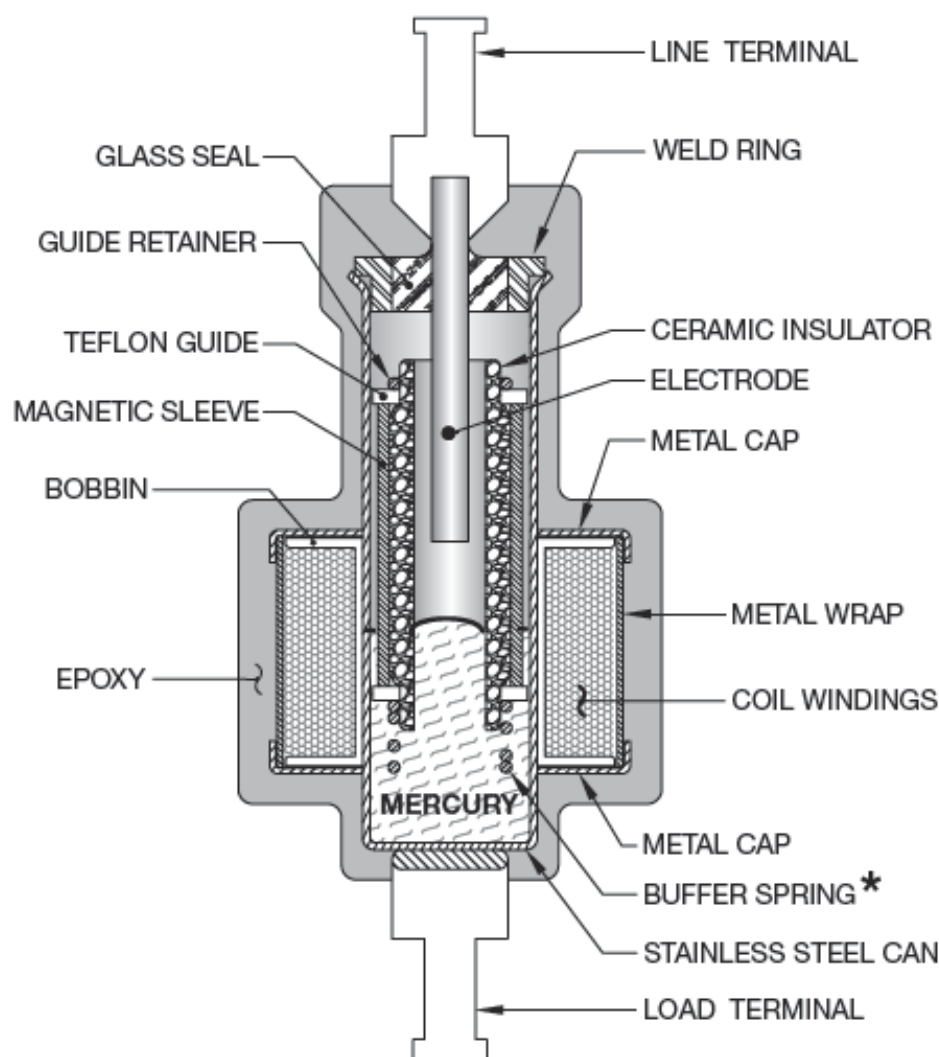


MDI - MERCURY RELAYS

MERCURY RELAYS



MERCURY RELAYS

MERCURY TO METAL CONTACTOR:

The load terminals are isolated from each other by the glass in the hermetic seal. "The plunger assembly," which includes the ceramic insulator, the magnetic sleeve and related parts, floats on the mercury pool. When the coil is powered causing a magnetic field, the plunger assembly is pulled down into the mercury pool which is in turn displaced and moved up to make contact with the electrode, closing the circuit between the top and bottom load terminal which is connected to the stainless steel can.

MERCURY RELAYS - ORDER CODE

[illegible]

30- AMP NORMALLY OPEN RELAYS

30 AMP NORMALLY OPEN

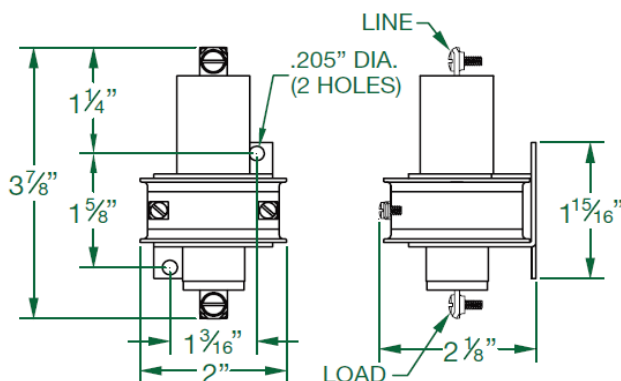
The 30-AMP model is designed to save space and simplify mounting methods. The standard mounting bracket on the three pole model allows the unit to be mounted in standard 3" snap track channel. If you do not use snap track mounting, the standard three pole bracket has key hole slots for easy mounting in any panel arrangement. The universal three pole mounting bracket has various mounting holes and key hole slots to meet a variety of mounting centers.

The 30-AMP series is a more compact line with a well proven switch which is the heart of mercury relays. It is the same switch design that is in our 35 and 60-AMP encapsulated MDR's, which have withstood the test of time and millions of cycles in many different applications.

30-AMP SERIES COIL DATA

PART #	Resistance	Current	V.A.	Watts
30NO - 24D	180 Ω	133 mA	3.2	3.2
230NO - 24D	131 Ω	188 mA	4.5	4.5
330NO-24D	73 Ω	329 mA	7.9	7.9
30NO - 24A	28 Ω	316 mA	7.6	2.8
230NO - 24A	12.5 Ω	610 mA	14.6	4.7
330NO-24A	7.6 Ω	815 Ma	19.6	5.0
30NO - 120A	725 Ω	65 mA	7.8	3.1
230NO - 120A	317 Ω	118 mA	14.2	4.4
330NO-120A	210 Ω	163 mA	9.6	5.6
30NO - 220A	3,150 Ω	27 mA	6.0	2.2
230NO - 220A	1,300 Ω	56 mA	12.3	4.1
330NO-220A	728 Ω	86 mA	18.9	5.5

