

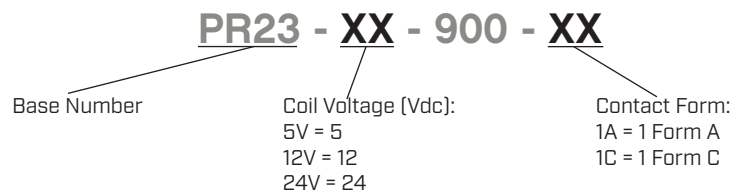
**SERIES:** PR23 | **DESCRIPTION:** POWER RELAY**FEATURES**

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

**MODEL**

|                 | coil<br>voltage<br>typ<br>(Vdc) | coil<br>resistance<br>( $\Omega \pm 10\%$ ) | operating voltage<br>min<br>(Vdc) | release<br>voltage<br>max<br>(Vdc) | coil<br>power<br>max<br>(mW) |
|-----------------|---------------------------------|---|-----------------------------------|------------------------------------|------------------------------|
|                 |                                 |   |                                   |                                    |                              |
| PR23-5V-900-1A  | 5                               | 27.8  | 3.5                               | 0.5                                | 900                          |
| PR23-12V-900-1A | 12                              | 160   | 8.4                               | 1.2                                | 900                          |
| PR23-24V-900-1A | 24                              | 640   | 16.8                              | 2.4                                | 900                          |
| PR23-5V-900-1C  | 5                               | 27.8  | 3.5                               | 0.5                                | 900                          |
| PR23-12V-900-1C | 12                              | 160   | 8.4                               | 1.2                                | 900                          |
| PR23-24V-900-1C | 24                              | 640   | 16.8                              | 2.4                                | 900                          |

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

**PART NUMBER KEY**

## CONTACT SPECIFICATIONS

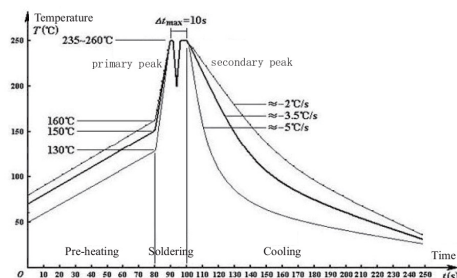
| parameter             | conditions/description  | min | typ                   | max          | units                    |
|-----------------------|---|-----|-----------------------|--------------|--------------------------|
| contact form          | 1 Form A, 1 Form C  |     |                       |              |                          |
| contact material      | Ag alloy  |     |                       |              |                          |
| contact rating        | 1 Form A: 30 A @ 125 Vac, 30 A @ 24 Vdc<br>1 Form C: NO/NC: 20 A / 15 A @ 125 Vac, 20 A / 15 A @ 24 Vdc |     |                       |              |                          |
| contact resistance    | at 6 Vdc, 1.0 A   |     |                       | 100          | mΩ                       |
| max switching voltage |   |     |                       | 250<br>28    | Vac<br>Vdc               |
| max switching current |   |     |                       | 30           | A                        |
| max switching power   |   |     |                       | 7,500<br>560 | 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>between coil and contacts for 1 minute                    |       | 1,500<br>2,500 |     | Vac<br>Vac                           |
| operate time          |   |       |                | 15  | ms                                   |
| release time          |   |       |                | 10  | ms                                   |
| shock resistance      | endurance<br>misoperation   |       | 1,000<br>100   |     | m/s <sup>2</sup><br>m/s <sup>2</sup> |
| 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                |   |       | 27.0           |     | g                                    |
| safety approvals      | UL/cUL 508  |       |                |     |                                      |
| flammability rating   | UL94V-0   |       |                |     |                                      |
| RoHS                  | yes   |       |                |     |                                      |
| packaging             | tray: 50 pcs per tray<br>carton size: 438 x 345 x 241 mm<br>carton QTY: 500 pcs per carton      |       |                |     |                                      |

