

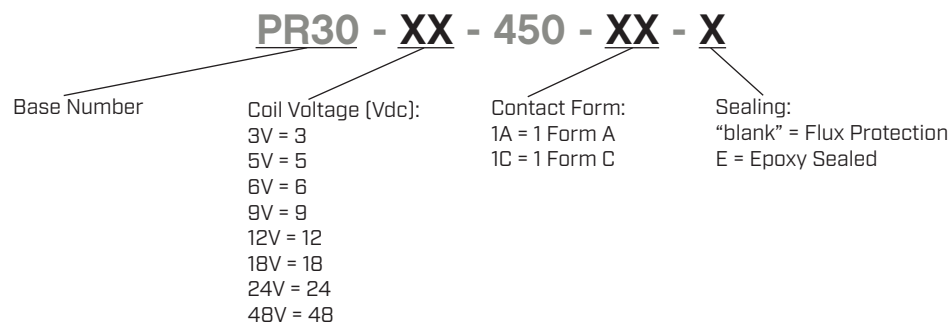
SERIES: PR30 | **DESCRIPTION:** POWER RELAY**FEATURES**

- 10 amp
- 1 form A
- 1 form C

**MODEL**

| | coil voltage typ [Vdc] | coil resistance [Ω±10%] | operating voltage ¹ min [Vdc] | release voltage max [Vdc] | continuous voltage max [Vdc] | coil power max [mW] |
|--------------|---------------------------------|-------------------------------|---|------------------------------------|---------------------------------------|------------------------------|
| PR30-3V-450 | 3 | 20 | 2.3 | 0.3 | 3.9 | 450 |
| PR30-5V-450 | 5 | 55 | 3.8 | 0.5 | 6.5 | 450 |
| PR30-6V-450 | 6 | 80 | 4.5 | 0.6 | 7.8 | 450 |
| PR30-9V-450 | 9 | 180 | 6.8 | 0.9 | 11.7 | 450 |
| PR30-12V-450 | 12 | 320 | 9.0 | 1.2 | 15.6 | 450 |
| PR30-18V-450 | 18 | 720 | 13.5 | 1.8 | 23.4 | 450 |
| PR30-24V-450 | 24 | 1,280 | 18.0 | 2.4 | 31.2 | 450 |
| PR30-48V-450 | 48 | 5,120 | 36.0 | 4.8 | 62.4 | 450 |

Notes: 1. Relay may pull in with less than operating voltage.
2. All specifications are measured at 20°C unless otherwise specified.

PART NUMBER KEY

COIL SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------------------|------------------------|-----|-----|-----|-------|
| coil power | nominal | | 450 | | mW |
| | at pickup voltage | | 255 | | mW |
| coil power continuous dissipation | at 20°C | | | 845 | mW |

CONTACT SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------|---|------------|-----|-------|------------|
| contact form | 1 Form A, 1 Form C | | | | |
| contact material | AgSnO ₂ (silver tin oxide) | | | | |
| contact rating | 1 Form A | | | | |
| | 10 A @ 125 Vac | | | | |
| | 5 A @ 277 Vac | | | | |
| | 5 A @ 30 Vdc | | | | |
| | 1 Form C | | | | |
| | 5/3 A @ 277 Vac NO/NC | | | | |
| | 5/3 A @ 30 Vdc NO/NC | | | | |
| contact resistance | at 1 A, 6 V voltage drop method | | | 100 | mΩ |
| max switching voltage | | | | 400 | Vac |
| | | | | 150 | Vdc |
| max switching current | normally open | | | 10 | A |
| | normally closed | | | 3 | A |
| max switching power | Vac | | | 2,770 | VA |
| | Vdc | | | 150 | W |
| life | electrical: at 10 A, 277 Vac, resistive | 100,000 | | | operations |
| | mechanical | 10,000,000 | | | operations |

