230/277	White
COS-ADP	98229	1/2" pendant/side mounting adapter	







TORK® nsi

HOS-M SERIES
HIGH BAY PIR MOUNTING LINE VOLTAGE OCCUPANCY SENSOR

ASHRAE 90.1

APPLICATIONS

- Warehouse
- Tall aisle
- High ceiling equipment room & storage spaces

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

POWER SUPPLY:
Built-in

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

COVERAGE: 1000 sq. ft.

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 800W Tungsten
120V 1000W Electronic Ballast
230V 1500W Electronic Ballast
277V 1800W Electronic Ballast
120V ¼ HP Motor

FEATURES

SOFTWARE SET: Completely customizable functions through button push programming.

MODES: Three selectable modes: Automatic On/Off, energy saving Walk Through, and Test. Factory default setting is Automatic.

TIME DELAY: 6 steps settings 5, 10, 15, 20, 25, and 30 minutes. Factory default setting is 10 minutes.

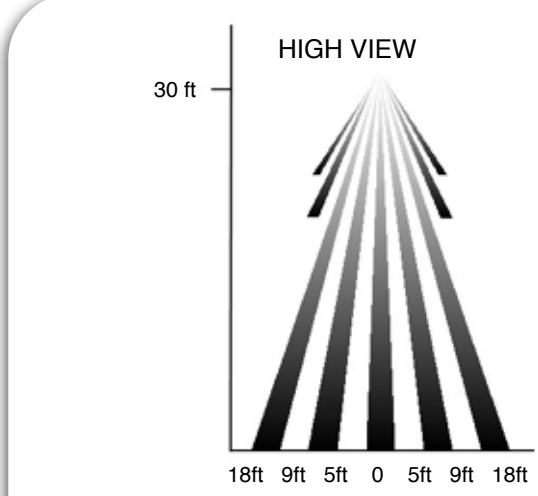
FLASH WARNING: Optional load flicker 2 minutes before Off.

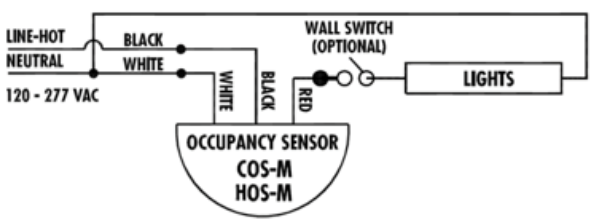
COVERAGE AREA: Preset for full coverage area. Optional half size area is selectable.

TEST MODE: Used for initial installation. Changes back Auto mode within 30 minutes without resetting.

MOUNTING: Includes as standard an adapter for pendant or side mounting with ½" threaded nipple. Also mounts direct to box or ceiling.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC)	DESCRIPTION
HOS-M	98209	120/230/277	White





CPS-L SERIES
CEILING MOUNTING PHOTO SENSOR

ASHRAE 90.1

APPLICATIONS

- Side window areas of offices
- Spaces with skylights
- Classrooms

SPECIFICATIONS

VOLTAGE:
24VDC

CURRENT CONSUMPTION:
9mA

POWER SUPPLY:
TPR-24B Power Packs provided separately

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

WARRANTY: 5 YRS.

FEATURES

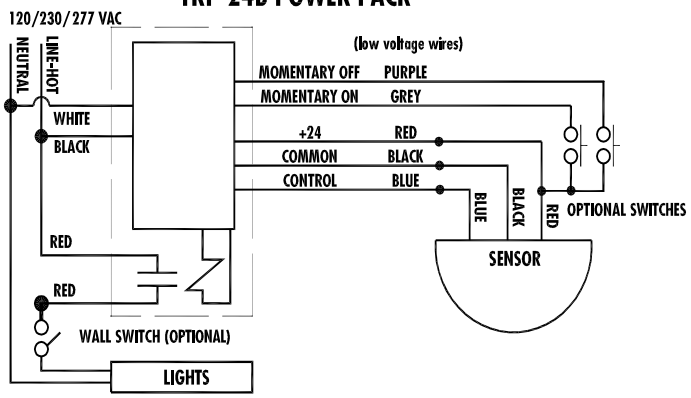
SOFTWARE SET: Completely customizable functions through button push programming.

LIGHT LEVEL SETTING: Light level between 5 to 200 fc.

MOUNTING: Mounts direct to box or ceiling. Available is optional adapter for pendant or side mounting with ½" threaded nipple.

CATALOG NO.	UPC CODE	INPUT SUPPLY	DESCRIPTION
CPS-L	98211	24VDC	White
TRP-24B	98225	120/277VAC	Power Pack
COS-ADP	98229	1/2" pendant/side mounting adapter	

TRP-24B POWER PACK



TRP-24 SERIES
POWER PACK FOR OCCUPANCY SENSORS

ASHRAE 90.1

APPLICATIONS

- Power and switching for occupancy or light sensors
- Power and switching for SS410 auto-off switch
- BAS compatible
- Demand shedding applications
- Low cost momentary switching of loads

SPECIFICATIONS

VOLTAGE:
120/230/277VAC 50/60Hz

OPERATING TEMPERATURE:
32°to 131°F (0°to 55°C)

WARRANTY: 5 YRS.

CONTACT RATINGS:
120V 15A Incandescent
120V 20A Ballast
230V 20A Ballast
277V 20A Ballast
120V 1 HP Motor

CATALOG NO.	UPC CODE	INPUT SUPPLY VAC 50/60Hz	OUTPUT CONTACTS
TRP-24B	98225	120/230/277	SPST
TRP-24I	98227	120/230/277	SPST
LCS115M	82082	Momentary Switch SPST	

FEATURES

OPERATION: Switches line voltage loads ON/OFF based on a contact closure from an occupancy sensor, AUTO OFF switch, or relay.

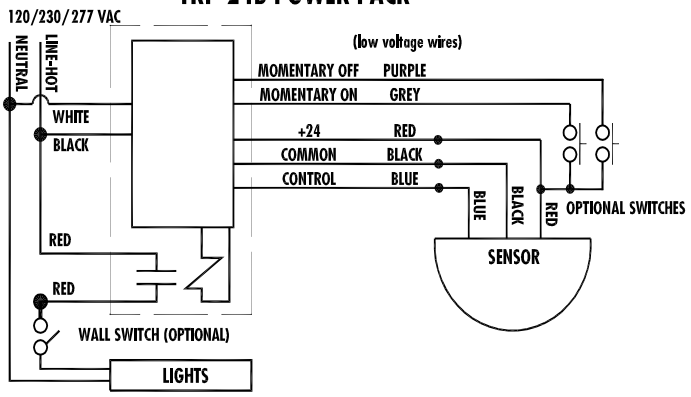
SENSOR CONTROL: Three wires for typical device control. Red and black wires for 24VDC output to power a device. Blue control wire to receive ON/OFF signal back from device.

TRP-24B INPUT: Two additional input wires to control TRP.
1. ON from momentary switch.
2. OFF from momentary switch.

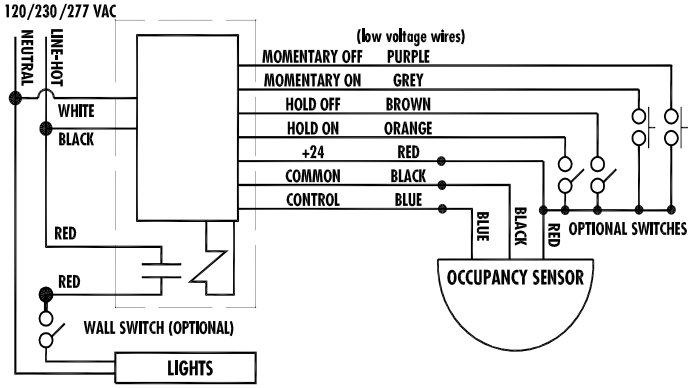
TRP-24I INPUT: Four additional input wires to control TRP.
1. Hold OFF for demand shed control.
2. Hold ON override.
3. ON from momentary switch.
4. OFF from momentary switch.

MOUNTING: Box mount to ½" KO

TRP-24B POWER PACK



TRP-24I POWER PACK



TORK® IN-WALL TIME SWITCHES

QUICK REFERENCE GUIDE

	SS700Z	SS721Z	SS720A	SS720Z	SA170	701A 711A	SS403	SS423	SS410	SS	D1060 D212	A	C
Page No.	509	509	511	512	513	514	515	515	515	517	518	519	520
Timer Type	SunSet 7 Day Digital	SunSet 7 Day Digital	7 Day Digital	SunSet 7 Day Digital	ZipSet Digital	24 Hour Mechanical	Auto OFF Digital	Auto OFF Digital	Auto OFF Digital	Auto OFF Electronic	Auto OFF Electronic	Auto OFF Mechanical	Auto OFF Mechanical
Voltage	120/277	120/277	120	120	120	120	120/277	120/277	24	24/120/ 208-240/277	120	125/250/ 277	125/250/ 277
Minimum Settings ON	1 min.	1 min.	1 min.	1 min.	1 min.	30 min.	5 min-24 hr	5 min-24 hr	5 min-24 hr	1 min-18 hr	10-60 min. 2-12 hr	Various 2 min-12 hr	Various 2 min-12 hr
Minimum Settings OFF	1 min.	1 min.	1 min.	1 min.	1 min.	30 min.	5 min.	5 min.	5 min.	1 min.	10 min.		
Manual Override	Yes	Yes	Yes	Yes	Yes	Yes							
SunSet (Astronomic)	Yes	Yes		Yes	ZipSet								
ON/OFF Set Points	10 Pair	10 Pair	7 Pair	7 Pair	1 Pair	24							
Flash Warning							Yes	Yes	Yes	Yes			
Audible Warning							Yes	Yes	Yes	Yes			
Power Outage Backup	Capacitor	Capacitor	Battery	Battery	Battery								
Switch Type	SPST	SPST	SPST	SPST	SPST	SPST	SPST	SPST	SPDT	SPST or SPDT	SPST	SPDT	SPDT or DPST
Resistive Ratings	16A	16A	15A	15A	15A	15 & 20A	15A	15A	1A	4A or 7.5A	15A	20/10/ 10A	20/10/ 10A
LED Ratings	10A	10A					1200W	1200W					
Neutral Required for Wiring	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	No	No
3-Way Wiring	Yes	Yes	No	No	No	No	Yes	Yes	Yes	SS13 Yes	No	No	No

TORK® SS700Z & SS721Z

SunSet IN-WALL TIMER

SUNSET / SUNRISE / 7 DAY

SunSet

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

UL LISTED FOR LED

BACK-UP WITHOUT BATTERIES!

APPLICATIONS

c UL us

- Commercial outdoor security lighting
- Interior lobby lighting
- Contactors for fans and motors
- Sign lighting

SPECIFICATIONS

TIMING ACCURACY: Line frequency.

INPUT VOLTAGE: 120/277VAC, 50/60Hz.

WIRE SIZE: #12AWG input/output - #16AWG 3-way (remote).

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C).

FEATURES

SCHEDULING: 10 ON and OFF pairs of set points for individual programs on each day of the week. 11 day groups speed programming. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Sunset and sunrise times are adjustable from 10°-60° Northern or Southern latitudes. Can be individually offset +/- 1-240 minutes for earlier or later operation.

RANDOM MODE: Varies ON and OFF times to create lived in look when away.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

MANUAL MODE: Does not run programs until set to AUTO (automatic) mode.

VACATION MODE: No operation when away.

EASY WIRING:
SS700Z does not require a neutral, can be used as a 3-way switch.

SS721Z Requires a neutral, can be used as a 3-way switch.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Permanent schedule retention. Supercapacitor provides 2 days of real time backup.

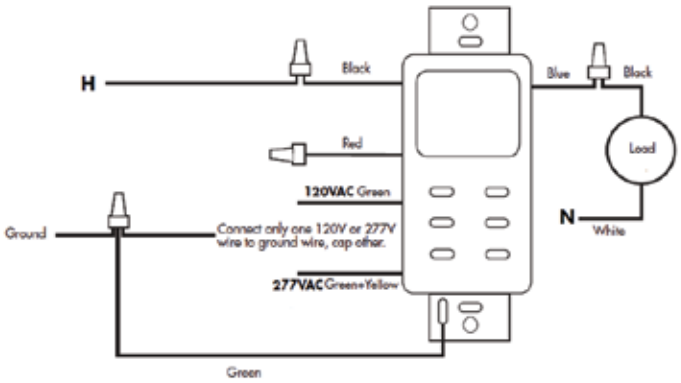
COMMERCIAL GRADE SPECS: Control lighting contactors and 277VAC loads. Compatible with CFL lamps.

