



UL I CSA I 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 CONTACTORS UL I CSA I 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.

### 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 century-long Arrow Hart tradition of unsurpassed quality.

#### **Applications**

- Workshop bench equipment
- Commercial & industrial exhaust fans
- High volume air conditioning systems
- Factory and shop machine tools and welders
- Conveyor systems
- Processing systems
- Industrial fans and pumps
- Air compressors

#### **Contactor Switches**



#### Manual Contactors in Enclosures





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.

- Robust, single-piece, moveable and stationary contact arms with large silver-cadmium buttons limit heat build-up for excellent continuity and long life.
- Screw and clamp or box lug terminals to meet individual project requirements.

#### CERTIFICATIONS AND COMPLIANCES

UL 508 - Industrial Control Equipment

**CSA Certified to C22.2 No. 14** – Industrial Control Equipment

#### **Switch Ordering Information**

Two-Position Switches Maintained Contact, Single Throw

	Poles	Amperage	Voltage	Termination Style	Max. AWG Wire Size	120 V/AC	Horsepo 240 V/AC	wer Rating 480 V/AC	600 V/AC	Catalog No.
	2	20	600 V/AC	Back & side wired screw	10	2	3	5	7.5	AH6808UDAC
	2	30	250 V/AC	Back & side wired screw	10	2	3	5	7.5	AH6808UDAC
PHASE	2	30	600 V/AC	Front wired screw	10	2	5	7.5	7.5	AH6810U <sup>1</sup>
SINGLE P	2	40	600 V/AC	Back & side wired screw	8 w/ring terminal		5			AH6808UC0
S	2	40	600 V/AC	Side wired screw & clamp	8	3	5	15	15	AHMC240C1
	2	40	600 V/AC	Side wired box lug	4	3	5	15	15	AHMC240L
	2	60	600 V/AC	Side wired box lug	4	3	5	15	15	AHMC260L
Ж	3	30	600 V/AC	Front wired screw	10	3	7.5	15	15	AH7810UD1,2
PHASE	3	40	600 V/AC	Side wired screw & clamp	8	3	7.5	15	20	AHMC340C1
THREE	3	40	600 V/AC	Side wired box lug	4	3	7.5	15	20	AHMC340L
F	3	60	600 V/AC	Side wired box lug	4	5	10	25	30	AHMC360L

 $<sup>^{\</sup>rm 1}$  Supplied with Robertson screws when ordered in Canada.

#### Three-Position Switches Maintained Contact, Double Throw

	Poles	Amperage	Voltage	Termination Style	Max. AWG Wire Size	AC 240 V/AC	orsepower Ratin AC-DC 250 V	g DC 250 V	Catalog No.
TE LINES E	DPDT	5 10 20	600 V/AC 250 V/AC/DC 125 V/AC/DC	Side wired screw	10	2		1.5	AH4361
Pillo	DPDT	20 30	250 V/AC/DC 125 V/AC/DC	Side wired screw	10		2		AH4371



<sup>&</sup>lt;sup>2</sup> In Canada, order Catalog No. AH7810U.

# M A N U A L CONTACTORS UL I CSA I NEMA COMMERCIAL INDUSTRIAL INSTITUTIONAL



# 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

**UL 508** — Industrial Control Equipment

**CSA Certified to C22.2 No. 14** — Industrial Control Equipment

#### **Manual Contactor Catalog No. Ordering Information**

Switch Only (see ratings on	Enclosures	With Switch Type 1,	Type 1,	Enclosure Only Type 1,		
previous page)	Type 1	Type 3R	Single Gang	Double Gang	Double Gang Deep	Type 3R
AH6808UDAC	AH6808GDAC	AH6808WDAC <sup>3</sup>	AHN1GD			*
AH6810U	AH6810G	AH6810W <sup>4</sup>	AHN1GD			AHN3WD
AH6808UC0 <sup>5</sup>						
AHMC240C	AHMC240C-1	AHMC240C-3		AHN1GD2		AHN3WD
AHMC240L	AHMC240L-1	AHMC240L-3		AHN1GD2		AHN3WD
AHMC260L	AHMC260L-1	AHMC260L-3			AHN1GD2D	AHN3WD
AH7810UD	AH7810GD <sup>6</sup>	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 <sup>7</sup>						

 $<sup>^{</sup>m 3}$  AH6808WDAC includes a copper-free aluminum back box and cover.

