

3PDT

The series 425 Power relay is capable of handling up to 30 Amps and 1 Hp Loads. The Series 425 has sufficient spacing to allow for 600 Vac contact ratings. The Design features a enclosed coil, Screw Terminals and Silver Cadmium Oxide contacts as standard. The Series 425 has a wide choice of options to choose from.



CONTACT LOAD RATINGS 3 POLE RELAYS

Load	30/DC	120-240/AC	208-240/AC	277/AC	600/AC
General Duty	30A	25A	25A	17A	10A
Motor (45% PF)	1Ø 1HP◇	1Ø 1HP◇	3Ø 3HP	-	-

◇ PER POLE

COIL SPECIFICATIONS 3 POLE RELAYS @ 25°C

Nominal Voltage	Resistance Ohms ± 10%		Current (MA)		Power Consumption	
	AC	DC	AC	DC	AC	DC
12	1.8	35.5	1600	333	11VA	4.0W
24	6.7	142	820	169	11VA	4.0W
48	27	568	410	84	11VA	4.0W
120 *	170	2980	85	18-21	11VA	4.0W
240 **	680	-	43	-	11VA	
480	2720	-	22	-	11VA	

* AC Coil is 120V, 50/60Hz, DC Coil is 110-125VD

** For 220 VDC use 3600 Ω, 10 Watt resistor in series with 110 VDC relay.

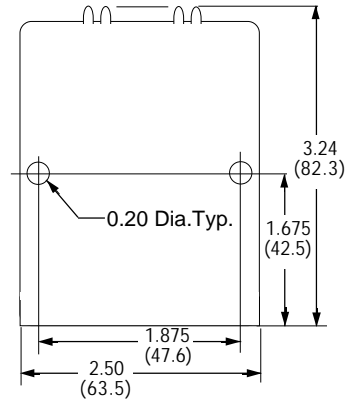
1, 2, and 3 Pole Relays

Min. Operate: AC: 85% of nominal Voltage or less @ 25°C
DC: 75% of nominal Voltage or less @ 25°C

Max. Over Voltage: 110% of nominal

OUTLINE DIMENSIONS

Dimensions shown are in INCHES and (millimeters)



UP



VERTICAL MOUNTING RECOMMENDED WITH CONTACTS UP



ORDERING CODE

Typical Type No. **425 XCX -120A**

Series

425 Screw Terminal, 30A, 1-3 Pole

Contact Arrangements

Insulated Armature Types (600V)

CXX 3PST-NO

XCX 3PDT

Options

Tungsten Contacts (High Inrush) - **CODE W**

0.25 inch quick connect terminals- **CODE 18**

1 Aux. Contact (SPDT Snap Switch, 10A) - **CODE 90**

2 Aux. Contact (SPDT Snap Switches, 10A) - **CODE 91**

Coil Voltage

AC: 6, 12, 24, 48, 120, 240, 480 (Add "A")

DC: 6, 12, 24, 48, 110 -125 (Add "D")

ULRecognized File No. E13224

GENERAL SPECIFICATIONS

CONTACTS

Contact Material: Silver Cadmium Oxide.

TIMING

Operate Time: 30 mS Max. @ Nominal Voltage.
Release Time: 15 mS Max. @ Nominal Voltage.

INSULATION CHARACTERISTICS

Dielectric Strength: 2500 V rms between Mutually insulated current carrying parts and those parts to ground.
Insulation Resistance: 500 VDC Exceeds 1000 Megohms.

ENVIRONMENTAL CAPABILITIES

Ambient Temperature Rating: AC: -55°C to +45°C @ Rated Operation.
DC: -55°C to +80 °C

LIFE EXPECTANCY

Mechanical: 10 Million Operations no load
Electrical: 100,000 Operations @ Rated Load.

