

**SERIES:** PR29 | **DESCRIPTION:** POWER RELAY**FEATURES**

- 10 amp
- 1 Form A
- class B & class F

**MODEL**

|                | coil<br>voltage<br>typ<br>(Vdc) | coil<br>resistance<br><br>( $\Omega \pm 10\%$ ) | operating<br>voltage <sup>1</sup><br>min<br>(Vdc) | release<br>voltage<br>max<br>(Vdc) | continuous<br>voltage<br>max<br>(Vdc) | coil<br>power<br>max<br>(mW) |
|----------------|---------------------------------|-------------------------------------------------|---------------------------------------------------|------------------------------------|---------------------------------------|------------------------------|
| PR29-3V-S-450  | 3                               | 20                                              | 2.1                                               | 0.15                               | 3.9                                   | 450                          |
| PR29-5V-S-450  | 5                               | 55                                              | 3.5                                               | 0.25                               | 6.5                                   | 450                          |
| PR29-6V-S-450  | 6                               | 80                                              | 4.2                                               | 0.30                               | 7.8                                   | 450                          |
| PR29-9V-S-450  | 9                               | 180                                             | 6.8                                               | 0.45                               | 11.7                                  | 450                          |
| PR29-12V-S-450 | 12                              | 320                                             | 8.4                                               | 0.60                               | 15.6                                  | 450                          |
| PR29-18V-S-450 | 18                              | 720                                             | 12.6                                              | 0.90                               | 23.4                                  | 450                          |
| PR29-24V-S-450 | 24                              | 1,280                                           | 16.8                                              | 1.20                               | 31.2                                  | 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****PR29 - XX - S - 450 - 1A - X X**

Base Number

Coil Voltage (Vdc):

3V = 3  
5V = 5  
6V = 6  
9V = 9  
12V = 12  
18V = 18  
24V = 24

Sealing:

"blank" = Flux Protection  
E = Epoxy Sealed

Coil Insulation:

"blank" = Class B  
F = Class F

## COIL SPECIFICATIONS

| parameter                         | conditions/description  | min | typ | max | units |
|-----------------------------------|-------------------------|-----|-----|-----|-------|
| coil power                        | nominal                 |     | 450 |     | mW    |
|                                   | at pickup voltage       |     | 200 |     | mW    |
| coil power continuous dissipation | at 20°C                 |     |     | 760 | mW    |
| temperature rise                  | at nominal coil voltage |     | 41  |     | K     |

## CONTACT SPECIFICATIONS

| parameter             | conditions/description                | min        | typ | max   | units      |
|-----------------------|---------------------------------------|------------|-----|-------|------------|
| contact form          | 1 Form A                              |            |     |       |            |
| contact material      | AgSnO <sub>2</sub> (silver tin oxide) |            |     |       |            |
| contact rating        | 10 A @ 250 Vac                        |            |     |       |            |
|                       | 10 A @ 30 Vdc                         |            |     |       |            |
|                       | 1/6 HP @ 125 Vac                      |            |     |       |            |
| contact resistance    |                                       |            |     | 100   | mΩ         |
| max switching voltage |                                       |            |     | 250   | Vac        |
|                       |                                       |            |     | 30    | Vdc        |
| max switching current |                                       |            |     | 10    | A          |
| max switching power   | Vac                                   |            |     | 2,500 | VA         |
|                       | Vdc                                   |            |     | 300   | W          |
| life                  | electrical                            | 100,000    |     |       | operations |
|                       | mechanical                            | 10,000,000 |     |       | operations |

## GENERAL SPECIFICATIONS

| parameter             | conditions/description                                     | min   | typ   | max | units |
|-----------------------|------------------------------------------------------------|-------|-------|-----|-------|
| insulation resistance | at 500 Vdc, 20 °C, 50% RH                                  | 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          |       |       | 4   | ms    |
| operating temperature | Class B models at nominal coil voltage                     | -40   |       | 85  | °C    |
|                       | Class F models at nominal coil voltage                     | -40   |       | 105 | °C    |
| storage temperature   |                                                            | -40   |       | 105 | °C    |
| weight                |                                                            |       | 6     |     | g     |
| safety approvals      | UL/cUL 508                                                 |       |       |     |       |
| flammability rating   | UL94V-0                                                    |       |       |     |       |
| RoHS                  | yes                                                        |       |       |     |       |
| packaging             | tray: 100 pcs per tray<br>carton QTY: 1,000 pcs per carton |       |       |     |       |

