

**Arrow Hart**  
Motor controllers & disconnects

Reliable  
motor control  
for industrial  
environments

Arrow Hart

**EATON**

*Powering Business Worldwide*

# The ideal motor control switch solutions for industrial environments

Arrow Hart understands the unique switching needs of complex environments. Eaton motor control disconnect switches are built for use in harsh industrial applications to address the needs of safety, reduced downtime and code compliance.

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## Switching solutions designed to keep your business productive, safe and compliant

- Specially designed for harsh environments with exposure to chemicals, detergents and washdowns
- Ensures personnel and equipment safety in the workplace
- Designed and built tough to withstand rough service in a physically abusive environment
- Provides compliance with relevant codes and standards
- Innovative design facilitates quick and easy installation and change-outs
- Part of a complete line of motor control solutions for all your facility's needs



### National Sanitation Foundation

For a device to earn National Sanitation Foundation (NSF) Certification, the product and manufacturing facility must have passed the stringent requirements of food and beverage facilities.

# Choose the switch designed for longevity in complex environments

The Arrow Hart X-Switch excels where standard industrial switches are most susceptible to fail: in physically abusive areas exposed to washdowns, extreme temperatures, chemicals and corrosive elements.



30A



60A



100A

## Applications

X-Switch is designed specifically for industrial manufacturing applications exposed to frequent washdowns.

UL 508 motor controller "suitable as motor disconnect" to comply with requirements of NEC® 430.

X-Switch is ideal for food processing, storage and service. Applications include meat and poultry processing, dairy, bottling, bakeries, distilleries and commercial kitchens.

X-Switch is also ideal for harsh environments such as mining, wastewater treatment, testing labs and heavy industrial manufacturing.

X-Switch enclosures are specially designed to prevent the penetration of external contaminants while delivering dependable motor control.

A variety of input/output options including a location for a breather drain and pre-designated center punch locations provide for maximum flexibility and customization.



# NSF certified motor control solution

Designed specifically around the needs of the food and beverage industry's processing areas, Arrow Hart's X-Switch is the ideal motor control solution for complex environments

## X-Switch motor control disconnect switch (non-fused)

**IP69K**  
*certified*

### Features & benefits

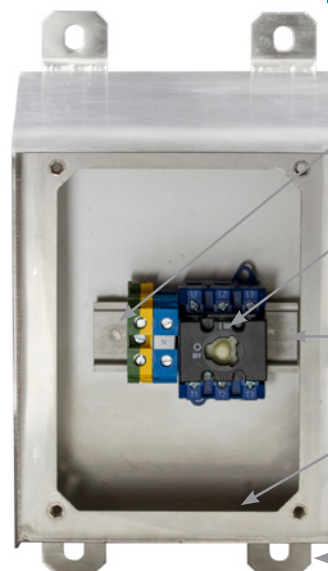
Multiple input and output configurations available



Sloped enclosure enhances washdown and water run off

Compact NEMA Type 4X - 316L stainless steel enclosure is ideal for washdown environments

High-visibility red handle can be padlocked to meet OSHA lockout/tagout requirements



Two optional auxiliary contacts available for PLC & VFD applications

Heavy-duty rotary disconnect switches designed for long life

DIN-rail mounting system

Optional breather drain prevents interior condensation build-up

Mounting feet provide full 1/4" clearance from mounting surface per NEC® 300.6(D)



Expanded silicone gasket for superior ingress protection and easy cleaning



NSF Listed for use in food processing areas per NSF 3-A 14159-1 standard

Compliances, specifications and availability are subject to change without notice.

# X-Switch motor control switch configurations & ordering

## Industrial grade complex environment switch

### Product description

3-pole, 3-phase  
30A, 60A or 100A, 600V/AC max.  
NEMA Type 4X, 12 & IP66, IP69K



30A X-Switch



60A X-Switch



100A X-Switch

### Features

- NSF certified for use in food processing areas per NSF 3-A 14159-1
- Can be padlocked to conform to OSHA lockout/tagout 1910.147 requirements
- Compact size and small footprint designed for installation versatility
- Durable, NEMA Type 4X enclosure is made of non-magnetic, non-corrosive type 316L stainless steel ideal for washdown environments
- IP69K breather drain option available to prevent interior condensation buildup (enclosure with breather drain is NSF listed, IP69K certified)
- IP69K rated for high temperature & high pressure wash down
- Mounting feet provide 1/4" spacing from mounting surface (NEC® 300.6(D))
- 30A, 60A & 100A switch options available
- Heavy-duty switch designed to deliver dependability, long life and excellent electrical continuity
- Auxiliary contact options available for PLCs and external indicators (break after main break, make before main make)
- Durable lever handle and switch mechanism will withstand repeated use in harsh environments

