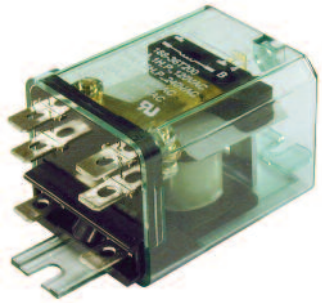


188 series

30 Amp Power Relays

File E38802

File LR54109

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to confirm the product meets the requirements for a given application.

Features

- AC coils 6-240VAC 50/60 Hz., DC 6-110VDC.
- Single pole, double throw, double break/double make contacts.
- .250" combination quick connect/solder terminals or PC terminals.
- Various mounting options include stud, core, bracket, flange, PC board.
- Open-style relay or with dust cover.

Contact Data @ 25°C

Arrangements: 1 Form X (SPST-NO-DM), 1 Form Y (SPST-NC-DB and 1 Form Z (SPDT-NC/NO-DB/DM).
Material: Silver-cadmium oxide, .25" (6.5mm) dia.
Expected Mechanical Life: 10 million operations.
Initial Contact Resistance: 50 milliohms.

Contact Ratings

Contact Arrangement	UL Ratings	Expected Life
1 Form X, 1 Form Y & 1 Form Z	30A 120/240/277VAC 15A 480/600VAC 1 HP @ 120VAC, 1 1/2 HP @ 240VAC 2 HP @ 208/277VAC* 30A @ 28VDC	100,000 ops.

*2 HP rating at reduced electrical life, consult factory.

Initial Dielectric Strength

Between Open Contacts: >1,200V rms, 60 Hz.
Between All Other Mutually Isolated Elements: >2,500V rms, 60 Hz.

Coil Data @ 25°C

Voltage: 6-110VDC and 6-240VAC.
Nominal Power:
DC Coils: 1.2 Watts.
AC Coils: 3.0VA.
Duty Cycle: Continuous at up to 25% overvoltage.
Initial Insulation Resistance: 1,000 megohms, min. @ 500VDC
Insulation: Class B, 130°C.
Temperature Rise:
AC Coils:
Nominal Voltage: 35°C for open models.
45°C for enclosed models.
25% Overvoltage: 55°C for open models.
65°C for enclosed models.
DC Coils:
Nominal Voltage: 35°C for open models.
40°C for enclosed models.
25% Overvoltage: 50°C for open models.
55°C for enclosed models.

Coil Data

	Nominal Voltage	DC Resistance in Ohms ± 10%	Must Operate Voltage
DC Coils	6 12 24 48 110	32 120 470 1,800 11,000	4.5 9.0 18.0 36.0 82.5
AC Coils	6 12 24 120 208 240	4.2 18 72 1,700 5,400 7,200	5.1 10.2 20.4 102.0 176.8 204.0

Operate Data @ 25°C

Must Operate Voltage:
DC Coils: 75% of nominal.
AC Coils: 85% of nominal.
Operate Time (Excluding Bounce): 20 milliseconds, max, at nominal voltage, no coil suppression.
Release Time (Excluding Bounce): 10 milliseconds, max, at nominal voltage, no coil suppression.

Environmental Data

Temperature Range (50/60 Hz operation, based on 105°C limit):
Operating
AC Coils: -45°C to +70°C for open models.
-45°C to +60°C for enclosed models.
DC Coils: -45°C to +80°C for open models.
-45°C to +70°C for enclosed models.
Storage
All: -65°C to +100°C.

Shock: 15g's, 11 ± 1 ms (non-operating, no mechanical damage).
Vibration: .1" double amplitude or 10 g's, 10-55 Hz. (operating, no contact chatter).

Mechanical Data

Termination: .250" quick connect/solder; and PC board.
Enclosure: Open or polycarbonate dust cover.
Weight: 3 oz. (86g) approximately.

