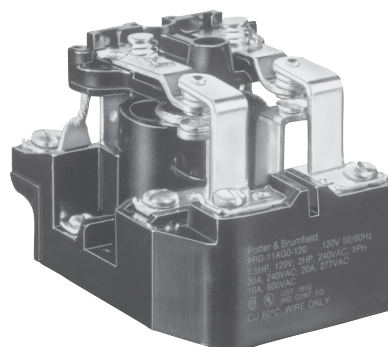


## PRD Series Power Relay

- Contact ratings to 50A
- Magnetic blowouts available for switching DC loads
- Contact arrangement up to 2 form C (2CO)
- 1 form C auxiliary switch available
- UL class B insulation

Typical applications  
Industrial controls, lighting.



### Approvals

UL E22575; CSA LR15734; VDE Reg.Nr.C144  
Models with all screw terminals are UL Listed. Others are UL Recognized.  
Technical data of approved types on request.

### Contact Data

|                               |                                                               |
|-------------------------------|---------------------------------------------------------------|
| Contact arrangement           | 1 and 2 form A (NO); 1 and 2 form C (CO);<br>1 form X (NO-DM) |
| Rated voltage                 | 600VAC, 125VDC                                                |
| Rated current                 | 50A                                                           |
| Contact material              | Ag, AgCdO, W                                                  |
| Min. recommended contact load | 1A, 12VDC or 12VAC                                            |
| Initial contact resistance    | 75mΩ max.                                                     |
| Initial voltage drop          | 75mV                                                          |
| Frequency of operation        | 7200 ops/hr                                                   |
| Operate/releases time max.    | 40/20ms                                                       |
| Bounce time max.              | 10ms                                                          |

### Contact ratings

| Type                                                    | Load                   | Cycles              |
|---------------------------------------------------------|------------------------|---------------------|
| <b>UL 508<sup>1)</sup></b>                              |                        |                     |
| Models with screws or quick connects for main terminals |                        |                     |
| Code Y, Ag, 1 pole                                      |                        |                     |
|                                                         | 25A, 277VAC            | 100x10 <sup>3</sup> |
|                                                         | 1HP, 120VAC            | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC            | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC            | 100x10 <sup>3</sup> |
|                                                         | 7A, 50VDC, resistive   | 100x10 <sup>3</sup> |
| Code Y, Ag, 2 pole                                      |                        |                     |
|                                                         | 25A, 240VAC            | 100x10 <sup>3</sup> |
|                                                         | 20A, 277VAC            | 100x10 <sup>3</sup> |
|                                                         | 1HP, 120VAC            | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC            | 100x10 <sup>3</sup> |
|                                                         | 7A, 50VDC, resistive   | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC            | 100x10 <sup>3</sup> |
| Code G, AgCdO, 1 pole                                   |                        |                     |
|                                                         | 30A, 277VAC, resistive | 100x10 <sup>3</sup> |
|                                                         | 1.5HP, 120VAC          | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC            | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC            | 100x10 <sup>3</sup> |
| Code G, AgCdO, 2 pole                                   |                        |                     |
|                                                         | 30A, 240VAC            | 100x10 <sup>3</sup> |
|                                                         | 20A, 277VAC            | 100x10 <sup>3</sup> |
|                                                         | 1.5HP, 120VAC          | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC            | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC            | 100x10 <sup>3</sup> |

1) Any PRD relay deviating electrically or physically from the standard models in the table is not UL or CSA listed. All horsepower ratings are for single phase motors..