GENERAL SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------|--|-------|-------|-----|-------|
| insulation resistance | at 500 Vdc | 1,000 | | | MΩ |
| dielectric strength | between open contacts at sea level for 1 minute | | 1,000 | | Vrms |
| | between coil and contacts at sea level for 1 minute | | 4,000 | | Vrms |
| operate time | at nominal coil voltage | | | 8 | ms |
| release time | at nominal coil voltage, without coil suppression | | | 5 | ms |
| shock resistance | functional | | 10 | | G |
| | destructive | | 100 | | G |
| vibration resistance | 10-55 Hz, 1.5 mm double amplitude | | | | |
| operating temperature | at nominal coil voltage | -40 | | 90 | °C |
| storage temperature | | -40 | | 130 | °C |
| weight | | | 7 | | g |
| safety approvals | UL/cUL 508 | | | | |
| flammability rating | UL94V-0 | | | | |
| RoHS | yes | | | | |
| packaging | tray: 100 pcs per tray carton QTY: 1,000 pcs per carton | | | | |

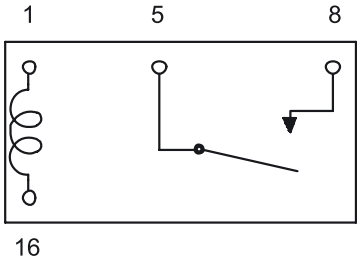
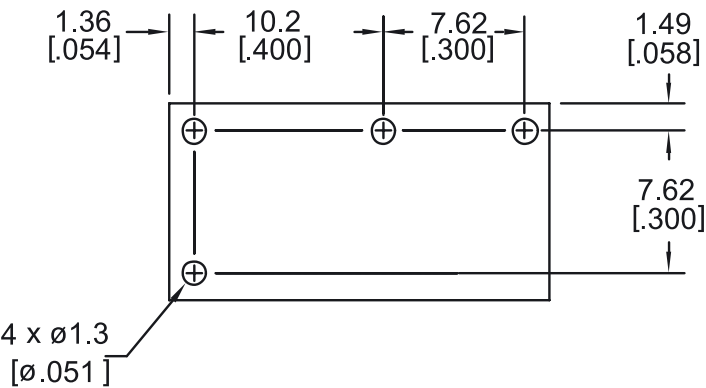
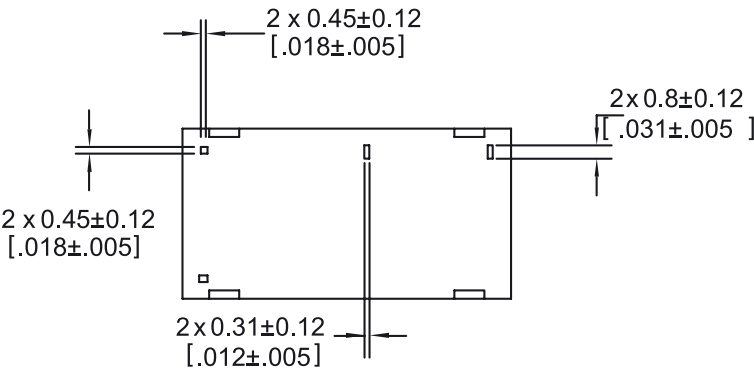
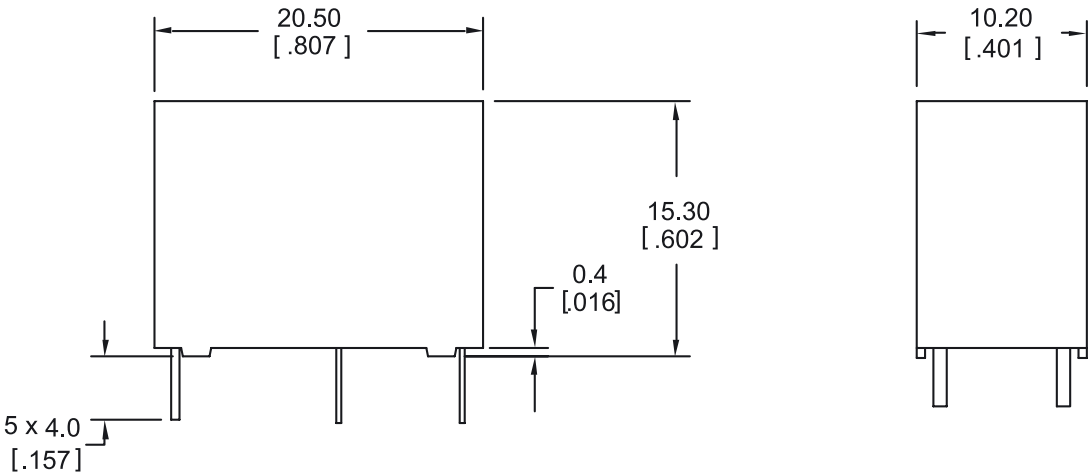
SOLDERABILITY

| parameter | conditions/description | min | typ | max | units |
|----------------|---|-----|-----|-----|-------|
| wave soldering | for max 5 seconds | | | 270 | °C |
| washable | only on epoxy sealed models max immersion time of 30 seconds | | | 80 | °C |