## SOLDERABILITY

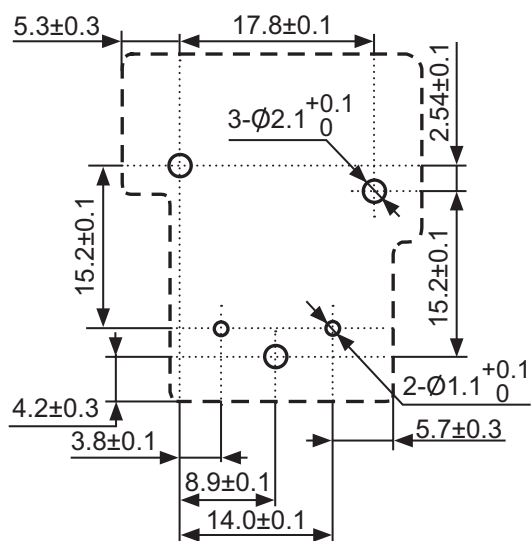
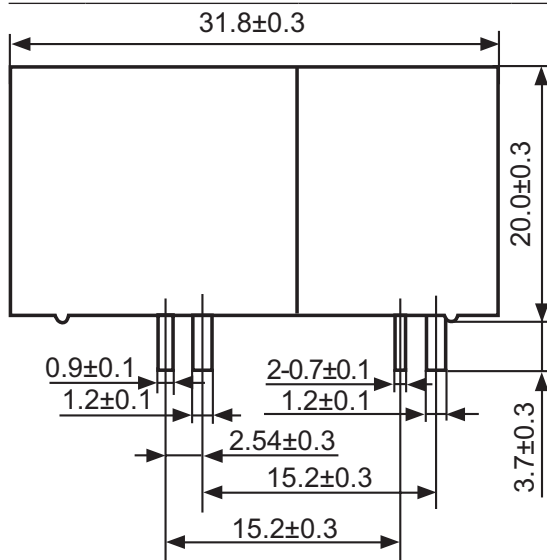
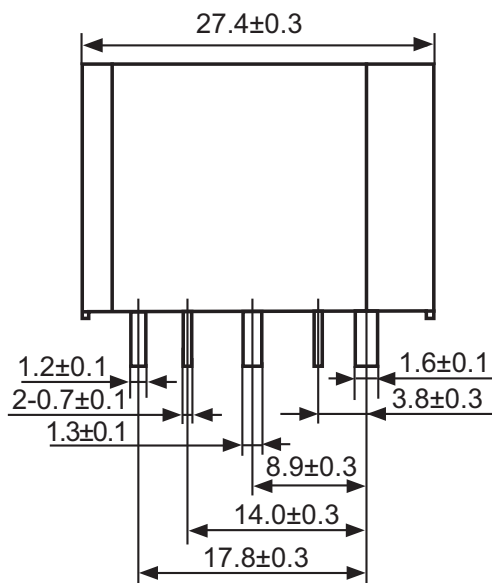
| parameter      | conditions/description | min | typ | max | units |
|----------------|------------------------|-----|-----|-----|-------|
| hand soldering | for 3.5±0.5 seconds    | 340 | 350 | 360 | °C    |
| wave soldering | for 10±1 seconds       | 255 | 260 | 265 | °C    |