FULL SWITCHING: No minimum load requirement.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	SWITCH TYPE	COLOR
SS700Z	14019	120/277	SPST	White
SS700ZA	14020	120/277	SPST	Light Almond
SS721Z	14027	120/277	SPST	White
SS721ZA	14028	120/277	SPST	Light Almond

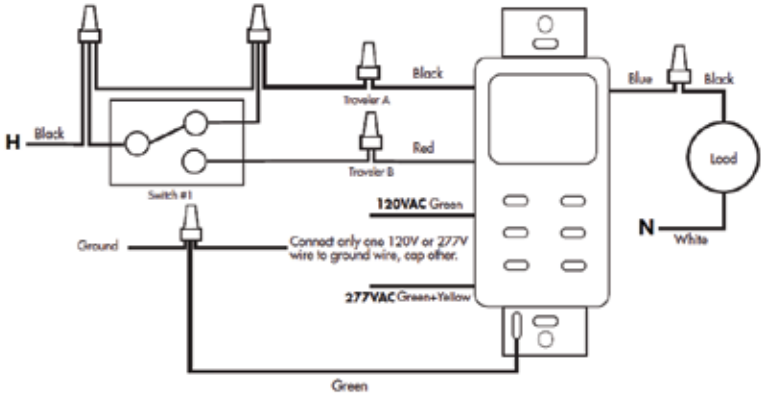
TYPE	SS700Z SERIES RATING	VOLTAGE (VAC)	SS721Z SERIES RATINGS
Resistive	16A	120-277	16A
Ballast	10A	120-277	13A
LED Driver	10A	120-277	10A
Tungsten	8A	120	8A
Pilot Duty	360VA	120	720VA
Motor	1/2HP	120	1/2HP

WIRING DIAGRAM: INSTALLATION SS700Z

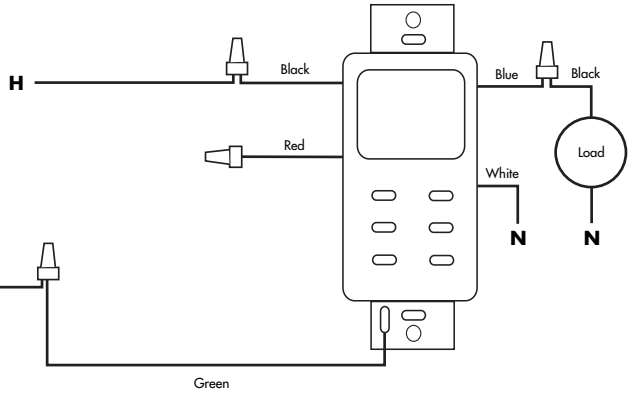


WIRING DIAGRAM: THREE-WAY INSTALLATION SS700Z

Connect a wire inside the gang-box between Traveler A and Hot.

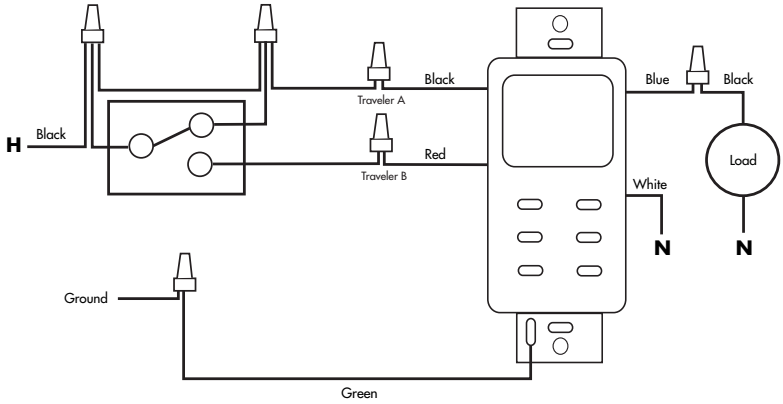


WIRING DIAGRAM: INSTALLATION SS721Z



WIRING DIAGRAM: THREE-WAY INSTALLATION SS721Z

Connect a wire inside the gang-box between Traveler A and Hot.



SS720A SERIES
7 DAY IN-WALL RESIDENTIAL TIMER

APPLICATIONS

- Residential Interior lights
- Random for lived-in look
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/month

INPUT VOLTAGE: 125VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
SS720A	14017	120	White
SS720AA	14018	120	Light Almond

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	15A
Tungsten	120	15A
Motor	120	1HP
Electronic Ballast	120	500VA

FEATURES

SCHEDULING: 7 ON and OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

DAYLIGHT SAVING: Manual button push for one hour adjustment.

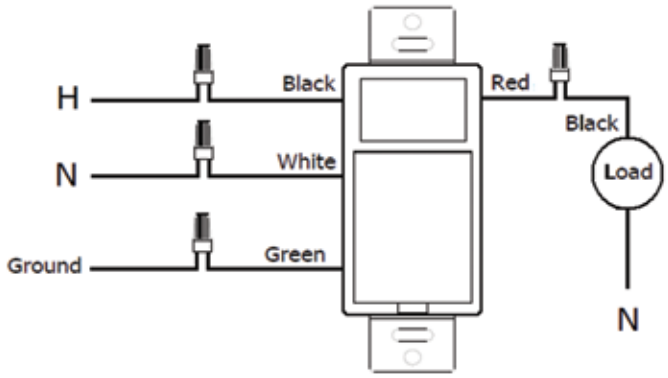
MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Rechargeable Ni-Cad battery retains time and schedule.

WALL PLATE: Supplied with standard single gang decorator wall plate.



TORK® SS720Z

SunSet IN-WALL RESIDENTIAL TIMER

SUNSET / SUNRISE / 7 DAY

APPLICATIONS

- Residential Interior lights
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/ month

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
SS720Z	14023	120	White

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	15A
Tungsten	120	960W
Motor	120	½HP
Electronic Ballast	120	500VA

FEATURES

SCHEDULING: 7 ON and OFF pairs of set points for individual programs on each day of the week. Minimum setting is 1 minute.

SunSet ASTRONOMIC: Adjusts daily to changes in sunset times. Sunset and sunrise times with five zones: North USA/Southern Canada, Central USA, South USA, Northern Canada/Alaska, and Hawaii/Puerto Rico.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

DAYLIGHT SAVING: Automatic adjustment (can be omitted).

LEAP YEAR: Automatic Compensation.

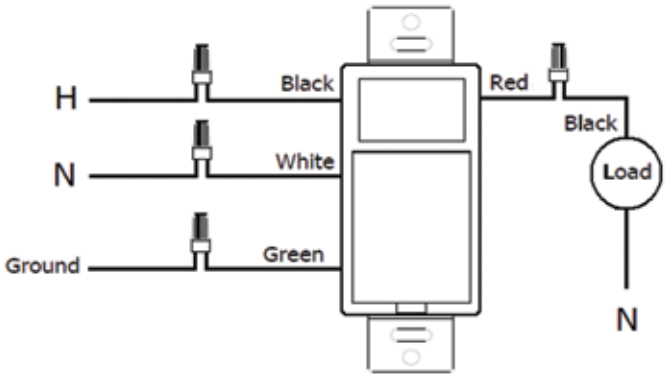
MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Rechargeable Ni-Cad battery retains time and schedule.

WALL PLATE: Supplied with standard single gang decorator wall plate.



SA170 SERIES
Zip-Set™ IN-WALL RESIDENTIAL TIMER
SUNSET / TIME OFF

*Wall plate not included

APPLICATIONS

- Residential Exterior lights
- Small fans and motors
- Appliances

SPECIFICATIONS

TIMING ACCURACY: +/- 1 minute/month

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

	CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
NEW!	SA170	16528	120	White

TYPE	VOLTAGE (VAC)	RATING
Resistive	120	15A
Inductive	120	15A
Tungsten	120	5A
Motor	120	1/2HP

FEATURES

Zip-Set™ factory preset time. Just enter area code and it finds correct time and sunset time.

SCHEDULING: One On/Off set point pair is active at a time. Schedule 1, Schedule 2, a combination of 1 & 2, or ZipSet™. Day combinations for 7-5-2 speed programming.

RANDOM MODE: Varies ON and OFF times to create "lived in" look when away.

COUNTDOWN: Button press turns lights ON and starts a 5 minute countdown to OFF.

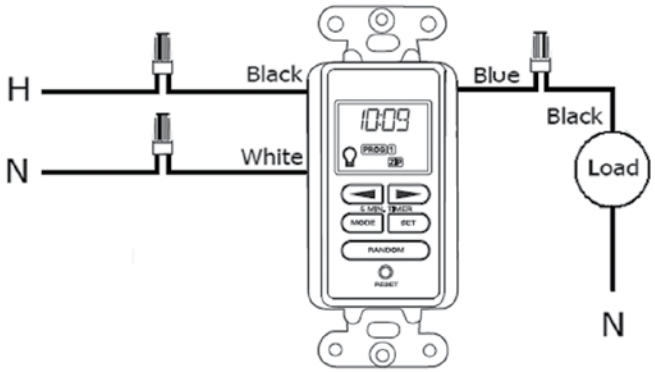
DAYLIGHT SAVING: Manual button push for one hour adjustment.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF, automatic operation then resumes.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM.

POWER OUTAGE BACKUP: Lithium batteries retain time and schedule.



701A & 711A SERIES
24 HOUR IN-WALL TIMER

APPLICATIONS

- Porch or patio
- Doorway
- Pool
- Outdoor security lighting

FEATURES

SCHEDULING: Minimum ON setting is 30 minutes. Dial has 48 captive trippers.

BYPASS SWITCH: Slide switch for ON, OFF, or TIMER (automatic) operation.

VACATION MODE: Set timer OFF with no change of tripper settings.

WIRING: Requires a neutral.

CLOCK FORMAT: AM/PM marked on dial.

WALL PLATE: Supplied with single gang wallplate.

SPECIFICATIONS

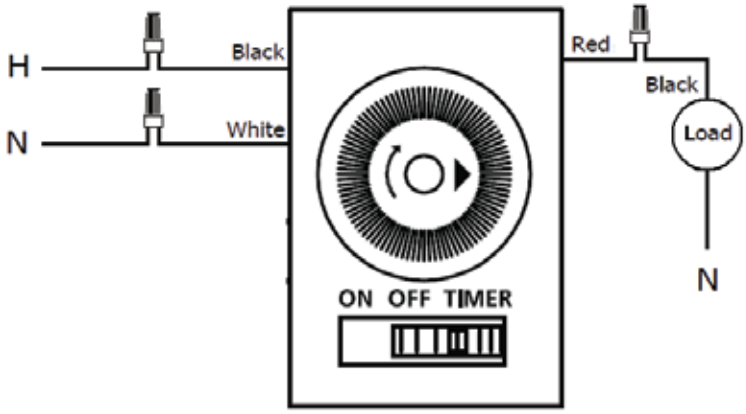
INPUT VOLTAGE: 125VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to +104°F (0°C to +40°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60 Hz	COLOR
701A	10113	125	White
701AA	10118	125	Light Almond
711A	10114	125	White

TYPE	VOLTAGE (VAC)	RATING	
		701A SERIES	711A SERIES
General Purpose	125	20A	15A
Resistive	125	20A	15A
Tungsten	125	1500W	1250W
Motor	125	1 HP	1/2 HP



TORK® SS400 SERIES
DIGITAL AUTO OFF IN-WALL TIMER

responsible energy

CALIFORNIA Title 24

ASHRAE 90.1

UL LISTED FOR LED

PROGRAMMABLE!

SS400 Series
*Wall plate included

APPLICATIONS

c UL us

- Offices, meeting rooms
- Energy code timed override
- Exhaust fans
- Equipment room and storage spaces

SPECIFICATIONS

TIMING ACCURACY: Line Frequency

INPUT VOLTAGE: SS403/SS423 – 120/230/277VAC 50/60 Hz
SS410 – 24VDC OR 24VAC 50/60 Hz

WIRE SIZE: SS403/SS423 – #14AWG input/output - #16AWG 3-way (remote)
SS410 – #18AWG

OPERATING TEMPERATURE: 32°F to +104°F (0°C to + 40°C)

WARRANTY: 5 Yrs.

FEATURES

WIRING CHOICES:
SS403 – no neutral for retrofit
SS423 – with neutral for new construction
SS410 – multiple circuits with power packs
– low voltage for class 2 wiring

ENERGY CODE PRESET: 2 hour timing for Title 24 and IECC (default). 4 hour timing for ASHRAE 90.1 (with quick dip switch adjustment)

PROGRAMMABLE: 5 minutes to 24 hour:
5 minute steps from 5 minutes to 1 hour.
10 minute steps from 1 to 4 hours.
30 minute steps from 4 to 12 hours.
1 hour steps from 12 to 24 hours.

SCROLL LOCK: Limits user adjustment to a maximum equal to the preset time.

FLASH WARNING: Optional one second flicker turns load off/on 2 minutes before end of time cycle.

BEEPER WARNING: Optional beep will sound every 15 seconds during the last 2 minutes of the time cycle.

TAMPER RESISTANT: Wall plate locks access to dip switch adjustments.

THREE-WAY & MULTI-WAY: Three-way compatible with existing switch. Multi-way requires momentary switches at the additional locations. Maximum distance 100 feet.

