

UL I CSA । NEMA COMMERCIAL INDUSTRIAL INSTITUTIONAL


## Manual Contactors and Disconnect Switches

## Rugged design and superior performance for equipment control and safety.

## M A N U A L

 CONTACTORSUL I CSA । NEMA
COMMERCIAL INDUSTRIAL INSTITUTIONAL


# Our AC and AC-DC switches provide dependable manual motor control when overload protection is provided separately or not required. 

## Switches

Ruggedly built and designed for dependability, Cooper Wiring Devices single-phase and three-phase switches provide trouble-free performance wherever manual motor control is required. Two-position AC switches are available in 20, 30, 40 and 60 amp ratings, and three-position AC-DC switches with a positive-stop center "off" position are rated at 5,10,20 and 30 amps.

## Applications

- Workshop bench equipment
- Commercial \& industrial exhaust fans
- High volume air conditioning systems
- Factory and shop machine tools and welders


## Manual Contactors (Enclosure with switch)

We produce switch and enclosure combinations to suit a wide variety of indoor and outdoor applications. When assembled in our type 3R enclosures, Cooper Wiring Devices' switches are particularly well suited for use with commercial HVAC equipment in outdoor settings.

All Cooper Wiring Devices' switches and manual contactors are direct beneficiaries of the centuryIong Arrow Hart tradition of unsurpassed quality.

- Conveyor systems
- Processing systems
- Industrial fans and pumps
- Air compressors


## Contactor Switches




Toggle Switch

## Proven design and innovative features make our switches easy to install and operate.

## FEATURES AND BENEFITS

■ Compact design provides extra wiring room for easy, fast installation.

■ Easy-to-read electrical ratings on rugged steel mounting straps ensure accurate identification.

■ Highly visible "ON/OFF" markings on large, rugged toggles make the switch easy to operate and reduce the risk of errors.

■ Cam and roll design provides dependable, trouble-free switch action.

■ Distinct wire pockets and thick-wall arc barriers prevent strands from straying.

## Switch Ordering Information

Two-Position Switches Maintained Contact, Single Throw

${ }^{1}$ Supplied with Robertson screws when ordered in Canada. $\quad 2$ In Canada, order Catalog No. AH7810U.

Three-Position Switches Maintained Contact, Double Throw

|  | Poles | Amperage | Voltage | Termination Style | Max. AWG Wire Size | $\begin{gathered} \mathrm{AC} \\ 240 \mathrm{~V} / \mathrm{AC} \end{gathered}$ | Horsepower Rating AC-DC 250 V | $\begin{gathered} \text { DC } \\ 250 \mathrm{~V} \end{gathered}$ | Catalog No. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5 | $600 \mathrm{~V} / \mathrm{AC}$ |  |  |  |  |  |  |
|  | DPDT | 10 | $250 \mathrm{~V} / \mathrm{AC} / \mathrm{DC}$ | Side wired screw | 10 | 2 |  | 1.5 | AH4361 |
|  |  | 20 | $125 \mathrm{~V} / \mathrm{AC} / \mathrm{DC}$ |  |  |  |  |  |  |
|  | DPDT | $\begin{aligned} & 20 \\ & 30 \end{aligned}$ | $\begin{aligned} & 250 \mathrm{~V} / \mathrm{AC} / D C \\ & 125 \mathrm{~V} / \mathrm{AC} / D C \end{aligned}$ | Side wired screw | 10 |  | 2 |  | AH4371 |



## Cooper Wiring Devices builds manual contactors to meet the demands of a variety of indoor and outdoor environments.

## FEATURES AND BENEFITS

- Totally enclosed body eliminates exposed contacts.
- Enclosures can be padlocked to conform to OSHA lockout requirements.

■ Cam and roll design provides dependable, troublefree switch action.

■ Double-break, silver-alloy, butt-type contacts provide long life.

■ Separate arc-quenching chambers isolate each pole

- Front terminals are designed for easy wiring.