MECHANICAL DRAWING (1A = 1 FORM A)

units: mm [inch]
tolerance: ±0.254 mm
unless otherwise noted

| DESCRIPTION | MATERIAL | PLATING/COLOR |
|-------------|---------------|---------------|
| housing | PBT [UL94V-0] | black |
| terminals | copper alloy | tin |



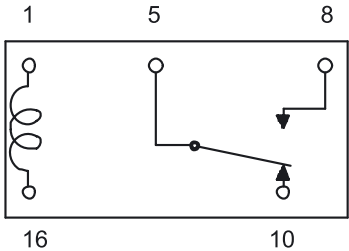
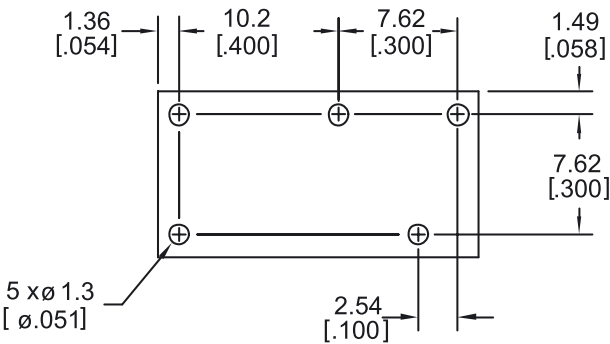
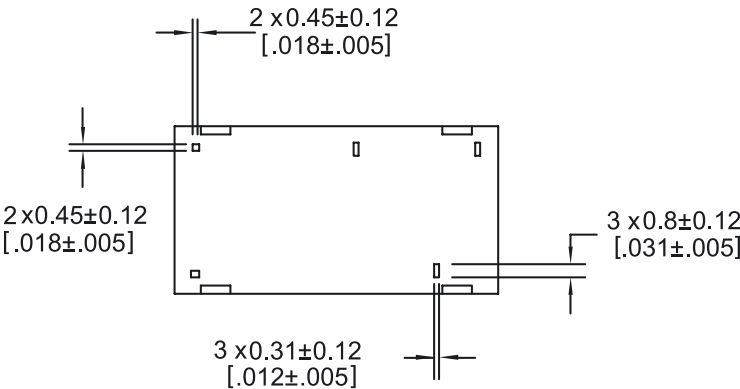
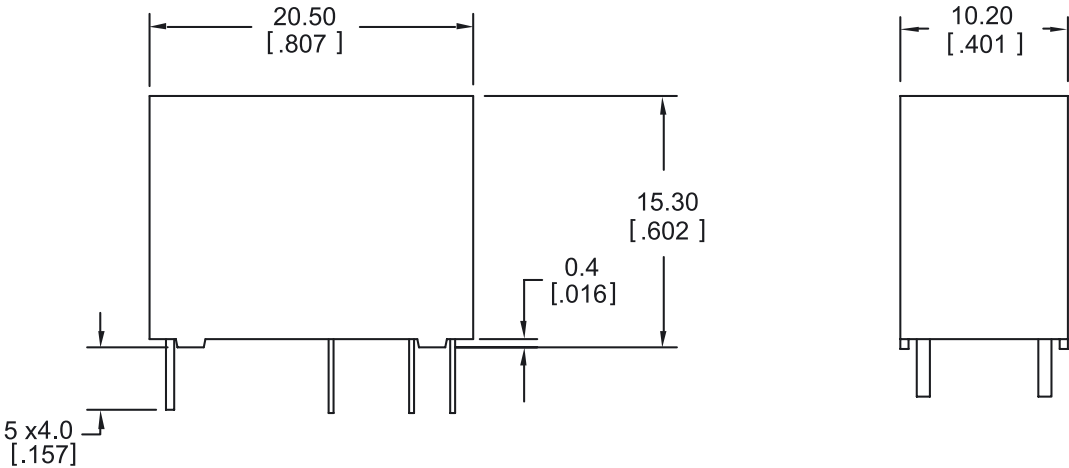
Recommended PCB Layout
Bottom View

