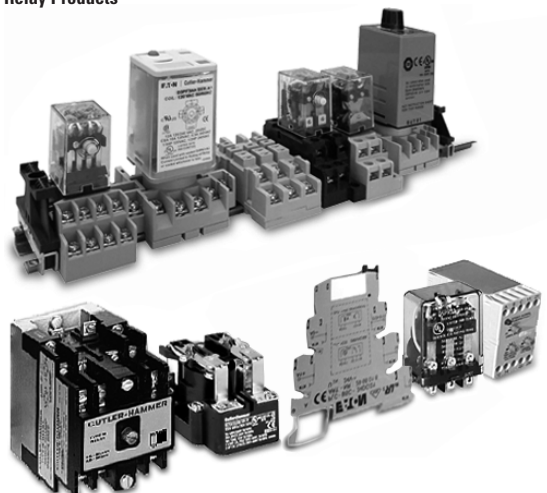


## Relay Products



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## Description

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## Control Relays and Timers Comparison

## Selection Guide by Catalogue Number Prefix

| Relays       | Type                            | Mounting                      | Contacts    | Maximum<br>Amperage<br>(AC) | RU | UL | CSA | CE | Page<br>Number |
|--------------|---------------------------------|-------------------------------|-------------|-----------------------------|----|----|-----|----|----------------|
| 9575H3       | General purpose                 | Panel mount                   | Fixed       | 40A                         | —  | X  | X   | X  | <b>T40-117</b> |
| AR/ARD       | Machine tool                    | Panel mount                   | Convertible | 10A                         | —  | X  | X   | —  | <b>T40-152</b> |
| BF/BFD       | Machine tool                    | Panel mount                   | Fixed       | 10A                         | X  | —  | X   | —  | <b>T40-146</b> |
| D2PF         | Full featured plug-in           | DIN rail/panel mount          | Fixed       | 10A                         | X  | —  | X   | X  | <b>T40-53</b>  |
| D2PR         | Standard plug-in                | DIN rail/panel mount/flange   | Fixed       | 10A                         | X  | —  | X   | X  | <b>T40-53</b>  |
| D3PF         | Full featured plug-in           | DIN rail/panel mount          | Fixed       | 16A                         | X  | —  | X   | X  | <b>T40-63</b>  |
| D3PR         | Standard plug-in                | DIN rail/panel mount          | Fixed       | 16A                         | X  | —  | X   | X  | <b>T40-63</b>  |
| D4PR         | Standard plug-in                | DIN rail/panel mount          | Fixed       | 10A                         | X  | —  | X   | X  | <b>T40-72</b>  |
| D5PF         | Full featured plug-in           | DIN rail/panel mount          | Fixed       | 16A                         | X  | —  | X   | X  | <b>T40-77</b>  |
| D5PR         | Standard plug-in                | DIN rail/panel mount/PC board | Fixed       | 16A                         | X  | —  | X   | X  | <b>T40-77</b>  |
| D7PF         | Full featured plug-in           | DIN rail/panel mount          | Fixed       | 20A                         | X  | —  | X   | X  | <b>T40-87</b>  |
| D7PR         | Standard plug-in                | DIN rail/panel mount/flange   | Fixed       | 20A                         | X  | —  | X   | X  | <b>T40-88</b>  |
| D8PR         | Standard plug-in                | DIN rail/panel mount/flange   | Fixed       | 30A                         | X  | —  | X   | X  | <b>T40-101</b> |
| D9PR         | Standard plug-in                | Panel mounting                | Fixed       | 25A                         | X  | —  | X   | —  | <b>T40-107</b> |
| D15          | Machine tool                    | DIN rail/panel mount          | Fixed       | 10A                         | —  | X  | X   | X  | <b>T40-141</b> |
| D26          | Machine tool                    | Panel or channel mount        | Convertible | 10A                         | —  | X  | X   | —  | <b>T40-157</b> |
| D85          | Alternating relays              | DIN rail/panel mount          | Fixed       | 10A                         | X  | X  | —   | X  | <b>T40-188</b> |
| D1PF         | Full featured plug-in           | DIN rail/panel mount          | Fixed       | 20A                         | X  | —  | X   | X  | <b>T40-47</b>  |
| D1PR         | Standard plug-in                | DIN rail/panel mount          | Fixed       | 20A                         | X  | —  | X   | X  | <b>T40-47</b>  |
| EASY         | Intelligent relay               | DIN rail                      | Fixed       | 8A                          | X  | —  | X   | X  | <b>T40-21</b>  |
| TMR5         | Timing relay (non-programmable) | DIN rail/panel mount          | Fixed       | 10A                         | X  | X  | —   | X  | <b>T40-178</b> |
| TMR6         | Timing relay (non-programmable) | DIN rail/panel mount          | Fixed       | 10A                         | X  | X  | —   | X  | <b>T40-182</b> |
| TR           | Timing relay (programmable)     | DIN rail/panel mount          | Fixed       | 10A                         | —  | X  | X   | —  | <b>T40-175</b> |
| Universal TR | Timing relay (programmable)     | DIN rail                      | Fixed       | 8A                          | —  | X  | X   | X  | <b>T40-171</b> |
| XR           | Terminal block relay            | DIN rail                      | Fixed       | 6A, 10A                     | X  | —  | —   | X  | <b>T40-5</b>   |