CERTIFICATIONS AND COMPLIANCES<br>UL 508 - Industrial Control Equipment<br>CSA Certified to C22.2 No. 14 -<br>Industrial Control Equipment

## Manual Contactor Catalog No. Ordering Information

| Switch Only (see ratings on previous page) | Enclosures With Switch |  | Enclosure Only |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Type 1 | Type 1, <br> Type 3R | Type 1, Single Gang | Type 1, Double Gang | Double Gang Deep | Type 3R |
| AH6808UDAC | AH6808GDAC | AH6808WDAC ${ }^{3}$ | AHN1GD |  |  | * |
| AH6810U | AH6810G | AH6810W ${ }^{4}$ | AHN1GD |  |  | AHN3WD |
| AH6808UC0 ${ }^{5}$ |  |  |  |  |  |  |
| AHMC240C | AHMC240C-1 | AHMC240C-3 |  | AHN1GD2 |  | AHN3WD |
| AHMC240L | AHMC240L-1 | AHMC240L-3 |  | AHN1GD2 |  | AHN3WD |
| AHMC260L | AHMC260L-1 | AHMC260L-3 |  |  | AHN1GD2D | AHN3WD |
| AH7810UD | AH7810GD ${ }^{6}$ | AH7810WD | AHN1GD |  |  | AHN3WD |
| AHMC340C | AHMC340C-1 | AHMC340C-3 |  | AHN1GD2 |  | AHN3WD |
| AHMC340L | AHMC340L-1 | AHMC340L-3 |  | AHN1GD2 |  | AHN3WD |
| AHMC360L | AHMC360L-1 | AHMC360L-3 |  |  | AHN1GD2D | AHN3WD |
| AH4361 | AH27940G |  | ** |  |  |  |
| AH4371 ${ }^{7}$ |  |  |  |  |  |  |

${ }^{3}$ AH6808WDAC includes a copper-free aluminum back box and cover
${ }^{4}$ In Canada, order Catalog No. AH6810WR
${ }^{5}$ AH6808UCO may be installed in a N1GD Type 1 or N3WD Type 3R enclosure.
${ }^{6}$ Add suffix B to Catalog No. for larger enclosure. Order AH7810GDB for AHN1GD2 enclosure. See dimensions for enclosures on next page.
${ }^{7}$ AH4371 does not fit standard enclosure due to length of switch (see dimensions on next page), normally panel mounted.

* Crouse-Hinds FSC2-SA box and DS185 cover.
**Enclosure only not available.

| Switch Only | Type 3, 7 \& 9 <br> For Hazardous Locations <br> (see ratings on <br> previous page) | Class I, Div. 1 \& 2, Groups C, D <br> Class II, Groups E, F, G |
| :---: | :---: | :---: |
| AH6808UDAC | - | Switch With Cover Plate <br> For Flush Mounting |
| AH6810U | AH6810E | AH6808FDAC |
| AH7810UD | AH7810ED | AH6810F |

[^0]Dimensional Data (in inches and mm)

## SWITCHES



AHMC240L, AHMC340L, AHMC260L, AHMC360L


AH6810U, AH7810UD


AH6808UDAC, AH6808UCO


AHMC240C, AHMC340C


ENCLOSURES


AH6810E, AH7810ED


## Individual Product Features

## MANUAL CONTACTOR SWITCHES



## AHMC 40 and 60 Series

■ 2 pole and 3 pole, 40 and $60 \mathrm{amp} 600 \mathrm{~V} / \mathrm{AC}$.
■ Most compact switch available.
■ High impact-resistant, glass-filled nylon construction.

- 40 amp available with screw and clamp or box lug terminations.
- 60 amp available with box lug terminations.
- Captive termination screws.

■ Two sets of contacts per pole distribute load and make/break action for long, reliable duty.


## AH6808UDAC, AH6808UC0

- 2 pole, 20, 30 and 40 amp $600 \mathrm{~V} / \mathrm{AC}$.
- Very compact.
- Back and side-wire, spring-loaded screw terminations.
- Fits all standard wallplates and covers.
- Wraparound fiber terminal shield provides additional insulation when installed in single-gang boxes.
- High impact-resistant thermoplastic lever.



## AH6810U, AH7810UD

- 2 pole and 3 pole, $30 \mathrm{amp} 600 \mathrm{~V} / \mathrm{AC}$.
- Front-wire screw termination.
- Termination screws are removable for use with ring terminal.