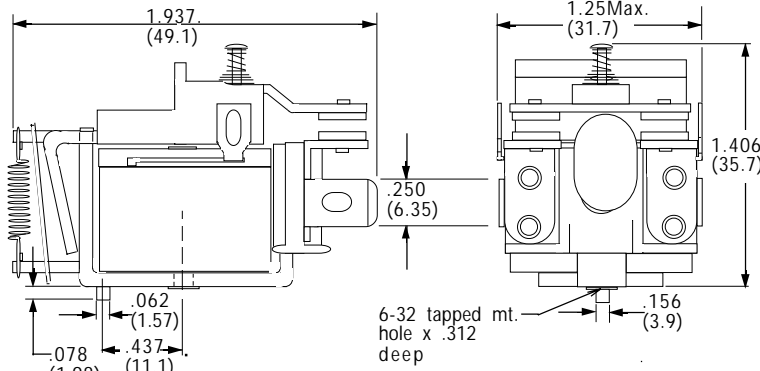
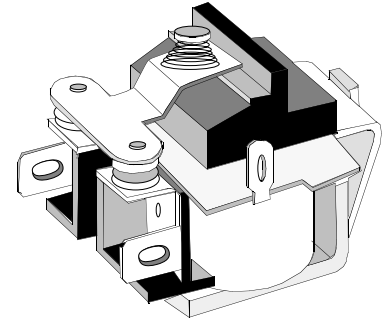
MISCELLANEOUS

Enclosure: Open Style
Weight: Small Base 9oz. large base 11 oz.approx.

CLASS 88UKD RELAY

**SIDE COIL SOLDER TERMINALS
SPST-N.O. DM, RATED 30 AMPS
1/4" QUICK CONNECT / SOLDER TERMINALS
SWITCHES UP TO 1 HP AT 600 VAC**

UL Recognized
File No. E43641



SPECIFICATIONS 88UKD

COIL

Pull-in Voltage (AC): 85% of Nominal Voltage or less
 Pull-in Voltage (DC): 80% of Nominal Voltage or less
 Dropout Voltage: 10% of nominal voltage or more
 Max. allowed voltage: 110% of nominal voltage
 Coil Resistance: ±10% Measured @ 25°C

CONTACTS

Contact Material: 1/4' silver alloy, gold flashed.
 Contact Resistance: Initial 50 Milliohms @ rated current.

Contact Rating: 30 Amps up to 300VAC/28VDC, Resistive Load
 5 Amps @ 600VAC Resistive Load
 1 HP @ 120-600 VAC Motor load.

TIMING

Operate Time: 25 mS Max. @ Nominal Voltage.
 Release Time: 20 mS Max. @ Nominal Voltage

DIELECTRIC STRENGTH

Contacts to coil: 3000 V rms
 Across open contacts: 1000 V rms
 Contacts to frame: 3000 V rms
 Insulation Resistance: 1000 megohms min. @ 500 VDC

TEMPERATURE

Operating: -10°C to +50°C @ Rated Operation. (AC)
 -10°C to +60°C @ Rated Operation. (DC)

VIBRATION RESISTANCE

Functional: 5g's 10 to 55Hz.

SHOCK RESISTANCE

Functional: 5g's 11mS Max.

LIFE EXPECTANCY

Mechanical: 5 Million Operations
 Electrical: 100,000 Operations @ Rated Load.

MISCELLANEOUS

Contact Insulation: Movable & stationary contacts are mounted on a molded plastic barrier insulator.
 Style: Open style construction.
 Mounting: 6-32 tapped hole and locating tab.
 Weight: 85 Grams, 3 oz. approx.