### Common X-Switch Configurations

Catalog No.	Description	Amp	UL <sup>®</sup>	NSF
AHDS30SSR	Motor Control Disconnect X-Switch,, NEMA 4X	30	•	•
AHDS60SSR	Motor Control Disconnect X-Switch,, NEMA 4X	60	•	•
AHDS100SSR	Motor Control Disconnect X-Switch,, NEMA 4X	100	•	•
AHDS30RS	Replacement switch	30	•	
AHDS60RS	Replacement switch	60	•	
AHDS100RS	Replacement switch	100	•	
AHDS30RAC	Aux contact - PLC	30	•	
AHDS30RVFD	Aux contact - VFD	30	•	
AHDS60RAC	Aux contact - PLC	60	•	
AHDS60RVFD	Aux contact - VFD	60	•	
AHDS100RAC	Aux contact - PLC	100	•	
AHDS100RVFD	Aux contact - VFD	100	•	
AHDS30CH	X-Switch Conduit Hub, Size 3/4"	For 30A Enclosure	•	
AHDS60CH	X-Switch Conduit Hub, Size 1-1/4"	For 60A Enclosure	•	
AHDS100CH	X-Switch Conduit Hub, Size 2"	For 100A Enclosure	•	
AHDSBD	Breather Drain IP69K rated	—	•	
AHDS30RTCASSR	Replacement top cover assembly	For 30A Enclosure		
AHDS61RTCASSR	Replacement top cover assembly	For 60/100A Enclosure		

### Short Circuit Current Ratings

#### 30A X-Switch SCCR:

Suitable for use as a Motor Disconnect with the following short-circuit current ratings:

- 65kA RMS symmetrical amps, 600 VAC max. when protected with 40A class J fuses

#### 60A X-Switch SCCR:

Suitable for use as a Motor Disconnect with the following short-circuit current ratings:

- 65kA RMS symmetrical amps, 600 VAC max. when protected with 70A class J fuses

#### 100A X-Switch SCCR:

Suitable for use as a Motor Disconnect with the following short-circuit current ratings:

- 65kA RMS symmetrical amps, 600 VAC max. when protected with 100A class J fuses

### Max Horse Power Ratings

Voltage	30A	60A	100A
1Ø 120 VAC	1.5	3	5
1Ø 220 - 240 VAC	5	7.5	15
1Ø 277 VAC	5	7.5	15
1Ø 440 - 480 VAC	7.5	15	30
3Ø 220 - 240 VAC	10	15	25
3Ø 440 - 480 VAC	20	30	50
3Ø 600 VAC	25	40	50

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# Non-fused 30 or 60 Ampere motor control disconnect switch "Suitable as Motor Disconnect" per NEC® 430.102(B) and 430.109(A)(6)

Arrow Hart's new line of NEMA Type 4X disconnect switches are made from VALOX™ resin and are a flexible and economical solution to 3-phase power switching applications. They are ideal for washdown and corrosive environments where an OSHA lockout/tagout disconnecting means is required. They also are suitable for use with metallic conduit and are available with auxiliary contacts for a variety of control circuit applications.

## Motor control disconnect switch (non-fused)

### Features & benefits

Optional 1/4" gap or flush mount feet for easy washdown

Captivated, combination head stainless steel screws for long life and easy access

Thermoplastic enclosure made from VALOX™ resin provides high impact strength and excellent corrosion resistance

High-visibility red handle can be padlocked to meet OSHA lockout/tagout requirements


Adjustable mounting feet for flexible positioning options

Heavy-duty industrial switches designed for long life

Optional auxiliary contact for PLC and VFD applications available

One piece gasket provides superior watertight protection and easy cleaning

Integrated grounding plate and DIN rail mounting allows automatic grounding and easy installation

 NSF Listed for use in food processing areas per NSF 3-A 14159-1 standard

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# Motor control disconnect switch (non-fused)