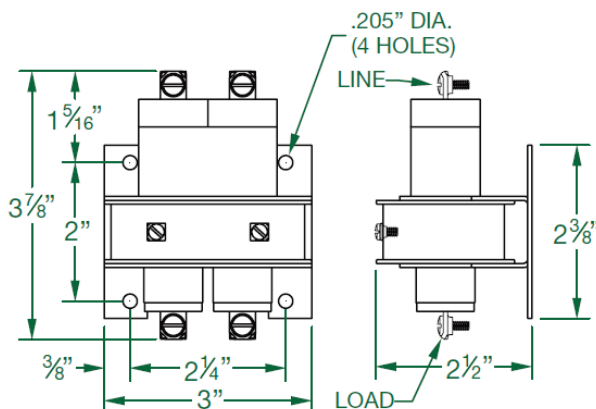
SINGLE POLE NORMALLY OPEN



STANDARD FEATURES

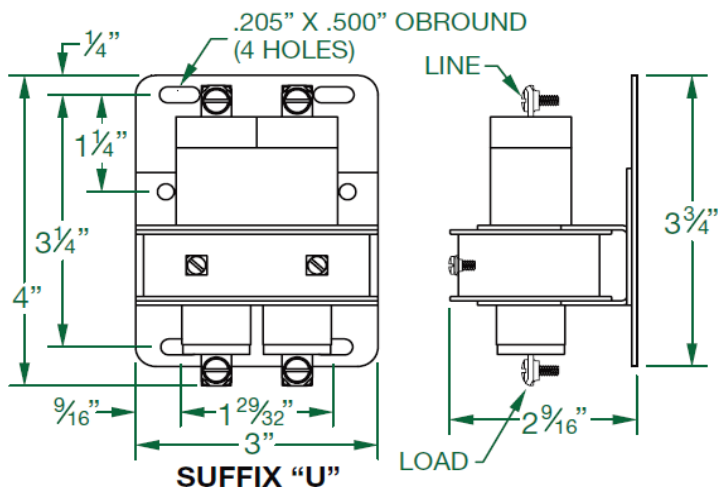
**TYPICAL SPECIFICATIONS
ON NORMALLY OPEN UNITS:**
 OPERATE TIME: 50 milliseconds
 RELEASE TIME: 80 milliseconds
CONTACT RESISTANCE:
 30-AMP=.003 ohm*
DIELECTRIC WITHSTAND:
 2500 VAC RMS
LONGEVITY:
 MILLIONS OF CYCLES
TEMPERATURE RANGE:
 -35°C TO 85°C
COIL TERMINALS:
 #6 BINDING HEAD SCREWS
LOAD TERMINALS:
 #8 BINDING HEAD SCREWS
UL LISTING: FILE #E62767
C.S.A.: FILE #LR41198
 *AFTER CYCLING UNDER LOAD.

TWO POLE NORMALLY OPEN STANDARD MOUNT

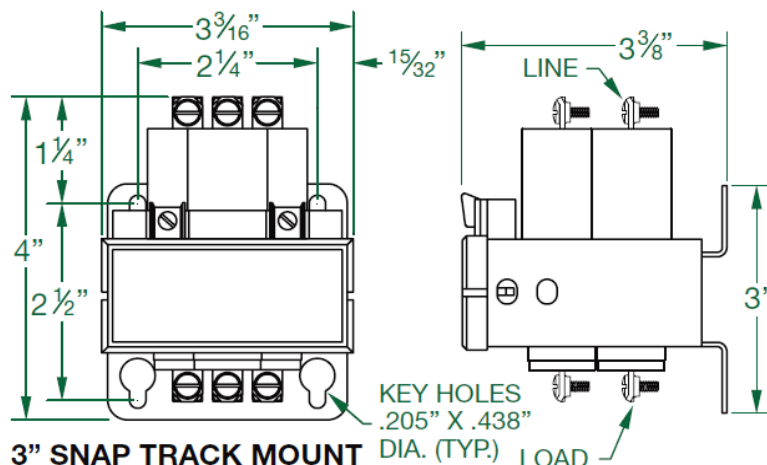


30- AMP NORMALLY OPEN RELAYS

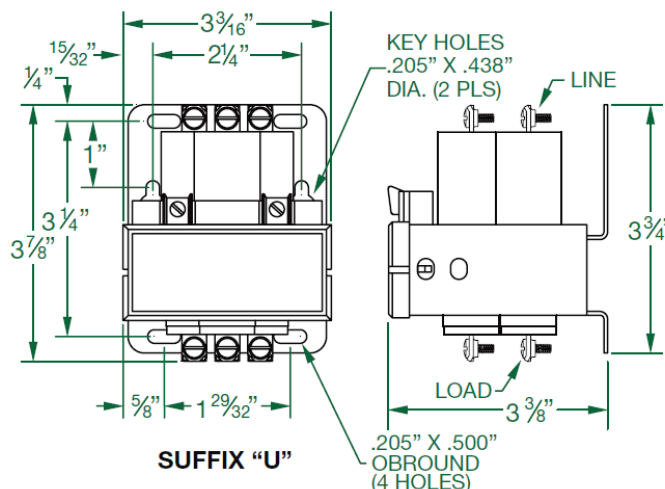
TWO POLE NORMALLY OPEN UNIVERSAL MOUNT



THREE POLE NORMALLY OPEN STANDARD MOUNT



THREE POLE NORMALLY OPEN UNIVERSAL MOUNT



L35/L60 - AMP NORMALLY OPEN RELAYS

L35/L60 NORMALLY OPEN

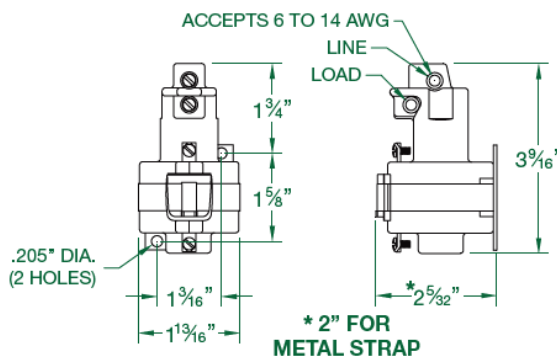
The "L" version of the 35 and 60-AMP normally open contactors are designed and manufactured to the same high quality specifications as the standard 35 and 60-AMP models. The contactor switch is the same well proven design that has been manufactured since 1975. The mounting centers and physical size are identical to the standard single and two pole 35 and 60-AMP molded versions.

