

D1 Series Relay



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

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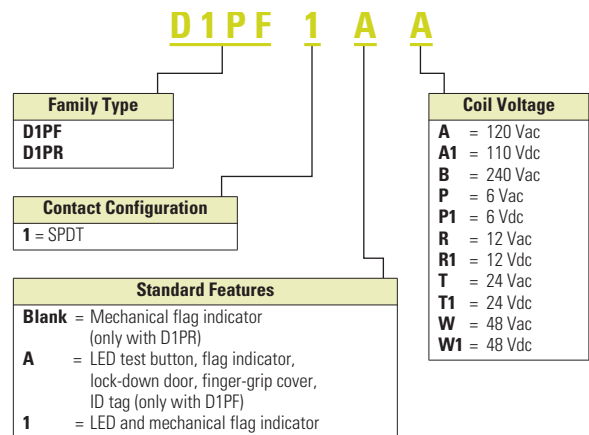
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Standards and Certifications



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

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Control Relays and Timers

General Purpose Plug-In Relays

Accessories

D1PR/D1PF Sockets and Accessories

Type	Module Size	Nominal Voltage (Max. for Sockets)	Nominal Current	Mounting Style	Wire Size	Wire Connection	Standard Pack	Catalog Number
Socket	B	300	20	Panel/DIN rail	12 /14 (2) AWG, 4 /2.5 (2) mm ²	Screw clamping	10	D1PAA ①
Flange mount adapter	—	—	—	Flange	—	—	25	PFC-D11
Metal spring clip	—	—	—	—	—	—	25	PMC-1781
Protection diode	B	6 to 250 Vdc	—	—	—	—	20	MOD-BD250
LED indicator	B	24 Vac/Vdc	—	—	—	—	20	MOD-BLG24
	B	120/240 Vac/Vdc	—	—	—	—	20	MOD-BLG240
MOV suppressor	B	120 Vac/Vdc	—	—	—	—	20	MOD-BMV120
	B	24 Vac/Vdc	—	—	—	—	20	MOD-BMV24
	B	240 Vac/Vdc	—	—	—	—	20	MOD-BMV240
Plastic DIN rail end stop	—	—	—	—	—	—	25	PFP-P

Note

① Protection Category (Finger Safe), EN 60529: IP20.

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Technical Data and Specifications

D1PF/D1PR Relay Specifications

Description	D1PR	D1PF
Contact Characteristics		
Contact rating	20A	20A
Terminal style	Plug-in	Plug-in
Contact materials	Silver alloy	Silver alloy
Maximum switching voltage	300V	300V
Switching current at voltage—resistive	20A at 120 Vac 50/60 Hz	20A at 120 Vac 50/60 Hz
	20A at 277 Vac 50/60 Hz	20A at 277 Vac 50/60 Hz
	20A at 28 Vdc	20A at 28 Vdc
Switching current at voltage	1/2 hp at 120 Vac	1/2 hp at 120 Vac
	1 hp at 277 Vac	1 hp at 277 Vac
Pilot duty	B300	B300
Minimum switching requirement	100 mA at 5 Vdc (0.5W)	100 mA at 5 Vdc (0.5W)
Coil Characteristics		
Operating range		
% of nominal (AC)	85 to 110%	85 to 110%
% of nominal (DC)	80 to 110%	80 to 110%
Average consumption	0.9 VA	0.9 VA
	0.7W	0.7W
Dropout voltage threshold	15% (AC)	15% (AC)
	10% (DC)	10% (DC)
Performance		
Electrical life (UL 508) operations at rated current	100,000 operations	100,000 operations
Mechanical life operations unpowered	10,000,000 operations	10,000,000 operations
Response time	20 ms	20 ms
Dielectric strength		
Between coil and contact Vac (rms)	2500V (rms)	2500V (rms)
Between poles Vac (rms)	1500V (rms)	1500V (rms)
Environment		
Ambient air temperature around the device		
Storage	−40° to 131°F (−40° to 55°C)	−40° to 131°F (−40° to 55°C)
Operation	−40° to 185°F (−40° to 85°C)	−40° to 185°F (−40° to 85°C)
Vibration resistance—operational	3 g-n at 10–55 Hz	3 g-n at 10–55 Hz
Shock resistance	10 g-n	10 g-n
Degree of protection	IP40	IP40
Features		
Cover options	Plain cover	Full featured
Features	Mechanical flag indicator (optional LED)	Locking pushbutton/ Bipolar LED/ Removable ID tag/ Mechanical flag indicator
Product certifications	RoHS/UL/CE/CSA	RoHS/UL/CE/CSA

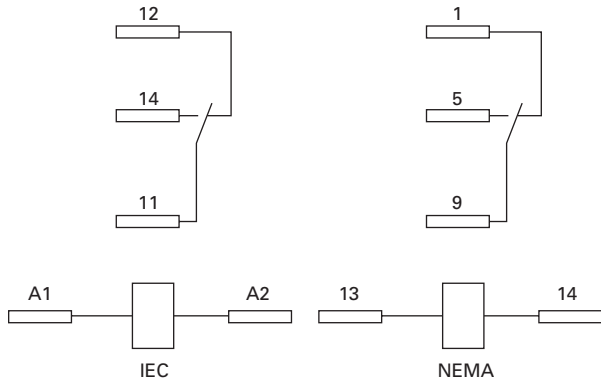
40.4 Control Relays and Timers

General Purpose Plug-In Relays

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Wiring Diagram

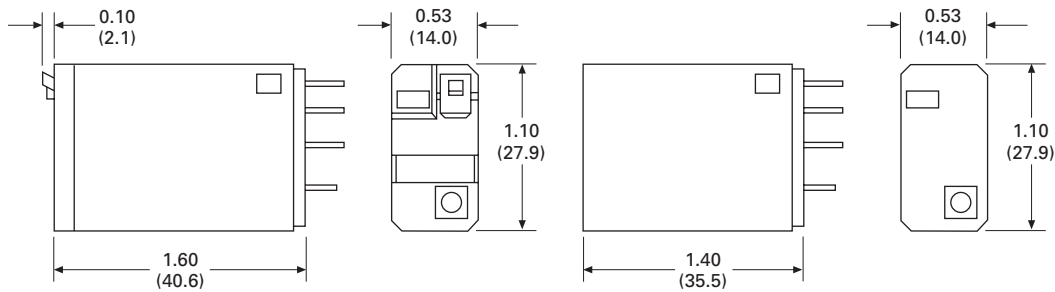
D1PF/D1PR



Dimensions

Approximate Dimensions in Inches (mm)

D1PF/D1PR



D1PAA