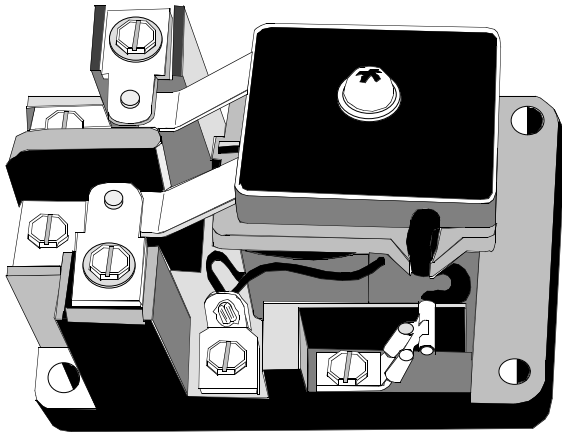
PART NUMBERS	Coil Measured @ 25°C			CROSS REFERENCE TO POTTER & BRUMFIELD
	NOMINAL INPUT VOLTAGE	NOMINAL RESISTANCE (OHMS)	NOMINAL POWER	
AC OPERATED COIL				
W88UKADX-3	24VAC	-	3VA	KR-3AH-24
W88UKADX-4	120VAC	-	3VA	KR-3AH-120
W88UKADX-5	240VAC, 60Hz 220VAC, 50Hz	-	3VA	KR-3AH-240
DC OPERATED COIL				
W88UKDX-2	12 VDC	100	1.5W	KR-3DH-12
W88UKDX-3	24 VDC	400	1.5W	KR-3DH-24
W88UKDX-4	110 VDC	8000	1.5W	KR-3DH-110

PART NUMBERS SHOWN ALSO AVAILABLE THRU STOCKING DISTRIBUTION.



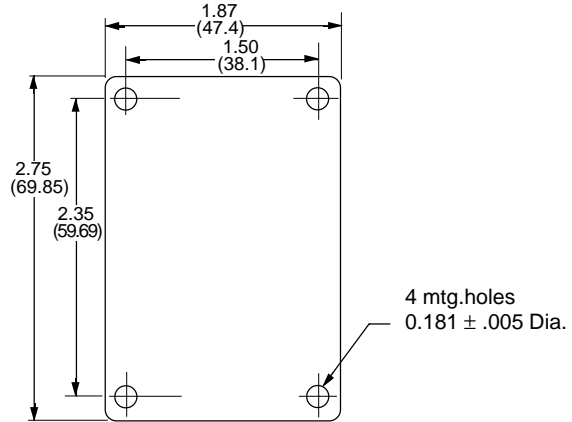
Listed (XBX Only)
file No. E13224

The **Series 415** is a compact, 15 amp base mounted industrial relay. It is a versatile relay that offers a variety of contact configurations and options. Excellent contact life assures long mechanical life and contact reliability on low level loads. Screw terminals are standard. Options include: high voltage or high inrush contacts, quick connect terminals, permanent magnet blowout and low power DC coils.



OUTLINE DIMENSIONS

Dimensions shown in Inch and (Millimeters)



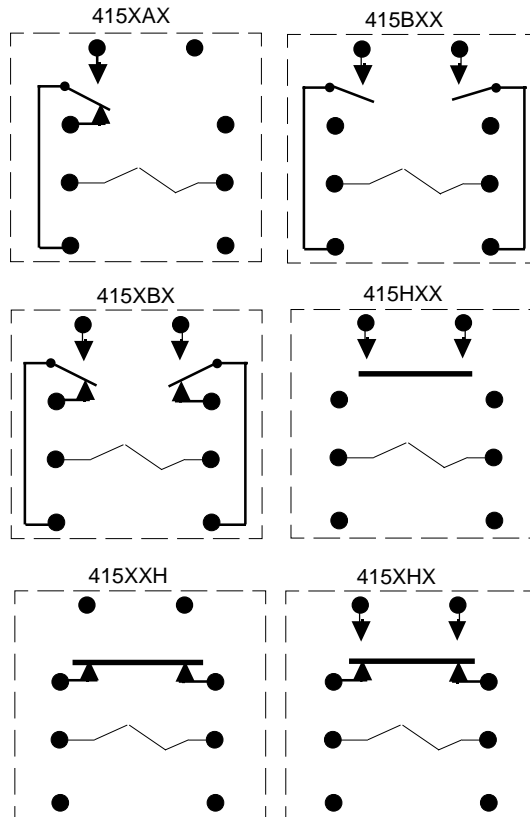
MAXIMUM DEPTH DIMENSION OF CONTACTOR 1.75", (44.45)