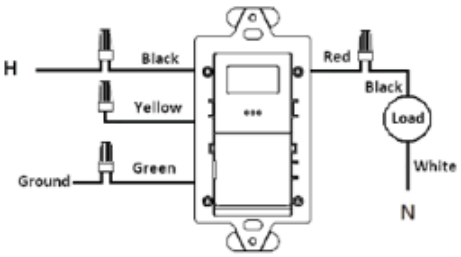
DISPLAY: Backlit LCD Display.

COLOR: White (single gang decorator wall plate included).

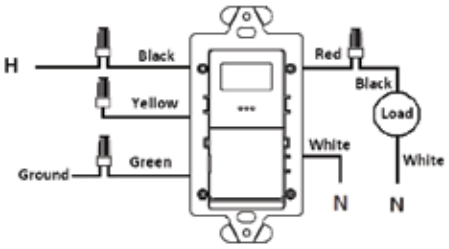
CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60 Hz	SWITCH TYPE	COLOR
SS403	14029	120/230/277	SPST	White
SS423	14030	120/230/277	SPST	White
SS410	14033	24VDC or 24VAC	SPDT	White

TYPE	VOLTAGE	SS403 RATING	VOLTAGE (VAC)	SS423 RATING
Resistive	120-277VAC	15A	120-277	15A
Ballast	120-277VAC	10A	120-277	13A
LED Lamp Driver	120-277VAC	1200W	120-277	1200W
Tungsten	120VAC	8A	120	8A
Pilot Duty	120VAC	360VA	120-277	720VA
Motor	120VAC	1/4HP	120-277	1HP
		SS410		
VOLTAGE	RATING		VOLTAGE (VAC)	RATING
28VDC	.5A Max		24	1A Max
Minimum Load 1ma @ 5V				

SS403 Wiring

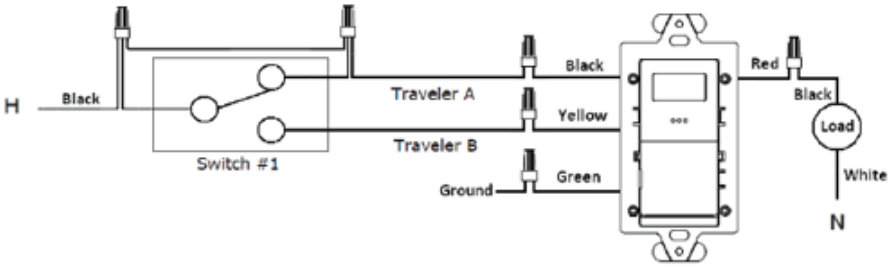


SS423 Wiring



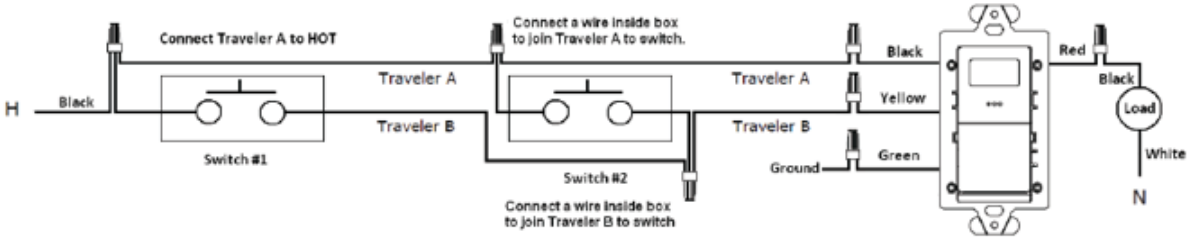
SS403 Wiring for 3-Way

Connect a wire inside the gang-box between Traveler A and HOT

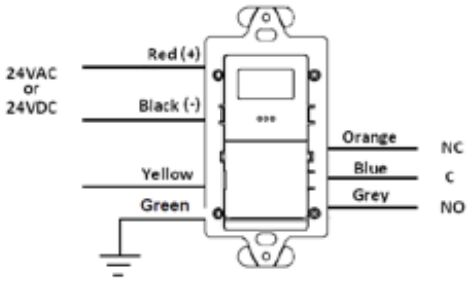


SS403 Wiring for 4-Way

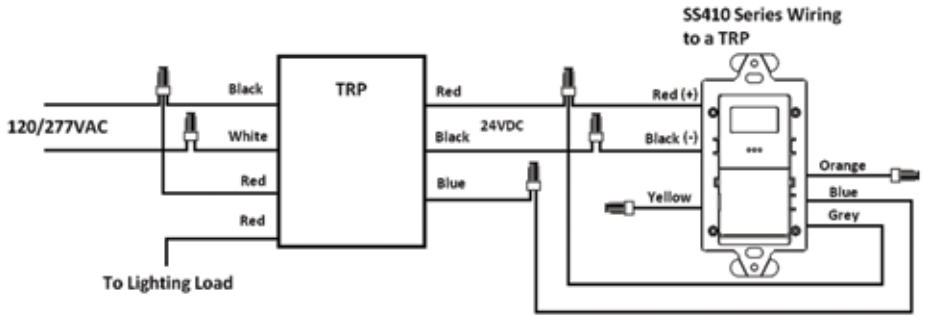
Use mometary switches at all additional locations.
Tork #LCS115M



SS410 Series Wiring



SS410 Series Wiring to a TRP



SS SERIES
AUTO OFF
IN-WALL TIMER

APPLICATIONS

- Bathroom fans and lights
- Indoor/Outdoor lighting
- Storage areas
- Hospitality areas

SPECIFICATIONS

TIMING ACCURACY:
±5% @ 60° to 80°F.

INPUT VOLTAGE:
24/120/208-240/277VAC, 50/60Hz.

WIRE SIZE: #18AWG.

OPERATING TEMPERATURE:
0°F to +100°F (-17°C to +37°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50/60Hz	WARNING BEFORE TIME OUT	SWITCH TYPE
SS20	14005	24/120/208-240/277	None	Single pole
SS20F	14008	24/120/208-240/277	*Flicker	Single pole
SS13F	14007	24/120/208-240/277	*Flicker	3-way
SS13B	14006	24/120/208-240/277	**Beep	3-way

*Flicker feature turns load OFF for ½ second, 2 minutes before end of timed cycle and again 1 minute before end of timed cycle.
**Beep feature will begin a ½ second audible warning every 12 seconds during the last 2 minutes of timed cycle.

FEATURES

VARIABLE TIMING: Choose from 1 minute to 18 hours.

FLASH WARNING: "F" suffix models with flicker feature turns load off for 1/2 second, 2 minutes before end of timed cycle and again 1 minute before end of timed cycle.

AUDIBLE WARNING: "B" suffix model will buzz that every 12 seconds during the last 2 minutes of timed cycle.

TAMPER RESISITANT: Time ON interval preset is hidden behind wall plate.

EASY SET: Small screw driver adjustment provides quick set-up of timing.

EASY WIRING: No neutral needed, great for retrofit.

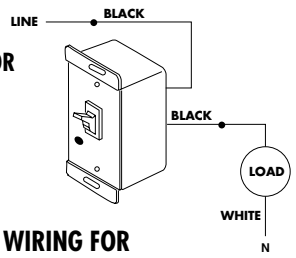
3-WAY: SS13 SERIES replaces standard 3-way switch with no re-wiring.

COLOR: White.

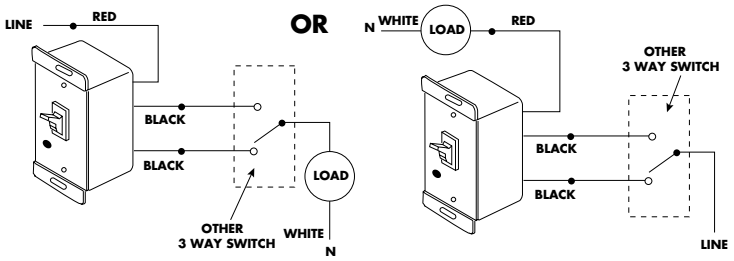
TYPE	CONTACT RATINGS	MINIMUM LOAD VOLTS	MINIMUM LOAD WATTS
SS13F & SS13B	.25-4.0A Resistive	24	6
	.25-4.0A Ballast*	120	30
	.25-4.0A Tungsten	208	50
	1/8 HP @ 120VAC	240	60
	1/3 HP @ 240VAC	277	70
SS20 & SS20F	.50-7.25A Resistive	24	12
	.50-7.25A Ballast*	120	60
	.50-4.0A Tungsten	208	105
	1/6 HP @ 120VAC	240	120
	1/2 HP @ 240VAC	277	150

*Not compatible with compact fluorescent lamps (CFL) and electronic fluorescent ballasts.

TYPICAL WIRING FOR 120 VAC SINGLE POLE



TYPICAL WIRING FOR 120 VAC – 3 WAY (Red is common)



D SERIES
ELECTRONIC AUTO OFF IN-WALL TIMER

APPLICATIONS

- Whole house fans
- Indoor/Outdoor lighting
- Bathroom fans and lights
- Self storage

SPECIFICATIONS

TIMING ACCURACY: Line voltage.

INPUT VOLTAGE: 120VAC, 60Hz.

WIRE SIZE: #14AWG.

OPERATING TEMPERATURE: 32°F to 122°F (0°C to 50°C).

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	TIME SETTINGS	OUTPUT CONTACTS
D212H	14021	120	Ivory	2, 4, 8, 12 HOURS
D212HA	14022	120	Light Almond	2, 4, 8, 12 HOURS
D212HW	14023	120	White	2, 4, 8, 12 HOURS
D1060M	14025	120	Ivory	10, 20, 30, 60 MINUTES
D1060LA	14024	120	Light Almond	10, 20, 30, 60 MINUTES
D1060MW	14025	120	White	10, 20, 30, 60 MINUTES

FEATURES

VARIABLE TIMING:
Button push changes time ON setting.

D1060M: 10, 20, 30, 60 minute.
D212H: 2, 4, 8, 12 hour.

LED DISPLAY: Indicator moves to new range as timer counts down.

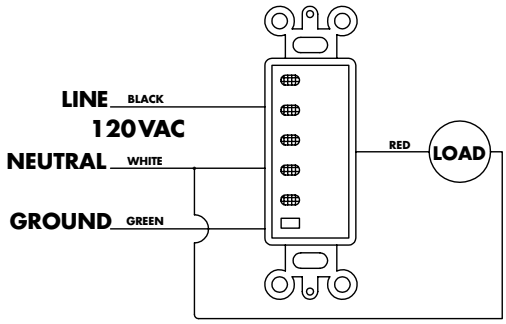
TAMPER RESISTANT: Time ON interval preset.

EASY SET: No adjustments, just wire and go!

WIRING: Requires a neutral.

THREE COLORS: Ivory, Light Almond, White.

TYPE	VOLTAGE (VAC)	RATING
General Purpose	120	15A
Resistive	120	1000W
Tungsten	120	1000W
Motor	120	1/4 HP
Ballast	120	1000VA



A SERIES
SPRINGWOUND AUTO OFF IN-WALL TIMER

*Wallplate not included

NEW!
SPDT, 2 IN 1 CONTACTS

APPLICATIONS

- Whole house fans
- Indoor/Outdoor lighting
- Bathroom fans and lights
- Self storage

SPECIFICATIONS

INPUT VOLTAGE:
125/250/277VAC, 50/60Hz.

TERMINAL SIZE: #12AWG.

OPERATING TEMPERATURE:
32°F to 122°F (0°C to 50°C).

CATALOG NO.	UPC CODE	HOLD FEATURE	COLOR
15 MINUTE MAX.			
A515MH	15020	With Hold	Ivory
A515MHW	15120		White
A515M	15013	No Hold	Ivory
A515MW	15113		White
A515MA	15127		Light Almond
30 MINUTE MAX.			
A530MH	15021	With Hold	Ivory
A530MHW	15121		White
A530M	15014	No Hold	Ivory
A530MW	15114		White
A530MA	15128		Light Almond
60 MINUTE MAX.			
A560MH	15022	With Hold	Ivory
A560MHW	15122		White
A560M	15015	No Hold	Ivory
A560MW	15115		White
2 HOUR MAX.			
A502HHW	15123	With Hold	White
A502H	15016	No Hold	Ivory
A502HW	15116		White
6 HOUR MAX.			
A506HHW	15125	With Hold	White
A506H	15018	No Hold	Ivory
A506HW	15118		White
12 HOUR MAX.			
A512HH	15026	With Hold	Ivory
A512HHW	15126		White
A512H	15019	No Hold	Ivory
A512HW	15119		White

FEATURES

VARIABLE TIMING: Twist knob for time ON setting. Time ON lengths from 15 minutes to 12 hour vary by model.

HOLD FEATURE: Some models have position for constant ON.

EASY SET: No adjustments. Just wire and go!

