

Features

• Contact ratings to 50 amps.

Magnetic blowouts available for switching DC loads.

Arrangements to DPDT.

• SPDT auxiliary switch available.

Replaces PR series.

Contact Data @ 25°C

Arrangements: Available to 2 Form C (DPDT). See ordering information. **Ratings:** See UL contact rating tables.

Minimum Rating: 1A @ 12 VAC/VDC.

Material: Silver and silver-cadmium oxide standard. Other materials available for special applications.

Expected Life: 100,000 operations at rated loads @25°C. Specific exceptions are noted in ratings tables. Life increases at reduced loads or with appropriate arc suppression.

UL/CSA Contact Ratings

Dimensions are shown for

reference purposes only.

Models with Screws or Quick Connects as Main Terminals

| Туре | Contact Code | Contact Ratings |
|-------------------|--------------|---|
| PRD-1, 3 or 5 | Y | 25 amps @ 277VAC 1 HP at 120VAC 2 HP at 250VAC 10 amps at 600VAC 7 amps at 50VDC Res. |
| PRD-1, 3 or 5 | G | 30 amps at 277VAC Res. 1.5 HP at 120VAC 2HP at 250VAC 10 amp at 600VAC |
| PRD-1, 3 or 5 | F | 50 amps at 240VAC Gen. Purp. (20,000 Ops.) 30 amps at 277VAC Res. 1.5 HP at 120VAC 2HP at 250VAC 10 amp at 600VAC |
| PRD-7 or 11 | Y | 25 amps at 240VAC 20 amps at 277VAC 1 HP at 120VAC 2 HP at 250VAC 7 amps at 50VDC Res. 10 amps at 600VAC |
| PRD-7 or 11 | G | 30 amps at 240VAC 20 amps at 277VAC 1.5 HP at 120VAC 2 HP at 250VAC 10 amps at 600VAC |
| PRD-7 or 11 | F | 50 amps at 240VAC Gen. Purp. (20,000 Ops.) 30 amps at 240VAC 20 amps at 277VAC 1.5 HP at 120VAC 2 HP at 250VAC 10 amps at 600VAC |
| PRD-3, 7 or 11 | H or J | 20 amp at 125VDC 1/3 HP at 125VDC |
| PRD-1, 5, 7 or 11 | N | 25 amp at 250VAC 1 HP at 125VAC 2 HP at 250VAC |

Note: 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.

Dimensions are in inches over

(millimeters) unless otherwise

specified.

PRD series

10 to 50 Amp Heavy Duty AC or DC Power Relay

- In File E22575 (Models With All Screw Terminals)
- **File E22575 (All Others)**

(File 15734

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

UL Contact Ratings

Models with Box Lugs as Main Terminals

| Туре | Contact Code | Contact Ratings |
|----------------------|--------------|--|
| PRD-3AP4 PRD-3DP4 | Ρ | 50 amps at 277VAC, Gen. Purp. 30 amps at 277VAC, Ballast (6,000 Ops.) 15 amps at 277VAC, Tungsten (6,000 Ops.) 102LRA, 17FLA at 240VAC (30,000 Ops.) 120LRA, 20FLA at 120VAC (30,000 Ops.) 1.5 HP at 120VAC (30,000 Ops.) 3 HP at 240VAC (30,000 Ops.) |

Note: 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.

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DC Factory Contact Ratings

| Models with D | ivioueis with box Lugs as iviain Terminais | | | | | |
|----------------------|--|--|--|--|--|--|
| Туре | Contact Code | Contact Ratings | | | | |
| PRD-3AR4 PRD-3DR4 | | 60 amps at 28VDC Res. 30 amps at 125VDC | | | | |

Auxiliary Snap-Action Switch

Arrangements: 1 Form C (SPDT). Rating: 5 amps at 120VAC, 60 Hz. @ 25°C. Material: Silver.

Initial Dielectric Strength

Initial Breakdown Voltage: 2,000V rms minimum between all elements and ground. (2,200V rms on 600V ratings.)

