

SERIES: PR10 | DESCRIPTION: POWER RELAY

FEATURES

- 5V/12V/24V
- SPST & SPDT
- 450 mW

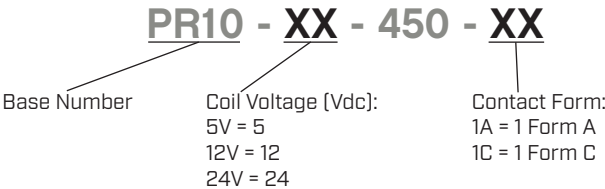


MODEL

|                 | coil<br>voltage<br>typ<br>(Vdc) | coil<br>resistance<br><br>(Ω±10%) | operating voltage<br><br>min<br>(Vdc) | release<br>voltage<br>max<br>(Vdc) | coil<br>power<br>max<br>(mW) |
|-----------------|---------------------------------|-----------------------------------|---------------------------------------|------------------------------------|------------------------------|
|                 |                                 |                                   |                                       |                                    |                              |
| PR10-5V-450-1A  | 5                               | 55                                | 3.75                                  | 0.5                                | 450                          |
| PR10-12V-450-1A | 12                              | 320                               | 9.00                                  | 1.2                                | 450                          |
| PR10-24V-450-1A | 24                              | 1,280                             | 18.00                                 | 2.4                                | 450                          |
| PR10-5V-450-1C  | 5                               | 55                                | 3.75                                  | 0.5                                | 450                          |
| PR10-12V-450-1C | 12                              | 320                               | 9.00                                  | 1.2                                | 450                          |
| PR10-24V-450-1C | 24                              | 1,280                             | 18.00                                 | 2.4                                | 450                          |

Notes: 1. All specifications are measured at 23°C unless otherwise specified.

PART NUMBER KEY



CONTACT SPECIFICATIONS

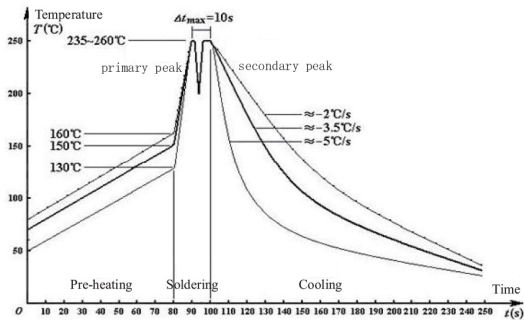
| parameter             | conditions/description                                                                            | min | typ                   | max          | units                    |
|-----------------------|---------------------------------------------------------------------------------------------------|-----|-----------------------|--------------|--------------------------|
| contact form          | 1 Form A, 1 Form C                                                                                |     |                       |              |                          |
| contact material      | Ag alloy                                                                                          |     |                       |              |                          |
| contact rating        | 1 Form A: 5 A @ 250 Vac, 5 A @ 28 Vdc<br>1 Form C: NO/NC: 5 A / 3 A @ 250 Vac, 5 A / 3 A @ 28 Vdc |     |                       |              |                          |
| contact resistance    | at 6 Vdc, 1.0 A                                                                                   |     |                       | 100          | mΩ                       |
| max switching voltage |                                                                                                   |     |                       | 250<br>28    | Vac<br>Vdc               |
| max switching current |                                                                                                   |     |                       | 10           | A                        |
| max switching power   |                                                                                                   |     |                       | 1,250<br>280 | VA<br>W                  |
| min switching load    | 5 Vdc, 100 mA                                                                                     |     |                       |              |                          |
| life                  | electrical<br>mechanical                                                                          |     | 100,000<br>10,000,000 |              | operations<br>operations |

GENERAL SPECIFICATIONS

| parameter             | conditions/description                                                                                                         | min   | typ                     | max | units             |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------|-------|-------------------------|-----|-------------------|
| insulation resistance | at 500 Vdc                                                                                                                     | 1,000 |                         |     | MΩ                |
| dielectric strength   | between open contacts for 1 minute<br>1A= between coil and contacts for 1 minute<br>1C= between coil and contacts for 1 minute |       | 1,000<br>3,500<br>2,500 |     | Vac<br>Vac<br>Vac |
| operate time          |                                                                                                                                |       |                         | 8   | ms                |
| release time          |                                                                                                                                |       |                         | 5   | ms                |
| shock resistance      | endurance<br>misoperation                                                                                                      |       | 1,000<br>100            |     | m/s²<br>m/s²      |
| vibration resistance  | endurance: 10~55 Hz, 1.5 mm double amplitude<br>misoperation: 10~55 Hz, 1.5 mm double amplitude                                |       |                         |     |                   |
| operating temperature |                                                                                                                                | -40   |                         | 85  | °C                |
| humidity              | at 40°C                                                                                                                        | 35    |                         | 95  | %RH               |
| weight                |                                                                                                                                |       | 7.0                     |     | g                 |
| safety approvals      | UL/cUL 508                                                                                                                     |       |                         |     |                   |
| flammability rating   | UL94V-0                                                                                                                        |       |                         |     |                   |
| RoHS                  | yes                                                                                                                            |       |                         |     |                   |
| packaging             | tube: 25 pcs per tube<br>carton size: 324 x 292 x 160 mm<br>carton QTY: 1,000 pcs per carton                                   |       |                         |     |                   |