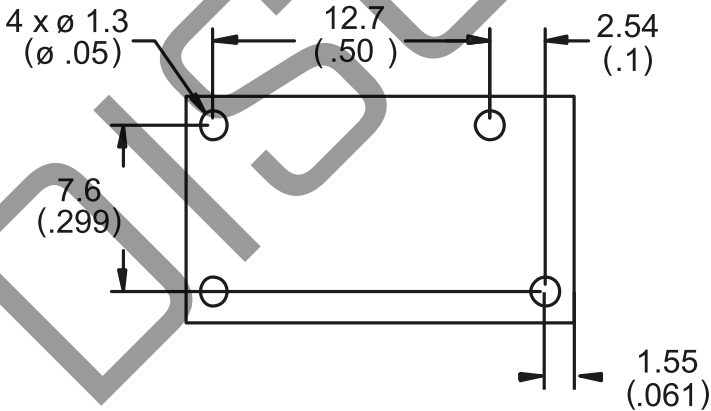
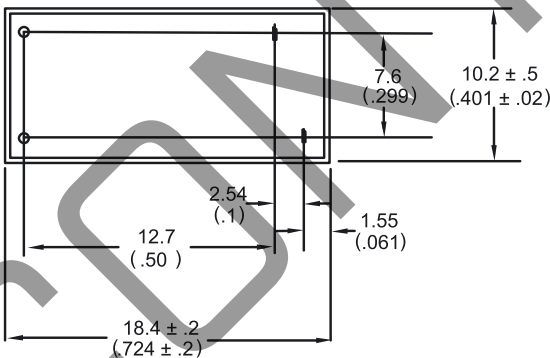
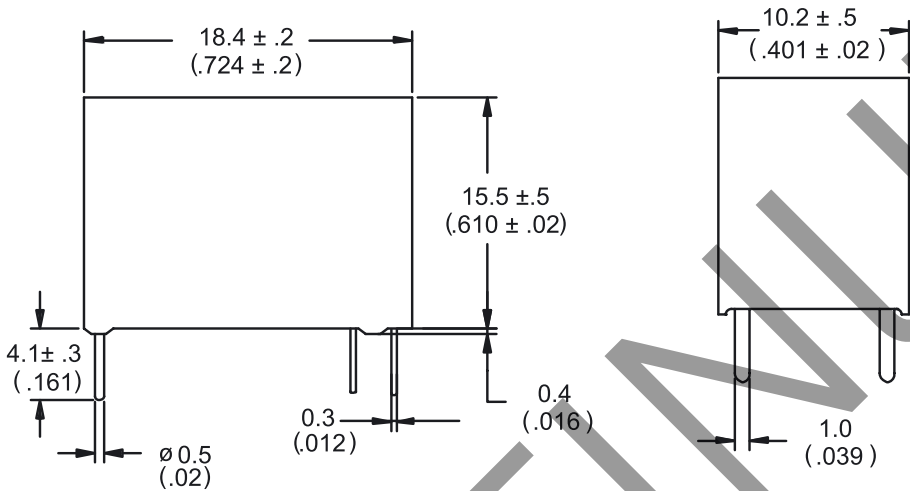
## SOLDERABILITY

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

MECHANICAL DRAWING

units: mm [inch]  
tolerance:  $\pm 0.254$  mm  
unless otherwise noted

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



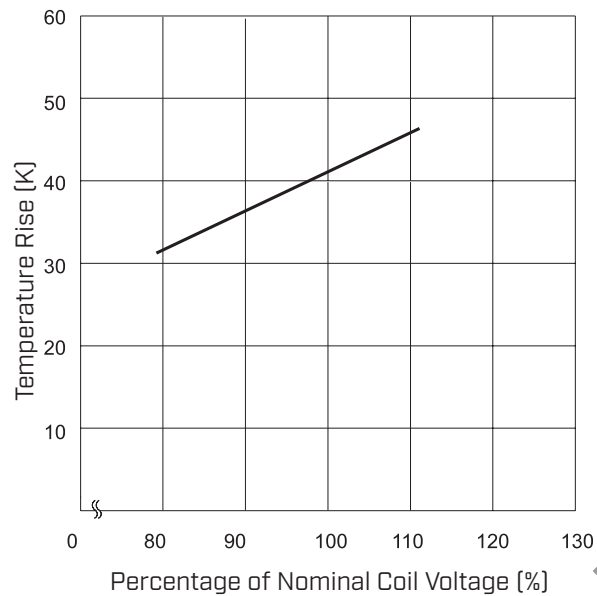
Recommended PCB Layout  
Bottom View



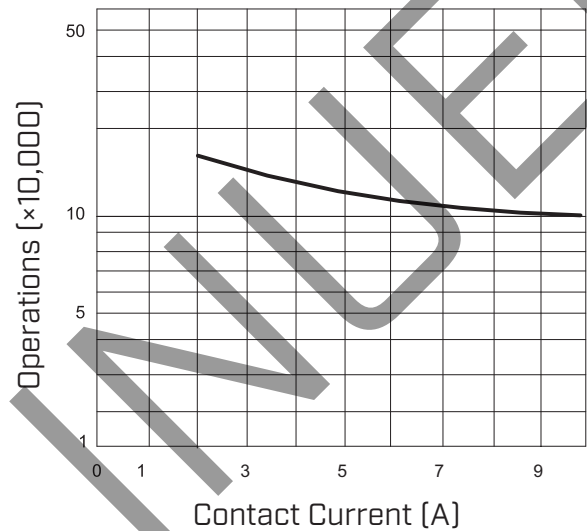
Wiring Diagram  
Bottom View

## CHARACTERISTIC CURVES

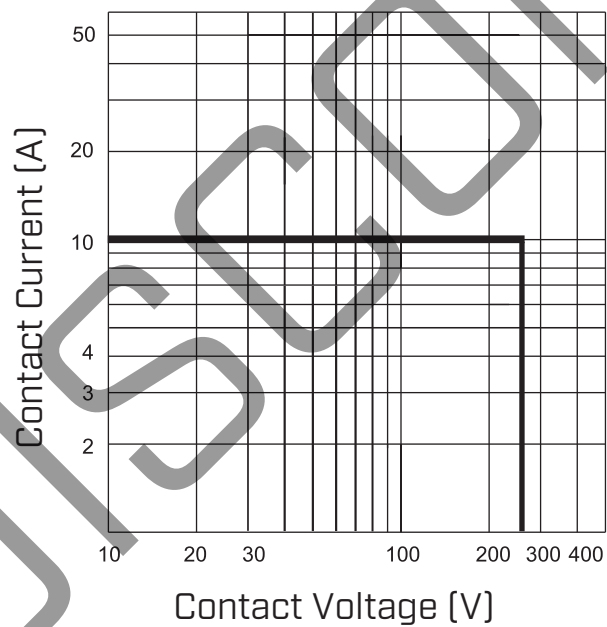
### Coil Temperature Rise



### Life Curve



### Maximum Switching Power



REVISION HISTORY

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

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

**sameskydevices.com**