CUIDEVICES

SERIES: PR30 | DESCRIPTION: POWER RELAY

FEATURES

- 10 amp
- 1 form A
- 1 form C

RoHS c UL us

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

PR30 - XX - 450 - XX - X

- Base Number
- Coil Voltage (Vdc):
  3V = 3
  5V = 5
  6V = 6
  9V = 9
  12V = 12
  18V = 18
  24V = 24
  48V = 48
- Contact Form:
  1A = 1 Form A
  1C = 1 Form C
- Sealing:
  “blank” = Flux Protection
  E = Epoxy Sealed

COIL SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
coil power	nominal at pickup voltage		450 255		mW mW
coil power continous 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				400 150	Vac Vdc
max switching current	normally open normally closed			10 3	A A
max switching power	Vac Vdc			2,770 150	VA W
life	electrical: at 10 A, 277 Vac, resistive mechanical	100,000 10,000,000			operations 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 between coil and contacts at sea level for 1 minute		1,000 4,000		Vrms Vrms
operate time	at nominal coil voltage			8	ms
release time	at nominal coil voltage, without coil suppression			5	ms
shock resistance	functional destructive		10 100		G 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				

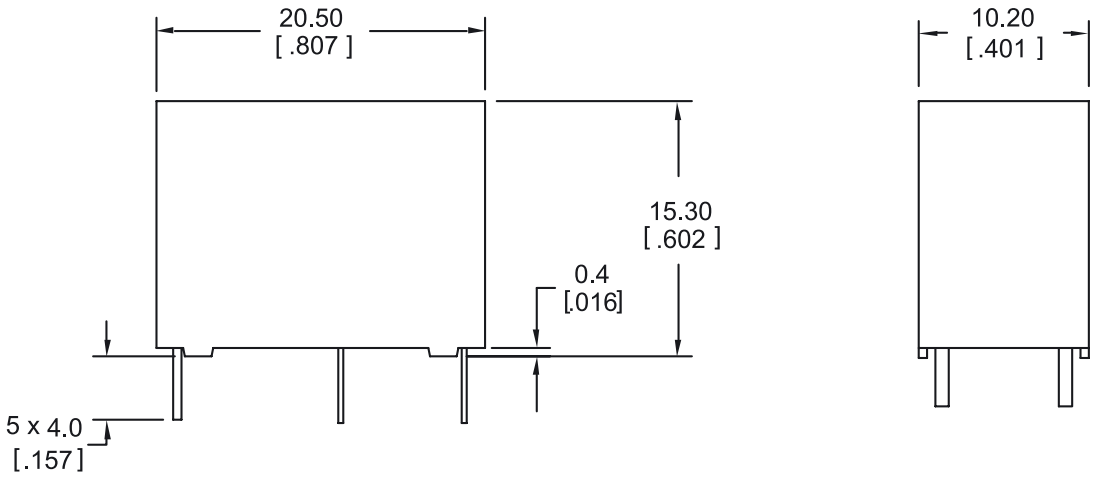
SOLDERABILITY

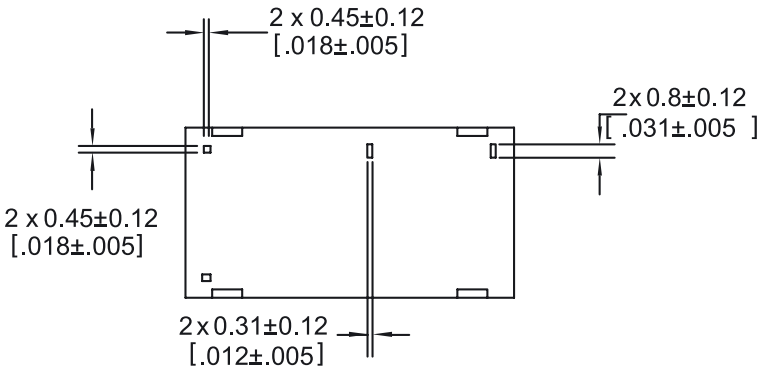
parameter	conditions/description	min	typ	max	units
wave soldering	for max 5 seconds			270	°C
washable	only on epoxy sealed models max imersion time of 30 seconds			80	°C