The new design provides a cleaner appearance, and is a more economical design. It is available in the single and two pole models only, with top and bottom load terminals or with lead wires. Noted are the typical specifications and UL and CSA file numbers.

L35/L60-AMP SERIES COIL DATA

PART #		Resistance	Current	V.A.	Watts
L35NO - 24D	L60NO - 24D	188 Ω	135 mA	3.3	3.3
L235NO - 24D	L260NO - 24D	92 Ω	260 mA	6.2	6.2
L35NO - 24A	L60NO - 24A	28 Ω	325 mA	7.8	3.0
L235NO - 24A	L260NO - 24A	10.3 Ω	660 mA	15.8	4.5
L35NO - 120A	L60NO - 120A	725 Ω	75 mA	9.0	4.0
L235NO - 120A	L260NO - 120A	350 Ω	115 mA	13.8	4.6
L35NO - 220A	L60NO - 220A	3,150 Ω	27 mA	5.9	2.2
L235NO - 220A	L260NO - 220A	1,000 Ω	69 mA	15.2	4.8

SINGLE POLE NORMALLY OPEN



STANDARD FEATURES

TYPICAL SPECIFICATIONS
ON NORMALLY OPEN UNITS:

OPERATE TIME: 50 milliseconds

RELEASE TIME: 80 milliseconds

CONTACT RESISTANCE:

35-AMP=.003 ohm*

60-AMP=.002 ohm*

DIELECTRIC WITHSTAND:

2500 VAC RMS

LONGEVITY:

MILLIONS OF CYCLES

TEMPERATURE RANGE:

-35°C TO 85°C

COIL TERMINALS:

#6 BINDING HEAD SCREWS

LOAD TERMINALS:

PRESSURE CONNECTORS FOR

A.W.G. #4-#14 ON 35-AMP AND

A.W.G. #2-#8 ON 60-AMP UNITS

#8 BINDING HEAD SCREWS

UL LISTING:

FILE #E62767 FOR L35 AND

L60-AMP N.O. UNITS 1-2 POLES

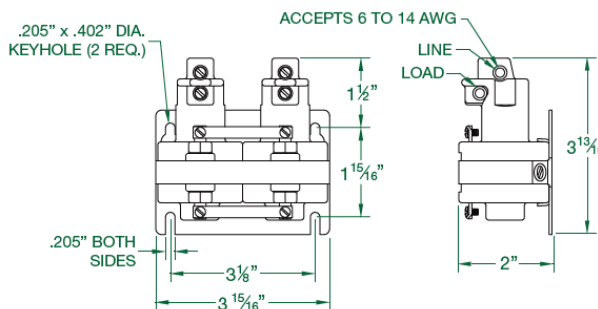
C.S.A.:

FILE #LR41198 AND

L60-AMP N.O. UNITS 1-2 POLES

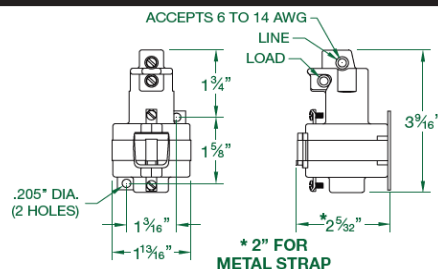
*AFTER CYCLING UNDER LOAD.

TWO POLE NORMALLY OPEN



35/60 - AMP NORMALLY OPEN RELAYS

SINGLE POLE NORMALLY OPEN



STANDARD FEATURES

TYPICAL SPECIFICATIONS NORMALLY OPEN UNITS:

OPERATE TIME: 50 milliseconds

RELEASE TIME: 80 milliseconds

NORMALLY CLOSED UNITS:

OPERATE TIME: 50 milliseconds

RELEASE TIME: 80 milliseconds

CONTACT RESISTANCE:

35-AMP=.003 ohm*

60-AMP=.002 ohm*

TEMPERATURE RANGE:

-35°C TO 85°C

COIL TERMINALS:

#6 BINDING HEAD SCREWS

LOAD TERMINALS:

PRESSURE CONNECTORS FOR

A.W.G. #4-#14 ON 35-AMP AND

A.W.G. #2-#8 ON 60-AMP UNITS

#8 BINDING HEAD SCREWS

RATINGS:

SEE PAGE 74 FOR COIL DATA

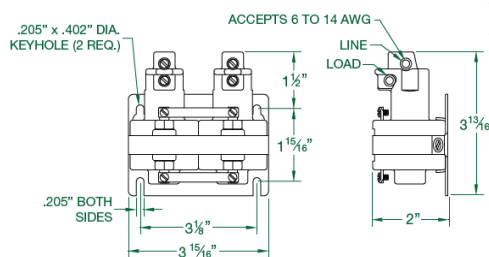
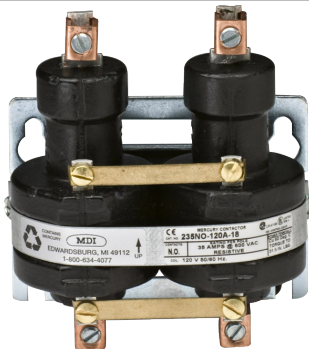
SEE PAGE 75 FOR RATINGS

UL LISTING: FILE #E-62767 FOR

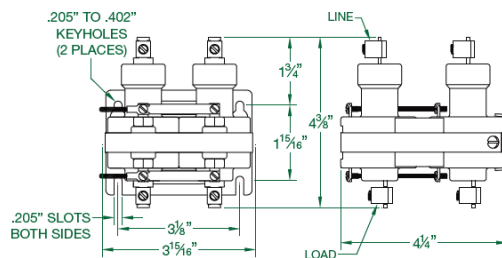
C.S.A.: FILE # LR 41198 FOR

*AFTER CYCLING UNDER LOAD.