Coil Data @ 25°C

Voltage: From 6 to 220VDC, and 6 to 480VAC. Resistance: See coil data table. Nom. Power: DC coils: 2.0 watts @ 25°C.; AC coils: 9.8VA @ 25°C. Max Power: DC coils: 8.0 watts @ 25°C. Duty Cycle: Continuous.

Initial Insulation Resistance: 100 megohms, minimum.

Coil Data

| | DC Coils | | | AC Coils (50-60 |)Hz.) |
|------------------|--|---------------------------------------|------------------|------------------------------------|---------------------------------------|
| Nominal Volts | Resistance In Ohms ±10%@ 25°C | Nominal DC Current In Milliamps | Nominal Volts | DC Resis. In Ohms ±15%@ 25°C | Nominal AC Current In Milliamps |
| 6 | 18 | 333 | 6 | .86 | 1600 |
| 12 | 71 | 169 | 12 | 3.2 | 820 |
| 24 | 288 | 84 | 24 | 12.0 | 410 |
| 48 | 1150 | 41.7 | 120 | 290 | 85 |
| 110 | 6050 | 18.2 | 240 | 1200 | 43 |
| 220 | Use 110V relay 6,000 ohm 5V resistor in seri | V wire-wound | 480 | 4500 | 22 |

Operate Data @ +25°C

Must-Operate Voltage: DC: 75% of nominal; AC: 85% of nominal.

Environmental Data

Temperature Range: AC: -55°C to +45°C.; DC: -55°C to +80°C.

Mechanical Data

Mounting: Two .187" (4.75mm) Dia. holes on 1.875" (47.63mm) centers. Termination: See ordering information tables for various options. Enclosure: Metal dust cover, 35D013, available. Order separately. Weight: 10 oz. (284g) approximately.

P&B

| | | Typical Par | t No. 🕨 🛛 🏼 🏲 | RD -7 | Α | Y | 0 | -120 |
|---|---|--|---|-----------------------|---------------------|--|---|------|
| 1. Type: PRD = Open PRDA = Ope | | DT snap-action switch | 1. | | | | | |
| 2. Main Contac 1 = SPST-NO 3 = SPST-NO 5 = SPDT | | PST-NO DPST-NO with 3mm PDT | contact gap | | | | | |
| 3. Coil Input: | | | | | | | | |
| A = 50/60 H 4. Main Contac Y = .312'' (7.9) $G = .312'' (7.9)$ | e t Material: 92mm) dia. silver. [25 92mm) dia. silver cad | 5A max. rating] Ioxide. [30A max. ra | | | | | | |
| $ \begin{array}{l} A = 50/60 \\ \hline \ \ \ \ \ \ \ \ \ \ \ \ \$ | t Material: 32mm) dia. silver. [25 32mm) dia. silver cad 32mm) dia. silver cad magnetic blow out. [doxide w/magnetic s tationary & silver c with Code 3, 7& 11 contact | 5A max. rating] Ioxide. [30A max. ra Ioxide. [50A max. ra 20A DC max. rating] blow out. [20A DC m adoxide movable. [2 | ting] nax. rating] | de 1, 5, 7 & 11 only. | | | | |
| $ \begin{array}{l} A = 50/60 \\ \hline \textbf{A}. \mbox{ Main Contact} \\ Y = .312'' (7) \\ G = .312'' (7) \\ F = .312'' (7) \\ T = .3$ | t Material: 32mm) dia. silver. [25 32mm) dia. silver cad 32mm) dia. silver cad magnetic blow out. [doxide w/magnetic s tationary & silver c with Code 3, 7& 11 contact | 54 max. rating] Ioxide. [30A max. ra Ioxide. [50A max. ra 20A DC max. rating] blow out. [20A DC m adoxide movable. [2 ct arrangement only. | ting] nax. rating] | 1 | fith Aux, SPDT Spar | -Action Switch) | | |
| A = 50/60 H Main Contac Y = .312" (75 G = .312" (75 F = .312" (75 H = Silver (75) H = Si | t Material: 32mm) dia. silver. [25 32mm) dia. silver cad 32mm) dia. silver cad magnetic blow out. [doxide w/magnetic s tationary & silver c with Code 3, 7& 11 contact | 5A max. rating] Ioxide. [30A max. ra Ioxide. [50A max. ra 20A DC max. rating] blow out. [20A DC m adoxide movable. [2 | ting] nax. rating] | 1 | ith Aux. SPDT Snap | -Action Switch) | | |
| A = 50/60 H Main Contact Y = .312" (7: G = .312" (7: F = .312" (7: H = Silver vv/ tJ = Silver car N = Tungster tAvailable | t Material: 22mm) dia. silver. [25 22mm) dia. silver cad 22mm) dia. silver cad magnetic blow out. [doxide w/magnetic stationary & silver c with Code 3, 7& 11 contac | A max. rating] Ioxide. [30A max. ra Ioxide. [50A max. ra 20A DC max. rating] blow out. [20A DC m cadoxide movable. [2 ct arrangement only. PRD | ting] Iax. rating] 25A max. rating] Coo | PRDA (W | | l | | |
| A = 50/60 H Main Contac Y = .312" (7: G = .312" (7: F = .312" (7: +H = Silver car N = Tungster +Available 5.Termination: CODE | t Material: 22mm) dia. silver. [25 22mm) dia. silver cad 22mm) dia. silver cad 22mm) dia. silver cad 22mm) dia. silver ca magnetic blow out. [3oxide w/magnetic a stationary & silver c with Code 3, 7& 11 contac | A max. rating] Ioxide. [30A max. ra Ioxide. [50A max. ra 20A DC max. rating] blow out. [20A DC m cadoxide movable. [2 ct arrangement only. PRD 1 | ting] Iax. rating] 25A max. rating] Coo | PRDA (W | В | L QC Twin .250" (I QC .250" (6.3 | | |