### Contact ratings (continued)

| Type                                                    | Load                                       | Cycles              |
|---------------------------------------------------------|--------------------------------------------|---------------------|
| <b>UL 508<sup>1)</sup></b>                              |                                            |                     |
| Models with screws or quick connects for main terminals |                                            |                     |
| Code F, AgCdO, 1 pole                                   |                                            |                     |
|                                                         | 50A, 240VAC, general purpose <sup>2)</sup> | 20x10 <sup>3</sup>  |
|                                                         | 30A, 277VAC, resistive                     | 100x10 <sup>3</sup> |
|                                                         | 1.5HP, 120VAC                              | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC                                | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC                                | 100x10 <sup>3</sup> |
| Code F, AgCdO, 2 pole                                   |                                            |                     |
|                                                         | 50A, 240VAC, general purpose <sup>2)</sup> | 20x10 <sup>3</sup>  |
|                                                         | 30A, 240VAC                                | 100x10 <sup>3</sup> |
|                                                         | 20A, 277VAC                                | 100x10 <sup>3</sup> |
|                                                         | 1.5HP, 120VAC                              | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC                                | 100x10 <sup>3</sup> |
|                                                         | 10A, 600VAC                                | 100x10 <sup>3</sup> |
| Code H, Ag with magnetic blowout, 1 or 2 pole           |                                            |                     |
|                                                         | 20A, 125VDC                                | 100x10 <sup>3</sup> |
|                                                         | 1/3HP, 125VDC                              | 100x10 <sup>3</sup> |
| Code J, AgCdO with magnetic blowout, 1 or 2 pole        |                                            |                     |
|                                                         | 20A, 125VDC                                | 100x10 <sup>3</sup> |
|                                                         | 1/3HP, 125VDC                              | 100x10 <sup>3</sup> |
| Code N, W stationary with AgCdO movable, 1 or 2 pole    |                                            |                     |
|                                                         | 25A, 250VAC                                | 100x10 <sup>3</sup> |
|                                                         | 1HP, 125VAC                                | 100x10 <sup>3</sup> |
|                                                         | 2HP, 250VAC                                | 100x10 <sup>3</sup> |

### UL 508<sup>1)</sup>

Models with box lugs for main terminals

|                      |                              |                     |
|----------------------|------------------------------|---------------------|
| Code P, Ag, 1 form X |                              |                     |
|                      | 50A, 277VAC, general purpose | 100x10 <sup>3</sup> |
|                      | 30A, 277VAC, ballast         | 6x10 <sup>3</sup>   |
|                      | 15A, 277VAC, tungsten        | 6x10 <sup>3</sup>   |
|                      | 102LRA, 17FLA, 240VAC        | 30x10 <sup>3</sup>  |
|                      | 120LRA, 20FLA, 120VAC        | 30x10 <sup>3</sup>  |
|                      | 1.5HP, 120VAC                | 30x10 <sup>3</sup>  |
|                      | 3HP, 240VAC                  | 30x10 <sup>3</sup>  |

### Factory ratings

Models with box lugs for main terminals

|                                            |                       |                     |
|--------------------------------------------|-----------------------|---------------------|
| Code R, Ag with magnetic blowout, 1 form X |                       |                     |
|                                            | 60A, 28VDC, resistive | 100x10 <sup>3</sup> |
|                                            | 30A, 125VDC           | 100x10 <sup>3</sup> |

Mechanical endurance DC Coil, 1x10<sup>6</sup> ops.; AC Coil 5x10<sup>5</sup> ops.

### Auxiliary Snap-Action Switch Contact Data

|                     |                         |
|---------------------|-------------------------|
| Contact arrangement | 1 form C (CO)           |
| Rating              | 5A, 120VAC, 60Hz., 25°C |
| Contact material    | Ag                      |

**PRD Series Power Relay (Continued)**

**Coil Data**

|                    |                            |
|--------------------|----------------------------|
| Coil voltage range | 6 to 110VDC<br>6 to 480VAC |
|--------------------|----------------------------|

|                                     |         |
|-------------------------------------|---------|
| Coil insulation system according UL | Class B |
|-------------------------------------|---------|

**Coil versions, DC coil**

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power W |
|-----------|-------------------|---------------------|---------------------|-----------------------------------|--------------------|
| 6         | 6                 | 4.5                 | 0.6                 | 18                                | 2                  |
| 12        | 12                | 9                   | 1.2                 | 71                                | 2                  |
| 24        | 24                | 18                  | 2.4                 | 288                               | 2                  |
| 48        | 48                | 36                  | 4.8                 | 1150                              | 2                  |
| 110       | 110               | 82.5                | 11                  | 6050                              | 2                  |

All figures are given for coil without preenergization, at ambient temperature +23°C.  
Other coil voltages on request.

