

D2 Series Relay



D2PR/D2PF Series

Product Description

The D2 Series is a compact line of relays with quick response time and long life. Available in DPDT, 4PDT and DPDT latching configurations.

Features

D2PR

- Ultra-high sensitivity relay with quick response
- High reliability, long life
- Panel, DIN rail and flange mounting
- Small size


Contents

Description

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Standards and Certifications



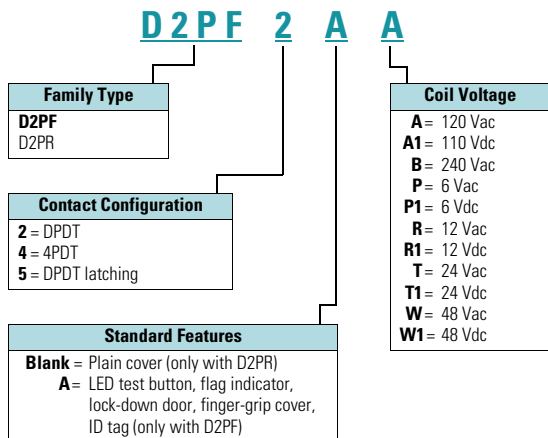
 When used with accompanying Eaton screw terminal socket.

D2PF

- Flag indicator shows relay status in manual or powered condition
- Bipolar LED status lamp allows for reverse polarity applications
 - Shows coil ON or OFF status
 - Ideal in low light conditions
- Color-coded pushbutton identifies AC coils with red or DC coils with blue pushbuttons
 - Allows for manual operation of relay without the need for coil power
 - Ideal for field service personnel to test control circuits
- Lock-down door, when activated, holds pushbutton and contacts in the operate position
 - Excellent for analyzing circuit problems
- Finger-grip cover allows operator to remove relays from sockets more easily than conventional relays
- White plastic ID tag/write label used for identification of relays in multi-relay circuits

Catalog Number Selection

D2PF/D2PR ①



Product Selection

D2PF/D2PR Relay/Socket Quick Reference

Relay Type	Socket	Clip	Module Type	ID Tag	Jumper
D2PR2, D2PF2	D2PAL	PWC-D24	B	PWF-D2P	D2PJ1
		PQC-1782	—	—	—
	D2PA6	PQC-1342	None	—	—
D2PR4, D2PF4	D2PAP	PWC-D24	B	PWF-D2P	D2PJ1
		PQC-1782	—	—	—
	D2PA7	PWC-D24	B	—	—
		PQC-1782	B	—	—
	D2PA6	PQC-1342	None	—	—
D2PR5	D2PA4	PYC-A1	None	—	—

Note

① For deciphering catalog numbers. Do not use for ordering as not all combinations are readily available.

3.4

Control Relays and Timers

General Purpose Plug-In Relays

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D2PF Series Relay



D2PF/D2PR Series

Coil Voltage	Contact Configuration	Coil Resistance (Ohms)	Catalog Number
Full Featured Style			
6 Vac	DPDT	9.6	D2PF2AP
6 Vdc	DPDT	40	D2PF2AP1
12 Vac	DPDT	46	D2PF2AR
12 Vdc	DPDT	160	D2PF2AR1
24 Vac	DPDT	180	D2PF2AT
24 Vdc	DPDT	650	D2PF2AT1
48 Vdc	DPDT	2600	D2PF2AW1
110/125 Vdc	DPDT	11,000	D2PF2AA1
120 Vac	DPDT	4430	D2PF2AA
220/240 Vac	DPDT	15,720	D2PF2AB
12 Vac	4PDT	46	D2PF4AR
12 Vdc	4PDT	160	D2PF4AR1
24 Vac	4PDT	180	D2PF4AT
24 Vdc	4PDT	650	D2PF4AT1
48 Vdc	4PDT	2600	D2PF4AW1
110/125 Vdc	4PDT	11,000	D2PF4AA1
120 Vac	4PDT	4430	D2PF4AA
220/240 Vac	4PDT	15,720	D2PF4AB
Plain Cover Style			
6 Vdc	DPDT	40	D2PR2P1
12 Vdc	DPDT	160	D2PR2R1
24 Vac	DPDT	180	D2PR2T
24 Vdc	DPDT	650	D2PR2T1
48 Vdc	DPDT	2600	D2PR2W1
110/125 Vdc	DPDT	11,000	D2PR2A1
120 Vac	DPDT	4430	D2PR2A
220/240 Vac	DPDT	15,720	D2PR2B
6 Vac	4PDT	9.6	D2PR4P
6 Vdc	4PDT	40	D2PR4P1
12 Vac	4PDT	46	D2PR4R
12 Vdc	4PDT	160	D2PR4R1
24 Vac	4PDT	180	D2PR4T
24 Vdc	4PDT	650	D2PR4T1
110/125 Vdc	4PDT	11,000	D2PR4A1
120 Vac	4PDT	4430	D2PR4A
220/240 Vac	4PDT	15,720	D2PR4B
Latching Style			
24 Vac	DPDT	180	D2PR5T
24 Vdc	DPDT	650	D2PR5T1
110 Vac	DPDT	11,000	D2PR5A