General Purpose Plug-In Relay



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Product Selection Guide

General Purpose Relay Selection Characteristics

- Current rating: 1A–30A
- Contact arrangement: SPDT, DPDT, 3PDT, 4PDT, etc.
- Coil voltage: 6V–240 Vac/ 6V–110 Vdc
- Mounting options: socket, flange, DIN rail, panel
- Specifications: CSA, CE, IEC, NEMA, UL, etc.
- Other: Physical dimensions, maximum voltage, mechanical/ electrical life, etc.

## General Purpose Plug-In Relays

## Relay Series

## D1PR/D1PF



## D2PR/D2PF



## D3PR/D3PF



## Approvals



## Features

Polycarbonate cover

Indicator lamp and pushbutton available

Panel and DIN mounting

Polycarbonate cover

Indicator lamp and pushbutton available

Panel, DIN and flange mounting

Latching

Polycarbonate cover

Indicator lamp and pushbutton available

Panel and DIN mounting

8- or 11-pin octal plug-in

Latching (D3PR version)

## Contact Data

| Configuration                     | SPDT         | DPDT         | DPDT Latching | 4PDT | DPDT                        | 3PDT |
|-----------------------------------|--------------|--------------|---------------|------|-----------------------------|------|
| Max. allowable load               | 20A          | 10A          | 10A           | 10A  | 16A                         | 16A  |
| Material                          | Silver alloy | Silver alloy |               |      | Silver alloy                |      |
| Dielectric strength between poles | 1500V        | 1500V        |               |      | 1500V                       |      |
| <b>Coil Data</b>                  |              |              |               |      |                             |      |
| AC                                | 6 to 240 Vac | 6 to 240 Vac |               |      | 6 to 240 Vac                |      |
| DC                                | 6 to 110 Vdc | 6 to 110 Vdc |               |      | 6 to 110 Vdc                |      |
| <b>Power</b>                      |              |              |               |      |                             |      |
| VA (Vac)                          | 0.9 VA       | 1.2 VA       |               |      | 3 VA 1.4W (D3PR and D3PF)   |      |
| Watts (Vdc)                       | 0.7W         | 0.9W         |               |      | 2 VA 1.64W (D3PR5 latching) |      |

## General Data

|                            |                              |                              |  |  |                                                          |  |
|----------------------------|------------------------------|------------------------------|--|--|----------------------------------------------------------|--|
| <b>Ambient temperature</b> |                              |                              |  |  |                                                          |  |
| Storage                    | −40° to 185°F (−40° to 85°C) | −40° to 185°F (−40° to 85°C) |  |  | −40° to 185°F (−40° to 85°C)                             |  |
| Operational                | −40° to 131°F (−40° to 55°C) | −40° to 131°F (−40° to 55°C) |  |  | −40° to 131°F (−40° to 55°C)                             |  |
| Response time              | 20 milliseconds              | 20 milliseconds              |  |  | 20 milliseconds                                          |  |
| <b>Life</b>                |                              |                              |  |  |                                                          |  |
| Mechanical operations      | 10 million                   | 10 million                   |  |  | 5 million (D3PR and D3PF)<br>10 million (D3PR5 latching) |  |
| Electrical operations      | 100,000                      | 200,000                      |  |  | 100,000                                                  |  |
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# 40.4 Control Relays and Timers

## General Purpose Plug-In Relays

D1 Series Relay



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### D1PR/D1PF Series

#### Product Description

The D1 Series of relay provides a compact single-pole relay capable of handling 20A. Multiple feature and voltage options allow for the perfect fit for any application.

#### Features

##### D1PR

- Compact relay capable of breaking relatively large load currents
- Panel and DIN rail mounting

##### D1PF

- The contact operation can be easily checked by Push-to-Test button
- Flag indicator shows relay status in manual or powered condition
- LED status lamp shows coil ON or OFF status—ideal for use in low light applications
- Push-to-Test button allows for manual operation of relay without the need for coil power
- Lock-down door holds pushbutton and contacts in the operate position when activated
- Finger-grip cover allows operator to remove relays from sockets easily
- ID tag/write label to identify relays in multiple-relay circuits
- Bipolar LED allows for reverse polarity applications