## Non-fused 30 or 60 ampere motor control disconnect switch

### Product description

3-pole, 3-phase  
30A or 60A, 600V/AC max.  
NEMA Type 4X, 12 & IP67



30A  
Disconnect switch




60A  
Disconnect switch

### Features

- Durable, NEMA Type 4X thermoplastic enclosure made from VALOX™ resin is ideally suited to withstand corrosive environments
- Compact size and small footprint designed for installation versatility
- Can be padlocked to conform to OSHA lock-out, tag-out 1910.147 requirements
- Robust mounting feet provide either flush mount or 1/4" spacing allowing washdown behind the enclosure (NEC® 300.6(D))
- Mounting feet are adjustable for flexible horizontal or vertical positioning
- DIN rail and integrated grounding plate allow easy installation
- Two Myers hubs are included to compliment NEMA Type 4X installation
- Heavy duty switch designed to deliver dependability, long life, and excellent electrical continuity
- Auxiliary contact option available (early make, late break)
- Auxiliary contact for variable frequency drive (VFD) application is also available (late make, early break)
- Both auxiliary contacts come with one set of Normally Open (NO) and one set of Normally Closed (NC) contacts
- Durable lever handle and switch mechanism will withstand repeated use
- Short circuit current ratings up to 65kA

### Motor control disconnect switches

Rating		Description	Catalog no.	
A	V/AC			
30	600 max.	30A disconnect switch	<input type="checkbox"/> AHDS30	•
		30A disconnect switch aux contacts	<input type="checkbox"/> AHDS30AC	•
		30A disconnect switch var freq drive	<input type="checkbox"/> AHDS30VFD	•
60	600 max.	60A disconnect switch	<input type="checkbox"/> AHDS60	•
		60A disconnect switch aux contacts	<input type="checkbox"/> AHDS60AC	•
		60A disconnect switch var freq drive	<input type="checkbox"/> AHDS60VFD	•

### Horsepower ratings

Voltage	30A	60A
1Ø 120V	1.5	3
1Ø 220-240V	5	7.5
1Ø 277V	5	7.5
1Ø 440-480V	7.5	15
3Ø 220-240V	10	15
3Ø 440-480V	20	30
3Ø 600V	25	40

### Short Circuit Current Ratings

#### 30A X-Switch SCCR:

Suitable for use as a Motor Disconnect with the following short-circuit current ratings:

- 65kA RMS symmetrical amps, 600 VAC max. when protected with 40A class J fuses

#### 60A X-Switch SCCR:

Suitable for use as a Motor Disconnect with the following short-circuit current ratings:

- 65kA RMS symmetrical amps, 600 VAC max. when protected with 70A class J fuses

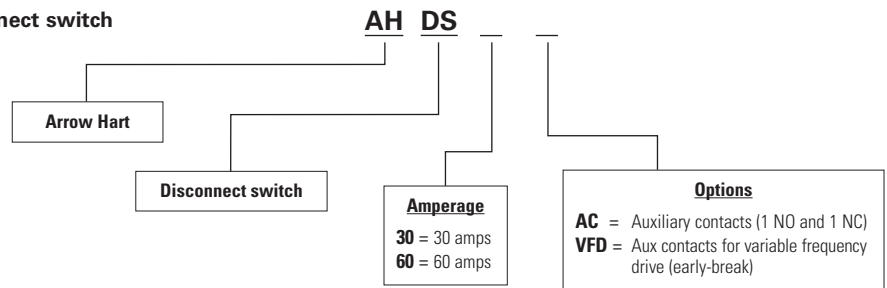
## Non-fused motor control disconnect switch ordering matrix

3-pole, 30A or 60A, 600V/AC


Motor control disconnect switch

sample number:

**AH30AC**



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 Indicates ROHS compliant

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# Other motor control disconnect switches

## Bussmann fused rotary disconnects

### Product description

3-pole, 3-phase  
30A or 60A, 600V/AC max.  
NEMA Type 4X, 12



ER4P-30J3PB



ER4P-60J3PB

### Features

- Lock/tagout: Up to three ¼" shank padlocks can be installed on external handles
- Multiple field installed accessories to enhance the enclosed disconnect switches to fit the desired application
- Auxiliary contacts
- NEMA Type 4X polycarbonate construction
- Uses class J fuses such as Bussmann LPJ
- UL98 Listed for general purpose, main disconnect, or branch circuit protection up to 600 V/AC file E182262
- UL 508 Listed for motor disconnect applications up to 600 V/AC File E155129
- cULus Listed to CSA Standard 22.2, No. 14, No. 4
- Conforms with IEC 60947-3
- RoHS Compliant

### Bussmann fused rotary disconnect switches



Rating		Description	Max. HP rating	Catalog no.
A	V/AC			
30	600 max.	30A fused rotary disconnect switch	20	□ ER4P-30J3PB
60	600 max.	60A fused rotary disconnect switch	50	□ ER4P-60J3PB