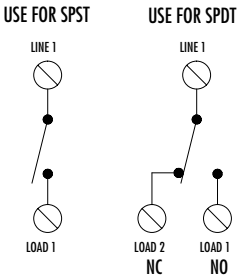
EASY WIRING: No neutral required. Great for retrofit! Use as single or in multi-gang box with no de-rating.

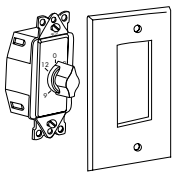
SWITCH TYPE: SPDT "2 in 1" contacts wire has SPST also.

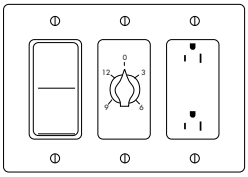
COLOR: Ivory, Light Almond, White.

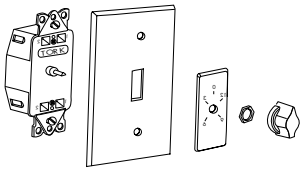
WALL PLATE: Fits standard or decorator style wall plates, see below (not included).

TYPE	VOLTAGE (VAC)	RATING
Resistive	125 250 277	20A 10A 10A
Inductive	125 250 277	20A 10A 10A
Tungsten	125	7A
Motor	125 250	1HP 2HP









CAUTION: This timer is not to be used in precision timing applications where inaccurate timing could have dangerous consequences (i.e. sun lamp, sauna, etc.).

C SERIES
COMMERCIAL STYLE SPRINGWOUND AUTO OFF IN-WALL TIMER

*Wallplate included

NEW! SPDT, 2 IN 1 CONTACTS

APPLICATIONS

c UL us

- Ventilating fans
- HVAC
- Whirlpools
- Self storage
- Motors and pumps

SPECIFICATIONS

INPUT VOLTAGE: 125/250/277VAC, 50/60Hz.

TERMINAL SIZE: #12AWG.

OPERATING TEMPERATURE: 32°F to 122°F (0°C to 50°C).

TYPE	VOLTAGE (VAC)	RATING
Resistive	125 250 277	20A 10A 10A
Inductive	125 250 277	20A 10A 10A
Tungsten	125	7A
Motor	125 250	1HP 2HP

FEATURES

VARIABLE TIMING: Twist knob for time ON setting. Time ON lengths from 15 minutes to 12 hour vary by model.

HOLD FEATURE: Some models have position for constant ON.

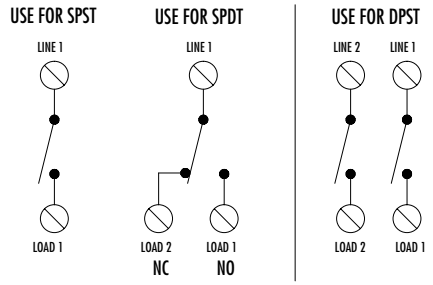
EASY SET: No adjustments. Just wire and go!

EASY WIRING: No neutral required. Great for retrofit!

SWITCH TYPE: SPDT "2 in 1" contacts wire as SPST also, except C460M and C412H are DPST.

COLOR: Metal-brushed aluminum.

WALL PLATE: Includes real metal wall plate with screw mounting, to add extra security for commercial applications.



CAUTION: This timer is not to be used in precision timing applications where inaccurate timing could have dangerous consequences (i.e. sun lamp, sauna, etc.).

CATALOG NO.	UPC CODE	HOLD FEATURE
15 MINUTE MAX.		
C515M	15501	No Hold
30 MINUTE MAX.		
C530M	15503	No Hold
60 MINUTE MAX.		
C560M	15505	No Hold
C560MH	15506	With Hold
C460M*	15011	No Hold
2 HOUR MAX.		
C502H	15507	No Hold
6 HOUR MAX.		
C506H	15511	No Hold
12 HOUR MAX.		
C512H	15513	No Hold
C512HH	15514	With Hold
C412H*	15010	No Hold

*DPST switch type.

TORIC
TIME

TORK® PLUG-IN TIMERS

400 SERIES
INDOOR PLUG-IN MECHANICAL TIMERS

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Control lamps, radios, televisions, appliances.
- Give the home a "lived in" look while away.
- Save energy and provide security.

401A

▲ 403A

402A

▲ 405A

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

ON/OFF: Manual ON/TIMER switch.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
401A	16001	125 VAC, 15A, 1875W Resistive 125VAC, 10A, 1250W Tungsten 125VAC, 1/3HP	1	Polarized	Multiple ON/OFF Lighting Timer	15 minute
402A	16002		1	Grounded	Heavy Duty 24 hour Timer	15 minute
403A	16013		1	Polarized	Powerful & Compact Automatic Timer	30 minute
405A	16014		2	Grounded	Heavy Duty 15 AMP Automatic Timer	15 minute

NOTE: "▲" = Indicates outlet location.

SA100 SERIES
INDOOR PLUG-IN MECHANICAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Control lamps, radios, televisions, appliances.
- Give the home a "lived in" look while away.
- Save energy and provide security.

SA011

SA105

SA100

SA110

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

ON/OFF: Manual ON/TIMER switch.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA011	16501	120VAC 15A Resistive, 120VAC 15A Inductive , 120VAC 1800W Tungsten, 120VAC 1/2HP Motor	1	Polarized	Lamp Timer with LED night light	Two Pair of On/Off trippers
SA100	16507	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1800W Tungsten	1	Polarized	Basic Timer with cover to hide dial	15 Minutes
SA105	16510		1 Timed 1 Untimed	Polarized Polarized	Table Top Timer for easy access with 6" cord	15 Minutes
SA110	16513		1 Timed 1 Untimed	Grounded Polarized	Heavy Duty Appliance Timer with cover to hide dial	15 Minutes

NOTE: "▲" = Indicates outlet location.

SA100 & 400 SERIES
INDOOR DIGITAL PLUG-IN TIMERS

NEW!

SA134

APPLICATIONS

- Automatically turn ON/OFF items in the home.
- Vary schedules daily.
- Give the home a "lived in" look while away.
- Save energy and provide security.

SA130

455D

457Z SunSet

FEATURES

SA134:
24 hour programming
Battery Back-up for power outages

SA130 & 455A:
7 day programming
Random feature for lived in look
Manual Daylight Savings
Battery Back-up for power outages

SunSet™ TIMER 457Z:
Sunset On with 7 day programmable Off or sunrise Off
Random feature for lived in look
Automatic Daylight Savings
Battery Back-up for power outages
Never come home to a dark house

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA134	16522	120VAC 8.3 amp Resistive 120VAC 600W Tungsten	1	Polarized	Easy Set 24 hour daily repeat timer	2 On/Off Settings
SA130*	16519	120VAC 15A Resistive , 120VAC 15A Inductive, 120VAC 500W Tungsten 120VAC 1/2 HP Motor	1 Timed 1 Untimed	Polarized	Easy Set Lamp Timer with cover to hide buttons	2 On/Off settings. 1 setting may be active at a time
455D	16015	125VAC 15A General Purpose 125VAC 15A Resistive 125VAC 1000W Tungsten	2	Grounded	Seven Day Programmable	24 ON/OFFs Different schedule for each day of the week. Multiple ON/OFFs
457Z	16016		2	Grounded	SunSet™ Timer Dusk to Dawn with automatic daylight savings	20 ON/OFFs Different schedule for each day of the week. Multiple ON/OFFs

NOTE: "▲" = Indicates outlet location. *ETL Listed for US and Canada

SA200 & SA500 SERIES
WIRELESS PLUG-IN CONTROLS

NEW!

APPLICATIONS

- Remotely turn ON/OFF items.
- Control lamps, radios, appliances, outdoor lighting.
- Safety: enter and leave rooms in full light.
- Provide a convenient control from your chair.

SA230

SA500

FEATURES

INDOOR REMOTE OUTLET - SA500 :

Control indoor outlet up to 80′ away
Transmitter has 3 pair ON/OFF buttons to allow independent control of 3 receivers
Match receiver and outlet with simple dial. No fussy programming.
Get one for each room. No cross talk.
Wireless control without moving across room

OUTDOOR REMOTE OUTLET - SA230:

Control indoor outlet up to 80′ away
Matched receiver and outlet. No programming
Transmitter has 1 pair ON/OFF button
Wireless control from the comfort of inside

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA500	16555	125VAC 8A Resistive 125VAC 625W Tungsten	1	Grounded	Indoor Remote Controlled Outlet	Manual On/Off with push button transmitter
SA230	16564	125VAC 8A Resistive 125VAC 600W Tungsten	2	Grounded	Outdoor Remote Controlled Outlet	Manual On/Off with push button transmitter

NOTE: "▲" = Indicates outlet location.

600 & SA200 SERIES
OUTDOOR PLUG-IN MECHANICAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting.
- Save energy. Don't run lights all night.
- Match dusk On with light activated timer.

601A

652B

602A

SA205

FEATURES

MECHANICAL TIMERS:

TIMER REPEAT SCHEDULE: Daily.
VARIABLE TIMING: Multiple ON/OFF times.
MANUAL SWITCH: ON or TIMER mode

LIGHT ACTIVATED TIMERS:

TIMER REPEAT SCHEDULE: Daily turns on at dusk
VARIABLE TIMING: Dial turn to choose a countdown time to turn Off hours after dusk

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▲)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
601A	16020	125 VAC, 15A, 1875W General Purpose 125VAC, 15A, 1875W Resistive 125VAC, 10A, 1250W Tungsten 125VAC, 1/2HP	1	Grounded	Outdoor Lighting Timer	15 Minutes
602A	16021		2	Grounded	Outdoor Lighting Timer	15 Minutes
SA205*	16534	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1800W Tungsten 120VAC 1800W Incandescent 120VAC 1/2 HP Motor	1 Timed 1 Untimed	Grounded	Landscape Timer	15 Minutes
652B	16018	125VAC 15A General Purpose 125VAC 15A Resistive 125VAC 1000W Tungsten 125 VAC 500VA Electronic Ballast 125VAC 1/3HP, TV-5	2	Grounded	Light Activated Outdoor Lighting Timer	Turns on at Dusk and countdown Off 2, 4, 6 or 8 hours later

* ETL listed for U.S. and Canada.

NOTE: "▲" = Indicates outlet location.

600 & SA200 SERIES
OUTDOOR PLUG-IN DIGITAL TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Match dusk On with light activated timer

621D & 631D
(621D without photocell)

611D

654A

SA204

FEATURES

DIGITAL TIMER:
7 day programming
Manual Daylight Savings
Random feature for lived in look
Battery Back-up for power outages

PHOTO-TIMERS:
Dusk to Dawn operation
Set a fixed time off before Dawn
Battery Back-up for power outages

LIGHT ACTIVATED TIMERS:
TIMER REPEAT SCHEDULE: Daily turns on at dusk.

VARIABLE TIMING: Choose a countdown time to turn Off from 1 to 9 hours after dusk.

654A USER SELECT MODE: Start countdown at any time and repeats daily.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
621D	16056	125 VAC, 15A, 1875W General Purpose 125VAC, 15A, 1875W Resistive 125VAC, 1000W Tungsten 125VAC, 8A Ballast 125VAC, 1/2HP	2	Grounded	Digital Outdoor Timer	7 On/Off pairs. Schedule for each day of week
611D	16018		1	Grounded	Digital Outdoor Photo-Timer	Photocell Turns on at Dusk and off at Dawn or off at a pre-set time
631D	16027		2	Grounded	Digital Outdoor Photo-Timer	
SA204*	16561	120VAC 8A Resistive 120VAC 600W Tungsten	2	Grounded	Light Activated Landscape Timer	Turns on at Dusk and countdown off 1 through 9 hours later
654A	16025	125VAC 15A General Purpose, 125VAC 15A Resistive, 125VAC 625W Tungsten 125VAC 1/3HP, TV-5	2	Grounded	Light Activated Outdoor Lighting Timer or User Selected Daily Repeat	Turns on at Dusk and countdown off 1 through 9 hours later. Includes user select mode.

* ETL listed for U.S. and Canada.

NOTE: "▲" = Indicates outlet location.

SA200 SERIES
OUTDOOR PLUG-IN STAKE TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Multiple outlets for holiday lighting

SA215

FEATURES

REPEAT SCHEDULE: Daily.

VARIABLE TIMING: Multiple ON/OFF times.

MANUAL SWITCH: ON or TIMER mode.

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS (▶)	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA215	16540	125V 15A Resistive 125V 1250W Tungsten 125V 1/2HP Motor	6	Grounded	Holiday Décor Stake Timer	30 minutes

NOTE: "▲" = Indicates outlet location.

SA200 SERIES
OUTDOOR Zip-Set DIGITAL PLUG-IN TIMERS

NEW!

