

PRD Series Power Relay

- Contact ratings to 50 amps
- 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); 1 Form X (NO-DM) |
| Rated voltage | 600VAC, 125VDC |
| Rated current | 50A |
| Contact material | Ag, AgCdO, W |
| Min. recommended contact load | 1A, 12VDC or 1.2VAC |
| 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 |
|---|------------------------|---------------------|
| UL 508 ¹⁾ | | |
| Models with screws or quick connects for main terminals | | |
| Code Y, Ag, 1 pole | | |
| | 25A, 277VAC | 100x10 ³ |
| | 1HP, 120VAC | 100x10 ³ |
| | 2HP, 250VAC | 100x10 ³ |
| | 10A, 600VAC | 100x10 ³ |
| | 7A, 50VDC, resistive | 100x10 ³ |
| Code Y, Ag, 2 pole | | |
| | 25A, 240VAC | 100x10 ³ |
| | 20A, 277VAC | 100x10 ³ |
| | 1HP, 120VAC | 100x10 ³ |
| | 2HP, 250VAC | 100x10 ³ |
| | 7A, 50VDC, resistive | 100x10 ³ |
| | 10A, 600VAC | 100x10 ³ |
| Code G, AgCdO, 1 pole | | |
| | 30A, 277VAC, resistive | 100x10 ³ |
| | 1.5HP, 120VAC | 100x10 ³ |
| | 2HP, 250VAC | 100x10 ³ |
| | 10A, 600VAC | 100x10 ³ |
| Code G, AgCdO, 2 pole | | |
| | 30A, 240VAC | 100x10 ³ |
| | 20A, 277VAC | 100x10 ³ |
| | 1.5HP, 120VAC | 100x10 ³ |
| | 2HP, 250VAC | 100x10 ³ |
| | 10A, 600VAC | 100x10 ³ |

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

| | | |
|---|------------------------------|---------------------|
| 2) In order to achieve 50A rating with Contact Code F, Termination Code 0 or A is required. | | |
| UL 508 ¹⁾ | | |
| Models with box lugs for main terminals | | |
| Code P, Ag, 1 form X | | |
| | 50A, 277VAC, general purpose | 100x10 ³ |
| | 30A, 277VAC, ballast | 6x10 ³ |
| | 15A, 277VAC, tungsten | 6x10 ³ |
| | 102LRA, 17FLA, 240VAC | 30x10 ³ |
| | 120LRA, 20FLA, 120VAC | 30x10 ³ |
| | 1.5HP, 120VAC | 30x10 ³ |
| | 3HP, 240VAC | 30x10 ³ |

Factory ratings

| | | |
|--|-----------------------|---------------------|
| Models with box lugs for main terminals | | |
| Code R, Ag with magnetic blowout, 1 form X | | |
| | 60A, 28VDC, resistive | 100x10 ³ |
| | 30A, 125VDC | 100x10 ³ |

Mechanical endurance DC Coil, 1x10⁶ ops.; AC Coil 5x10⁵ ops.

Auxiliary Snap-Action Switch Contact Data

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

PRD Series Power Relay (Continued)

Coil Data

| | |
|-------------------------------------|----------------------------|
| Coil voltage range | 6 to 110VDC 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 _{rms} |
| between contact and coil | 2000V _{rms} |
| between adjacent contacts | 2000V _{rms} |
| Initial insulation resistance | |
| between insulated elements | 100M Ω |

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.

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.

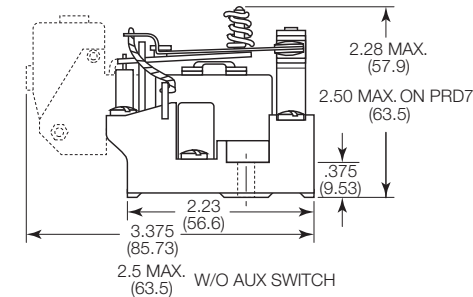
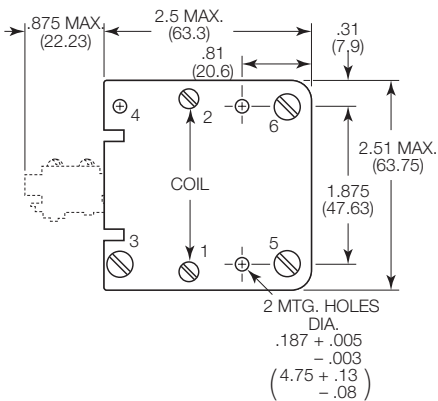
Accessories