Accessories

D2PF/D2PR 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	12	DIN rail/panel	14/16 (2) AWG, 2.5/1.5 (2) mm ²	Elevator	1	D2PAL ①
	None	300	10	DIN rail/panel	12/14 (2) AWG, 4/2.5 (2) mm ²	Screw clamping	10	D2PA6
	B	300	10	DIN rail/panel	14/16 (2) AWG, 2.5/1.5 (2) mm ²	Elevator	1	D2PAP ①
	B	300	10	DIN rail/panel	12/14 (2) AWG, 4/2.5 (2) mm ²	Screw clamping	10	D2PA7 ①
	None	300	10	DIN rail/panel	12/14 (2) AWG, 4/2.5 (2) mm ²	Screw clamping	5	D2PA4
Flange mount adapter	—	—	—	Flange	—	—	25	PFC-D2D72
Plastic ejector clip	—	—	—	—	—	—	10	PWC-D24
Metal spring clip	—	—	—	—	—	—	25	PQC-1782
	—	—	—	—	—	—	25	PQC-1342
Hold-down spring	—	—	—	—	—	—	100	PYC-A1
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
Coil bus jumpers	—	—	—	—	—	—	10	D2PJ1
Plastic DIN rail end stop	—	—	—	—	—	—	25	PFP-P

Note

① Protection category (finger safe), EN 60529: IP20.