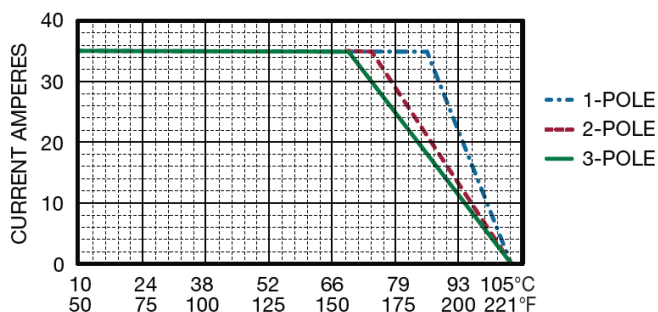
TWO POLE NORMALLY OPEN



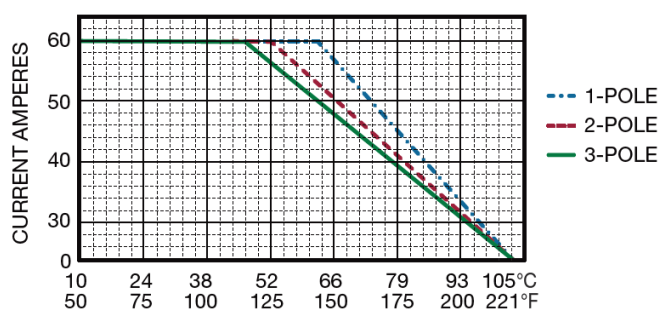
THREE POLE NORMALLY OPEN



35-AMP NORMALLY OPEN
LOAD DERATING DUE TO AMBIENT TEMPERATURE

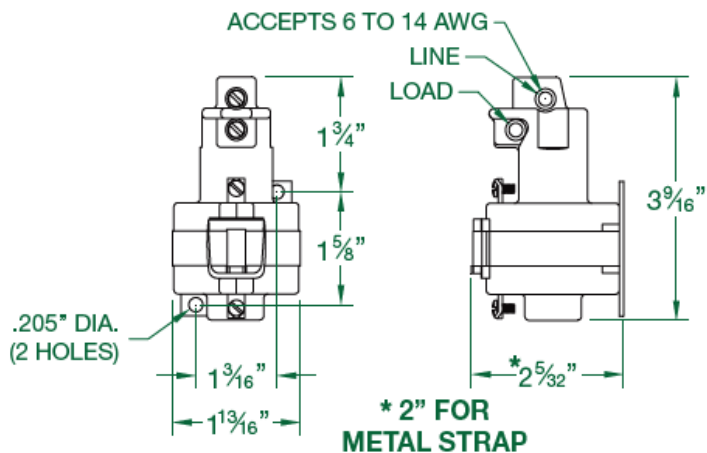
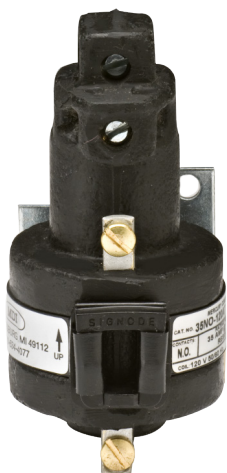