## Eaton enclosed rotary disconnects

### Product description

3-pole, 3-phase  
16A, 25A, 40A, or 80A, 600V/AC max.  
NEMA Type 4X



ER53025UX

### Features

- Padlockable in the OFF position (up to three padlocks) to meet OSHA lockout requirements
- Rated for making and breaking loads
- Accepts auxiliary contacts; capability to signal PLC controllers
- Ground lug connection provided
- Possibility of adding one power pole and one auxiliary contact
- NEMA Type 4X
- Meets NEC® Article 430 requirements for a separate disconnect means within sight of all motor loads
- UL listed under Section 508, File No. E165150
- CSA listed to 22.2 No. 14, File 162136

### Eaton enclosed rotary disconnect switches



Rating		Description	Max. HP rating	Catalog no.
A	V/AC			
16	600 max.	16A enclosed rotary disconnect switch	10	□ ER53016UX
25	600 max.	25A enclosed rotary disconnect switch	20	□ ER53025UX
40	600 max.	40A enclosed rotary disconnect switch	25	□ ER53040UX
80	600 max.	80A enclosed rotary disconnect switch	40	□ ER53080UX

Indicates ROHS compliant

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## Other motor control switches

### Choose from a variety of rugged, dependable motor control solutions

From NEMA Type 1 to NEMA Type 4X enclosures and replacement switches, Arrow Hart has the devices you need for safe, dependable motor control



AHMC240C



AH6810U



AH7810WD



AH6808GDAC

#### Motor controllers & disconnects

Ruggedly built to provide dependable manual motor control for 2- and 3-pole applications up to 60A; available in 10/20, 20/30, 30, 40 & 60 Amp configurations for AC and AC/DC single-phase and three-phase applications

#### Motor controllers & disconnects in enclosures

Arrow Hart's switch and NEMA Type 1 and Type 3R enclosure combinations suit a wide variety of indoor and outdoor applications; all enclosures are OSHA Lockout/Tagout compliant. Available in 10, 20, 30, 40 & 60 Amp configurations; NEMA Type 3, 7, & 9 Hazardous Location enclosures also available with 30A switches

#### Fused & non-fused disconnects

Available in both non-fused and fused designs, these devices combine an HP-rated switch with a compact, durable, watertight enclosure that's NEMA Type 3R, 4X or 12 rated, OSHA Lockout/Tagout compliant and fulfills NEC® Article 430 requirements. Available in 30, 60 & 100 Amp configurations

#### Popular manual motor controllers & disconnects

Rating		Description	Catalog no.
A	V/AC		
30	250	Two-position maintained contact switch, single throw, 2-Pole single phase, front wired screw termination	<input type="checkbox"/> AH6810U
30	600	Two-position maintained contact switch, single throw, 3-Pole three phase, front wired screw & clamp termination	<input type="checkbox"/> AH7810UD
30	250	Two-position maintained contact switch, single throw, 2-Pole single phase, in NEMA Type 1 enclosure	<input type="checkbox"/> AH6810G
30	600	Two-position maintained contact switch, single throw, 3-Pole three phase, in NEMA Type 1 enclosure	<input type="checkbox"/> AH7810GD
40	600	Two-position maintained contact switch, single throw, 3-Pole three phase, in NEMA Type 3R enclosure	<input type="checkbox"/> AHMC340L-3
60	600	Two-position maintained contact switch, single throw, 3-Pole three phase, in NEMA Type 3R enclosure	<input type="checkbox"/> AHMC360L-3

#### Related products

Whether you need to get power quickly and easily from one point to another, preserve cable connections for safety and reliability or simply replace a switch, we have the devices you need to get the job done.



#### Wire mesh grips

Industrial cable strain relief

Compliances, specifications and availability are subject to change without notice.

# Motor control disconnect switch (fused & non-fused) specification & performance data

## Motor controllers & disconnects switches

### Product description

3-pole, 3-phase  
30A, 60A or 100A, 600V/AC max.