VERTICAL MOUNTING
RECOMMENDED WITH
CONTACTS UP

WIRING DIAGRAMS

TOP VIEW



Magnecraft & Struthers-Dunn

ORDERING CODE	Typical Type No.	415	XBX	18	-120A
Series	415 Screw Terminals, 15 Amp 1 and 2 pole				
Contact Arrangements	BXX (DPST-NO.) HXX (SPST-NO-DM) XAX (SPDT) XBX (DPDT) XHX (SPDT-DB-DM) XXH (SPST-NC-DB)				
Options	0.25 inch quick connect terminals - CODE 18 Permanent Magnet Blowout - CODE 69 (Consult Factory for other options)				
Coil Voltage	AC: 6, 12, 24, 48, 120, 240, (Add "A") DC: 6, 12, 24, 32, 48, 115-125 (Add "D")				

Special coils: Low Power (mW), series coils.
 High Inrush contacts: 10 Amps continuous, 150 Amp Inrush.
 High Voltage Contacts: Up to 4KV

CONTACT RATINGS

LOAD	30VDC	120VAC	240VAC
RESISTIVE MOTOR (80% pF)	15A -	15A 1/2HP	10A 1HP

AC COIL SPECIFICATIONS @ 25°C (6VA)

Nominal Voltage (60HZ)	Resistance Ohms ± 10%	mA @ nominal voltage	
		Inrush Current	Sealed Coil
6	1.5	1800	1000
12	6.3	900	500
24	25	450	250
48	100	225	125
120	620	90	50
240	2500	45	25

DC COIL SPECIFICATIONS @ 25°C (3.5W)

Nominal Voltage (VDC)	Resistance Ohms ± 10%	mA @ nominal voltage	
		Coils Cold	Coils Hot
6	10	600	500
12	40	300	250
24	155	150	125
32	390	112	95
48	620	75	62
*115/125	4000	31	26

* 220-250 VDC relays supplied with resistor in series with 115/125 VDC coil.

CROSS REFERENCE STRUTHERS-DUNN TO WARD LEONARD

STRUTHERS-DUNN	WARD LEONARD
DC COIL 2 POLE N.O.	
415BXX-6D	105-1420
415BXX-12D	105-3420
415BXX-24D	105-4420
415BXX-110D	105-6420
DC COIL 2 POLE N.C..	
415XXB-6D	105-1421
415XXB-12D	105-3421
415XXB-24D	105-4421
415XXB-110D	105-6421
DC COIL DPDT	
415XBX-6D	105-1422
415XBX-12D	105-3422
415XBX-24D	105-4422
415XBX-110D	105-6422
AC COIL 2 POLE N.O..	
415BXX-6A	105-1520
415BXX-12A	105-3520
415BXX-24A	105-4520
415BXX-120A	105-6520
AC COIL 2 POLE N.C..	
415XXB-6A	105-1521
415XXB-12A	105-3521
415XXB-24A	105-4521
415XXB-120A	105-6521
415XXB-240A	105-7521
AC COIL DPDT	
415XBX-6A	105-1522
415XBX-12A	105-3522
415XBX-24A	105-4522
415XBX-120A	105-6522
415XBX-240A	105-7522

NOTE:

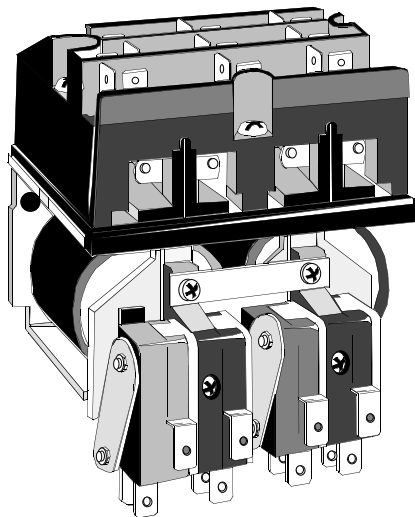
THE 105 STYLE IS SLIGHTLY SMALLER WITH A DIFFERENT MOUNTING HOLE PATTERN.