60-AMP NORMALLY OPEN
LOAD DERATING DUE TO AMBIENT TEMPERATURE

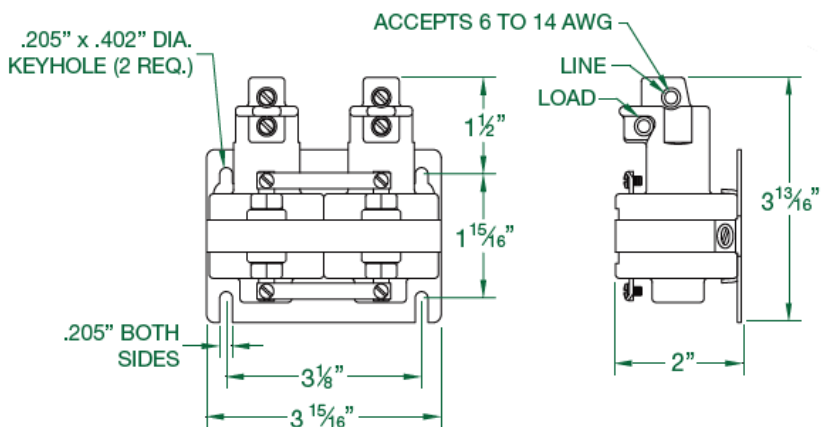


35-AMP T-TOP RELAYS

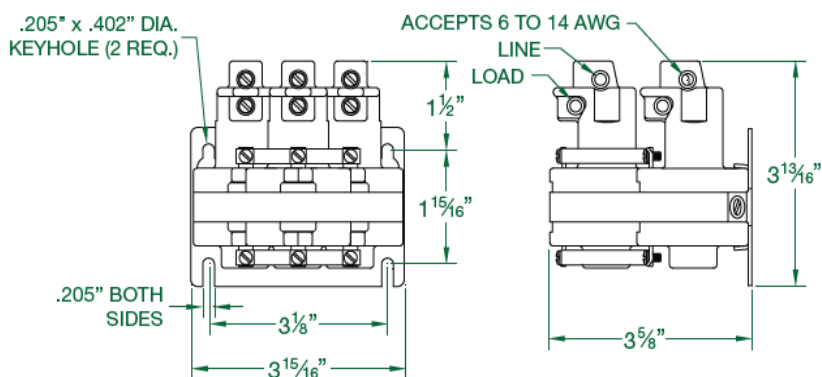
SINGLE POLE NORMALLY OPEN



TWO POLE NORMALLY OPEN



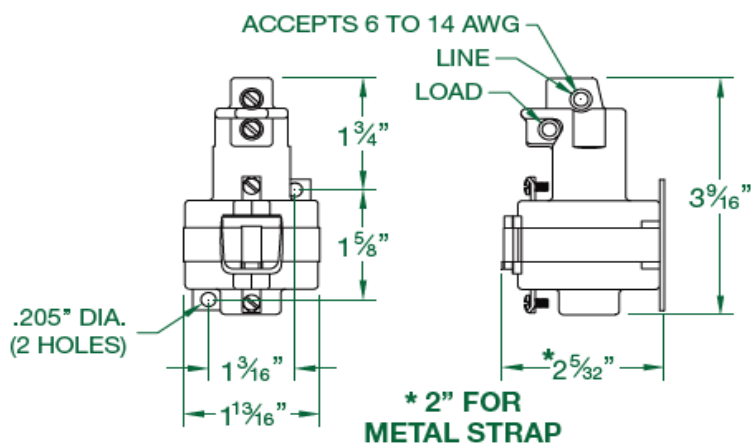
THREE POLE NORMALLY OPEN



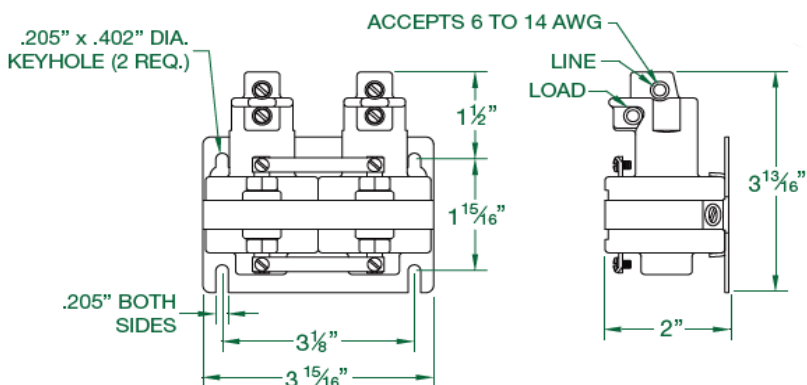
35/60 - AMP NORMALLY CLOSED RELAYS

Similar construction as normally open units but with coil positioned closer to top of the contactor

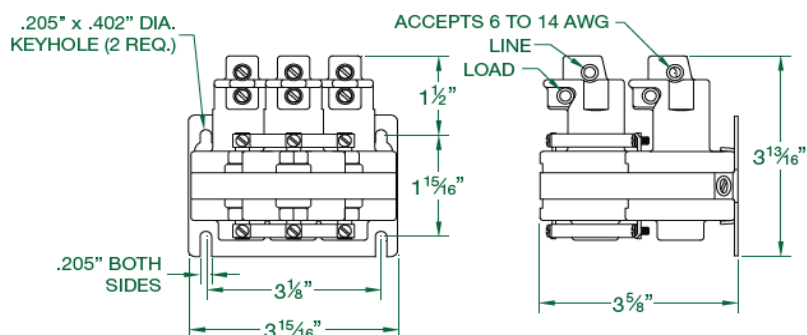
SINGLE POLE NORMALLY CLOSED



TWO POLE NORMALLY CLOSED



THREE POLE NORMALLY CLOSED



100 -AMP RELAYS

STANDARD FEATURES

TYPICAL SPECIFICATIONS

ON NORMALLY OPEN UNITS:

OPERATE TIME: 50 milliseconds

RELEASE TIME: 80 milliseconds

CONTACT RESISTANCE:

35-AMP=.003 ohm*

60-AMP=.002 ohm*

DIELECTRIC WITHSTAND:

2500 VAC RMS

LONGEVITY:

MILLIONS OF CYCLES

TEMPERATURE RANGE:

-35°C TO 85°C

COIL TERMINALS:

LOAD TERMINALS:

PRESSURE CONNECTORS FOR

A.W.G. #4-#14 ON 35-AMP AND

A.W.G. #2-#8 ON 60-AMP UNITS

#8 BINDING HEAD SCREWS

UL LISTING:

FILE #E62767 FOR L35 AND

L60-AMP N.O. UNITS 1-2 POLES

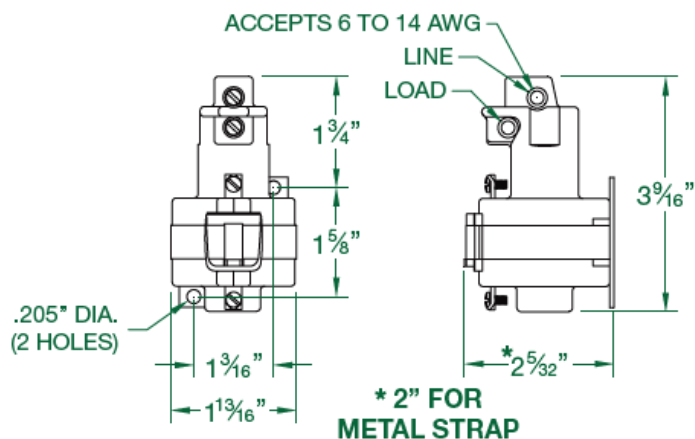
C.S.A.:

FILE #LR41198 AND

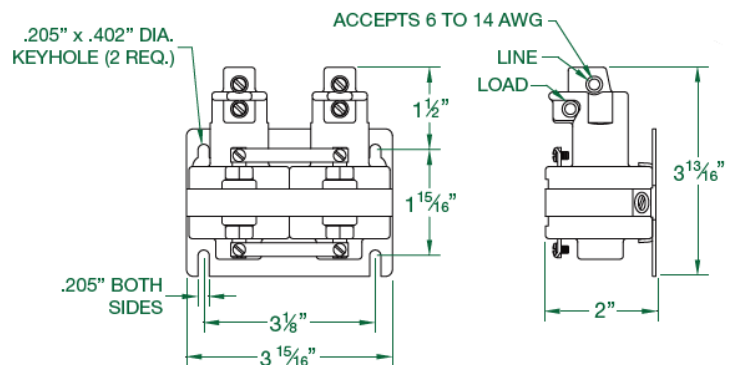
L60-AMP N.O. UNITS 1-2 POLES

*AFTER CYCLING UNDER LOAD.