Device type	30A, 60A & 100A X-Switch motor controllers & disconnects	30A & 60A - disconnect switches (non-fused)
<b>Testing &amp; code compliance</b>	<ul style="list-style-type: none"> <li>cULus Listed to UL508, file no. E135083</li> <li>NSF evaluated for use in washdown areas and to NSF/ANSI/3-A Standard 14159-1 Hygiene requirements for the design of meat and poultry processing equipment</li> </ul>	<ul style="list-style-type: none"> <li>cULus Listed to UL60947-1 &amp; 60947-4, file no. E135083</li> </ul>
<b>Environmental specifications</b>	<p><b>Flammability:</b> Meets UL94 requirements; rated 94-5V</p> <p><b>Temperature rating:</b> -40°C to 105°C (-40°F to 221°F)</p> <p><b>Protection:</b> NEMA Type 4X, 12 &amp; IP66, IP69K</p>	<p><b>Flammability:</b> UL94 V0 and 5VA Classification</p> <p><b>Temperature rating**:</b> Max continuous: +60°C (+140°F) Min continuous (without impact): -50°C (-58°F)</p> <p><b>Water/moisture resistance:</b> NEMA Type 4, 4X, 12 &amp; IP67</p> <p><b>UV resistance:</b> All enclosure materials are UV stabilized</p>
<b>Electrical specifications</b>	<p><b>Maximum continuous current:</b> 30A, 60A, 100A</p> <p><b>Max operating voltage:</b> 600V/AC</p> <p><b>Short circuit current rating (SCCR):</b> see chart on page 5</p> <p><b>Motor loads:</b> Horsepower rated per UL508, see chart on page 5</p>	<p><b>Maximum continuous current:</b> 30A, 60A</p> <p><b>Dielectric voltage:</b> 2200V AC minimum</p> <p><b>Max operating voltage:</b> 600V/AC</p> <p><b>Short circuit current rating (SCCR)*:</b> see chart on page 7</p> <p><b>Motor loads:</b> Horsepower rated per UL508, see chart on page 7</p>
<b>Mechanical specifications</b>	<p><b>Terminal accommodation:</b> (30A) #10 AWG; (60A) #6 AWG; (100A) 1/0# AWG</p> <p><b>Mechanical life:</b> 10,000 cycles minimum</p> <p><b>Voltage ratings:</b> Permanently marked on device</p> <p><b>Mounting:</b> Welded feet provide full 1/4" clearance</p>	<p><b>Impact resistance:</b> As per UL746C</p> <p><b>Mechanical life:</b> 10,000 cycles minimum.</p> <p><b>Voltage ratings:</b> Permanently marked on device</p> <p><b>Mounting:</b> External adjustable feet with three positions (0, 45 &amp; 90 degrees) 30A - flush and non-flush mounting feet options</p> <p><b>Terminal identification:</b> (30A) #10 AWG; (60A) #6 AWG</p>
<b>Material</b>	<p><b>Enclosure - body:</b> 14 gauge type 316L stainless steel</p> <p><b>Mounting feet:</b> 11 gauge type 316L stainless steel</p> <p><b>Enclosure handle:</b> Red nylon thermoplastic</p> <p><b>Enclosure - screws:</b> Tri-Combo head pattern w/ captivated O-RWG</p> <p><b>Lock-out/tag-out bracket:</b> Polycarbonate/Polybutylene Cerephthalate (PC/PBT)</p> <p><b>Enclosure gasket:</b> Expanded silicone</p> <p><b>Manual contactor terminal type:</b> 30A - front-wire screw termination; 40A &amp; 60A - box lug termination</p> <p><b>Manual contactor terminal screws:</b> Nickel plated 260 brass</p> <p><b>Manual contactor contacts:</b> Silver</p> <p><b>Manual contactor moveable arm:</b> Brass</p>	<p><b>Enclosure - top cover:</b> VALOX™ resin</p> <p><b>Enclosure - base:</b> VALOX™ resin</p> <p><b>Enclosure - screws:</b> 300 Series stainless steel (captivated)</p> <p><b>Grounding - plate:</b> Steel - galvanized</p> <p><b>Grounding - assembly screw:</b> 300 series stainless steel</p> <p><b>Handle:</b> VALOX™ resin</p> <p><b>Handle - seal:</b> Neoprene</p> <p><b>Handle - shaft:</b> VALOX™ resin</p> <p><b>Handle - screw:</b> 300 series stainless steel (tamper resistant type)</p> <p><b>Mounting feet:</b> VALOX™ resin</p> <p><b>Mounting feet - assembly screws:</b> 300 series stainless steel</p> <p><b>Threaded inserts:</b> Brass</p>
<b>Optional equipment materials</b>	<p><b>Breather drain material:</b> Type 304 stainless steel</p> <p><b>Breather drain gasketing:</b> Expanded silicone rubber</p>	<p><b>Impact resistance:</b> As per UL746C</p>

\* Break all lines

\*\*When used with 75°C copper wire only

\*\*\*Not applicable for 1 Ø 120 and 277 VAC applications

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# We make what matters work.\*

\* At Eaton, we believe that power is a fundamental part of just about everything people do. Technology, transportation, energy and infrastructure-these are things the world relies on every day. That's why Eaton is dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because that's what really matters. And we're here to make sure it works.

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