SOLDERABILITY

| parameter      | conditions/description | min | typ | max | units |
|----------------|------------------------|-----|-----|-----|-------|
| hand soldering | for 3.5±0.5 seconds    | 340 | 350 | 360 | °C    |
| wave soldering | for 10±1 seconds       | 255 | 260 | 265 | °C    |

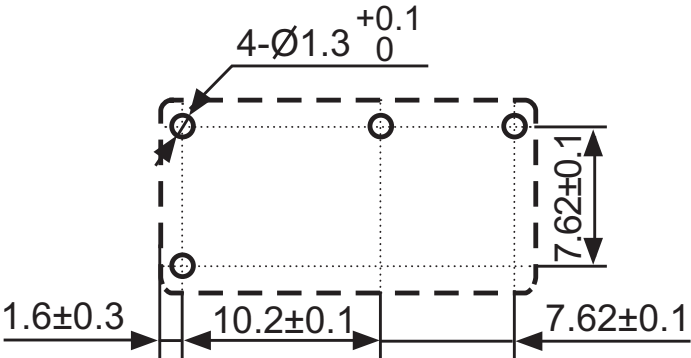
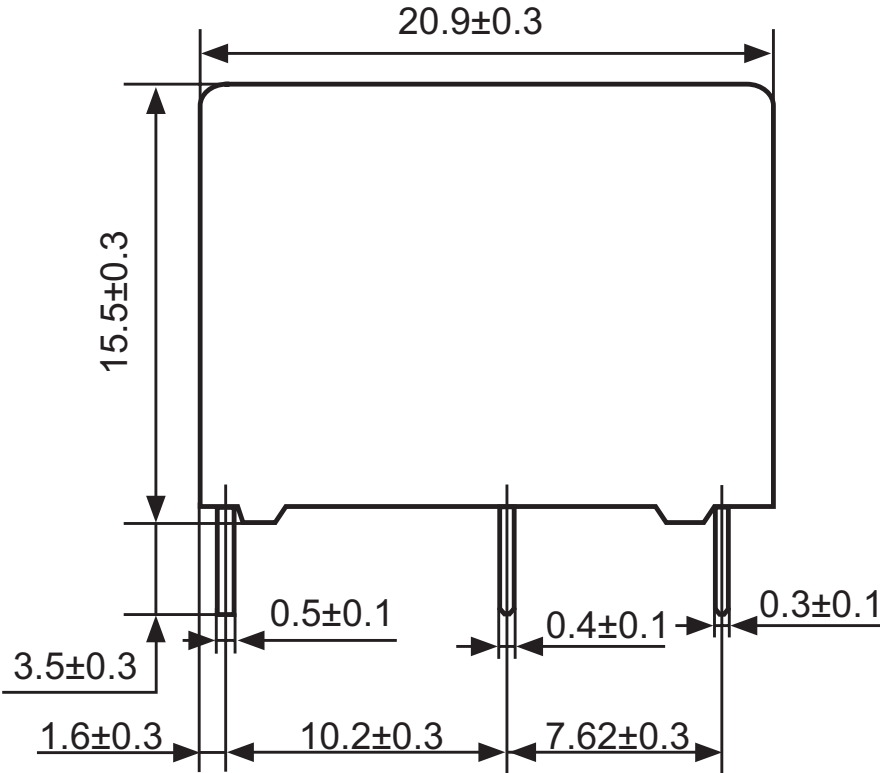


Double-wave Soldering Curve

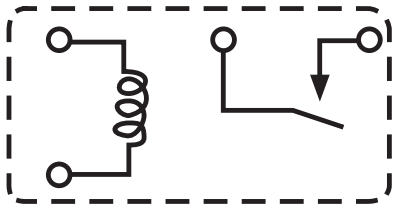
MECHANICAL DRAWING (1A = 1 FORM A)

units: mm  
tolerance:  $\pm 0.3$  mm  
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL             | PLATING/COLOR |
|------|-------------|----------------------|---------------|
| A    | housing     | PBT [UL94V-0]        | black         |
| B    | terminals   | copper covered steel | tin           |