**Coil versions, AC coil**

| Coil code | Rated voltage VAC | Operate voltage VAC | Release voltage VAC | Coil resistance $\Omega \pm 15\%$ | Rated coil power VA |
|-----------|-------------------|---------------------|---------------------|-----------------------------------|---------------------|
| 6         | 6                 | 5.1                 | 0.6                 | 0.86                              | 9.8                 |
| 12        | 12                | 10.2                | 1.2                 | 3.2                               | 9.8                 |
| 24        | 24                | 20.4                | 2.4                 | 12                                | 9.8                 |
| 120       | 120               | 102                 | 12                  | 290                               | 9.8                 |
| 240       | 240               | 204                 | 24                  | 1200                              | 9.8                 |
| 480       | 480               | 408                 | 48                  | 4500                              | 9.8                 |

All figures are given for coil without preenergization, at ambient temperature +23°C.  
Other coil voltages on request.

**Insulation Data**

|                               |                      |
|-------------------------------|----------------------|
| Initial dielectric strength   |                      |
| between open contacts         | 2000V <sub>rms</sub> |
| between contact and coil      | 2000V <sub>rms</sub> |
| between adjacent contacts     | 2000V <sub>rms</sub> |
| Initial insulation resistance |                      |
| between insulated elements    | 100M $\Omega$        |

**Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content  
refer to the Product Compliance Support Center at  
[www.te.com/customer-support/rohssupportcenter](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature

AC coil: -55°C to 45°C

DC coil: -55°C to 80°C

Category of environmental protection

IEC 61810

RT0 - open relay

Terminal type Screw, Quick connects, Box lugs

Weight 284g

Packaging/unit tray/20 pcs., box/40pcs.