APPLICATIONS

- Automatically turn ON/OFF outdoor lighting
- Save energy. Don't run lights all night
- Match dusk On everyday

FEATURES

- Fast programming with ZIP-SET™ One-Step™ set-up. Just enter your area code
- ZIP-SET™ turns lights ON at sunset & OFF at countdown or preset time.
- 7-5-2 settings for full week, weekdays, and weekends
- Option to set with one of three on/off programs
- Manual Daylight Savings
- Random feature for lived in look
- Battery Back-up for power outages

CATALOG NO.	UPC CODE	RATINGS	NO. OF OUTLETS	TYPE OF PLUG	DESCRIPTION	VARIABLE TIMING SEGMENTS
SA210	16537	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 1000W Tungsten 120VAC 1/4 HP Motor	2 Timed 1 Untimed	Grounded	Zip-Set™ Outdoor Living Wall Mount Timer	Sunset On and countdown hours to Off or same fixed time off each day
SA220	16534	120VAC 15A Resistive 120VAC 15A Inductive 120VAC 600W Tungsten 120VAC 1/4 HP Motor	6 Timed 1 Untimed	Grounded	Zip-Set™ Outdoor Lighting Stake Timer	Sunset On and countdown hours to Off or same fixed time off each day

TORK*ALERT*™ SIGNALING DEVICES

MECHANICAL STROBE HORNS

TA880-N5

TA5508H-G1

APPLICATIONS

- High performance for industrial signaling applications. Offers high sound output, low current draw and dependable operation. Strobes use xenon flashtube, ideal for maximum efficiency and reliability.

FEATURES

ALARM: Penetrating mechanical sound.

WIRING: Low current draw. Horn may be wired separately

MOUNTING: 4" square surface mounting.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	INPUT CURRENT (AMPS)	dB @10 FEET	CANDELA
TA880-N5	96015	120VAC	0.115	96	15
TA5508H-G1	96071	24VDC	.059	strobe only	15/75

NOTE: TA880-N5 For outdoor use, unit must be mounted in a TA-WBBF outdoor backbox. See page 550 for ordering. TA5508H-G1 for indoor mounting only.

MECHANICAL HORNS

APPLICATIONS

- Loud tone with typical decibel output of 87 dB at 10 feet. Low frequency resonation for strong penetration of noisy areas like boiler rooms, water pumping stations, elevators and air compressor rooms.

FEATURES

INPUT VOLTAGE: Wide input voltage ratings for compatibility with unregulated power supplies.

WIRING: Screw terminals for convenient IN/OUT wiring. Low current draw for minimizing power supply and wiring cost.

HOUSING: Steel, painted Dawn Mist. Resonant grill design for high sound output.

MOUNTING: To indoor box TA-BBSF or outdoor box TA-WBBF, see accessories page 550.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	INPUT CURRENT (AMPS)
SURFACE TYPE			
TA874-N5	96023	120VAC, 60Hz	0.070
TA874-N5R (Red)	97613	120VAC, 60Hz	0.070
TA875-G1	97687	24VDC	0.035
WITH WEATHERPROOF BACKBOX TA-WBBF UL LISTED FOR OUTDOOR USE			
TA876-N5	96026	120VAC, 60Hz	0.070

NOTE: Use TORK signal timers for 24 hour or 7 day scheduling, see page 485.

MULTI-TONE ELECTRONIC HORNS

24VDC &115VAC

TA875-1G1

TA-MTS

APPLICATIONS

- For indoor and outdoor use. Superior sound penetration for various room conditions. Screw terminals accept #12AWG.

FEATURES

OPERATING TEMPERATURE:
TA-MTS: -31˚F to +150˚F (-35˚C to +66˚C).

DIMENSIONS AND MOUNTING:
TA-MTS: 4 1⁄18″H x 4 1/8″W x 3 17/32″D
Can be mounted on celing or wall.
TA875-1G1: 4 3/4″H x 4 3/4″W x 1 3/8″D
1 gang, 2 gang or 4" square backbox.

TA875-1G1 24VDC HORN		
ALARM TONE	CURRENT (AMPS)	TYPICAL dB @10 FEET
BELL	0.020	91
HI-LO	0.025	96
CHIME	0.028	93
SINGLE STROKE BELL	0.026	93
HORN	0.023	97
3 BEEPS, PAUSE	0.023	97
SIREN	0.040	95
SLOW WHOOP	0.040	96

TA-MTS 115VAC HORN				
ALARM TONE	AMPS @ 120VAC		TYPICAL dB @10 FEET	
	HIGH	STANDARD	HIGH OUTPUT	STANDARD OUTPUT
HORN	0.050	0.042	85	82
BELL	0.041	0.039	82	75
HORN 2	0.050	0.040	85	79
CODE 3 HORN	0.050	0.042	82	75
CODE 3 TONE	0.042	0.040	79	75
SLOW WHOOP	0.050	0.042	85	82
SIREN	0.045	0.041	85	82
HI-LO	0.042	0.039	82	79

CATALOG NO.	UPC CODE	INPUT VOLTAGE	DESCRIPTION
TA875-1G1	97641	20-31VDC	Multi-tone Electric Horn
TA-MTS	97674	115 VAC	Multi-tone Electric Horn

HEAVY DUTY BELLS

4", 6", 10" DIAMETERS
AC VIBRATING BELLS

APPLICATIONS

- For indoor or outdoor applications. High sound output, durable and dependable performance. Ideal for schools and hopsitals.

FEATURES

TERMINAL SIZE: #12 - 22 AWG.

WIRING: Screw terminals permit fast IN/OUT field wiring.

HOUSING: Steel gong and cast aluminum. See page 551 for dimensional drawings.

MOUNTING: To indoor box TA-BBSF or outdoor box TA-WBBF, see accessories page 550.

CATALOG NO.	UPC CODE	SHELL SIZE	VOLTAGE	INPUT CURRENT (AMPS)	dB @ 10 FEET	COLOR
TA340-4G5	96001	4″	24VAC	0.320	81-90	Dawn Mist
TA340-4N5	96002	4″	120VAC	0.065	81-90	Dawn Mist
TA340-6G5	96003	6″	24VAC	0.320	81-95	Dawn Mist
TA340-6N5	96004	6″	120VAC	0.065	81-95	Dawn Mist
TA340-10G5	96005	10″	24VAC	0.320	84-98	Dawn Mist
TA434-4N5	98005	4"	120VAC	0.065	81-95	Red
TA434-6N5	97521	6″	120VAC	0.065	81-95	Red
TA434-10N5	96522	10″	120VAC	0.065	84-98	Red

LIGHT DUTY AND GENERAL PURPOSE BELLS & BUZZER

TA740

TA725

APPLICATIONS

- Designed to operate on either bell ringing transformers or batteries. Non-adjustable sound.

CATALOG NO.	UPC CODE	DESCRIPTION	VAC	VDC	AMPS	dB
TA740	96228	2½" Gong	8-16	3-6	1	76 @ 10'
TA744	96230	4" Gong	8-16	3-6	1	78 @ 10'
TA725	96226	Buzzer	8-16	3-6	1	88 @ 3'

FEATURES

ALARM: Bell ringing, non-adjustable sound.

DIMENSIONS FOR TA725:
3" H x 2½" W x 1" D.

MOUNTING: Fully enclosed sturdy steel bases and covers. Base and cover snap together, no screws required.

CHIMES & CHIME KITS

APPLICATIONS

- Powerful and loud, pleasant sounding push-button chimes. Ideal for homes, apartments and offices.

CATALOG NO.	UPC CODE	DESCRIPTION	DIMENSIONS
TAC212WS	96064	16VAC Chime + Push Button clip for Stucco + 10VA Transformer	7 3/16"L x 4"W x 2"D
TAC212WL	96054	16VAC Chime +1 Illuminated & 1 Non-illuminated Push-button +10VA Transformer	7 1/4"L x 4 3/4"W x 2 1/2"D

FEATURES

INPUT: 16V, 10VA, 120VAC.

ALARM: Chime.

MOUNTING: Fully enclosed sturdy steel bases.

WEATHERPROOF MOTOR DRIVEN SIREN

APPLICATIONS

- For industrial and outdoor use. Ideal for evacuation and warning systems.

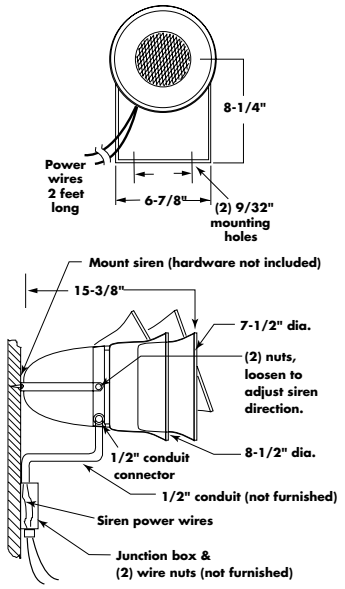
FEATURES

INPUT VOLTAGE: 120AC & DC, 60Hz.

ALARM: Loud, distinctive tone. Designed to be effective over standard horns or bells.

HOUSING: Red enamel paint over heavy gauge aluminum housing. Fully enclosed motor. 180° swivel and adjustable direction.

DIMENSIONS



CATALOG NO.	UPC CODE	INPUT VOLTAGE	dB @10 FEET	AMPS	VA
TA315-1N5	96599	120VAC/DC	117	2.5	300

MANUAL FIRE ALARM
PULL-DOWN STATION

APPLICATIONS

- Designed for indoor use. Ideal for schools, hospitals, industrial plants, warehouses and retail stores. Key required to close and reset device. Meets requirements, BSA, MEA, CA and UL.

FEATURES

ALARM: Loud, distinctive tone. Designed to be compatible with any control panel to initiate local alarm signals, trip municipal fire alarm box and start fire pumps.

MOUNTING: Sturdy metal construction, mounts to a standard single gang electrical box.

CATALOG NO.	UPC CODE	SWITCH	VOLTS	AMPS
TA270A	96521	SPST, NO	30V AC/DC	1

TELEPHONE RELAY

APPLICATIONS

- This device activates appliances when a telephone ring voltage is detected. For indoor and outdoor use with horns, bells or strobes. Recommended use where ambient noise levels are high. FCC approved.

FEATURES

INPUT: Accepts RJ-11C phone plug.

WIRING: Hard wire connections, for analog phone lines.

MOUNTING: Weatherproof, indoor and outdoor, includes mounting bracket.

CATALOG NO.	UPC CODE	INPUT TELEPHONE RING VOLTAGE	AC INPUT VOLTAGE	RINGER EQUIVALENCE	PEAK CANDLEPOWER
TA-B-8332	97100	39-150V/20-30Hz	115VAC-5A, 230VAC-2A	Up to 115VDC-500MA	0.6

WALL CLOCKS
QUARTZ & ELECTRIC

APPLICATIONS

- Each model meets United States Government Specifications. All Clocks provide second hand for accurate timing.

FEATURES

QUARTZ
Accurate to one minute per year. Low power consumption for long battery life. Uses AA battery (not supplied).

ELECTRIC (UL)
110VAC, 60 Hz synchronous motor. 66 inch line cord and plug. Does not require grounding.

MOUNTING: Concealed mounting brackets allow for simple, neat placement on walls.

QUARTZ CLOCK				
CATALOG NO.	UPC CODE	TYPE	SIZE	FRAME COLOR
TA1886 G	96156	QUARTZ	8″	Grey
TA1886 B	96155	QUARTZ	8″	Brown
TA1887 G	96159	QUARTZ	12″	Grey
TA1887 B	96157	QUARTZ	12″	Brown
TA1887 BK	96158	QUARTZ	12″	Black

ELECTRIC CLOCK				
CATALOG NO.	UPC CODE	TYPE	SIZE	FRAME COLOR
TA1880 G	96152	ELECTRIC	8″	Grey
TA1880 B	96151	ELECTRIC	8″	Brown
TA1882 G	96154	ELECTRIC	12″	Grey
TA1882 B	96153	ELECTRIC	12″	Brown

ELECTRIC DOOR OPENERS
REMOTE CONTROL & CONTACT DEVICES

APPLICATIONS

- For unlocking or locking metal or wooden doors using low voltage wiring. For AC, use TA591 or TA592 transformer.

MAGNETIC SWITCH CONTACTS

For activating a variety of signals, ideal for limiting space applications. Self-insulating and can be mounted in any direction. All units include companion magnet. Dimensions: 2 3/16"L x 1/2"W x 1/2"D

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA60	96975	Circuit closed with magnet engaged		
	TA61	96976	Make & break NO and NC	24VAC 12VDC	.5
	TA62	96977	Circuit open with magnet engaged		
	TA67W	96979	Terminal Cover		

DOOR/WINDOW CONTACTS, ROLLING BALL TYPE

Signals automatically with the opening and closing of doors, windows and transoms. Operates from pressure in any direction. Non-tilt, non-jamming design. Fits 3/4" hole; no need to mortise.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA44	96995	Normally closed Push to open		
	TA45	96996	Normally open Push to close	12-24V AC/DC	2
	TA46	96997	Momentary contact Push to make & break		

MORTISE TYPE REMOTE OPENER

Reversible for right or left hand door. Use with mortise entrance locks having a latch bolt with up to 1/2" width and throw. 6" wire leads. Dimensional drawings available.