<sup>\*\*</sup>Enclosure only not available.

Switch Only (see ratings on previous page)	Type 3, 7 & 9 For Hazardous Locations <sup>8</sup> Class I, Div. 1 & 2, Groups C, D Class II, Groups E, F, G	Switch With Cover Plate For Flush Mounting	
AH6808UDAC	-	AH6808FDAC	
AH6810U	AH6810E	AH6810F	
AH7810UD	AH7810ED	AH7810FD	

<sup>&</sup>lt;sup>8</sup> Type 3, 7 & 9 enclosure includes back box of iron with galvanized and acrylic paint finish. Cover is copper-free aluminum.

<sup>&</sup>lt;sup>4</sup> In Canada, order Catalog No. AH6810WR.

 $<sup>^{\</sup>mbox{\scriptsize 5}}$  AH6808UCO may be installed in a N1GD Type 1 or N3WD Type 3R enclosure.

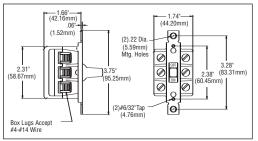
<sup>&</sup>lt;sup>6</sup> Add suffix B to Catalog No. for larger enclosure. Order AH7810GDB for AHN1GD2 enclosure. See dimensions for enclosures on next page.

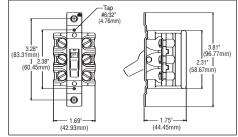
 $<sup>^{7}</sup>$  AH4371 does not fit standard enclosure due to length of switch (see dimensions on next page), normally panel mounted.

 $<sup>\</sup>ensuremath{^{*}}$  Crouse-Hinds FSC2-SA box and DS185 cover.

#### **Dimensional Data** (in inches and mm)

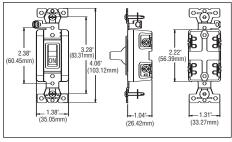
#### **SWITCHES**

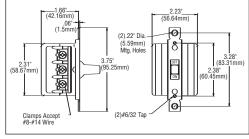


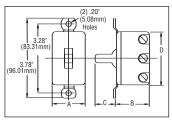


AHMC240L, AHMC340L, AHMC260L, AHMC360L

AH6810U, AH7810UD





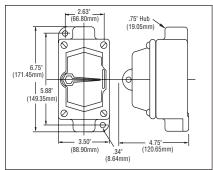


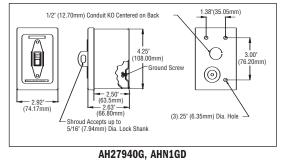
AHMC240C, AHMC340C

D Α В С 1.59 1.66" .66" 2.50" AH4361 (40.39mm)(42.16mm) (16.76mm) (63.50mm)1.81" 1.98" 1.22 2 88" AH4371 (45.97mm) (50.29mm) (30.99mm) (73.15mm)

AH6808UDAC, AH6808UCO

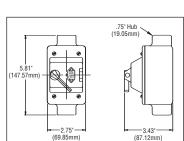
#### **ENCLOSURES**

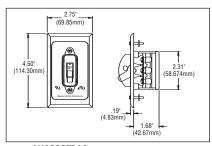




AH6810E, AH7810ED

Knockouts for .75 - 1.00 (19.05-25.40mm) Mtg. Hole (2.00° (50.80mm) Mtg. Hole (2.00° (50.80mm) Mtg. Hole (112.27mm) (112.27mm) (118.62mm) (118.