Outline Dimensions

Typical Part No. >	188-	3	4	T	2	00

1. Basic Series and Type:
188 = Open or Enclosed 30 Amp Power Relay.

2. Enclosure and Terminals:
1 = Open, Solder/Quick Connect Terminals.
2 = Plain Enclosure with 6-32 Tapped Core, Solder/Quick Connect Terminals
3 = Flanged Enclosure, Solder/Quick Connect Terminals
4 = Plain Enclosure with Mounting Bracket and Stud on Closed End, Solder/Quick Connect Terminals
5 = Plain Enclosure with Bottom Mounted 6-32 Stud, Solder/Quick Connect Terminals
6 = Plain Enclosure with Bottom Mounted Bracket, Solder/Quick Connect Terminals
7 = Open, Printed Circuit Board Terminals
8 = Plain Enclosure, Printed Circuit Board Terminals
0 = Special

3. Contact Arrangement:
4 = 1 Form X (SPST-NO-DM) 5 = 1 Form Y (SPST-NC-DB) 6 = 1 Form Z (SPDT-NC-NO, DB-DM) 0 = Special

4. Coil:

A = 6VDC	M = 208VAC	S = Special
B = 12VDC	N = 6VAC	
C = 24VDC	P = 12VAC	
D = 48VDC	Q = 24VAC	
F = 110VDC	T = 120VAC	
	U = 240VAC	

5. Contacts:
2 = 1/4" (6.25mm) Diameter, Silver-Cadmium Oxide. 0 = Special

6. Standard or Special:
00 = Standard F0 = Class "F" Coil A1-Z9 = Special Construction or Feature

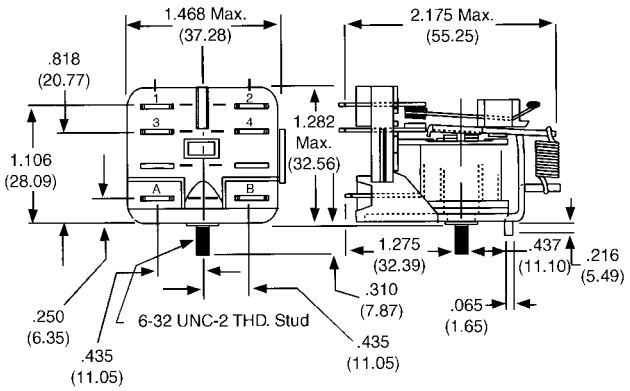
NOTE: No sockets are available for this relay.

Our authorized distributors are more likely to maintain the following items in stock for immediate delivery.

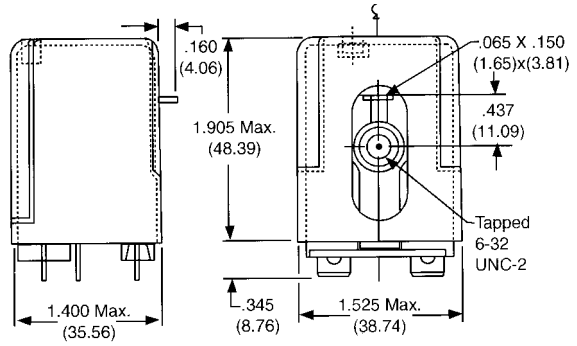
188-34B200	188-34T200	188-34C200	188-36Q200
188-34C200	188-34Q200	188-36B200	188-36T200

