

**SERIES:** PRL6 | **DESCRIPTION:** LATCHING POWER RELAY**FEATURES**

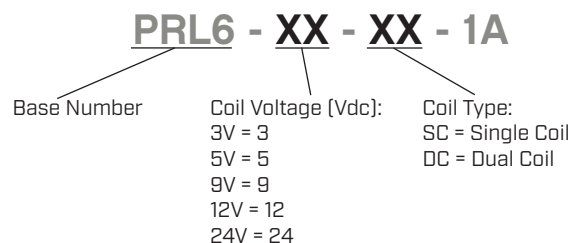
- single coil
- double coil
- 1 form A

**MODEL**

|                | coil<br>voltage<br>typ<br>[Vdc] | coil<br>resistance<br><br>[Ω±10%] | operating<br>voltage<br>min<br>[Vdc] | reset<br>voltage<br>min<br>[Vdc] | coil<br>power<br>typ<br>[mW] |
|----------------|---------------------------------|-----------------------------------|--------------------------------------|----------------------------------|------------------------------|
| PRL6-3V-SC-1A  | 3                               | 36                                | 2.4                                  | 2.4                              | 250                          |
| PRL6-5V-SC-1A  | 5                               | 100                               | 4                                    | 4                                | 250                          |
| PRL6-9V-SC-1A  | 9                               | 324                               | 7.2                                  | 7.2                              | 250                          |
| PRL6-12V-SC-1A | 12                              | 576                               | 9.6                                  | 9.6                              | 250                          |
| PRL6-24V-SC-1A | 24                              | 2304                              | 19.2                                 | 19.2                             | 250                          |
| PRL6-3V-DC-1A  | 3                               | 18/18                             | 2.4                                  | 2.4                              | 500                          |
| PRL6-5V-DC-1A  | 5                               | 50/50                             | 4                                    | 4                                | 500                          |
| PRL6-9V-DC-1A  | 9                               | 162/162                           | 7.2                                  | 7.2                              | 500                          |
| PRL6-12V-DC-1A | 12                              | 288/288                           | 9.6                                  | 9.6                              | 500                          |
| PRL6-24V-DC-1A | 24                              | 1152/1152                         | 19.2                                 | 19.2                             | 500                          |

Notes:

1. The magnetic relay is shipped in the reset state. However, it may be in the set state due to impact of transportation or installation. Therefore, check status of the relay prior to use.
2. It is recommended to apply 1-1.3 times of rated coil voltage and the pulse width must be greater than 30 ms.
3. Do not apply voltage to the set coil and reset coil at the same time, and do not apply voltage to the coil for more than 1 minute.
4. During transportation, storage, and application, please keep the relays away from strong magnetic fields to avoid malfunction or damage.
5. All specifications are measured at 23°C unless otherwise specified.

**PART NUMBER KEY**

CONTACT SPECIFICATIONS

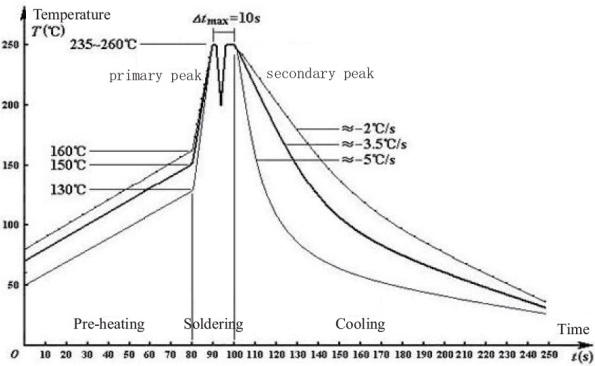
| parameter             | conditions/description   | min | typ                  | max   | units                    |
|-----------------------|--|-----|----------------------|-------|--------------------------|
| contact form          | 1 Form A   |     |                      |       |                          |
| contact material      | Ag alloy   |     |                      |       |                          |
| contact rating        | 16 A @ 277 Vac<br>TV-10 250 Vac  |     |                      |       |                          |
| contact resistance    | at 6 Vdc, 1 A  |     |                      | 100   | mΩ                       |
| max switching voltage |  |     |                      | 277   | Vac                      |
| max switching current |  |     |                      | 16    | A                        |
| max switching power   |  |     |                      | 4,432 | VA                       |
| min switching load    | 5 Vdc, 0.1 A   |     |                      |       |                          |
| life                  | electrical: 16 A, 277 Vac resistive load<br>mechanical: at 180 operations/minute |     | 100,000<br>1,000,000 |       | 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, 50/60 Hz for 1 minute<br>between coil and contacts, 50/60 Hz for 1 minute |       | 1,000<br>4,000 |     | Vac<br>Vac                           |
| operate time          |  |       |                | 15  | ms                                   |
| release time          |  |       |                | 15  | 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  | 5     |                | 85  | %RH                                  |
| weight                |  |       | 7              |     | g                                    |
| safety approvals      | UL/cUL 508   |       |                |     |                                      |
| flammability rating   | UL94V-0  |       |                |     |                                      |
| RoHS                  | yes  |       |                |     |                                      |
| packaging             | tube: 100 pcs per case<br>carton size: 484 x 314 x 166 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    |