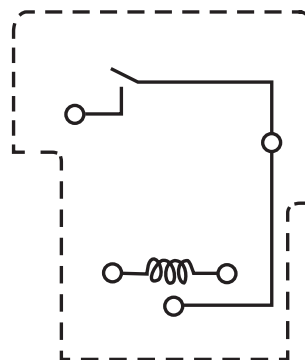
Double-wave Soldering Curve

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

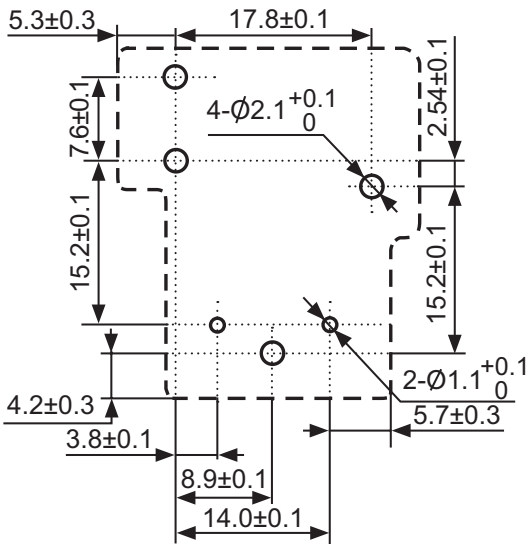
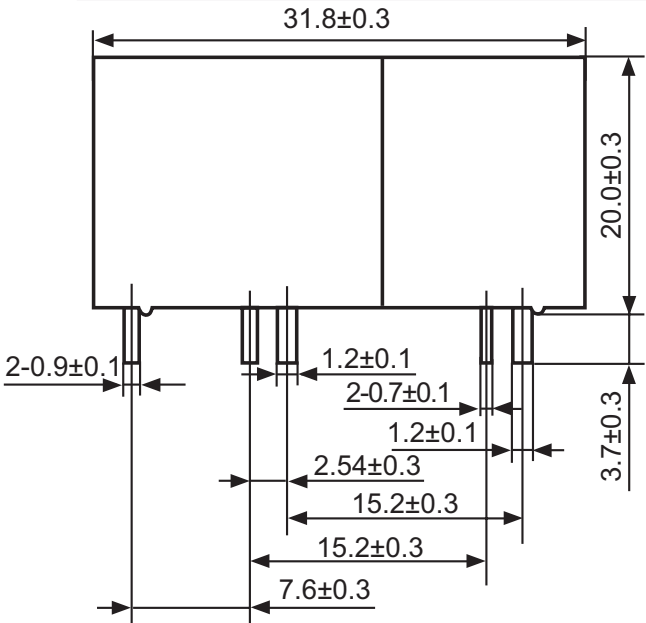
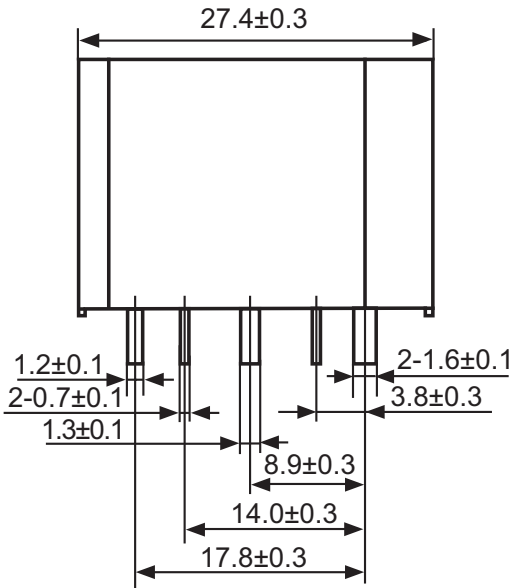


### Wiring Diagram Bottom View

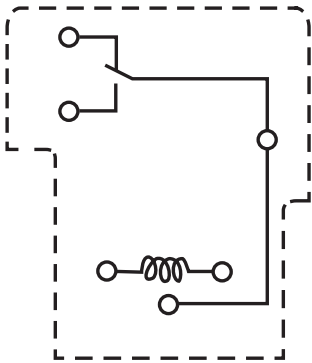
MECHANICAL DRAWING (1C = 1 FORM C)