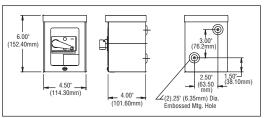


AH7810GDB, AHN1GD2 Dim A=2.63 (66.80mm)

AHN1GD2D Dim A=3.87 (98.30mm)

AH6808WDAC

AH6808FDAC (plate only, no toggle guard) AH6810F, AH7810FD



AHN3WD



# M A N U A L CONTACTORS UL I CSA I NEMA COMMERCIAL INDUSTRIAL INSTITUTIONAL



#### **Individual Product Features**

#### MANUAL CONTACTOR SWITCHES



#### AHMC 40 and 60 Series

- 2 pole and 3 pole, 40 and 60 amp 600 V/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, AH6808UCO

- 2 pole, 20, 30 and 40 amp 600 V/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 amp 600 V/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 amp 600 V/AC, 10, 20 and 30 amp 125-250 V/AC/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.







- Enclosures can be padlocked in conformance to OSHA lockout requirements.
- Thick steel 0.060" (1.52mm) 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" (12.70mm), 0.750" (19.05mm), 1.0" (25.40mm) 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 silver- cadmium buttons	Brass with silver- cadmium buttons	Brass with silver- cadmium 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 MANUAL DISCONNECTS ULICSAINEMA 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**

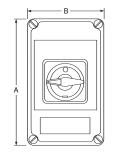
- Manufacturing equipment in factories
- Agricultural facilities and food processing
- Automotive garages
- Assembly plants
- Maritime applications
- Processing plants

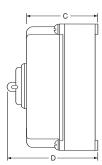
#### **Accessories**

Switch 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	Α	В	C	D
30 Amp	6.688"	4.625"	3.813"	5.375"
	(169.86mm)	(117.48mm)	(96.84mm)	(136.55mm)
60 & 100	10.188"	6.313"	5"	6.688"
Amp	(258.76mm)	(160.34mm)	(127.00mm)	(169.86mm)





#### **Non-fused Manual Disconnect Catalog No. Ordering Information**

	Maximum Horsepower Rating-Voltage Single Phase Three Phase									
Amps*	120V	200V	240V	200V	208V	240V	480V	600V	<b>Auxiliary Contacts</b>	Catalog No.
30	2	5	5	10	10	10	20	30	Without Aux. Contacts With Aux. Contacts	AH30MS1B AH30MS1B-M2
60	3	7.5	10	15	15	20	40	50	Without Aux. Contacts With Aux. Contacts	AH60MS2B AH60MS2B-M2
100						25	50	50	With Aux. Contacts	AH100MS2-M2

<sup>\*</sup> Note: The 30 amp switch is tested and approved at 40 amps, the 60 amp switch is tested and approved at 80 amps. See ratings inside enclosure or contact factory. Valox® 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

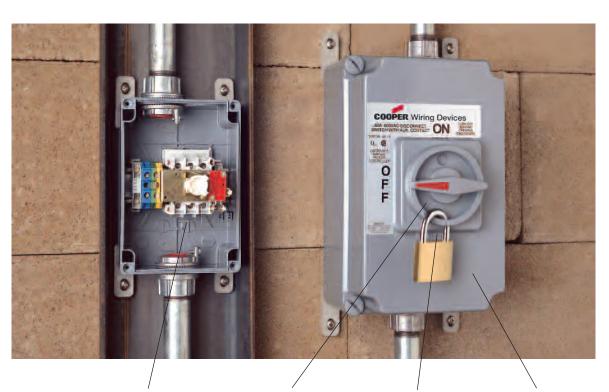
**UL 508** — Industrial Control Equipment **CSA Certified to C22.2 No. 14** — Industrial Control Equipment **NEMA** — Type 3R, 4X, 12

#### SHORT CIRCUIT RATING

30 amp switch: 10 kA, 600 V/AC maximum when protected by 80 amp class RK5 fuses.

60 amp switch: 10 kA, 600 V/AC maximum when protected by 110 amp class RK5 fuses.