Recommended PCB Layout  
Bottom View

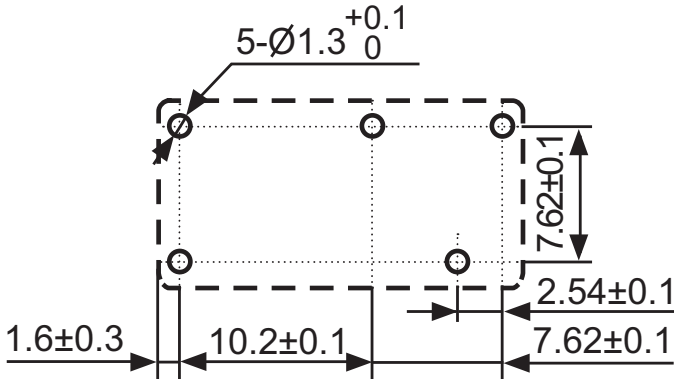
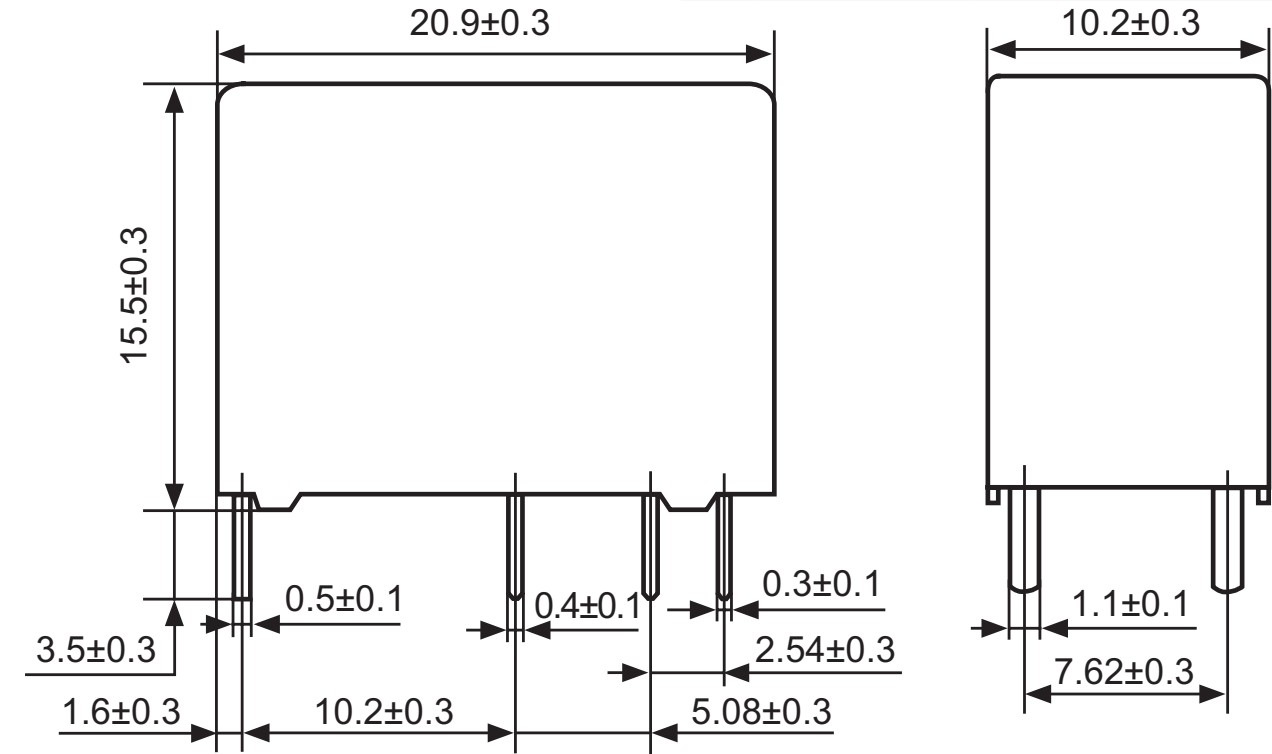


Wiring Diagram  
Bottom View

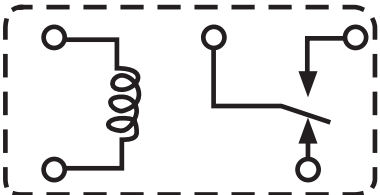
MECHANICAL DRAWING (1C = 1 FORM C)

units: mm  
tolerance:  $\pm 0.3$  mm  
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL             | PLATING/COLOR |
|------|-------------|----------------------|---------------|
| A    | housing     | PBT [UL94V-0]        | black         |
| B    | terminals   | copper covered steel | tin           |