Outline Dimensions

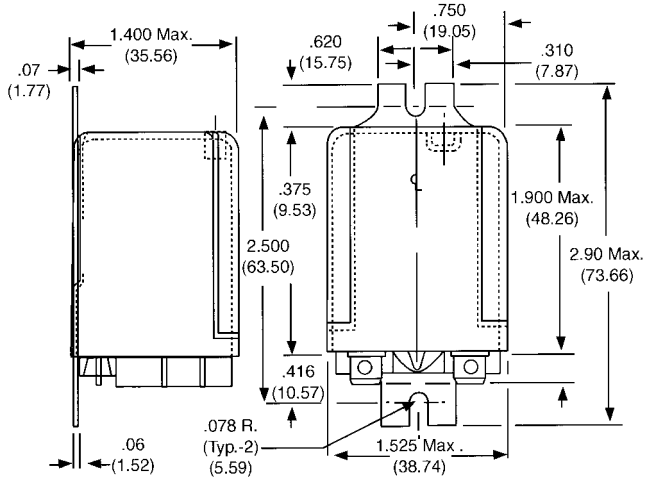
Open 188-1



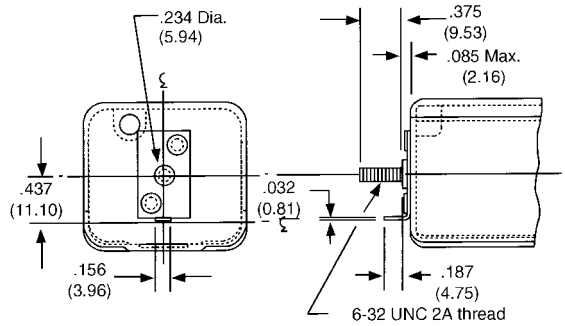
Dust Cover 188-2



Dust Cover with Mounting Flange 188-3

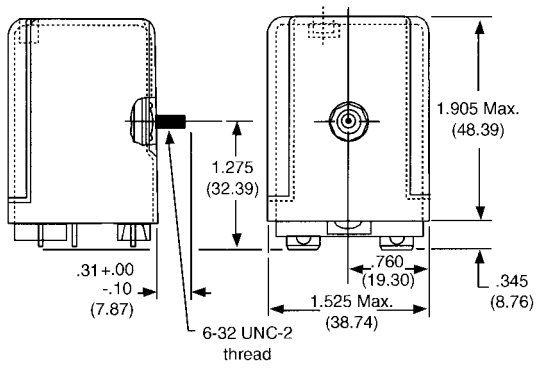


Dust Cover with Bracket and Stud on End 188-4

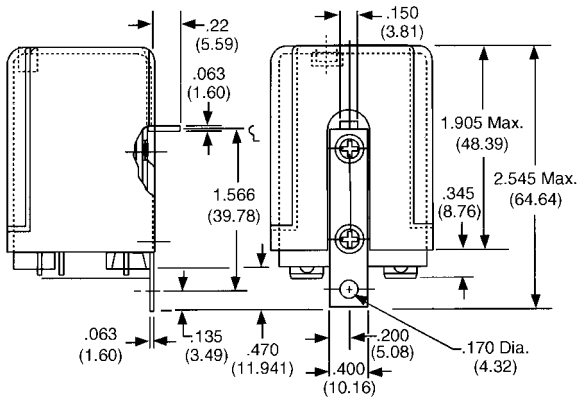


Outline Dimensions (Continued)

Bottom Stud 188-5

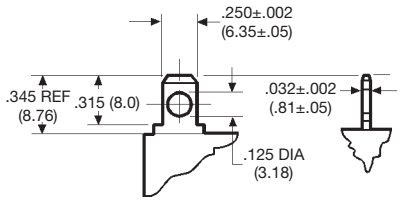


Bracket Mount 188-6

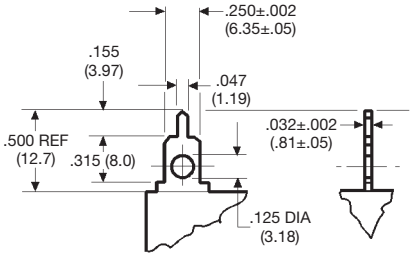


Terminal Dimensions

.250" (6.35mm) Quick Connect

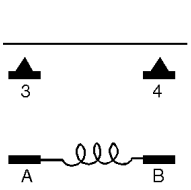


Printed Circuit

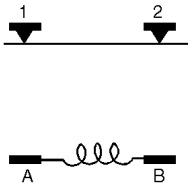


Wiring Diagrams

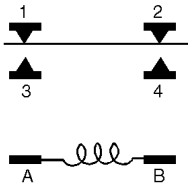
1 Form X (SPST-NO-DM)



1 Form Y (SPST-NC-DB)

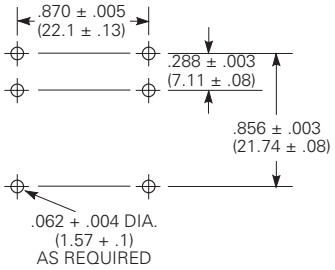


1 Form Z (SPDT-NC/NO-DB/DM)



PC Board Layout (Bottom View)

Suggested PCB layout for 188 series relays with PCB terminals



Reference Only

Disclaimer

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188 Series Data Sheet
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