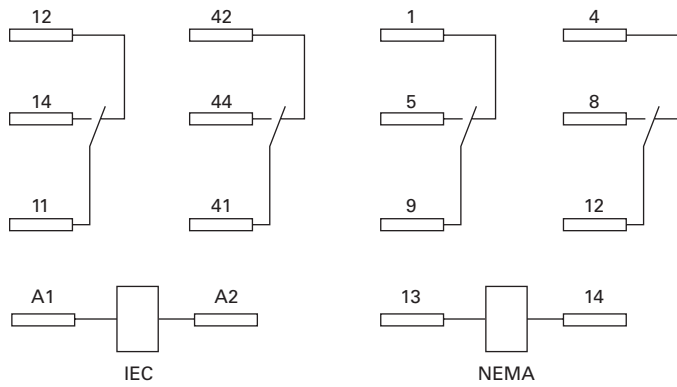
Technical Data and Specifications

D2PF/D2PR Relay Specifications

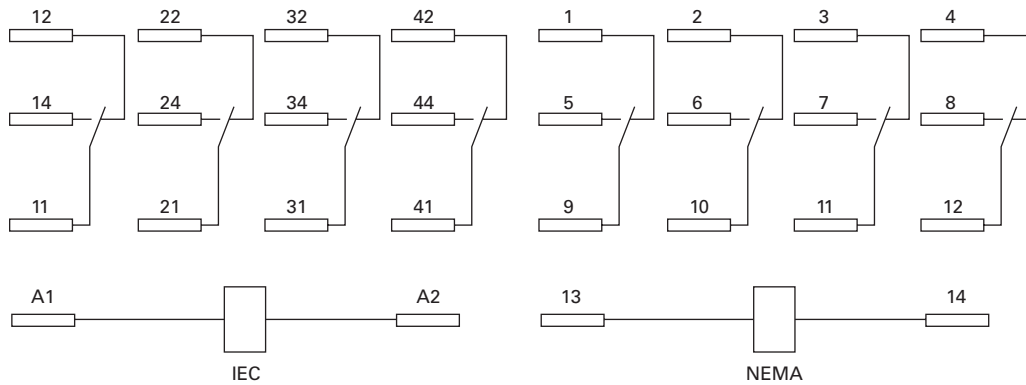
Description	D2PR2/D2PR4	D2PR5	D2PF
Contact Characteristics			
Contact rating	10A	5A	10A
Terminal style	Plug-in	Plug-in	Plug-in
Contact materials	Silver alloy	Silver (gold flashed)	Silver alloy
Maximum switching voltage	300V	250 Vac/125 Vdc	300V
Switching current at voltage—resistive	10A at 120 Vac 50/60 Hz	3A at 250 Vac	10A at 277 Vac 50/60 Hz]
	8A at 277 Vac 50/60 Hz	—	8A at 120 Vac 50/60 Hz
	8A at 28 Vdc	5A at 30 Vdc	8A at 28 Vdc
Switching current at voltage	1/3 hp at 120 Vac 1 hp at 277 Vac	1/8 hp at 250 Vac	1/3 hp at 120 Vac 1 hp at 277 Vac
Pilot duty	B300	—	B300
Minimum switching requirement	100 mA at 5 Vdc (0.5W)	100 mA, 1 Vdc	100 mA at 5 Vdc (0.5W)
Coil Characteristics			
Operating range			
% of nominal (AC)	85 to 110%	80 to 110%	85 to 110%
% of nominal (DC)	80 to 110%	80 to 110%	80 to 110%
Average consumption	1.2 VA	—	1.2 VA
	0.9W	—	0.9W
Dropout voltage threshold	15% (AC)	30% (AC)	15% (AC)
	10% (DC)	10% (DC)	10% (DC)
Performance			
Electrical life (UL 508) operations at rated current	200,000	200,000	200,000
Mechanical life operations unpowered	10,000,000	100,000,000	10,000,000
Response time	20 ms	—	20 ms
Dielectric strength			
Between coil and contact Vac (rms)	1500 rms	—	1500 rms
Between poles Vac (rms)	1500 rms	—	1500 rms
Environment			
Ambient air temperature around the device			
Operation	−40° to 131°F (−40° to 55°C)	—	−40° to 131°F (−40° to 55°C)
Storage	−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	Plain cover	Full featured
Features	Mechanical flag indicator	Latching	Locking pushbutton/ Bipolar LED/ Removable ID tag/ Mechanical flag indicator
Product certifications	RoHS/UL/CE/CSA	UL/CE/CSA	RoHS/UL/CE/CSA

Wiring Diagrams

D2PF2/D2PR2



D2PF4/D2PR4



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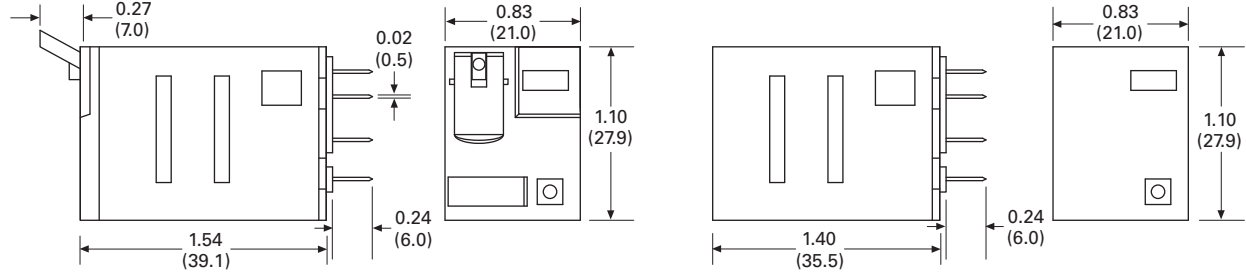
Control Relays and Timers