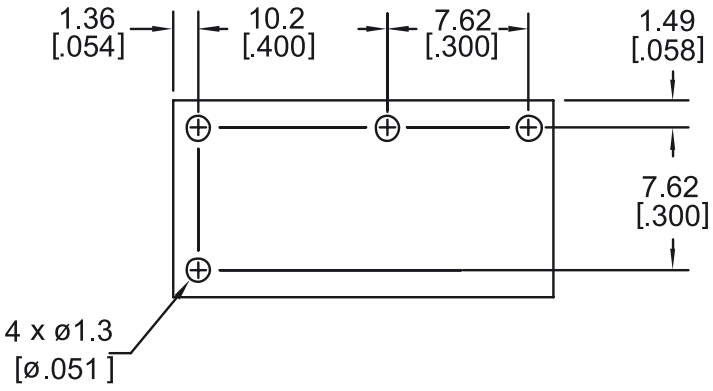
MECHANICAL DRAWING (1A = 1 FORM A)

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

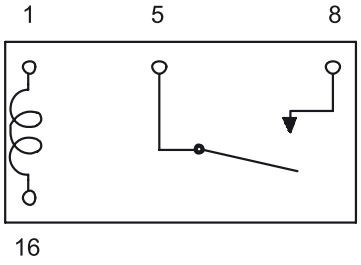
DESCRIPTION	MATERIAL	PLATING/COLOR
housing	PBT (UL94V-0)	black
terminals	copper alloy	tin







Recommended PCB Layout
Bottom View

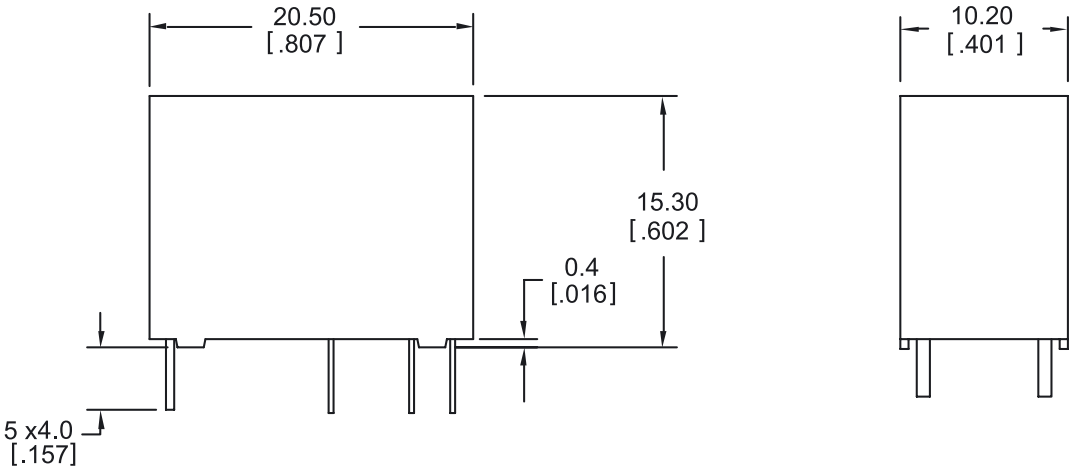


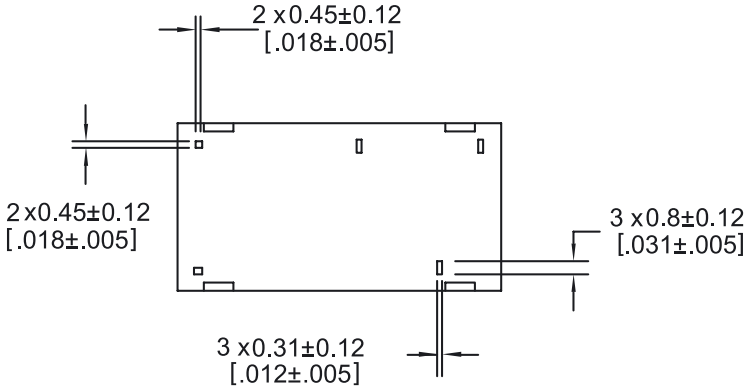
Wiring Diagram
Bottom View

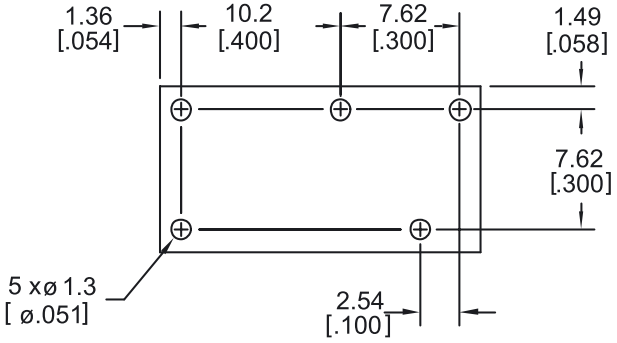
MECHANICAL DRAWING (1C = 1 FORM C)