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           |



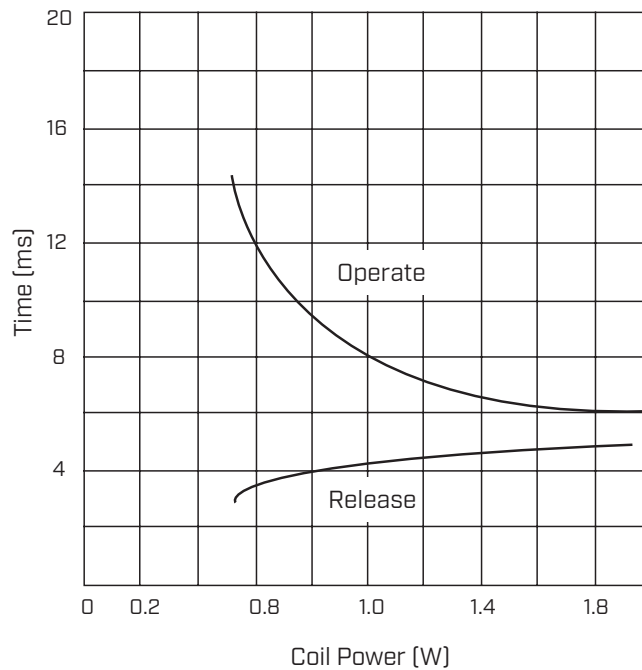
Recommended PCB Layout  
Bottom View



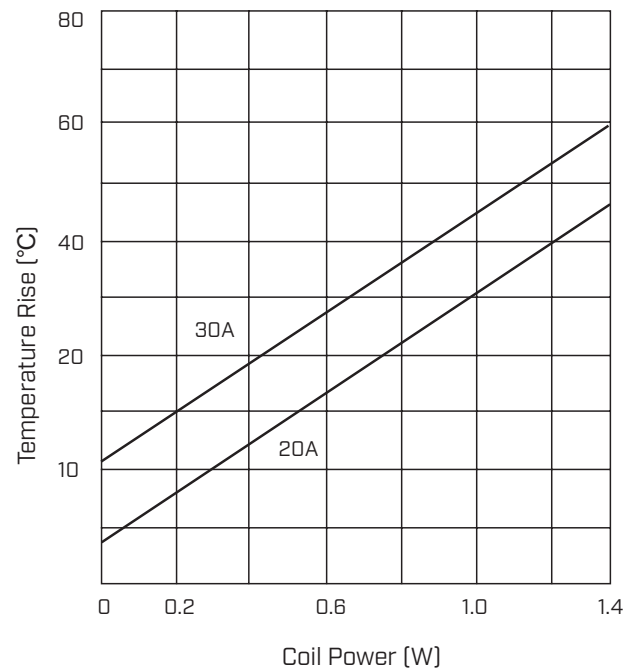
Wiring Diagram  
Bottom View

## CHARACTERISTIC CURVES

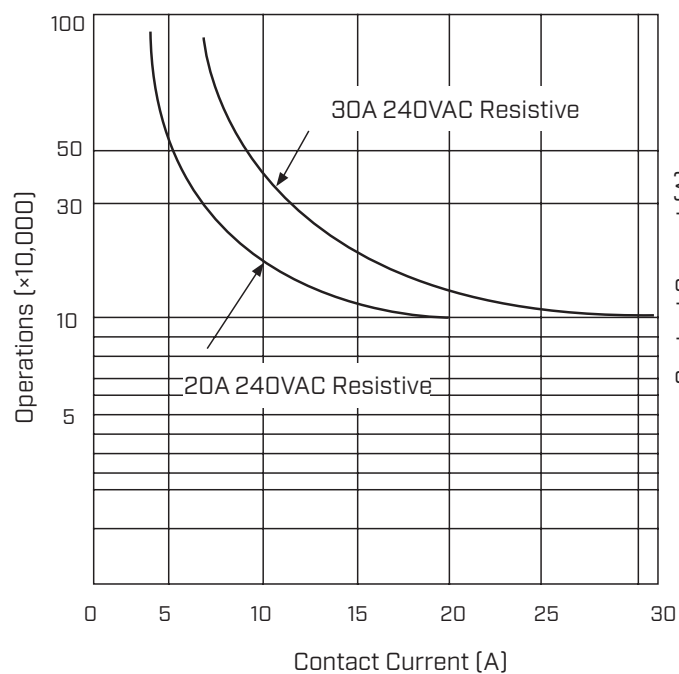
Time Curve



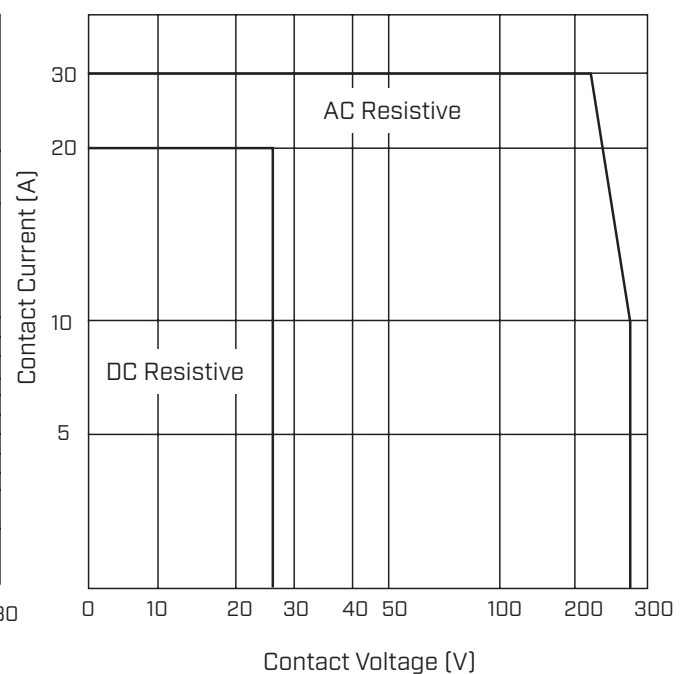
Coil Temperature Rise



Life Curve



Maximum Switching Power



## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 08/15/2022 |

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



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

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

CUI Devices 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.

**cuidevices.com**