GENERAL SPECIFICATIONS

COIL	
Pull-in Voltage:	80% of nominal voltage or less measured at 25°C
Dropout Voltage:	10% of nominal voltage or more @ 25°C
Max. allowed voltage:	110% of nominal voltage
Coil Resistance:	±10% Measured @ 25°C
CONTACTS	
Contact Material:	Silver Cadmium Oxide.
TIMING	
Operate Time:	25 mS Max. @ Nominal Voltage.
Release Time:	10mS Max. @ Nominal Voltage.
DIELECTRIC STRENGTH	
All Mutually Insulated Points:	1500 V rms between all mutually insulated current carrying parts and those parts to ground.
Insulation Resistance:	500 VDC Exceeds 1000 Megohms.
TEMPERATURE	
Temperature Rating:	AC: -45°C to +55°C @ rated operation. DC: -45°C to +70°C @ rated operation
LIFE EXPECTANCY	
Mechanical:	20 Million Operations no load
Electrical:	200,000 Operations @ Rated Load. 500,000 Operations @ 1/2 rated load.
MISCELLANEOUS	
Weight:	4 oz. (113 g) approx.



The Series A275 relay is a 2 coil, compact motor reversing contactor which finds extensive applications in the Industrial door operator Industry, the hoist Industry and electronic wheel balancers, to name a few. The A275 has Q.C. coil terminals extending out the back (opposite the contact terminals), mechanically interlocked armatures is a standard feature.

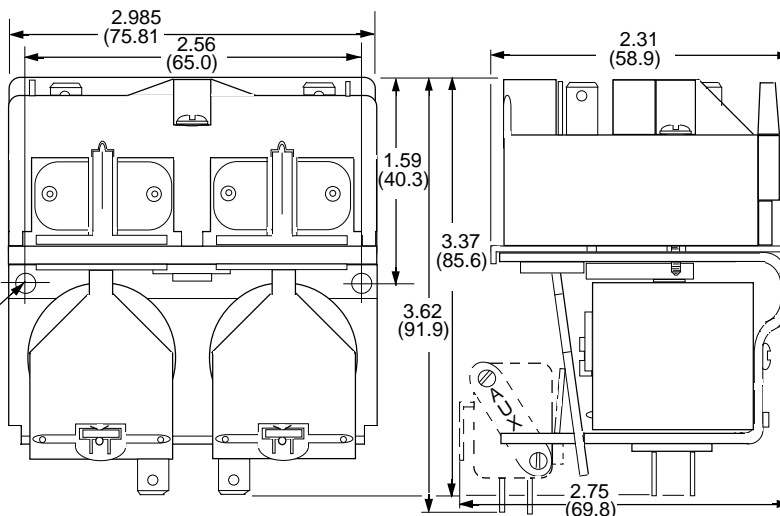


UP
↑
**RECOMMENDED
MOUNTING POSITION**

.187 (4.76)
2 holes for
#8 screws

OUTLINE DIMENSIONS

Dimensions shown in Inch and (Millimeters)



Magnecraft & Struthers-Dunn

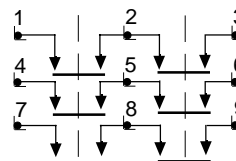
ORDERING CODE				
Typical Type No.	A275	KXX	90	-24A
Series	A275, 1/4" Terminals, motor reversing. Continuous, 1 & 2 Hp, 3 pole models			
Contact Arrangements	KXX (3PDM-NO., per coil)			
Options	2 Aux. contacts, each SPDT (1 per coil) 1/4" Q.C. terminals - CODE 90 4 Aux. contacts, each SPDT (2 per coil) 1/4" Q.C. terminals - CODE 91 Rectified Coil - CODE V2			
Coil Voltage	AC: 12, 24, 110, 120, 220, 240 (Add "A") DC: 12, 24, 32, 48, 120 (Add "D")			

OPTIONS (CONSULT FACTORY)