DEVICE	CATALOG NO.	UPC CODE	VOLTS	AMPS
	TA09	96960	8-16VAC 3-6VDC	.95-1.75 1.25-1.80
	TA154	96962	16VAC 3-6VDC	.95-1.75 1.25-1.80

ELECTRIC DOOR SWITCH

For turning lights/signals on or off when doors are opened or closed. Ideal for closets, dark rooms, storage areas of walk-in refrigeration. Rust resistant steel case with 4 knockouts, antique brass plate. Box dimensions: 1 1/4"W x 3 7/8"H x 2"D. Plate dimensions: 1 1/4"W x 4"

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS MAX.
	TA502	96964	Light ON when door is open	125VAC 250VAC	6 3

RIM TYPE REMOTE OPENER

Reversible for right or left hand door. Standard surface type used with lock latches with up to 5/8" width and throw. 6" wire leads. Dimensional drawings available

DEVICE	CATALOG NO.	UPC CODE	VOLTS
	TA152	96961	8-16VAC, 3-6VDC

DOOR TRIP SWITCH

Signals automatically as door is openend. Commonly used on store doors to announce entrance of customers. Mounts on top of door frame. Solid cast brass. Size: 3 x 1 5/8"

DEVICE	CATALOG NO.	UPC CODE	VOLTS	AMPS MAX.
	TA236	96963	12-24VAC	2

TORK ALERT™

PUSH-BUTTONS
ILLUMINATED, NON-ILLUMINATED & WEATHERPROOF

APPLICATIONS

- For outdoor use to activate low voltage bells, buzzers, horns or any other audible signal. Ideal for factory doors, receiving departments, small office buildings, limited access retail stores and private homes.

WEATHERPROOF PUSH-BUTTONS / SOLID CAST BRASS

BUTTON	CATALOG NO.	UPC CODE	DESCRIPTION	INPUT VOLTAGE
	TA1786B	96090	Without conduit backplate	Momentary Contacts 4 amps AC/DC @ 12V 4 amps AC, 2 amps DC @ 24V 2 amps AC 1 amp DC @48V
	TA1786CB	96091	With conduit backplate	

ILLUMINATED PUSH-BUTTONS, UP TO 16VAC

BUTTON	CATALOG NO.	UPC CODE	COLOR	SIZE
	TA603L	96035	Gold	1 3/4" (diameter)
	TA631L	96089	White	2 3/4" x 7/8"
	TA656B	96039	Gold	15/16 x 2 3/4"
	TA215LB	96031	Brass	1 1/4 x 2″
	TA620L*	96037	Chrome	5/8" (diameter)
	TA620LB*	96038	Brass	5/8" (diameter)

NON-ILLUMINATED PUSH-BUTTONS, UP TO 24VAC

BUTTON	CATALOG NO.	UPC CODE	COLOR	SIZE
	TA600	96041	Polished Brass	2 1/4" (diameter)
	TA603	96044	Polished Brass	1 3/4" (diameter)
	TA631	96088	White	2 3/4" x 7/8"
	TA635	96047	Ivory, black bar	2 3/4" x 7/8"
	TA666BK	96048	Black, ivory bar	2 3/4" X 2 3/4"
	TA602	96043	Polished Brass	13/8" x 5 1/4"
	TA601	96042	Sprayed Brass	2 x 2 9/16"
	TA620*	96045	Chrome	5/8" (diameter)
	TA620B*	96046	Brass	5/8" (diameter)

*Stainless steel plate to fit TA620 models: Order TA 147-1

WARNING LIGHTS
INDUSTRIAL UNITS

LETTER	INDICATES COLOR
R	Red
A	Amber
C	Clear
B	Blue

APPLICATIONS

- ½" conduit mounting. Full selection of dome colors, see "Ordering Info". For outdoor use. All units must be mounted vertically with base at bottom.

TA47N5 / TA47R5 – ALL PURPOSE 360° BEACON

Large parabolic reflector rotates around a 100 wall bulb. Long range beam. Use to indicate equipment malfunctions, security intrusion, etc.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA47RN5	96061	90 FPM Corrosion resistant/Outdoor use Glass filled polypropylene housing Acrylic dome Tamper resistant dome clamps Nominal current draw 9 1/2"H x 8 1/2" diameter	117VAC	
	TA47AN5	96161		117VAC	.9
	TA47AR5	96162		240VAC, 60Hz	

TA52N5 – COMPACT ROTATING BEACON

Light intensifying reflector rotates arounf a low current 25 watt bulb. Bayonet socket for easy lamp replacement. Ideal for restricted or dangerous areas.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA52RN5	96063	80-90 FPM 360˚ rotation Dependable belt & turntable design Acrylic dome Nominal current draw 6 1/2"H x 55/8" diameter	117VAC	.21
	TA52AN5	96163			
	TA52BN5	96263			

TA93-2N5 – MIDI-STROBE

Solid state circuitry in a low profile design. No moving parts means less Maintenance!

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA93-2RN5	99622	70-80 FPM Solid state electronic circuitry High output 3-4 watt, 3.6 joules Vertically mounted flash tube Snap out socket base for 360˚ Fresnel dome optics Nominal current draw 6 1/2"H x 5 1/8" diameter	117VAC	.04
	TA93-2AN5	97623			
	TA93-2CN5	96968			
	TA93-2BN5	97624			

TA94N5 – ELECTRONIC STROBE

High intensity strobe tube with inner fluted lens for maximum brilliance. No moving parts makes it immune to shock and vibration. Ideal for security alert.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA94RN5	97626	70-80 FPM Solid state electronic circuitry High output 3-4 watt, 3.6 joules Acrylic dome Glass filled polypropylene housing Suitable for outdoor use 9 1/2"H x 8 1/2" diameter	117VAC	.04
	TA94AN5	97627			
	TA94BN5	97628			

WARNING LIGHTS
VEHICULAR UNITS

LETTER	INDICATES COLOR
R	Red
A	Amber

APPLICATIONS

- 1/2" conduit mounting.
  Full selection of dome colors, see "Ordering Info".
  For outdoor use. All units must be mounted vertically with base at bottom.

TA53E1 – ROTATING BEACON

Single point shock-mounting. Ideal for use on security or service vehicles.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA53AF1	96185	90-100 FPM Dependable belt & turntable design 25 watt lamp Acrylic Dome Nominal current draw 7 1/2"H x 6" diameter	36VDC
	TA53AG1	96184		24VDC

TA54E1 – PORTABLE, MAGNETIC, ROTATING BEACON

Single point shock-mounting. Ideal for use on security or service vehicles.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA54AE1	96187	75 FPM, 12 watt lamp Quiet belt-drive motor. Teardrop design fits under windshields. Includes glare shield, velcro tape 4 1/2" H x 7 1/2" diameter	12VDC
	TA54RE1	96087		

TA131DN5 / TA131DU1 – DOUBLE FLASH SUPER STROBE

Ideal for industrial applications requiring extremely high visibility. One model covers all popular mounting methods: ½" pipe, surface, flange, electrical box.

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS	AMPS
	TA131DRN5	96510	60 FPM, 7.5 JPF High intensity 85,000 peak CP Flashtube Rated at 7000-8000 hrs. Durable Lexan® housing 5"H x 7 1/4" diameter	120VAC	.2
	TA131DAN5	96610			
	TA131DRU1	96511		10.5-31.0VDC	
	TA131DAU1	97611			

TA879 – VEHICULAR BACKUP ALARM

Solid state electronic unit. Helps to comply with OSHA and State regulations. Makes distinctive noise, ideal for extreme variations in background noise

DEVICE	CATALOG NO.	UPC CODE	DESCRIPTION	VOLTS
	TA879	96102	2 sound levels 97 or 87 dB +/- dB at 4ft Multi-voltage Water-resistant housing	12 to 48VDC

NOTE: "FPM" = Flashes per minute
"JPF" = Joules per flash

For replacement parts and accessories, see page 550.

POWER SUPPLY UNITS
24 VDC UNITS

TA640

TA606

APPLICATIONS

- Units provide power to multiple signaling devices, depending on requirements.

FEATURES

TA606
Regulated and filtered 24VDC up to 600mA. Easy-to-use screw terminals, accepts #16-24AWG. No conduit is required for installation.

TA640
Dual output unit, each providing 2 Amps fo current. If connected in parallel, will provide up to 4 Amps. Circuit breaker provides input protection.

CATALOG NO.	UPC CODE	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	REGULATION	RIPPLE VOLTAGE
TA606	96109	117VAC	24VDC	600mA		
TA640	96110	115VAC	24VDC	4A	+/-5%	10mVRMS

TRANSFORMERS

APPLICATIONS

- Engineered to ensure long use for bells, buzzers and chimes.

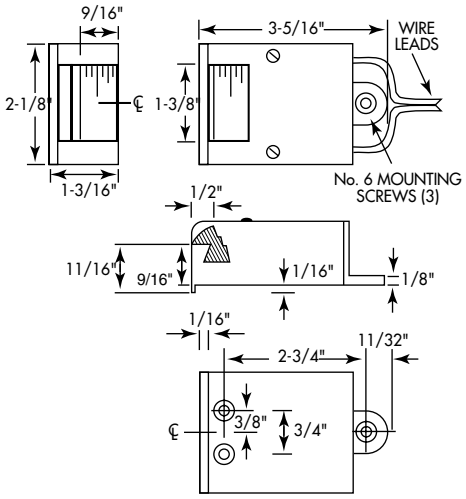
CATALOG NO.	UPC CODE	TYPE	VOLTS-AMPS (VA)	PRIMARY VOLTAGE AC	SECONDARY VOLTAGE AC	Hz
TA590	96104	Bell	5	120	10	60
TA591	96105	Chime	10	120	16	60
TA592	96106	Tri-Volt	10-10-20	120	8-16-24	50/60
TA598	96602	Tri-Volt	20-30-30	120	8-16-24	60
TA599	96108	Heavy Duty	40	120	24	60
TA1245Y-50	96166	Heavy Duty	50VA	120/208/240	24	60
TA1245Y-75	96167	Heavy Duty	75VA	120/208/240	24	60

ACCESSORIES, REPLACEMENT PARTS

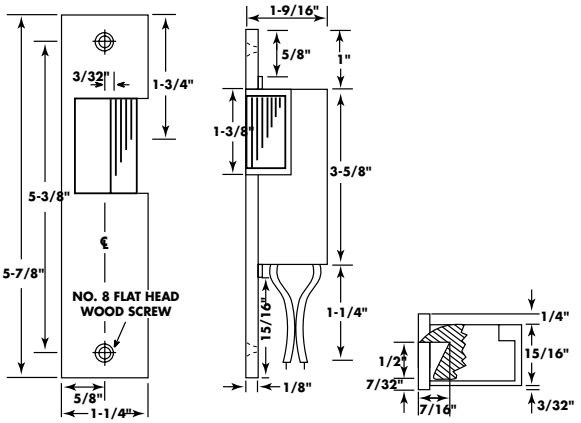
UNIT	CATALOG NO.	UPC CODE	DESCRIPTION
TA93-2	TA-L6-2	96982	110VAC Xenon Flash Tube
TA52	TA-L8	96134	110VAC Bulb
TA94	TA-L10	96136	110VAC Xenon Flash Tube
TA-94	TA-L10-1	96981	110VAC Xenon Flash Tube
TA502	TA502SW	96966	Replacement switch
TA874 Series	TA-BBSF	97694	Backbox – 4" painted Dawn Mist 3/4" and 1" KO's
TA874 Series	TA-WBBF	97692	Weatherproof Backbox – 1/2" KOs 4" painted Dawn Mist
TA-BBSF, TA-WBBF	TA-SFPF	97707	Semi-Flush plate – Dawn Mist
TA-BBSF, TA-WBBF	TA-SFPFR	97697	Semi-Flush plate – Red
TA47, TA94	TA-ADR	96111	Acrylic Dome – Red
TA47, TA94	TA-ADA	96311	Acrylic Dome – Amber
TA52, TA53	TA-D5B	96419	Acrylic Dome – Blue
TA54	TA-D6A	96320	Dome – Amber
TA93, TA94	TA-D7R	96121	Fresnal Dome – Red
TA93, TA94	TA-D7A	96321	Fresnal Dome – Amber
TA93, TA94	TA-D7C	96621	Fresnal Dome – Clear
TA131D	TA-D8R	96970	Acrylic Dome – Red