Note: All part numbers are RoHS compliant.

Stock Items – The following items are normally maintained in stock for immediate delivery.

| | 0 | | • | |
|--------------|--------------|---------------|---------------|----------------|
| PRD-3AG0-120 | PRD-5AY0-240 | PRD-7DY0-12 | PRD-11AY0-240 | PRD-11DJ0-24 |
| PRD-3AJ3-24 | PRD-5DY0-12 | PRD-7DY0-24 | PRD-11AY0-480 | PRD-11DY0-12 |
| PRD-3AY0-120 | PRD-5DY0-24 | PRD-11AF0-240 | PRD-11DF0-12 | PRD-11DY0-24 |
| PRD-3DY0-12 | PRD-7AG0-120 | PRD-11AG0-24 | PRD-11DF0-110 | PRD-11DY0-110 |
| PRD-3DY0-24 | PRD-7AY0-24 | PRD-11AG0-120 | RD-11DG0-12 | PRDA-11AGA-120 |
| PRD-5DF0-12 | PRD-7AY0-120 | PRD-11AG0-240 | PRD-11DG0-24 | PRDA-11AYA-120 |
| PRD-5AY0-24 | PRD-7AY0-240 | PRD-11AH0-120 | PRD-11DH0-12 | |
| PRD-5AY0-120 | PRD-7AY3-120 | PRD-11AY0-24 | PRD-11DH0-24 | |
| PRD-5AY1-120 | PRD-7DG0-24 | PRD-11AY0-120 | PRD-11DH0-110 | |
| | | | | |

Ordering Information for 50A Models with Box Lugs for Main Terminals

| Typical Part No. 🕨 | PRD | -3 | Α | Р | 4 | -120 |
|---|-----|----|---|---|---|------|
| 1. Type: PRD = Open power relay. | | | | | | |
| 2. Main Contact Arrangement: 3 = 1 Form X (SPST-NO-DM) | | 1 | | | | |
| 3. Coil Input: A = AC, 50/60 Hz. D = DC | | | _ | | | |
| 4. Main Contact Material: P = 50 amp, silver. R = 50 amp, silver with magnetic blow out. | | | | | | |
| 5. Termination: 4 = Main — boxlug terminals which accept #6-#14 wire. Coil — #6-32 screw terminals. | | | | | | |
| 6. Coil Voltage: 12, 24, 48, 110, 125VDC 24, 120, 240, 277, 480VAC, 50/60 Hz. | | | | | | |

Note: All part numbers are RoHS compliant.