WIRING DIAGRAM

TOP VIEW

Main contact terminals are numbered on contactor



Auxiliary contact
Snap Switches

GENERAL SPECIFICATIONS

COIL	
Pull-in Voltage:	AC: 85%, DC: 80% of nominal voltage measured at 25°C
Dropout Voltage:	10% of nominal voltage or more @ 25°C
Max. allowed voltage:	110% of nominal voltage
Coil Resistance:	±10% Measured @ 25°C
CONTACTS	
Contact Material:	Silver Cadmium Oxide.
TIMING	
Operate Time:	50 mS Max. @ Nominal Voltage.
Release Time:	30 mS Max. @ Nominal Voltage.
DIELECTRIC STRENGTH	
All Mutually Insulated Points:	2500 V rms between all mutually Insulated current carrying parts and those parts to ground.
Insulation Resistance:	500 VDC Exceeds 1000 Megohms.
TEMPERATURE	
Temperature Rating:	AC: -45°C to +50°C @ rated operation. DC: -45°C to +70 °C @ rated operation.
LIFE EXPECTANCY	
Mechanical:	5 Million Operations no load
Electrical:	100,000 Operations @ Rated Load. 500,000 Operations @ 1/2 rated load.
MISCELLANEOUS	
Weight:	1 pound, approx..

CONTACT RATINGS

AC CONTACTS: Rated with all contacts in use, not rated per pole.

VOLTAGE (60HZ)	PHASE	MOTOR LOADS (HP)	RESISTIVE LOAD (AMPS)
120	1 - 2 - 3	1	15
240	1	1.5	10
240	2 - 3	3	10
480/600	2 - 3	3	5

DC COIL SPECIFICATIONS @ 25°C

Nominal Voltage	Resistance Ohms ± 10%	Power Consumption
12	31.0	4.5W
24	125	4.6W
32	210	4.9W
48	500	4.6W
120	3240	4.4W

Polypropylene encapsulated coils

DC CONTACTS

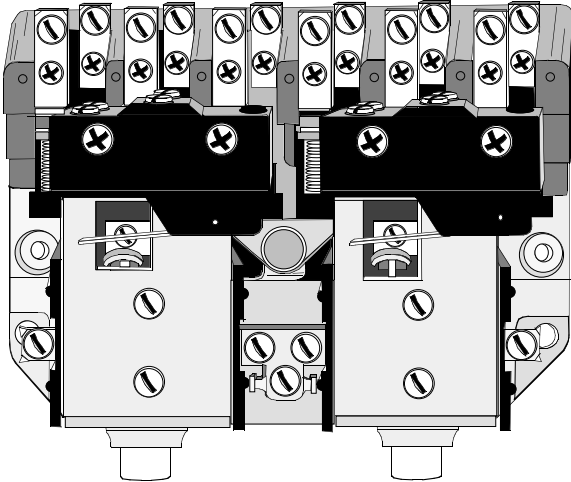
VOLTAGE (DC)	RESISTIVE LOAD (AMPS)
30	15
125	5

600 volt spacing to ground.
300 volt spacing for auxiliary contacts.

AC COIL SPECIFICATIONS @ 25°C

Nominal Voltage	Resistance Ohms ± 10%	Power Consumption
12V/50-60hz	1.24	17VA
24V/50-60hz	4.63	16.7VA
110V/50-120V/60hz	125	16.8VA
220V/50-240V/60hz	500	16.8VA

The Series A575 relay is rated to 7.5 HP. Two sets of 3 pole, double-make, N.O. contacts are mechanically Interlocked to prevent simultaneous closure. Front mounted auxiliary contacts are available for electrical lockup and lockout. All versions have silver cadmium oxide contacts. The A575 motor reversing contactor is widely used for control of overhead doors, elevators, hoists, machine tools, and other similar devices that requires frequent jogging.