REMOTE CONTROL DOOR OPENERS

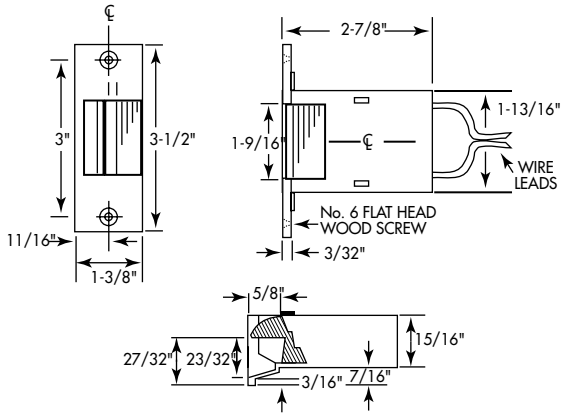
TA152



TA09

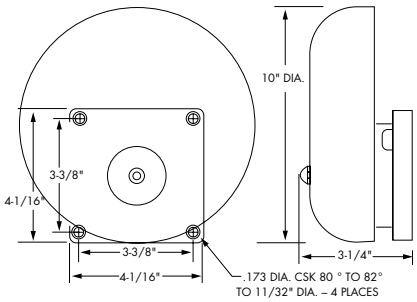


TA154



HEAVY DUTY BELLS

10″



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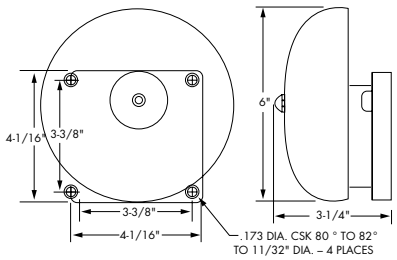

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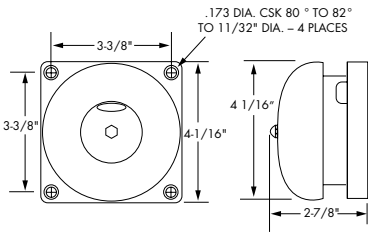
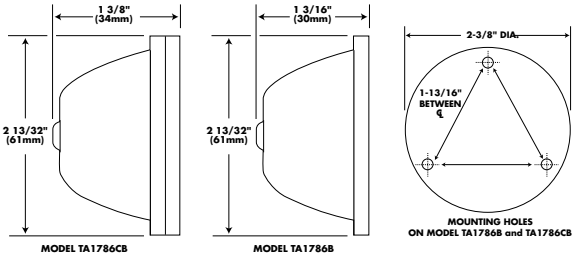


WEATHERPROOF BUTTON

TA1786B ONLY



TORK® POOL & SPA CONTROLS

PP PANEL SERIES
POOL AND SPA PANELS

APPLICATIONS

c UL us
LISTED
POOL/SPA
CONTROL PANEL
3NZM

- Pumps
- Swimming pools
- Fountains
- Ponds

FEATURES

COMBINATION PANEL: The PP Panel Series provides a flexible platform to create a custom pool and spa control at an off the shelf price. Start with a blank panel and add timers, freeze controls, circuit breakers, switches and outlets for a custom installation.

PP-100R: 100 amp load center 120-240V, 5/10 circuit breaker base.

PP-125R: 125 amp load center 120-240V, 8/16 circuit breaker base.

CONTROLS: Freeze protection or mechanical and digital timers are all available with unique features not found elsewhere in the industry. Find specification details on pages 557 and 558.

BREAKERS: Listed for Cutler Hammer (BR), GE (THQL), Murray/Siemens (MP) and Square D (HOM) (not included).

REVERSIBLE DOOR: Easy-Hinge patented removable and reversible door. Change from left to right opening. Solves installation issues in the field.

WHILE-IN-USE COMPARTMENT: Inside mounting for two devices with cord exit.

DEVICE MOUNTING: Provision for mounting one or two devices in any combination accepts toggle, GFCI, X-10 and UPB type devices in, PP-100R and PP-125R enclosures.

TRANSFORMER: Select panels include 120V input: 100 watt with output 12V/13V or 300 watt with output 12V/13V/14V.

ENCLOSURE: Metal NEMA 3R with lockable hasp. See page 558 for dimensions.

PP-125R-P4

PP-125R-P4-100X

CATALOG NO.	UPC CODE	CONTROL	CONTROL INPUT	ADDITIONAL INFORMATION
PP-100R	94016	-	-	Panel only. Add controls from page 557 and 558.
PP-125R	94017	-	-	Panel only. Add controls page 557 and 558.
PP-125R-P4	53007	P1104-M	240VAC	Add another control from page 557 and 558.
PP-125R-P4-100X	94018	P1104-M	240VAC	Includes 100 watt Low Voltage Transformer
PP-125R-P4-300X	94019	P1104-M	240VAC	Includes 300 watt Low Voltage Transformer

P1100 SERIES
SWIMMING POOL TIMERS, 24 HOUR ELECTROMECHANICAL CONTROL

QUICK INSTALL/RELEASE LEVER: For easy installation and removal when installing into pool panels.

LOAD INDICATOR LAMP

CONVENIENT EXTERNAL ROCKER SWITCH: 3 position switch: OFF/ON/AUTO. Use switch to turn OFF pump at the end of pool season.

REAL TIME SWITCH FACE: Easy to set and check time.

CAPTIVE TRIPPERS: 15 minute intervals, no lost trippers.

HEATER CONTACTS: FM suffix includes "Fireman Switch" to turn off pool heater 20-30 minutes before timer turns OFF. Contact rates SPST, 15A @120V.

THERMOSTAT: PFP models include built in Freeze Protection. No extra wiring. Thermostat turns on load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

ACCESSORY CONTACT: PF models include extra contact to accept PFPT Freeze Protection Accessory. Thermostat turns ON load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

TIMER INTERLOCK: Makes one second timer dependant on operation of another timer.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	CONTACTS	RESISTIVE/ INDUCTIVE RATINGS	HP RATING	NOTES
PFP2-M	94026	240	DPST	40A	7.5HP @ 240V	Thermostat only
PFP3-M	94027	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Thermostat only
P1101-M	10056	120	DPST	40A	3 HP @ 120V	
P1101FM-M	10060	120	DPST	40A	3 HP @ 120V	Fireman Switch
PF1101-M	94020	120	DPST	40A	3 HP @ 120V	Accepts PFPT thermostat input
PF1101FM-M	94024	120	DPST	40A	3 HP @ 120V	Fireman Switch & Accepts PFPT thermostat input
PFP1102-M	94022	240	DPST	40A	7.5HP @ 240V	Freeze Protection included
PFP1103-M	94023	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Freeze Protection included
P1104-M	10057	240	DPST	40A	7.5HP @ 240V	
P1104FM-M	10061	240	DPST	40A	7.5HP @ 240V	Fireman Switch
PF1104-M	94021	240	DPST	40A	7.5HP @ 240V	Accepts PFPT thermostat input
PF1104FM-M	94025	240	DPST	40A	7.5HP @ 240V	Fireman Switch & Accepts PFPT thermostat input
PFPT	94028	120/240	-	-	-	Thermostat accessory

*PFPT

NOTE: " " = Indicates Freeze Protection.

PEW1100 SERIES
SWIMMING POOL TIMERS, 7 DAY DIGITAL CONTROL

QUICK INSTALL/RELEASE LEVER: For easy installation and removal when installing into pool panels.

LOAD INDICATOR LAMP

LARGE LCD DISPLAY

LARGE "MANUAL" BUTTON: 3 operating modes available: OFF/ON/AUTO. Using the OFF mode, the pool can be closed down without disrupting the time settings.

POWER OUTAGE BACKUP: Battery retains time and schedule.

7 DAY PROGRAMMING ONE MINUTE INTERVAL: Allows for the control of various electrical equipment on a 7 day schedule. 15 schedule weekly programs.

THERMOSTAT: PFPEW models include built in Freeze Protection. No extra wiring. Thermostat turns on load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

ACCESSORY CONTACT: PFEW models include extra contact to accept PFPT Freeze Protection Accessory. Thermostat turns ON load at user settable level between 33°F and 42°F. Moving water prevents costly freeze damage.

TIMER INTERLOCK: Makes one timer dependant on operation of another timer.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	CONTACTS	RESISTIVE/ INDUCTIVE RATINGS	HP RATING	NOTES
PEW101-M	82432	120	DPST	40A	3 HP @ 120	
PFEW101-M	94029	120	DPST	40A	3 HP @ 120	Accepts PFPT thermostat input
PFPEW1102-M	94031	240	DPST	40A	7.5HP @ 240V	Freeze protection included
PFPEW1103-M	94032	120/240 w/neutral	DPST	40A	3 HP @ 120V 7.5HP @ 240V	Freeze protection included
PEW104-M	82442	240	DPST	40A	7.5HP @ 240V	
PFEW104-M	94030	240	DPST	40A	7.5HP @ 240V	Accepts PFPT thermostat input

NOTE: " " = Indicates Freeze Protection.

1100 SERIES
SAME ON/OFF TIMES EACH DAY
SWIMMING POOL TIME SWITCHES

APPLICATIONS

- Pool pumps
- Heaters
- Lighting

SPECIFICATIONS

INPUT VOLTAGE: 120 or 208-277VAC, 60Hz (varies by model).

TIMING ACCURACY: Line frequency.

TERMINAL RANGE: #8 - #14AWG.

OPERATING TEMPERATURE: -40° to 165°F (-40° to +74°C).

POWER CONSUMPTION: 3 watt max.

ENCLOSURE: Lockable hasp. Type varies by model. See page 557 for dimensions and additional enclosure information.

FEATURES

SCHEDULING: Minimum ON setting is 20 minutes with a minimum OFF setting of 75 minutes. Dial accommodates up to 12 pairs of trippers. One pair included.

MANUAL OVERRIDE: Until the next regularly scheduled ON or OFF automatic operation then resumes.

TYPE	VOLTAGE	CONTACT RATING
General Purpose	120-277VAC	40A
Resistive	120-277VAC	40A
Tungsten	120VAC	40A
Ballast	120-277VAC	20A
LED Driver*	120-277VAC	20A
Motor	120VAC	2HP
	240VAC	5HP
277VAC Single Phase		

*UL only or & cULus on B suffix units

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 60Hz	OUTPUT CONTACTS	ENCLOSURE TYPE
1101	10011	120	SPST	Metal Indoor NEMA 1
1101BM-IAP*	10073	120	SPST	Mechanism and mounting plate
1104	10014	208-277	DPST	Metal Indoor NEMA 1
1104B-P*	10070	208-277	DPST	Polycarbonate Indoor/Outdoor NEMA 3R
1104B-O*	10075	208-277	DPST	Metal Indoor/Outdoor NEMA 3
1104BM-IAP*	10074	240	DPST	Mechanism and mounting plate
1101FM-N	10043	120	SPST	Noryl® Indoor/Outdoor NEMA 3R with fireman switch
1104FM-N	10044	208-277	DPST	Noryl® Indoor/Outdoor NEMA 3R with fireman switch
1101FM-M	10043	120	SPST	Mechanism with fireman switch
1104FM-M	10044	208-277	DPST	Mechanism with fireman switch
1101D	10028	120	Two 1101 SPST each	Metal Indoor/Outdoor NEMA 3R
1104D	10029	208-277	Two 1104 DPST each	Metal Indoor/Outdoor NEMA 3R
1104DF	10032	208-277	One 1104 One 1104FM	Metal Indoor/Outdoor NEMA 3R
Replacement Trippers		Order #P47 for a pair of ON/OFF trippers Order #PF48 for a pair of ON/OFF trippers for 1100FM series		
Replacement Motor		#101 (120V) & #201 (208-277V)		

* B suffix units cULus

POOL & SPA JUNCTION BOXES

JPB75175

APPLICATIONS

- For installation of underwater pool lights or low voltage connections.

FEATURES

- Durable PVC molded case
- INTERIOR & EXTERIOR bonding
- Flexibility for conduit sizing
- Built-in strain relief cord clamps
- Line or low voltage wiring
- Complete compliance with UL Standard 1241

CATALOG NO.	UPC CODE	DESCRIPTIONS	CONDUIT HUBS
JBP75175	95457	Two Light Junction Box	3/4" / 1/2" / 1"
JBP57510	95485	Four Light Junction Box	1/2" / 3/4" / 3/4" / 1" / 1"

DPC201 SERIES
DIGITAL TWO-SPEED PUMP TIMER

APPLICATIONS

- Swimming pools with two-speed pump motors

FEATURES

PUMP PROTECTION: Unit always starts on HIGH with 5 minute countdown before switching to low.

SCHEDULING: Up to 3 HIGH/LOW/OFF cycles repeat each day. Minimum setting 5 minute.

MANUAL OVERRIDE: Hold OFF until midnight then follows the next regularly scheduled HIGH/LOW/OFF operation.

DAYLIGHT SAVING: Automatic adjustment (can be omitted)

LEAP YEAR: Automatic Compensation

CLOCK FORMAT: AM/PM

POWER OUTAGE BACKUP: Permanent schedule retention. Super capacitor provides 4 days of real time backup.

CATALOG NO.	UPC CODE	INPUT SUPPLY (VAC) 50-60Hz	OUTPUT CONTACTS
DPC201	82457	120-277	SPST

LOAD TYPE	RATINGS	
	120VAC	208-277VAC
Motor	1HP	1 1/2 HP@208VAC 2 HP@240-277VAC
Resistive	40A	40A
Inductive	40A	40A
Ballast	30A	20A
Tungsten	15A	
Pilot Duty	720VA	720VA

SPECIFICATIONS

TIMING ACCURACY: Line Frequency.