■ Heavy duty brass contact arms with large silver buttons.

- Two sets of contacts per pole distribute load and make/break action for long, reliable duty.



## AH4361/AH4371

■ 2 pole, $5 \mathrm{amp} 600 \mathrm{~V} / \mathrm{AC}, 10,20$ and $30 \mathrm{amp} 125-250 \mathrm{~V} / \mathrm{AC} / \mathrm{DC}$.
■ Three-position, double throw, maintained contact.
■ Positive stop in center "off" position for motor-reversing and speed-control applications.

- Lever cannot be moved from one position to other side without first stopping in the center "off" position.
- Heavy duty copper contacts and brass terminals.

■ Quick-make/quick-break actuation - rated AC and DC.


## SWITCHED ENCLOSURES

- Enclosures can be padlocked in conformance to OSHA lockout requirements.
■ Thick steel 0.060 " $(1.52 \mathrm{~mm})$ construction with gray, baked enamel finish.
- Knockouts:
- Type 1 enclosure - 0.500" (12.70mm), 0.750" (19.05mm) concentric knockout top and bottom.
- Type 3R enclosure - two 0.500" ( 12.70 mm ), 0.750" $(19.05 \mathrm{~mm}), 1.0^{\prime \prime}(25.40 \mathrm{~mm})$ concentric knockouts on bottom.

■ Screw-style ground terminal in Type 1 single gang takes up to a \#10-14 AWG wire. All other enclosures include lug-style ground terminal which accommodates \#4-14 AWG wire.
■ AH6808WDAC includes a copper-free aluminum back box and cover.
■ Type 3, 7 \& 9 enclosure includes back box of iron with galvanized and acrylic paint finish. Cover is copper-free aluminum.

## Standard Materials for Switches and Enclosures

| Item | Switch Model Catalog No. |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | AH6808UDAC, AH6808UCO | AH6810U, AH7810UD | AHMC Series | AH4361, AH4371 |
| Mounting Strap | Plated steel | Plated steel | Plated steel | Plated steel |
| Toggle | Thermoplastic | Glass-filled nylon | Glass-filled nylon | Thermoplastic |
| Base | Urea thermoset | Urea thermoset | Glass-filled nylon | Thermoset plastic |
| Cover | Urea thermoset | Urea thermoset | Glass-filled nylon | Thermoset plastic |
| Contacts | Brass with silvercadmium buttons | Brass with silvercadmium buttons | Brass with silvercadmium buttons | Copper |
| Box Lug | - | - | Brass with steel screw | - |
| Terminal Screw | Brass | Brass | Nickel-plated brass | Brass |
| Terminal Clamp | Steel | - | Brass | - |
| Type 1 Enclosure | Cold-rolled steel with polyester urethane finish | Cold-rolled steel with polyester urethane finish | Cold-rolled steel with polyester urethane finish | Cold-rolled steel with polyester urethane finish |
| Type 3R Enclosure | Die-cast aluminum | Cold-rolled steel with polyester urethane finish | Cold-rolled steel with polyester urethane finish | - |
| Type 3, 7 \& 9 Enclosure | - | Iron-alloy cast body with electrogalvanized and aluminum acrylic paint; Copper-free aluminum cast cover | - | - |
| Cover Plates For Flush Mounting | Stainless steel | Painted gray steel | - | - |

NON-FUSED M A N U A L DISCONNECTS UL I CSA I NEMA INDUSTRIAL INSTITUTIONAL


## Non-fused Switches: Compact and durable, Cooper Wiring Devices non-fused switches are the answer for safe motor load disconnects.

Our 30 and 60 amp 600 V/AC non-fused manual disconnect switches combine a horsepower-rated switch in a durable, watertight NEMA 3R, 4X, 12 enclosure. They meet all applicable OSHA and NEC requirements for Lockout/Tagout control of directly wired, high-wattage equipment where overload protection is not required. All are built to the highest industry standards.