SINGLE POLE NORMALLY OPEN

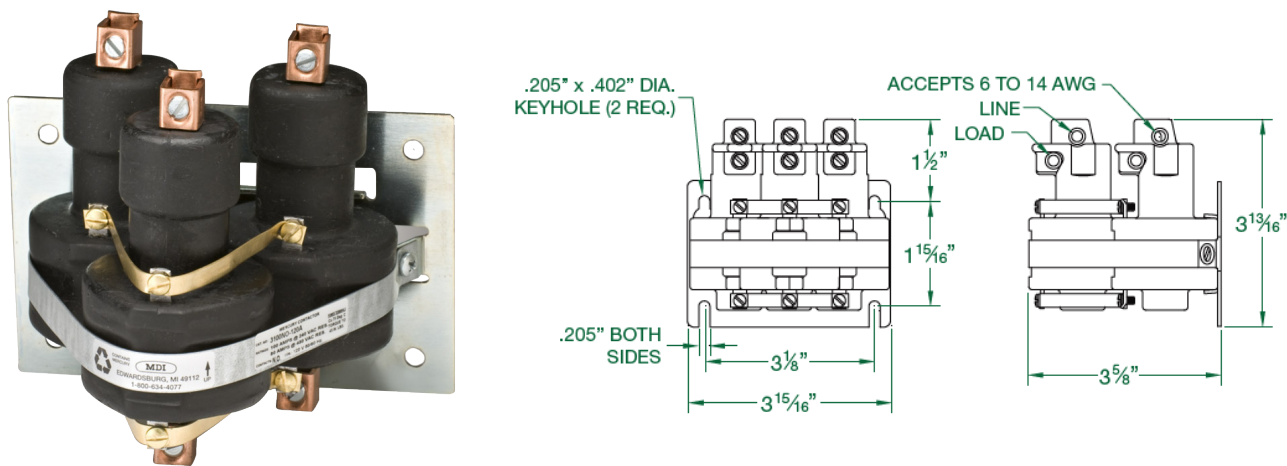


TWO POLE NORMALLY OPEN

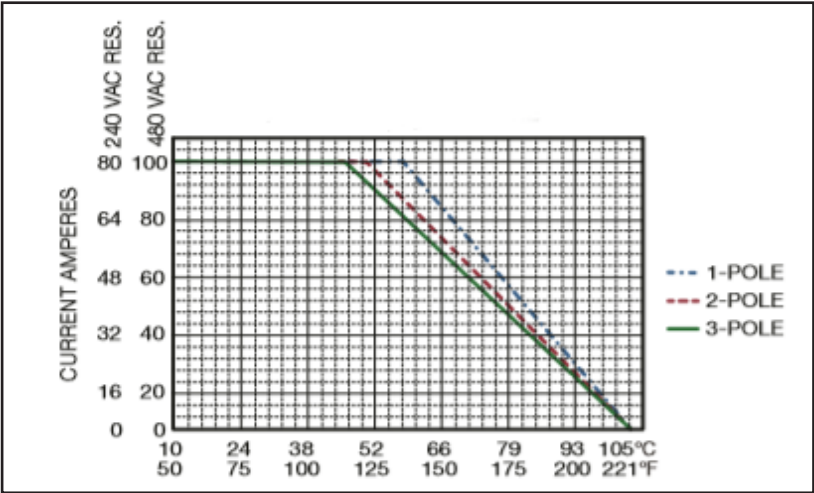


100 -AMP RELAYS

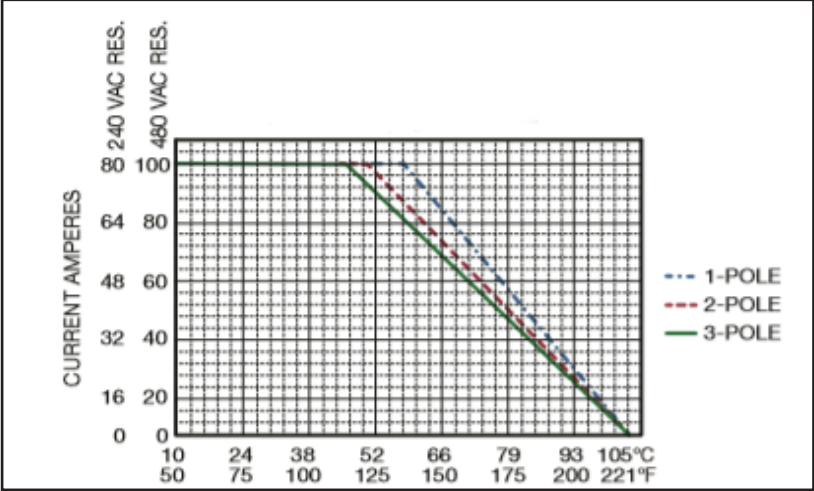
THREE POLE NORMALLY OPEN



100-AMP NORMALLY OPEN LOAD DERATING DUE TO AMBIENT TEMPERATURE



100-AMP NORMALLY CLOSED LOAD DERATING DUE TO AMBIENT TEMPERATURE



HIGH VOLTAGE RELAYS

STANDARD FEATURES

For UV Curing, and Various High Voltage applications. Available in Single Pole, Normally Open, and Normally Closed Units. The coils utilize 6-32 Wire Binding Screws, and the Contacts use Compression type terminals for #2 thru #8 A.W.G. wire.

- Also available in 2 & 3 pole

RATINGS:

10 AMPS @ 3500 VAC

15 AMPS @ 2500 VAC

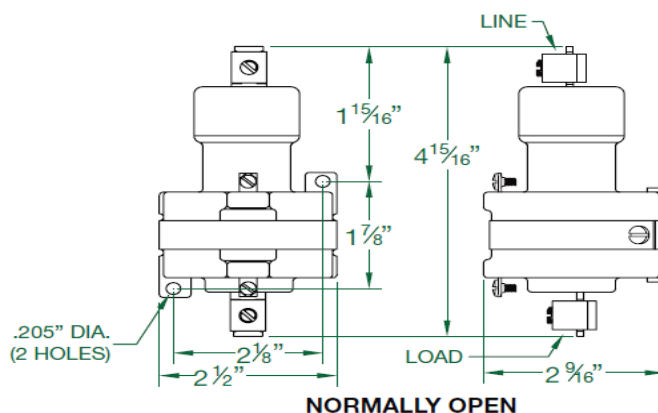
AC INDUCTIVE Power Factor .7 or Greater

#6 BINDING HEAD SCREWS

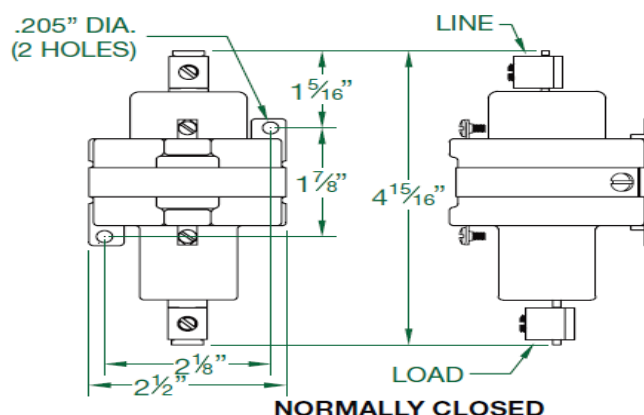
HIGH VOLTAGE - COIL DATA

PART #	Resistance	Resistance	Current	V.A.	Watts
100NC-24D-6A	24 VDC	65	369 mA	8.9	8.9
100NC-120A-6A	120 VAC	380	125 mA	15.0	5.9
100NC-220A-6A	220 VAC	1400	76 mA	16.7	8.1
100NO-12DH-6A	12 VDC	16	750 mA	9.0	9.0
100NO-24AH-6A	24 VAC	16	760 mA	18.2	9.2
100NO-24DH-6A	24 VDC	65	369 mA	8.9	8.9
100NO-120AH-6A	120 VAC	380	158 mA	19.0	9.5
100NO-220AH-6A	220 VAC	1320	92 mA	20.2	11.2