Wiring Diagram
Bottom View

MECHANICAL DRAWING (1C = 1 FORM C)

units: mm [inch]
tolerance: ± 0.254 mm
unless otherwise noted

| DESCRIPTION | MATERIAL | PLATING/COLOR |
|-------------|---------------|---------------|
| housing | PBT [UL94V-0] | black |
| terminals | copper alloy | tin |

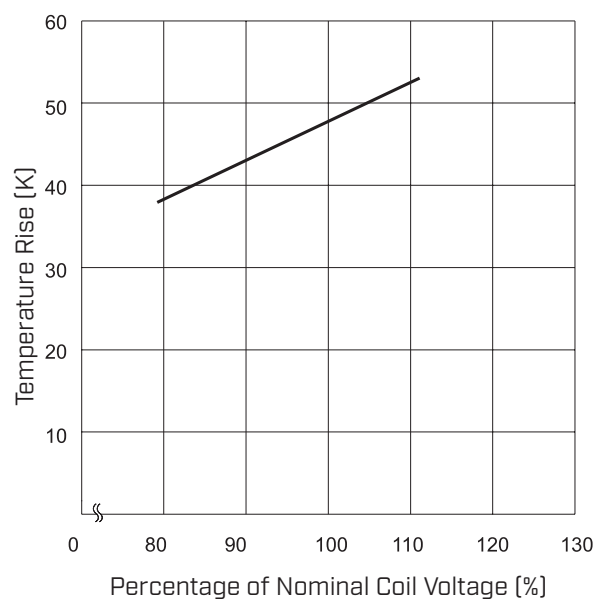


Recommended PCB Layout
Bottom View

Wiring Diagram
Bottom View

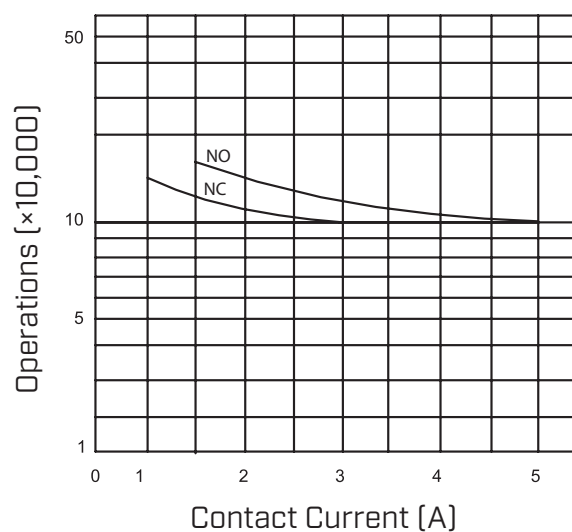
CHARACTERISTIC CURVES

Coil Temperature Rise



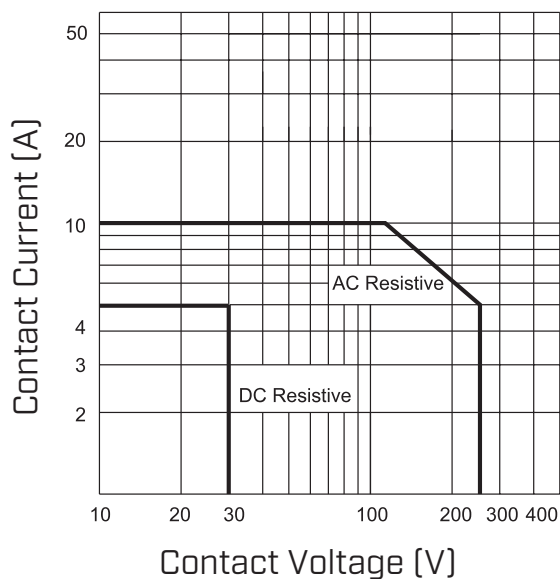
Test Conditions:
5 A at 85°C
Mounting Distance: 10 mm

Life Curve



Test Conditions:
NO contact, resistive load, room temp, flux protection, 250 Vac/30 Vdc, 1 second on 9 seconds off
NC contact, resistive load, room temp, flux protection, 250 Vac/30 Vdc, 1 second on 9 seconds off

Maximum Switching Power



REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 02/14/2024 |

The revision history provided is for informational purposes only and is believed to be accurate.



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