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

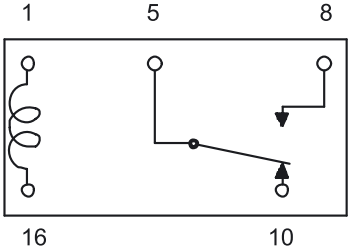
DESCRIPTION	MATERIAL	PLATING/COLOR
housing	PBT (UL94V-0)	black
terminals	copper alloy	tin







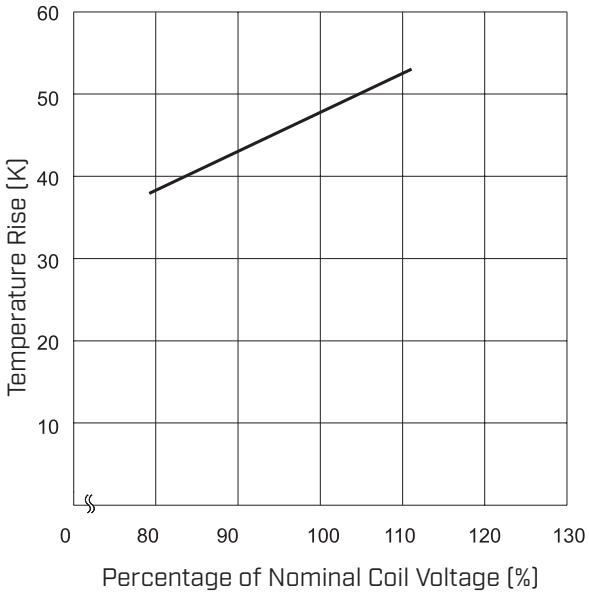
Recommended PCB Layout
Bottom View



Wiring Diagram
Bottom View

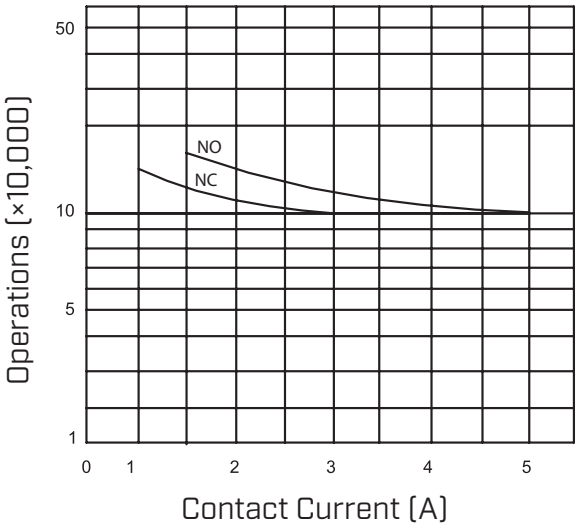
CHARACTERISTIC CURVES

Coil Temperature Rise



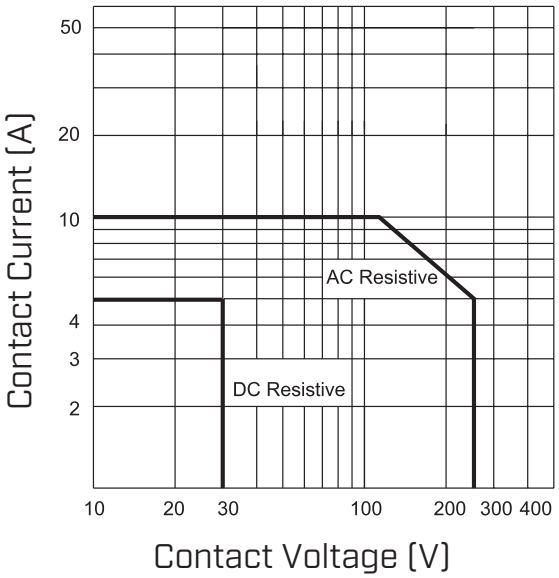
Test Conditions:
5 A at 85°C
Mounting Distance: 10 mm

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.