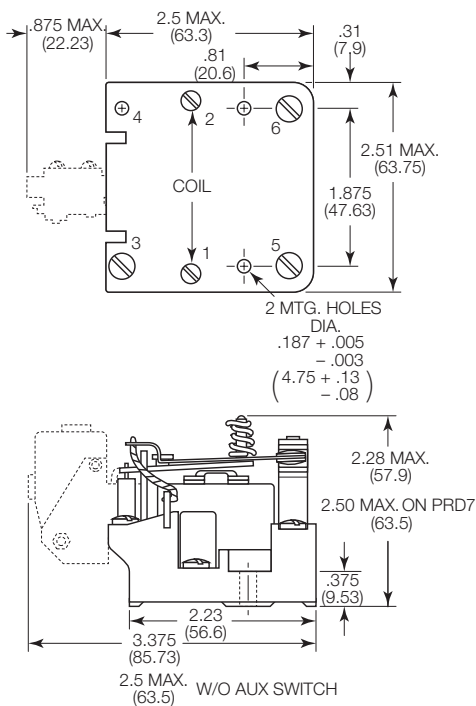
**Accessories**

Product Code Description

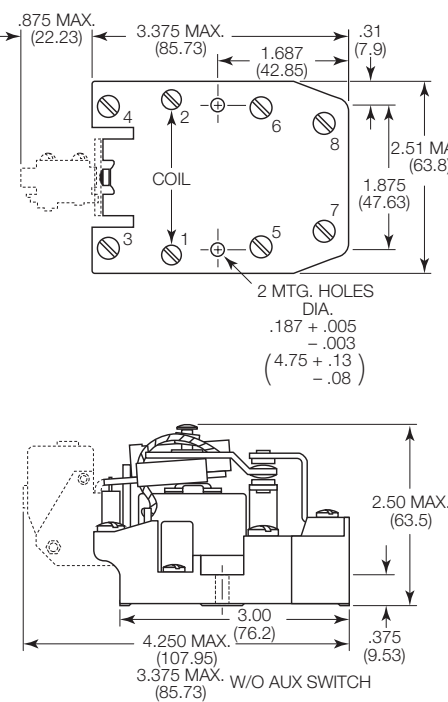
35D013 Metal dust cover

**Dimensions**

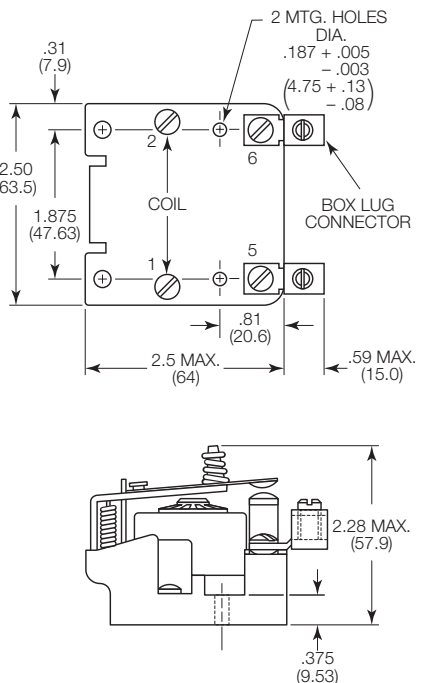
PRD/PRDA 1, 3, 5 and 7



PRD/PRDA 11



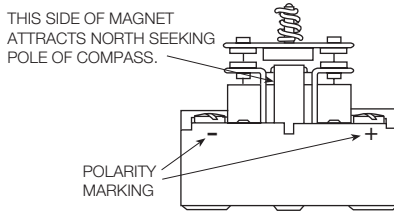
PRD-3\_P and R



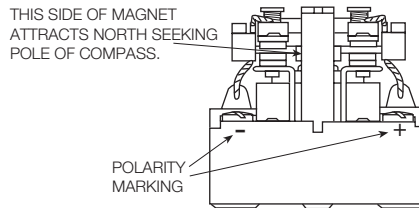
**PRD Series Power Relay (Continued)**

**Terminal assignment for models with magnetic blowout**

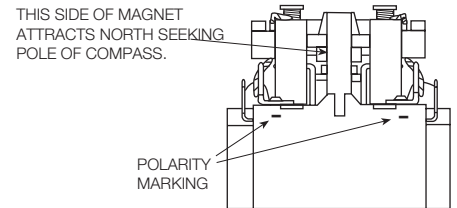
PRD3 with blowout



PRD7 with blowout



PRD 11 with blowout



**Product code structure**

Typical product code

**PRD -7 A Y 0 -120**

**Type**

- PRD** Open relay  
**PRDA** Open relay with aux. 1 form C (CO) snap-action switch

**Main contact arrangement**

- |                                                              |                             |
|--------------------------------------------------------------|-----------------------------|
| <b>1</b> 1 form A (1 NO)                                     | <b>3</b> 1 form X (1 NO-DM) |
| <b>5</b> 1 form C (1 CO)                                     | <b>7</b> 2 form A (2 NO)    |
| <b>7V</b> 2 form A (2 NO) with 3mm contact gap <sup>1)</sup> | <b>11</b> 2 form C (2 CO)   |

<sup>1)</sup> Code 7V is only available as a UL Recognized model, not UL Listed

**Coil input**

- |                      |             |
|----------------------|-------------|
| <b>A</b> AC, 50/60Hz | <b>D</b> DC |
|----------------------|-------------|

**Main contact material and type**

- Y** .312" (7.92mm) dia. Ag [25A max. rating]  
**G** .312" (7.92mm) dia. AgCdO [30A max. rating]  
**F** .312" (7.92mm) dia. AgCdO [50A max. rating] <sup>2)</sup>  
**H** Ag with magnetic blowout [20A DC max. rating] <sup>3)</sup>  
**J** AgCdO with magnetic blowout [20A DC max. rating]  
**N** W stationary & AgCdO movable [25A max. rating] <sup>4)</sup>  
**P** Ag [50A max. rating] <sup>5)</sup>  
**R** Ag with magnetic blow out [50A max. rating] <sup>5)</sup>

<sup>2)</sup> Available with Main contact arrangement code 1, 5, 7 or 11 only, and Termination code 0 or A only.

<sup>3)</sup> Available with Main contact arrangement code 3, 7 or 11 only

<sup>4)</sup> Available with Main contact arrangement code 1, 5, 7 or 11 only.

<sup>5)</sup> Available with Main contact arrangement code 3 only, and Termination code 4 only.

**Termination**

**PRD types only**

- 0** #8-32 screw term. for main contacts, #6-32 screw term. for coil.  
**1** .250" (6.35mm) QC for main contacts and coil  
**3** #8-32 screw term. for main contacts, .250" (6.35mm) QC for coil.  
**4** Box lug term. which accept #6 - #14 wire for main contacts, #6-32 screw term. for coil. <sup>6)</sup>

<sup>6)</sup> Available with Main contact arrangement code 3 only, and Main contact material code P or R only.

**PRDA (with aux. switch) types only**

- A** #8-32 screw term. for main contacts, #6-32 screw term. for coil, screw term. for aux. switch  
**B** .250" (6.35mm) QC for main contacts, coil and aux. switch  
**L** Twin .250" (6.35mm) QC for main contacts, .250" (6.35mm) QC for coil and aux. switch

**Coil voltage**

Coil code: please refer to coil versions table