## Applications

- Manufacturing equipment in factories
- Agricultural facilities and food processing
- Automotive garages
- Assembly plants
- Maritime applications
- Processing plants


## Accessories

| Switch <br> Amperage | Description | Catalog No. |
| :---: | :---: | :--- |
| 30 | Auxiliary Contacts 1 NO, 1 NC, 6A 250V | AH30AUXB |
| 60 | Auxiliary Contacts 1 NO, 1 NC, 6A 250V | AH60AUXB |
| 30 | Replacement switch | AHBRS30ANF |
| 60 | Replacement switch | AHBRS60ANF |
| $30 \& 60$ | Replacement mounting feet kit | AHMSF |

Dimensional Data (in inches and mm)

| Enclosure Type | A | B | C | D |
| :--- | :--- | :--- | :--- | :--- |
| 30 Amp | $6.688^{\prime \prime}$ | $4.625^{\prime \prime}$ | $3.813^{\prime \prime}$ | $5.375^{\prime \prime}$ |
|  | $(169.86 \mathrm{~mm})$ | $(117.48 \mathrm{~mm})$ | $(96.84 \mathrm{~mm})$ | $(136.55 \mathrm{~mm})$ |
| $60 \& 100$ | $10.188^{\prime \prime}$ | $6.313^{\prime \prime}$ | $5^{\prime \prime}$ | $6.688^{\prime \prime}$ |
| Amp | $(258.76 \mathrm{~mm})$ | $(160.34 \mathrm{~mm})$ | $(127.00 \mathrm{~mm})$ | $(169.86 \mathrm{~mm})$ |



Non-fused Manual Disconnect Catalog No. Ordering Information

| Amps* | Maximum Horsepower Rating-VoltageSingle PhaseThree Phase |  |  |  |  |  |  |  | Auxiliary Contacts | Catalog No . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
|  | 120 V | 200V | 240V | 200V | 208V | 240V | 480V | 600V |  |  |
| 30 | 2 | 5 | 5 | 10 | 10 | 10 | 20 | 30 | Without Aux. Contacts | AH30MS1B |
|  |  |  |  |  |  |  |  |  | With Aux. Contacts | AH30MS1B-M2 |
| 60 | 3 | 7.5 | 10 | 15 | 15 | 20 | 40 | 50 | Without Aux. Contacts | AH60MS2B |
|  |  |  |  |  |  |  |  |  | With Aux. Contacts | AH60MS2B-M2 |
| 100 |  |  |  |  |  | 25 | 50 | 50 | With Aux. Contacts | AH100MS2-M2 |

[^1]See ratings inside enclosure or contact factory. Valox ${ }^{\circledR}$ is a registered trademark of General Electric, USA. Hubs not included.

## Rugged construction meets OSHA, NEC and NEMA safety requirements.

## FEATURES AND BENEFITS

■ Meets NEC Article 430 requirements for a separate disconnect switch within sight of all motor loads.
■ Enclosures rated NEMA 3R, 4X, 12 for reliable performance in outdoor, washdown, corrosive and dusty applications.
■ Formed-in-place continuous gasket ensures full perimeter sealing.
■ Gasketed switch handle maintains NEMA 4X rating.

- Captive cover mounting screws will not fall out during assembly and are corrosion resistant (60 amp, non-metallic; 30 amp , stainless steel).
- Adjustable mounting feet included for flexible positioning options.
- Auxiliary contacts available for PLC signaling.


## CERTIFICATIONS AND COMPLIANCES

UL 508 - Industrial Control Equipment
CSA Certified to C22.2 No. 14 -
Industrial Control Equipment
NEMA - Type 3R, 4X, 12

## SHORT CIRCUIT RATING

30 amp switch: $10 \mathrm{kA}, 600 \mathrm{~V} / \mathrm{AC}$ maximum when protected by 80 amp class RK5 fuses.
60 amp switch: $10 \mathrm{kA}, 600 \mathrm{~V} / \mathrm{AC}$ maximum when protected by 110 amp class RK5 fuses.
100 amp switch: 10kA, $600 \mathrm{~V} / \mathrm{AC}$ maximum when protected by 250 amp RK1 fuses.