### Contents

#### Description

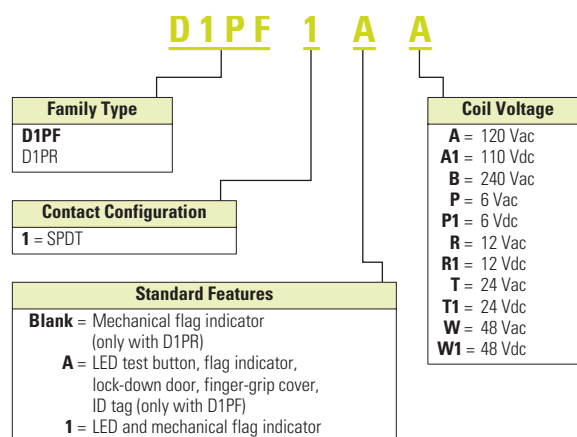
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#### Standards and Certifications



#### Catalogue Number Selection

##### D1PR/D1PF Series



## Product Selection

## D1PR/D1PF Relay/Socket Quick Reference

| Relay Type | Socket | Clip     | Module Type | ID Tag | Jumper |
|------------|--------|----------|-------------|--------|--------|
| D1PR1      | D1PAA  | PMC-1781 | B           | —      | —      |
| D1PF1      | D1PAA  | PMC-1781 | B           | —      | —      |

## D1PF Series Relay



## D1PR/D1PF Series

| Coil Voltage                          | Contact Configuration | Coil Resistance (Ohms) | Catalogue Number |
|---------------------------------------|-----------------------|------------------------|------------------|
| <b>Full Featured</b>                  |                       |                        |                  |
| 6 Vac                                 | SPDT                  | 12.2                   | <b>D1PF1AP</b>   |
| 6 Vdc                                 | SPDT                  | 47                     | <b>D1PF1AP1</b>  |
| 12 Vac                                | SPDT                  | 46                     | <b>D1PF1AR</b>   |
| 12 Vdc                                | SPDT                  | 188                    | <b>D1PF1AR1</b>  |
| 24 Vac 50/60 Hz                       | SPDT                  | 180                    | <b>D1PF1AT</b>   |
| 24 Vdc                                | SPDT                  | 750                    | <b>D1PF1AT1</b>  |
| 48 Vac                                | SPDT                  | 720                    | <b>D1PF1AW</b>   |
| 48 Vdc                                | SPDT                  | 2600                   | <b>D1PF1AW1</b>  |
| 110 Vdc                               | SPDT                  | 13,800                 | <b>D1PF1AA1</b>  |
| 120 Vac 50/60 Hz                      | SPDT                  | 4430                   | <b>D1PF1AA</b>   |
| 240 Vac 50/60 Hz                      | SPDT                  | 15,720                 | <b>D1PF1AB</b>   |
| <b>Plain Cover with LED Indicator</b> |                       |                        |                  |
| 6 Vac                                 | SPDT                  | 12.2                   | <b>D1PR11P</b>   |
| 6 Vdc                                 | SPDT                  | 47                     | <b>D1PR11P1</b>  |
| 12 Vac                                | SPDT                  | 46                     | <b>D1PR11R</b>   |
| 12 Vdc                                | SPDT                  | 188                    | <b>D1PR11R1</b>  |
| 24 Vac 50/60 Hz                       | SPDT                  | 180                    | <b>D1PR11T</b>   |
| 24 Vdc                                | SPDT                  | 750                    | <b>D1PR11T1</b>  |
| 48 Vac                                | SPDT                  | 720                    | <b>D1PR11W</b>   |
| 48 Vdc                                | SPDT                  | 2600                   | <b>D1PR11W1</b>  |
| 240 Vac 50/60 Hz                      | SPDT                  | 15,720                 | <b>D1PR11B</b>   |
| 110 Vdc                               | SPDT                  | 13,800                 | <b>D1PR11A1</b>  |
| 120 Vac                               | SPDT                  | 4430                   | <b>D1PR11A</b>   |
| 24 Vac 50/60 Hz                       | SPDT                  | 180                    | <b>D1PR1T</b>    |
| <b>Plain Cover</b>                    |                       |                        |                  |
| 6 Vac                                 | SPDT                  | 12.2                   | <b>D1PR1P</b>    |
| 6 Vdc                                 | SPDT                  | 47                     | <b>D1PR1P1</b>   |
| 12 Vac                                | SPDT                  | 46                     | <b>D1PR1R</b>    |
| 12 Vdc                                | SPDT                  | 188                    | <b>D1PR1R1</b>   |
| 24 Vdc                                | SPDT                  | 750                    | <b>D1PR1T1</b>   |
| 48 Vac                                | SPDT                  | 720                    | <b>D1PR1W</b>    |
| 48 Vdc                                | SPDT                  | 2600                   | <b>D1PR1W1</b>   |
| 110 Vdc                               | SPDT                  | 13,800                 | <b>D1PR1A1</b>   |
| 120 Vac 50/60 Hz                      | SPDT                  | 4430                   | <b>D1PR1A</b>    |
| 240 Vac                               | SPDT                  | 15,270                 | <b>D1PR1B</b>    |