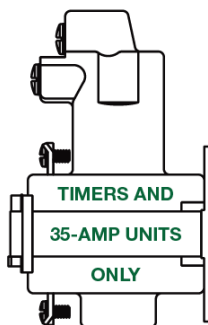
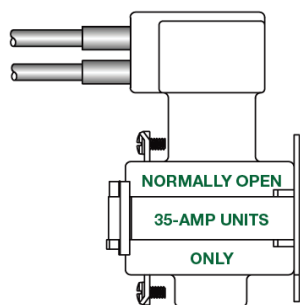
SINGLE POLE NORMALLY CLOSED



SINGLE POLE NORMALLY CLOSED



OPTIONAL TERMINATIONS & MOUNTING

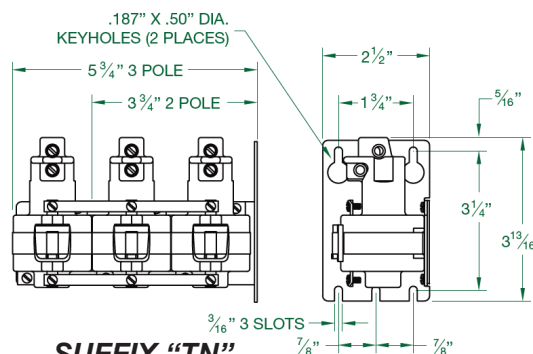


TS (Top Screws)

Designated by the letters "TS" in the catalog number suffix. For timers and 35-AMP units. (Dimensions same as T-Top see page 8).

L-1 (Leaded)

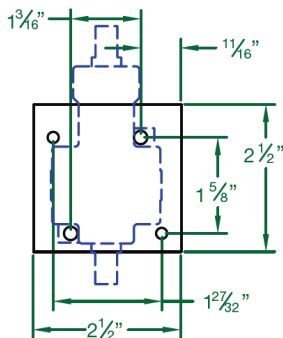
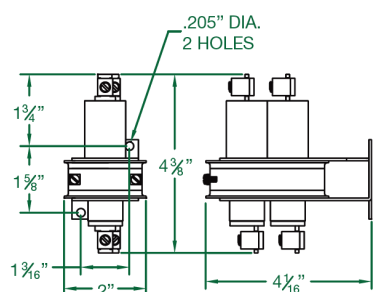
Designated by the letters "L-1" in the catalog number suffix. For normally open 35-AMP units. Height 3-3/16" other dimensions same as standard (page 8).



SUFFIX "TN"

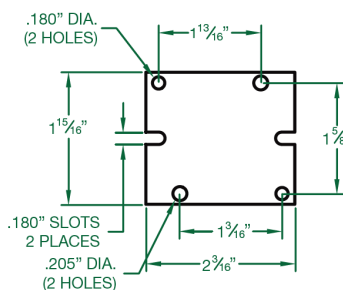
Two or Three Pole 35-AMP Only.

Load terminals on top for shorter overall height.



"P" PANEL MOUNT

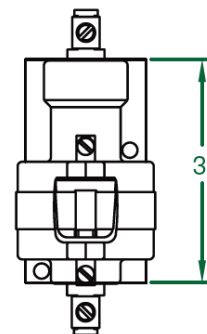
For 35, 60-AMP or standard timer; with standard mounting bracket. The standard mounting bracket attaches to the panel with two 6-32 screws. Material: 3/8" thick phenolic.



"U" UNIVERSAL BRACK-

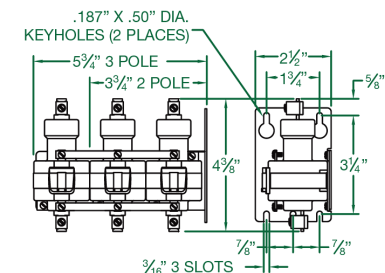
ET

For single pole, 35 and 60-AMP units, and for timers. This is the standard bracket for hybrid timers. Material: 16-ga. plated steel.



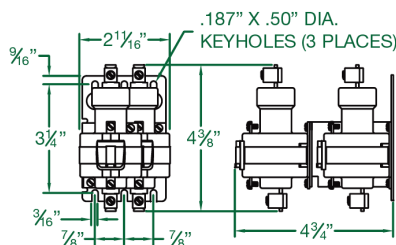
"B" BRACKET

For single pole 35 and 60-AMP units, and for timers. Mounts into standard 3" snap-track. Material is 16-ga. plated steel.



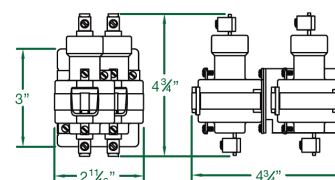
SUFFIX "N"

Narrow 2 or 3 pole 35 or 60-AMP units only



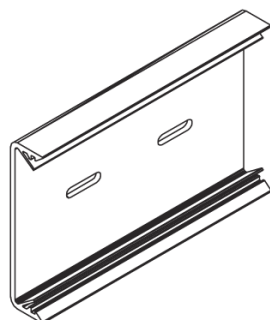
SUFFIX -19

Two pole 35 or 60-AMP narrow mounted, front facing, off set, for panel mounting.



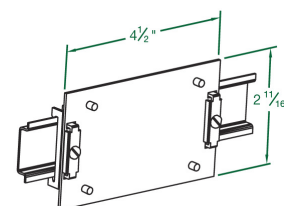
SUFFIX -"NB"

Two pole 35 or 60-AMP narrow mounted, front facing, off set, for snap track mounted



3" SNAP TRACK™ MOUNTING

Specify suffix "B" for SNAP TRACK mount on single, two and three pole 35 and 60-AMP series and single and two pole 30-AMP series. SNAP TRACK mount is standard on three pole 30-AMP without suffix.



SUFFIX -17 & -20

Din rail mount 35 mm symmetrical for 35 and 60-AMP units.