100 amp switch: 10kA, 600 V/AC maximum when protected by 250 amp RK1 fuses.



Removable DIN rail mounting switch allows easy wiring.

Large, clearly marked rotary handle provides a good grip, even for a gloved hand.

Lockable nylon handle complies with OSHA Lockout/Tagout requirements.

Valox® thermoplastic enclosure provides high impact strength and excellent corrosion resistance.

# FUSED MANUAL DISCONNECTS UL I CSA I NEMA I N D U S T R I A L INSTITUTIONAL



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

Our 30 amp 600 V/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.

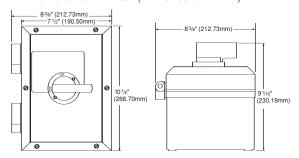
#### **Applications**

- 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	AH30AUXF
Replacement Switch	AHBRS30AF
Replacement Mounting Feet Kit	AHMSF
Trunk Latch Kit	AHNTL01

#### **Dimensional Data** (in inches and mm)



#### **Fused Manual Disconnect Catalog No. Ordering Information**

Maximum Horsepower Rating Voltage AC Fuse Auxiliary										
Amps	3 Phase	110V	200V	208V	240V	480V	600V	Type	Con <b>Caattal</b> og No.	
30	Standard	1.5			3	5	7.5	J	Without Auxiliary	AH30MS2F
	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	

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.



# 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 O-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.

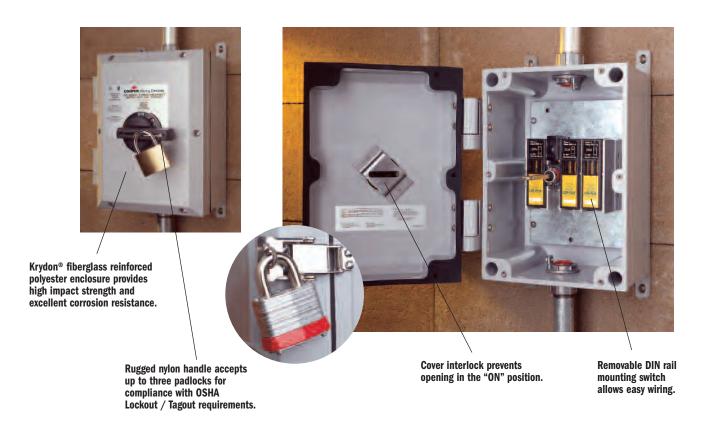
#### CERTIFICATIONS AND COMPLIANCES

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" (1.27mm) 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):

	120 V/AC	240 V/AC	Max Amps
15 Amps	1/2	2	12A
20 Amps	1	2	16A
30 Amps	2	2	24A

#### 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® paragraphs 430.83 and 430.109.

#### For more information:

#### **Cooper Wiring Devices Customer Service**

#### **United States**

203 Cooper Circle Peachtree City, GA 30269 Phone: (866) 853-4293 Fax: (800) 329-3055 **Canada** 5925 McLaughlin Road Mississauga, Ontario, L5R 1B8 Phone: (800) 267-1042

Fax: (800) 761-5748

Visit our web site at: www.cooperwiringdevices.com

## **COOPER** Wiring Devices

#### CERTIFICATIONS AND COMPLIANCES

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

AH1891/AH1991 Series



Momentary and Maintained Contact Series

#### Catalog No.

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	lvory	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)

Catal	υQ	Nο

Rating	Description (Add suffix I for Ivory)	15 Amp	20 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

#### Catalog No.

Rating	Description	15 Amp	20 Amp	30 Amp
120-277 V/AC Single pole	Single pole - Maintained	1205V	2225V	3035V
		_	_	3035B
120-277 V/AC	Double pole - Maintained	_	2226B	3036B
		_	2226V	3036V
120-277 V/AC	Single pole - Momentary	1895B	1995B	_
		1895GY	1995GY	-
		1895V	1995V	-
120-277 V/AC	Momentary - Locking	1895L	1995L	_

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

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