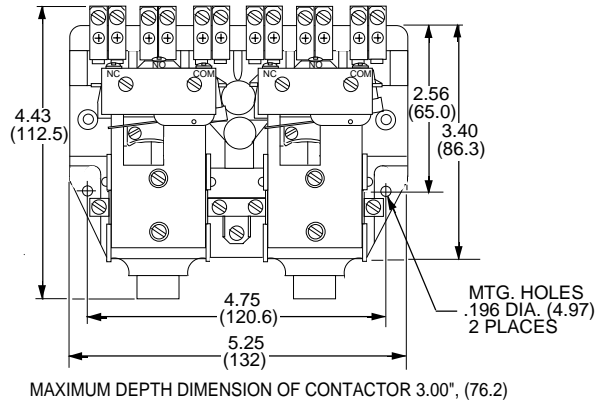


UP

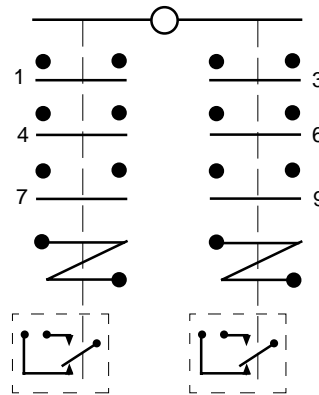


RECOMMENDED
MOUNTING POSITION

OUTLINE DIMENSIONS
Dimensions shown in Inch and (Millimeters)



WIRING DIAGRAM



Magnecraft & Struthers-Dunn

ORDERING CODE				
Typical Type No.	A575	KXX	90	-24A
Series	A575, Screw Terminals, 2 coil motor rev. contactor, 1.5 - 7.5 HP			
Contact Arrangements	KXX (3PDM-NO., per coil)			
Options	1 Form SPST-NO & SPST-NC Aux. contacts per coil, Rated 5 Amps - CODE 74 SPDT Aux. contact per coil Rated 5 Amps. - CODE 90			
Coil Voltage	AC: 12, 24, 120, 240, 440, 550 (Add "A") DC: 12, 24, 115-125, 240 (Add "D")			

Mechanical Interlock omitted, Consult Factory
OPTIONS (CONSULT FACTORY)

GENERAL SPECIFICATIONS

COIL	
Pull-in Voltage:	AC: 85%, DC: 80% of nominal voltage measured at 25°C
Dropout Voltage:	10% of nominal voltage or more @ 25°C
Max. allowed voltage:	110% of nominal voltage
Coil Resistance:	±10% Measured @ 25°C
CONTACTS	
Contact Material:	Silver Cadmium Oxide.
TIMING	
Operate Time:	60 mS Max. @ Nominal Voltage.
Release Time:	30 mS Max. @ Nominal Voltage.
DIELECTRIC STRENGTH	
All Mutually Insulated Points:	2500 V rms between all mutually Insulated current carrying parts and those parts to ground.
Insulation Resistance:	500 VDC Exceeds 1000 Megohms.
TEMPERATURE	
Temperature Rating:	-40°C to +50°C @ rated operation.
LIFE EXPECTANCY	
Mechanical:	5 Million Operations no load
Electrical:	100,000 Operations @ Rated Load. 250,000 Operations @ 1/2 rated load.
MISCELLANEOUS	
Weight:	1.5 pounds, approx..

AC COIL SPECIFICATIONS @ 25°C (22VA)

Nominal Voltage	Resistance Ohms ± 10%	Nominal Current
12	1.00	1.833 AMP
24	5.30	0.917 AMP
*120	92.0	0.183 AMP
240	420	0.920 AMP
440	2100	0.050 AMP
550	3100	0.040 AMP

* AC coil is 120, 50-60HZ

CONTACT RATINGS

LOAD	VOLTAGE (60HZ)	PHASE	MOTOR LOADS (HP)	RESISTIVE LOAD (AMPS)
3PST-DM-NO (per pole)	120	1	1-1/2	30
	208/240	1	3	30
	208/240	2-3	5	30
	480/600	2-3	7-1/2	15

DC CONTACTS

LOAD	VOLTAGE (DC)	RESISTIVE LOAD (AMPS)
3PST-DM-NO (per pole)	115	15
	230	2

DC COIL SPECIFICATIONS @ 25°C (10 WATT)

Nominal Voltage	Resistance Ohms ± 10%	Nominal Current
12	16.5	0.727
24	58.2	0.412
**120	1,450	0.083
240	4,200	0.055