MERCURY RELAY - COIL DATA

PER POLE RATINGS ON STANDARD COILS					
PART #	Voltage	Resistance (Ω)	Current (mA)	V.A. (VA)	Power (Watts)
35NO-24A	24 VAC	50	242	5.8	2.9
35NO-120A	120 VAC	1,250	53	6.4	3.5
35NO-208A	208 VAC	3,400	30	6.2	3.1
35NO-220A	220 VAC	4,800	28	6.2	3.8
35NO-277A	277 VAC	7,900	20	5.5	3.2
35NO-480A	480 VAC	20,00	12	5.9	3.0
35NO-6D	6 VDC	13	462	2.8	2.8
35NO-12D	12 VDC	36	333	4.0	4.0
35NO-24D	24 VDC	176	136	3.3	3.3
35NO-48D	48 VDC	636	75	3.6	3.6
35NO-125D	125 VDC	3,400	37	4.6	4.6
35NO-250D	250 VDC	14,800	17	4.2	4.2
35NC-24A	24 VAC	36	310	7.4	3.5
35NC-120A	120 VAC	960	65	7.8	3.6
35NC-220A	220 VAC	3,400	31	6.8	3.3
35NC-12D	12 VDC	36	333	4.0	4.0
35NC-24D	24 VDC	176	136	3.3	3.3
35NC-48D	48 VDC	560	86	4.1	4.1
35NC-125D	125 VDC	3,400	37	4.6	4.6
60NO-24A	24 VAC	50	259	6.2	3.4
60NO-120A	120 VAC	1,250	48	5.8	2.9
60NO-208A	208 VAC	3,400	30	6.2	3.1
60NO-220A	220 VAC	4,800	27	5.9	3.5
60NO-277A	277 VAC	7,900	19	5.3	2.9
60NO-480A	480 VAC	20,000	12	5.8	2.9
60NO-12D	12 VDC	36	333	4.0	4.0
60NO-24D	24 VDC	140	171	4.1	4.1
60NO-48D	48 VDC	636	75	3.6	3.6
60NO-125D	125 VDC	3,400	37	4.6	4.6
60NO-250D	250 VDC	14,800	17	4.3	4.3
60NC-24A	24 VAC	36	325	7.8	5.3
60NC-120A	120 VAC	960	69	8.3	4.1
60NC-220A	220 VAC	3,400	34	7.5	3.9
60NC-277A	277 VAC	7,900	26	7.3	5.5
60NC-12D	12 VDC	36	333	4.0	4.0
60NC-24D	24 VDC	140	171	4.1	4.1
60NC-48D	48 VDC	560	86	4.1	4.1
60NC-125D	125 VDC	3,400	37	4.6	4.6
100NC-125D	125 VDC	2,400	52	6.5	6.5

- NOTES: 1. Inrush current = 1.5 times the steady state current. (No inrush on DC coils).
2. Minimum operation voltage is 90% of nominal voltage.
3. All AC voltages are 50/60 Hz.
4. For other coils voltages contact the factory
5. Ratings shown are per pole. (Coils are in parallel).

MERCURY RELAY - COIL DATA

PER POLE RATINGS ON STANDARD COILS (CONT.)

PART #	Voltage	Resistance (Ω)	Current (mA)	V.A. (VA)	Power (Watts)
100NO-24A	24 VAC	16	646	15.5	6.7
100NO-120A	120 VAC	380	137	16.4	7.1
100NO-220A	220 VAC	1,400	73	16.1	7.5
100NO-277A	277 VAC	2,400	55	15.2	7.3
100NO-480A	480 VAC	6,300	35	16.8	7.7
100NO-24D	24 VDC	65	369	8.9	8.9
100NO-148D	148 VDC	325	148	7.1	7.1
100NO-125D	125 VDC	2,400	52	6.5	6.5
100NC-24A	24 VAC	16	515	12.4	4.2
100NC-120A	120 VAC	380	110	13.2	4.6
100NC-208A	208 VAC	1,400	55	11.4	4.2
100NC-240A	240 VAC	1,685	49	11.8	4.0
100NC-480A	480 VAC	6,300	27	13.0	4.6
100NC-12D	12 VDC	28	433	5.2	5.2

MERCURY RELAY RATINGS

		RATINGS ARE IN AMPS UNLESS OTHERWISE SPECIFIED											
		30 NO	35 NO	35 NO (H)	35 NC	60 NO	60 NO (H)	60 NC	100 NO	100 NO	100 NO (H)	100 NC	100 NO (H)
A.C RESISTIVE	240 V	30	35	35	35	60	60	60	100	100	100	100	100
	480 V	30	35	35	35	60	60	60	80	100	80	100	100
	600 V	30	35	-	-	48	-	-	70	80	70	80	80
A.C INDUCTIVE P.F. .4 OF GREATER	120 V	-	-	25	25	-	30	30	-	-	100	100	100
	240 V	-	-	15	15	-	20	20	-	-	100	100	100
GENERAL PURPOSE P.F. .7 OR GREATER	240 V	-	-	35	35	-	60	60	-	-	100	80	100
	480 V	-	-	35	35	-	60	60	-	-	80	80	100
D.C RESISTIVE HEATING	48 V	-	-	35	35	-	60	60	-	-	100	100	100
	125 V	-	-	16	16	-	40	40	-	-	50	50	50
	250 V	-	-	12	12	-	20	20	-	-	30	30	30
TUNGSTEN LAMP		120 V	30	35	35	60	60	60	100	100	100	100	100
MOTOR LOADS	SINGLE PHASE	120 V	-	1 H.P.	2 H.P.	-	3 H.P.	3 H.P.	-	-	7.5 H.P.	7.5 H.P.	7.5 H.P.
		240 V	-	1 H.P.	3 H.P.	-	5 H.P.	5 H.P.	-	-	10 H.P.	10 H.P.	10 H.P.
	THREE PHASE	240 V	-	-	5 H.P.	-	7.5 H.P.	7.5 H.P.	-	-	15 H.P.	15 H.P.	15 H.P.
		480 V	-	-	7.5 H.P.	-	10 H.P.	10 H.P.	-	-	20 H.P.	20 H.P.	20 H.P.

KEY: FILLED AREA FILLED AREA FOR UL LISTINGS AND/OR COMPONENT RECOGNITION.
- NOT RECOMMENDED FOR THIS TYPE OF LOAD.