Product Code Description

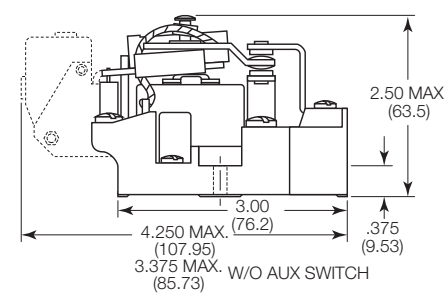
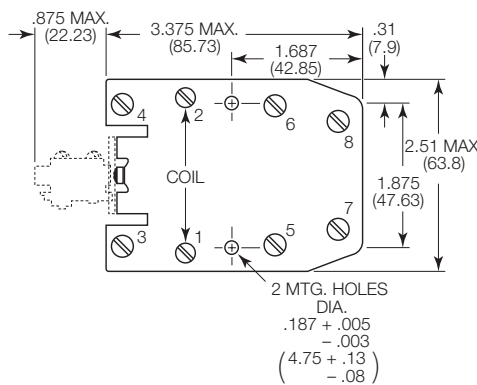
35D013 Metal dust cover

Dimensions

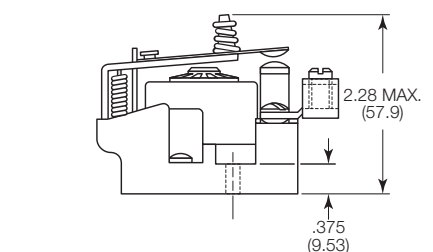
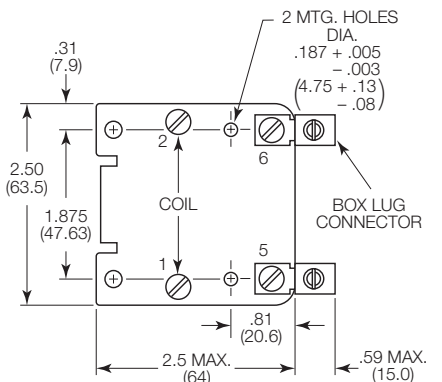
PRD/PRDA 1, 3, 5 and 7



PRD/PRDA 11



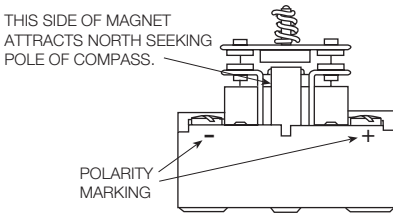
PRD-3_P and R



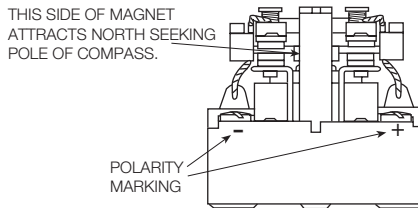
PRD Series Power Relay (Continued)

Terminal assignment for models with magnetic blowout

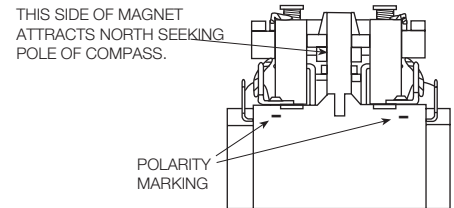
PRD3 with blowout



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

- 1** 1 form A (1 NO) **3** 1 form X (1 NO-DM)
- 5** 1 form C (1 CO) **7** 2 form A (2 NO)
- 7V** 2 form A (2 NO) with 3mm contact gap ¹⁾ **11** 2 form C (2 CO)

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

Coil input

- A** AC, 50/60Hz **D** 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] ²⁾
- H** Ag with magnetic blowout [20A DC max. rating] ³⁾
- J** AgCdO with magnetic blowout [20A DC max. rating]
- N** W stationary & AgCdO movable [25A max. rating] ⁴⁾
- P** Ag [50A max. rating] ⁵⁾
- R** Ag with magnetic blow out [50A max. rating] ⁵⁾

²⁾ Available with Main contact arrangement code (step 2 above) 1, 5, 7 or 11 only, and Termination code (step 5 below) 0 or A only.

³⁾ Available with Main contact arrangement code (step 2 above) 3, 7 or 11 only

⁴⁾ Available with Main contact arrangement code (step 2 above) 1, 5, 7 or 11 only.

⁵⁾ Available with Main contact arrangement code (step 2 above) 3 only, and Termination code (step 5 below) 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. ⁶⁾

⁶⁾ Available with Main contact arrangement code (step 2 above) 3 only, and Main contact material code (step 4 above) 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

PRD Series Power Relay (Continued)