## FUSED MANUAL

 DISCONNECTSUL I CSA I NEMA
INDUSTRIAL INSTITUTIONAL


## Fused Switches: Heavy duty, horse-power-rated disconnect switches in a watertight enclosure provides fused switch control of directly wired loads.

Our 30 amp $600 \mathrm{~V} / \mathrm{AC}$ fused manual disconnect switches combine a horsepower-rated switch in a durable, watertight NEMA 3R, 4X, 12 enclosure. They meet all applicable OSHA and NEC requirements for Lockout/ Tagout control of directly wired, high-wattage equipment with overload protection.

## Applications

- Manufacturing equipment in factories
- Agricultural facilities and food processing
- Automotive garages
- Assembly plants
- Maritime applications
- Processing plants

Accessories

| Description | Catalog No. |
| :--- | :--- |
| Auxiliary Contacts 1 NO, 1 NC | AH3OAUXF |
| Replacement Switch | AHBRS30AF |
| Replacement Mounting Feet Kit | AHMSF |
| Trunk Latch Kit | AHNTLO1 |

Dimensional Data (in inches and mm)


Fused Manual Disconnect Catalog No. Ordering Information

| Amps | 3 Phase | Maximum Horsepower Rating Voltage AC |  |  |  |  | $\begin{aligned} & \text { Fuse } \\ & \text { 600V } \end{aligned}$ | Auxiliary Type | Concartta 0 g No. | AH30MS2F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 110V | 200V | 208V | 240V | 480V |  |  |  |  |
| 30 | Standard | 1.5 |  |  | 3 | 5 | 7.5 | J | Without Auxiliary |  |
|  | Maximum | 3 | 5 | 7.5 | 7.5 | 15 | 20 | J | Contacts |  |
| 30 | Standard | 1.5 |  |  | 3 | 5 | 7.5 | J | With Auxiliary | AH30MS2F-M2 |
|  | Maximum | 3 | 5 | 7.5 | 7.5 | 15 | 20 | J | Contacts |  |

[^2]
## Krydon' enclosures make our fused manual disconnect switches resistant to corrosion and heat.

## FEATURES AND BENEFITS

■ Class J fuses are accepted by the 30 amp fused switch.
■ "No touch" fuse and switch contacts can only be accessed with the switch in the "OFF" position.
■ Auxiliary contacts available for PLC signaling.

- Meets NEC Article 430 requirements for a separate disconnect switch within sight of all motor loads.
■ Enclosures rated NEMA 3R, 4X, 12 for reliable performance in outdoor, washdown, corrosive and dusty applications.
- Captive stainless steel cover mounting screws are sealed with 0 -rings for added moisture resistance.
- Hinged, gasketed cover is removable for easy installation.
- Adjustable mounting feet included for flexible positioning options.

■ Trunk latch accessory prevents unauthorized removal of cover.

## CERTIFICATIONS AND COMPLIANCES

UL 98 - Industrial Control Equipment
CSA Certified to C22.2 No. 14 -
Industrial Control Equipment
NEMA - Type 3R, 4X, 12

## SHORT CIRCUIT RATING

Suitable for use on a circuit capable of delivering up to 100kA R.M.S. Symmetrical, 600 V/AC maximum.


## Additional Toggle Switches

## Cooper Wiring Devices manufactures a broad range of toggle switches, all built to the highest standards.

## FEATURES AND BENEFITS

- Dual back-wire holes for feed-through wiring.

■ Thick .050" ( 1.27 mm ) plated steel strap to withstand abuse.

- One-piece brass contact arm and large silver-alloy contact assure low-resistance switching.
- Spring-loaded terminal screws (AH1891/AH1991 Series only).
- Lighted and Pilot-Lighted styles available (AH1891/AH1991 Series only).


## Specification Grade AC Switches

## AH1201/AH1221 Series

The AH1201/AH1221 Series provides all of the features shown above except for the spring loaded terminals.