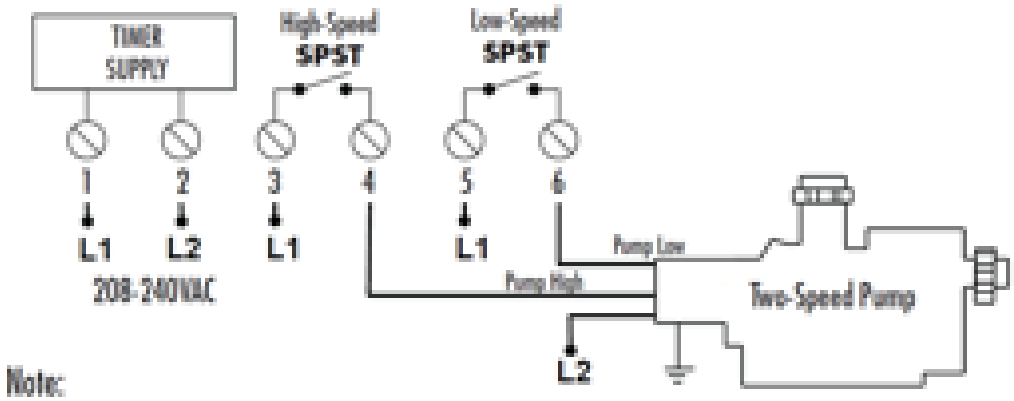
INPUT VOLTAGE:
120-277VAC, 50/60Hz (automatic detection)

TERMINAL RANGE: #8 - #16AWG.

OPERATING TEMPERATURE:
-40˚ to +149˚F (-40˚ to +65˚C)

POWER CONSUMPTION: 6VA max.

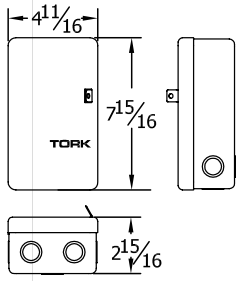
ENCLOSURE: Indoor/Outdoor NEMA 3 Metal with locking hasp. See page 557 for dimensions and additional enclosure information.



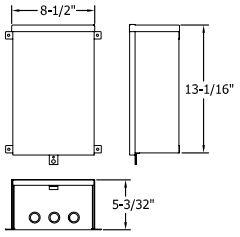
Note:
A) Power must be supplied to each terminal marked L1
B) For 120VAC motors use Neutral in place of L2

ENCLOSURES

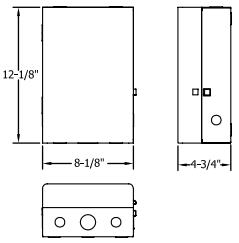
STANDARD FOR MODELS			METAL INDOOR NEMA 1 ENCLOSURE #68229
1101	7120	EW101B-Y	
1102	7122	EW103B-Y	
1103	8001		
1104	8004		
1101FM	8061		
1104FM	8121		
7100	8301		
7102	8601		
7200	8602		
7202	TU40-Y		
1101-7	EW201-Y		
WH2B	EW120B-Y		



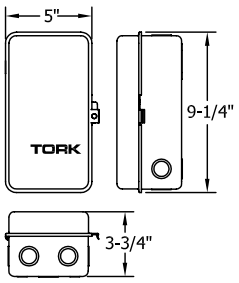
STANDARD FOR MODELS		METAL INDOOR/OUTDOOR MODEL #9006
TZ220L-O	TZ300L-O	
TZ300L-O	T920L-O	
T930L-O	W300-O	



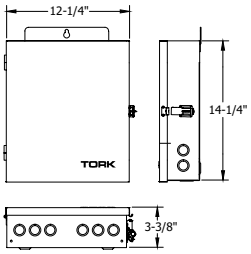
STANDARD FOR MODELS		METAL INDOOR NEMA 1 ENCLOSURE #63016-1
TZ220L	TW220L	
TZ300L	TW300L	
W300	T920L	
W302	T930L	
W300L	TW222L	
W302L	TW302L	
#62158 "E" DOOR		
T920L-E	T930L-E	
TW220L-E		



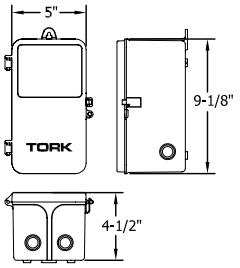
STANDARD FOR MODELS			METAL INDOOR NEMA 1 ENCLOSURE #63100-6
7220	1847AZL	DGM100A-Y	
7222	8007	DGU100A-Y	
7200L	8007L	DGUM100A-Y	
7202L	8007V	LC200	
7120L	8007U		
1847A	8007VL		
1848A	8008		
1847AZ	8008L		
1847AL	LDS-A		
DG100A-Y	LDSH-A		



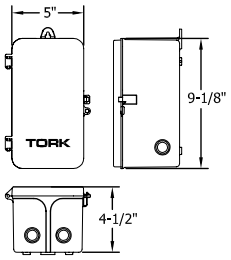
STANDARD FOR MODELS	DLC400BP
DLC400BP	



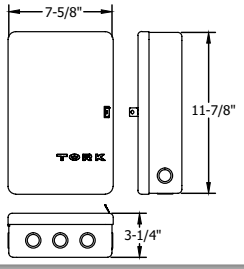
STANDARD FOR MODELS		NORYL® & LEXAN® INDOOR/OUTDOOR NEMA 3R MODEL #9000NC
1101NC	DGLC100A-NC	
1103NC	DGLC200A-NC	
1104NC		
8001-NC		



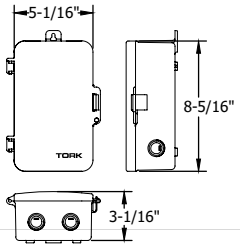
STANDARD FOR MODELS		NORYL® INDOOR/OUTDOOR NEMA 3R MODEL #9000N
7200Z, ZL		
7202Z, ZL		
7120Z, ZL		
7122Z, ZL		
DG Series	DZS Series	
8001-N	DTS Series	
8001U-N	DW Series	
SMC-3D	DWZ Series	
DZM Series		



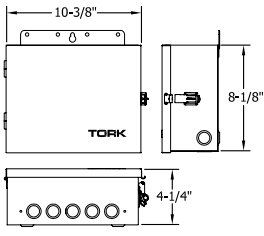
STANDARD FOR MODELS		METAL INDOOR NEMA 1 ENCLOSURE #70100
W100	W220L	
W200	W222L	
W202	1847AW	
W120	1847AWL	
W220	W400B	
W222	W402B	
	W400BL	



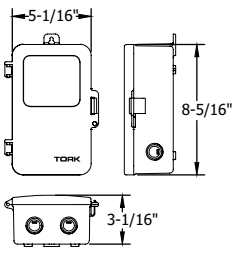
MODELS		PLASTIC INDOOR/OUTDOOR NEMA 3R #9000P
TU40	DTU40	
1101B-P	E101PB	
1103B-P	E Series	
1104B-P	EW Series	
EH20C	EWZ Series	



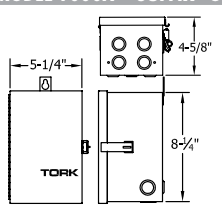
STANDARD FOR MODELS		METAL DUPLEX INDOOR/OUTDOOR MODEL #9004L
1101D	1101DF	
1114D	1114DF	
1104D	1104DF	



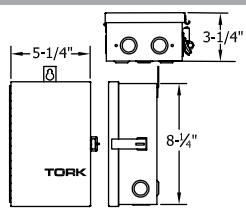
MODELS		PLASTIC INDOOR/OUTDOOR NEMA 3R WITH CLEAR COVER
EW103B-C	EW120B-C	
NEMA 1 ENCLOSURE STANDARD FOR MODELS		
DTWH40		



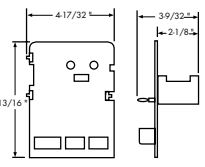
STANDARD FOR MODELS		METAL INDOOR/OUTDOOR NEMA 3 MODEL 9000A – SUFFIX "O"
7300, L, Z, ZL	8001-O	
7302, L, Z, ZL	8001U-O	
8007U-O	8007-O	
DZS100BP-O	DZS200BP-O	
DZS200BP	DW200B-O	
DZM200BP-O	5401A	



STANDARD FOR MODELS		METAL INDOOR/OUTDOOR MODEL 9000B – SUFFIX "O"
1101-O	1104B-O	
DPC201	7200-O	
1103-O	7202-O	



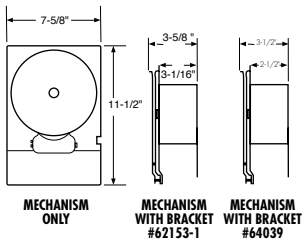
MODELS	LC200M MOUNTING WITH BRACKET
LC200M	



TORK® nsi

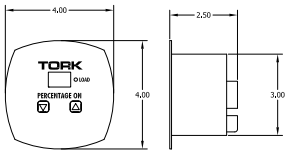
MECHANISM & MOUNTING BRACKET #62153-1

MODELS	
Use Bracket #64039	
W100	W120
W200	W220
W202	W222
Use Bracket #62153-1	
W300	W302



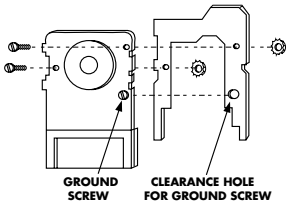
PCT15M

PCT15M



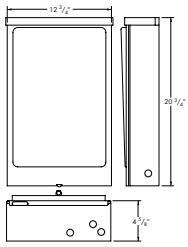
IAP BRACKET INTERMATIC ADAPTER PLATE

1101BM-IAP	7200
1104BM-IAP	7202
1102	7120
1103	7122
7100	E Series
7102	EW Series
	EWZ Series



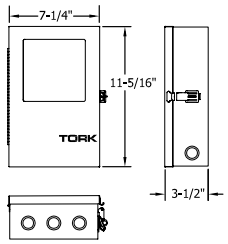
MODELS — 5441A ENCLOSURE

5441A



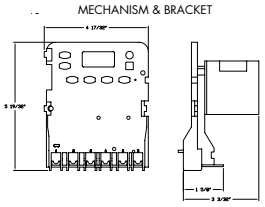
ELC74 ENCLOSURE

ELC74



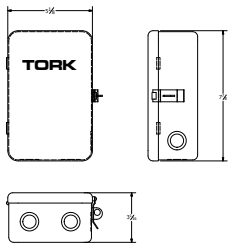
E/EW/EWZ SERIES

EWZ101-MB
EWZ103-MB
EWZ120-MB
EWZ201-MB



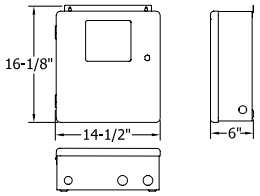
MODELS — METAL INDOOR

SA300
SA306



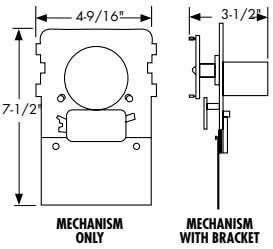
ELC78 & ELC712 ENCLOSURE

ELC78
ELC712



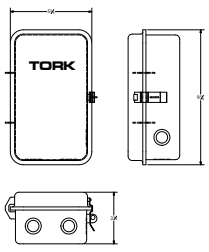
MECHANISM & MOUNTING BRACKET #65447

1101-M	1102-M
1103-M	1104-M
7000 Series	1847A, Z
1848A	8001-LC/WB
8601	8121
8602	8061
8301	



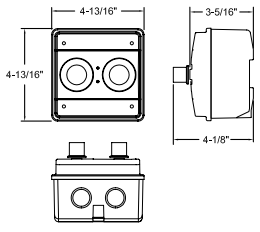
MODELS — METAL INDOOR

SA400



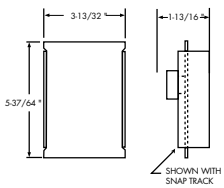
EWJT & E500T SERIES ENCLOSURE

EJWT
E500T
E501T
E502T
ACT30MA

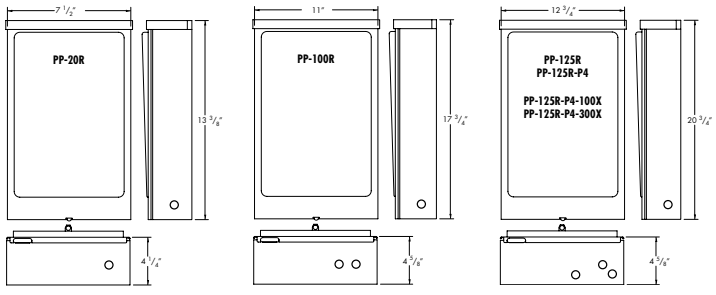


MODELS — LDS SERIES MOUNTING WITH BRACKET

LDS	LDSH



POOL PANEL SERIES



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