| Product Code | Arrangement | Material | Coil | Terminals | Part Number | | | | |
|----------------|--------------------|--------------------|-----------------|-------------|-------------|-------------|------------|-------------|-------------|
| PRD-3AY0-120 | 1 form X, 1 NO-DM | Ag | 120VAC | Screw | 7-1393127-9 | | | | |
| PRD-3AG0-120 | | AgCdO, 30A | | | 6-1393127-9 | | | | |
| PRD-3AJ0-120 | | AgCdO, mag blowout | | | 7-1393127-4 | | | | |
| PRD-3AJ3-24 | 1 form C, 1 CO | Ag, mag blowout | 24VAC | Screw / QC | 7-1393127-5 | | | | |
| PRD-3DH0-24 | | | 24VDC | | Screw | 8-1393127-6 | | | |
| PRD-3DY0-12 | | | 12VDC | 9-1393127-5 | | | | | |
| PRD-3DY0-24 | | | 24VDC | 9-1393127-6 | | | | | |
| PRD-3DY0-110 | | | 110VDC | 9-1393127-4 | | | | | |
| PRD-5AY0-24 | 1 form C, 1 CO | AgCdO, 50A | 24VAC | QC | 1393128-6 | | | | |
| PRD-5AY0-120 | | | 120VAC | | 1393128-5 | | | | |
| PRD-5AY0-240 | | | 240VAC | | 1393128-7 | | | | |
| PRD-5DF0-12 | | | 12VDC | | 2-1423100-4 | | | | |
| PRD-5DY0-12 | | | Ag | | 1-1393128-6 | | | | |
| PRD-5DY0-24 | | | 24VDC | | 1-1393128-7 | | | | |
| PRD-7AG0-120 | | | 2 form A, 2 NO | | AgCdO, 30A | 120VAC | Screw / QC | 9-1393129-5 | |
| PRD-7AY0-24 | | | | | | 24VAC | | 1393130-9 | |
| PRD-7AY0-120 | | | | | | 120VAC | | 1393130-7 | |
| PRD-7AY0-240 | | | | | | 240VAC | | 1-1393130-0 | |
| PRD-7AY3-120 | 120VAC | 1-1393130-2 | | | | | | | |
| PRD-7DG0-24 | AgCdO, 30A | 24VDC | | Screw | | 1-1393130-6 | | | |
| PRD-7DH0-48 | Ag, mag blowout | 48VAC | | | | 2-1393130-1 | | | |
| PRD-7DY0-12 | Ag | 12VDC | | 2-1393130-8 | | | | | |
| PRD-7DY0-24 | 24VDC | 2-1393130-9 | | | | | | | |
| PRD-11AF0-240 | 2 form C, 2 CO | AgCdO, 50A | | 240VAC | | Screw | | 3-1423100-0 | |
| PRD-11AG0-24 | | | | AgCdO, 30A | | | | 24VAC | 1-1393127-1 |
| PRD-11AG0-120 | | | | 120VAC | | | | 1393127-9 | |
| PRD-11AG0-240 | | | 240VAC | 1-1393127-2 | | | | | |
| PRD-11AH0-120 | | | Ag, mag blowout | 120VAC | 1-1393127-6 | | | | |
| PRD-11AY0-24 | | | Ag | 24VAC | 2-1393127-9 | | | | |
| PRD-11AY0-120 | | | 120VAC | 2-1393127-6 | | | | | |
| PRD-11AY0-240 | | | 240VAC | 3-1393127-0 | | | | | |
| PRD-11AY0-480 | | | 480VAC | 3-1393127-1 | | | | | |
| PRD-11DF0-12 | | | AgCdO, 50A | 12VDC | 2-1423100-2 | | | | |
| PRD-11DF0-110 | 110VDC | 2-1423100-9 | | | | | | | |
| PRD-11DG0-12 | AgCdO, 30A | 12VDC | 3-1393127-5 | | | | | | |
| PRD-11DG0-24 | 24VDC | 3-1393127-8 | | | | | | | |
| PRD-11DH0-12 | Ag, mag blowout | 12VDC | 4-1393127-7 | | | | | | |
| PRD-11DH0-24 | | 24VDC | 4-1393127-9 | | | | | | |
| PRD-11DH0-48 | | 48VDC | 5-1393127-0 | | | | | | |
| PRD-11DH0-110 | 110 VDC | 4-1393127-6 | | | | | | | |
| PRD-11DJ0-24 | AgCdO, mag blowout | 24 VDC | 5-1393127-5 | | | | | | |
| PRD-11DY0-12 | Ag | 12 VDC | 6-1393127-1 | | | | | | |
| PRD-11DY0-24 | | 24 VDC | 6-1393127-2 | | | | | | |
| PRD-11DY0-48 | | 48 VAC | 6-1393127-3 | | | | | | |
| PRD-11DY0-110 | | 110 VDC | 6-1393127-0 | | | | | | |
| PRDA-11AGA-120 | AgCdO, 30A | 120 VAC | Screw | 7-1393131-4 | | | | | |
| PRDA-11AYA-120 | | | | 7-1393131-9 | | | | | |

PRD accessory

| Product Code | Description | Part Number |
|--------------|----------------------------|-------------|
| 35D013 | Metal dust cover enclosure | 5-1393158-2 |



35D013 Dust Cover

PRD dust cover has a steel base with knockouts for 0.5" (12.7mm) dia. conduit and a cover fitted with two screws. Fits PRD relays, except with auxiliary contacts. Finished in gray baked enamel.

Mounting:
Three No. 10 holes on 1.875" (47.63mm) x 4.125" (104.77mm) centers.



Note: Additional unused holes may be present in dust cover base.