Catalog No.

| Rating | Description | 15 Amp | 20 Amp |
| :---: | :--- | :--- | :--- |
| $120-277$ V/AC | Single pole | AH1201 | AH1221 |
| $120-277$ V/AC | Double pole | AH1202 | AH1222 |
| $120-277$ V/AC | Three-way | AH1203 | AH1223 |
| $120-277$ V/AC | Four-way | AH1204 | AH1224 |

Basic Catalog Numbers shown above denote brown device.
For other colors add suffixes as follows:

| Available Colors | Ivory | Gray | White |
| :---: | :---: | :---: | :---: |
|  | I | GRY | W |

## H.P. Conversion Table

(applies to 277 V/AC switches only):

|  | $\mathbf{1 2 0}$ V/AC | $\mathbf{2 4 0}$ V/AC | Max Amps |
| :---: | :---: | :---: | :---: |
| $\mathbf{1 5 ~ A m p s}$ | $1 / 2$ | 2 | 12 A |
| 20 Amps | 1 | 2 | 16 A |
| 30 Amps | 2 | 2 | 24 A |

## NOTES

- AC switches are not recommended for use on Master or Emergency Power Systems.
- AC Switches can be used on H.P. applications as permitted by NEC ${ }^{\circledR}$ paragraphs 430.83 and 430.109.


## For more information:

## Cooper Wiring Devices Customer Service

## United States

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## CERTIFICATIONS AND COMPLIANCES

Listed to UL, CSA and Federal Specification WS896-E, where applicable.

AH1891/AH1991 Series


Momentary and Maintained Contact Series

| Rating | Description | 15 Amp | 20 Amp | 30 Amp |
| :--- | :--- | :--- | :--- | :--- |
| 120-277 V/AC | Single pole | AH1891 | AH1991 | AH3991 |
| 120-277 V/AC | Double pole | AH1892 | AH1992 | AH3992 |
| 120-277 V/AC | Three-way | AH1893 | AH1993 | AH3993 |
| 120-277 V/AC | Four-way | AH1894 | AH1994 | AH3994 |

Basic Catalog Numbers shown above denote brown device. For other colors add suffixes as follows:

| Available Colors | Ivory | Gray | White | Red | Black |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 15 Amp | I | GRY | W |  |  |
| 20 Amp | I | GRY | W | RED | BL |
| 30 Amp | I |  |  |  |  |

347 V/AC Canadian Version (CSA only)

| Rating | Catalog No. |  |  |
| :---: | :---: | :--- | :--- |
|  | Description <br> (Add suffix I for Ivory) | $\mathbf{1 5}$ Amp | $\mathbf{2 0}$ Amp |
| 347 V/AC | Single pole | AH18201 | AH18221 |
| 347 V/AC | Double pole | AH18202 | AH18222 |
| 347 V/AC | Three-way | AH18203 | AH18223 |
| 347 V/AC | Four-way | AH18204 | AH18224 |

Momentary and Maintained Contact, Three
Position, Center Off - Back \& Side Wire

| Rating | Description | $\mathbf{1 5}$ Amp | $\mathbf{2 0}$ Amp | $\mathbf{3 0}$ Amp |
| :--- | :--- | :--- | :--- | :--- |
| $120-277$ V/AC | Single pole - Maintained | 1205 V | 2225 V | 3035 V |
|  |  | - | - | 3035 B |
| $120-277$ V/AC | Double pole - Maintained | - | 2226 B | 3036 B |
| $120-277$ V/AC | Single pole - Momentary | - | 2226 V | 3036 V |
|  |  | 1895 B | 1995 B | - |
| 1295 GY | 1995 GY | - |  |  |
|  |  | 1895 V | 1995 V | - |

Available Colors: B - Brown; GY - Gray; V - Ivory; Locking devices in nickel finish

| Replacement Key | Catalog No. |
| :--- | :---: |
| Description | AH2000 |
| Replacement Key for 1895/1995L |  |


[^0]:    ${ }^{8}$ Type $3,7 \& 9$ enclosure includes back box of iron with galvanized and acrylic paint finish. Cover is copper-free aluminum.

[^1]:    * Note: The 30 amp switch is tested and approved at 40 amps , the 60 amp switch is tested and approved at 80 amps .

[^2]:    Horsepower Ratings: Motors that exceed the standard horsepower rating may have a starting current that requires the use of appropriate time delay fuses. Hubs not included.