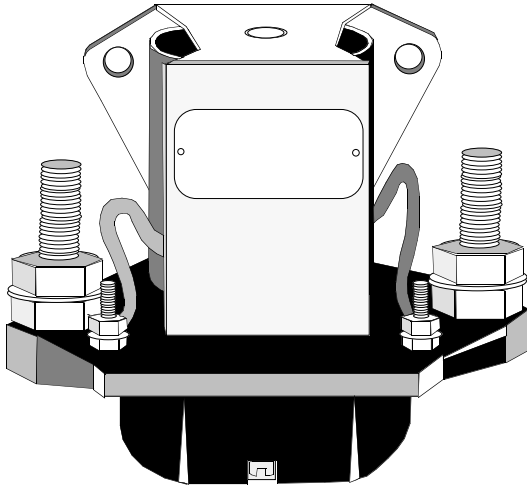
** DC coil is 110-125 VDC

AUXILIARY CONTACTS

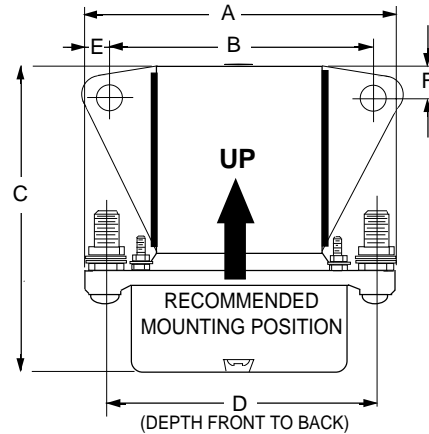
LOAD	VOLTAGE (AC)	RESISTIVE LOAD (AMPS)
1 FORM "A"	120	5
"B" OR "C"	240	5

SERIES 101-102-103 50,100 & 200 AMP SINGLE POLE DC CONTACTORS

The Series 101, 102 and 103 are DC solenoid-actuated, heavy duty contactors. Each contactor has a single pole, double-make normally open contact. Contacts are enclosed with a molded plastic cover. The series 101 is rated at 50 amps continuous duty. The series 102 is rated 100 amps continuous and the series 103 is rated at 200 amps continuous. Coils are rated for DC only, as standard. The powerful magnetic structure creates very high contact pressure which results in very reliable and low resistance contacts, making them suitable for power applications in telecommunications, elevator and rail mass transit as well as other Industries.



OUTLINE DIMENSIONS



Dimensions shown in Inch and (Millimeters)

Dim.	101HXX	102HXX	103HXX
A	2.69 (68.33)	3.38 (85.73)	4.25 (107.9)
B	1.87 (47.4)	2.25 (57.1)	2.40 (60.9)
C	2.50 (63.5)	3.22 (81.79)	3.53 (89.66)
D	1.84 (46.7)	2.09 (53.0)	2.65 (67.31)
E	0.40 (10.1)	0.56 (14.2)	0.92 (23.3)
F	0.43 (10.9)	0.50 (12.7)	0.56 (14.2)

Mounting holes (2) - .265 (6.73) Inch Dia.

Magnecraft & Struthers-Dunn

ORDERING CODE			
Typical Type No.	102	HXX	-28D
Series	101 Screw Term., 50 Amp, 1 pole 102 Screw Term., 100 Amp, 1 pole 103 Screw Term., 200 Amp, 1 pole		
Contact Arrangements	HXX- 1 Pole D.M.- N.O. Standard. HXH- 2 Pole D.B. -1 N.C. and 1 N.O.103 only. JXX- 2 Pole D.M. N.O XRX- SPDT-M-B (Make before break, 103 only) XXH- 1Pole-D.B. + 1NC (103 only)		
Coil Voltage	DC: 12, 28, 48, (Add "D")		

Note: Contact arrangements other than the standard HXX will require a 3 digit suffix number to be added to the type number. This is done by the factory and will be shown after the contact arrangement code. Contact factory for suffix number.

OPTIONS (CONSULT FACTORY)

AC COIL INPUT VOLTAGES
NON STANDARD DC COIL VOLTAGES

WIRING DIAGRAM