Stock Items - The following items are normally maintained in stock for immediate delivery.

No models in the PRD-3AP / PRD-3DP series are maintained in stock.

Dimensions are in inches over (millimeters) unless otherwise specified. Specifications and availability subject to change.

.59 MAX.

(15.0)

(57.9)

3.38 MAX.

(85.9)

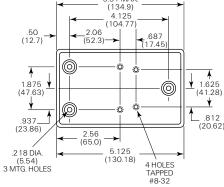
Outline Dimensions PRD/PRDA Small Base - Top View PRD/PRDA Large Base - Top View 50 Amp PRD 2 MTG. HOLES 2 MTG. HOLES DIA. .187 + .005 - .003 (4.75 + .13 - .08 .875 MAX. (22.23) 2.5 MAX. _ 3.375 MAX. → .875 MAX (22.23) .31 .31 (7.9) .31 (7,9) (63.3) (85.73) 1.687 (7.9)81 (20.6)Ø, \otimes 0 \otimes Ø ⊕⊿ \land Ð \square \otimes 6 2 8 2.51 MAX 6 2.51 MAX (63.8) Q 1.875 (47.63) (63.75) COIL 2.50 1.875 (63.5)(47.63) င္ပ် BOX LUG CONNECTOR COIL 1.875 (47.63) \otimes \bigcirc \bigcirc 0 3 \bigcirc Ø \square (Ŧ) Ð \bigcirc \oslash \otimes 2 MTG. HOLES DIMENSIONS APPLY TO PRD 11 AND PRDA 11 2 MIG. HOLE DIA. .187 + .005 -.003 (4.75 + .13 -.08 .81 (20.6) DIMENSIONS APPLY TO PRD 1, 3, 5, & 7 2 MTG. HOLES 2 MTG. HOLES DIA. .187+.005 -.003 (4.75+.13 -.08 2.5 MAX. (64)2.50 MAX. 2.28 MAX (57.9)(63.5)2.50 MAX On PRD7 2.28 MAX 6 (63.5) 0 ۷ .375 3.00 (9.53) -4.250 MAX (76.2) (107.95) 3.375 MAX W/O AUX SWITCH (85.73) **∢** 2.23 3.375 (56.6) .375 (9.53) .375 (9.53) (85.73)2.5 MAX. W/O AUX SWITCH (63.5) 35D013 Dust Cover 5.31 MAX (134.9) 4.125 (104.77) PRD dust cover has a 3.13 MAX (79.5) steel base with knockouts .97 for 0.5" (12.7mm) dia. (24.64)



Dust Cover Open

conduit and a cover fitted with two screws. Fits PRD relays, except with auxiliary contacts. Finished in gray baked enamel.

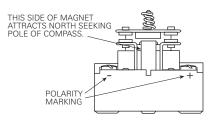
Mounting: Three No. 10 holes on 1.875" (47.63mm) x 4.125" (104.77mm) centers.



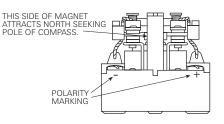


Note: Additional unused holes may be present in dust cover base.

PRD Magnetic Blow-Out Drawings PRD3 with Magnetic Blow-Out



PRD7 with Magnetic Blow-Out



PRD11 with Magnetic Blow-Out

.093.

1.50 ¥ (38.1) .75 (19.1)

4 .88 DIA (22.4)

¥

_.812 (20.62)

+

KNOCKOUT HOLES