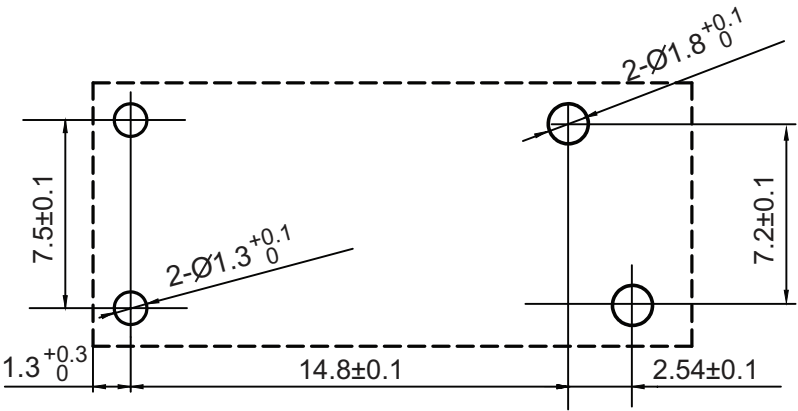
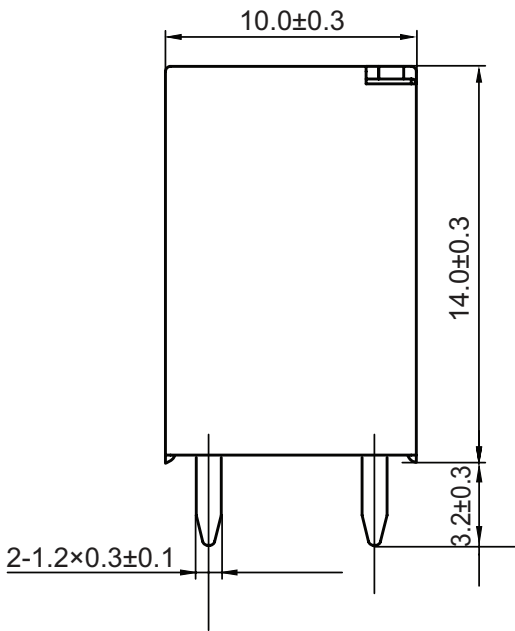
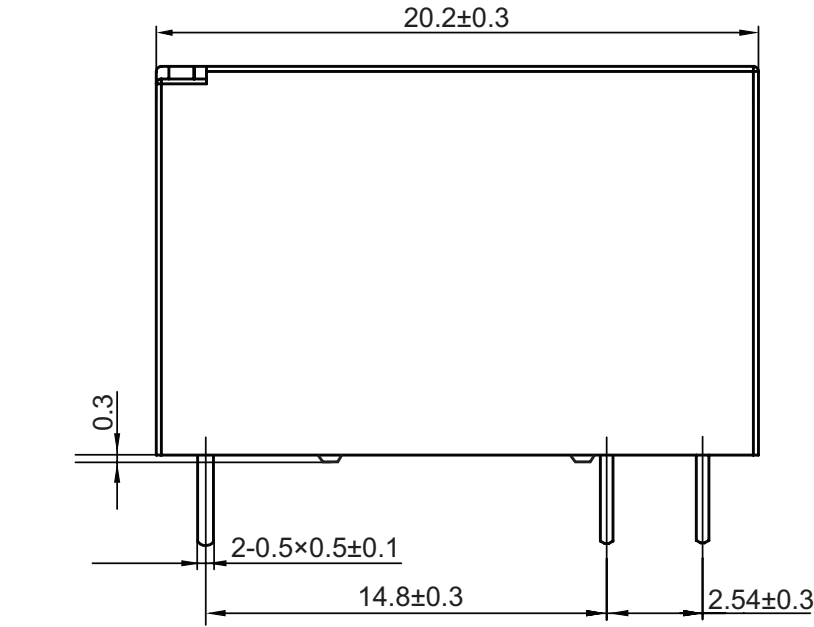