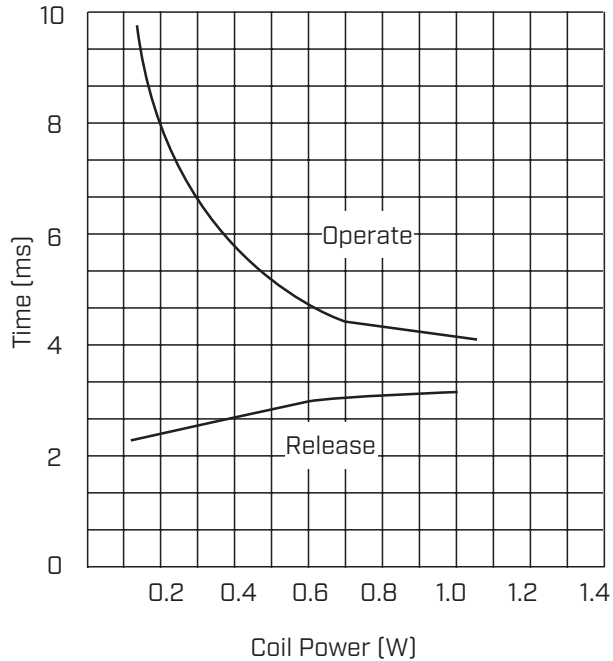
Recommended PCB Layout  
Bottom View



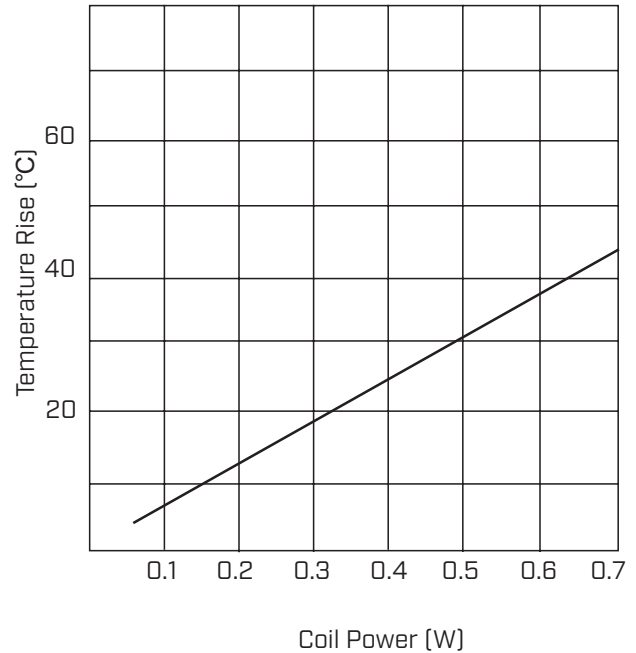
Wiring Diagram  
Bottom View

## CHARACTERISTIC CURVES

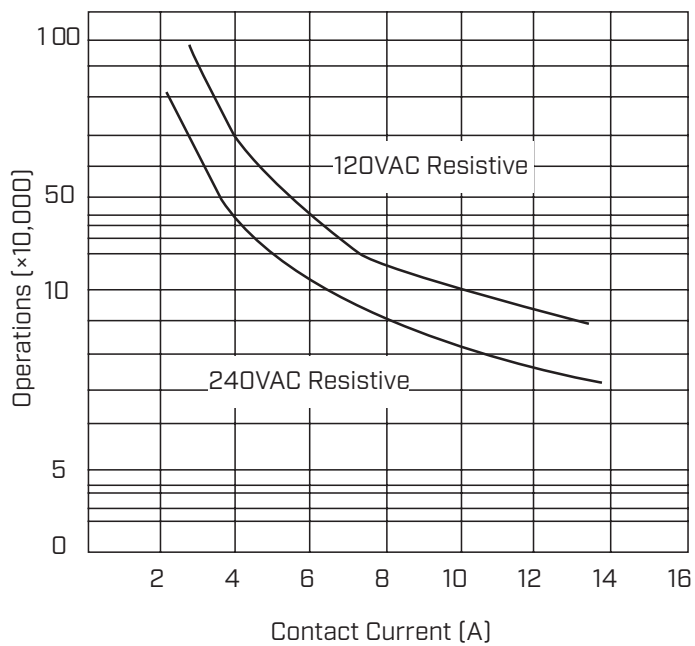
Time Curve



Coil Temperature Rise



Life Curve



REVISION HISTORY

| rev. | description                       | date       |
|------|-----------------------------------|------------|
| 1.0  | initial release                   | 08/09/2022 |
| 1.01 | CUI Devices rebranded to Same Sky | 09/12/2024 |

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



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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