Double-wave Soldering Curve

MECHANICAL DRAWING (SINGLE COIL)

units: mm

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



Recommended PCB Layout  
Bottom View

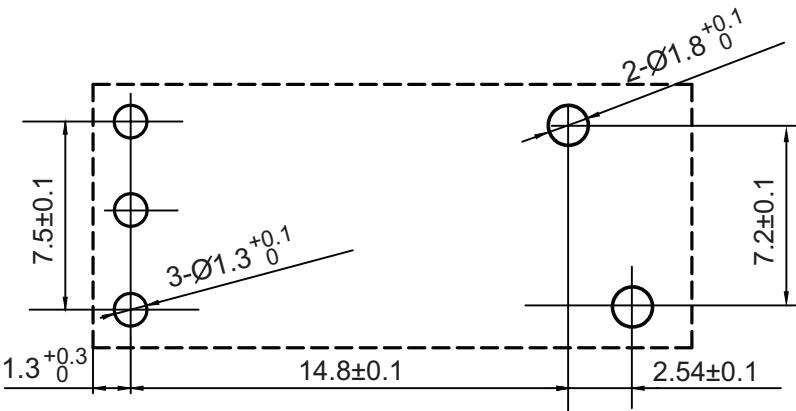
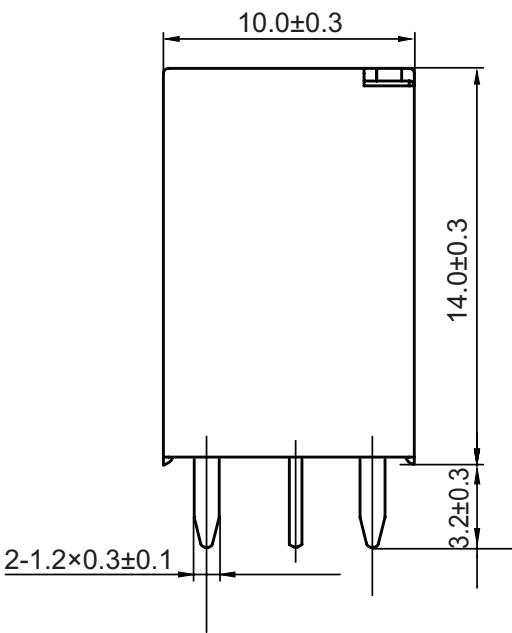
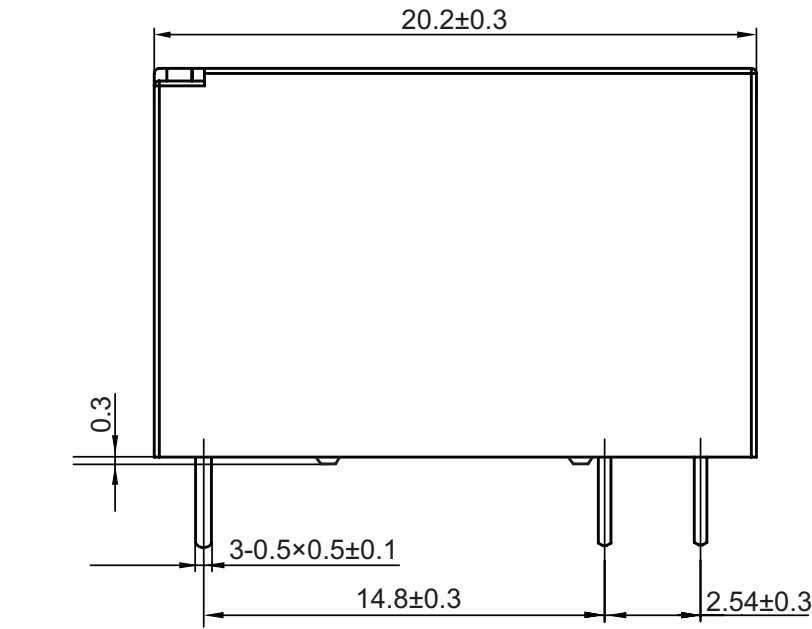


Wiring Diagram  
Bottom View

MECHANICAL DRAWING (DOUBLE COIL)

units: mm

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



Recommended PCB Layout  
Bottom View



Wiring Diagram  
Bottom View

REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 05/19/2025 |

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



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