General Purpose Plug-In Relays

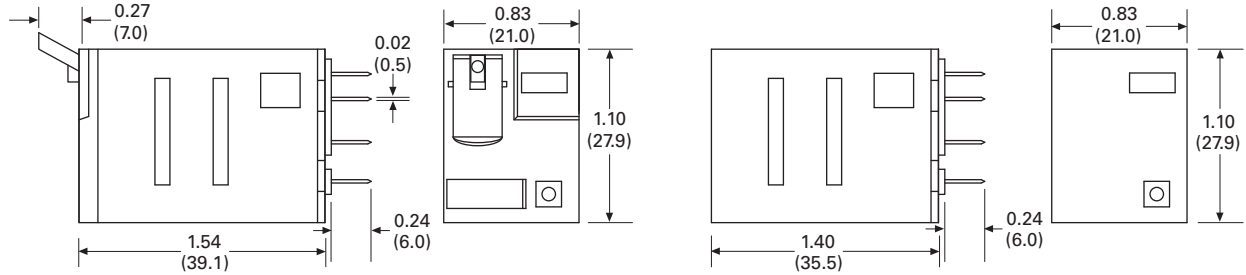
Dimensions

Approximate Dimensions in Inches (mm)

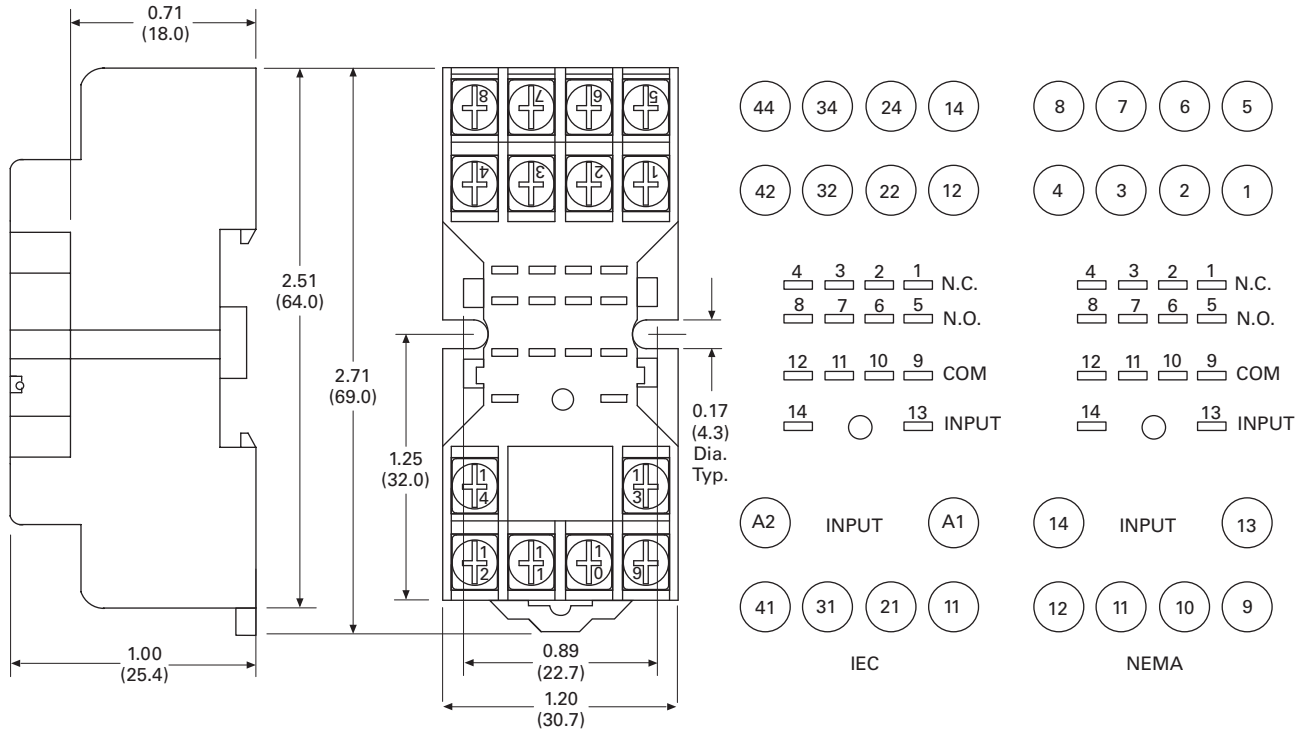
D2PF2/D2PR2



D2PF4/D2PR4

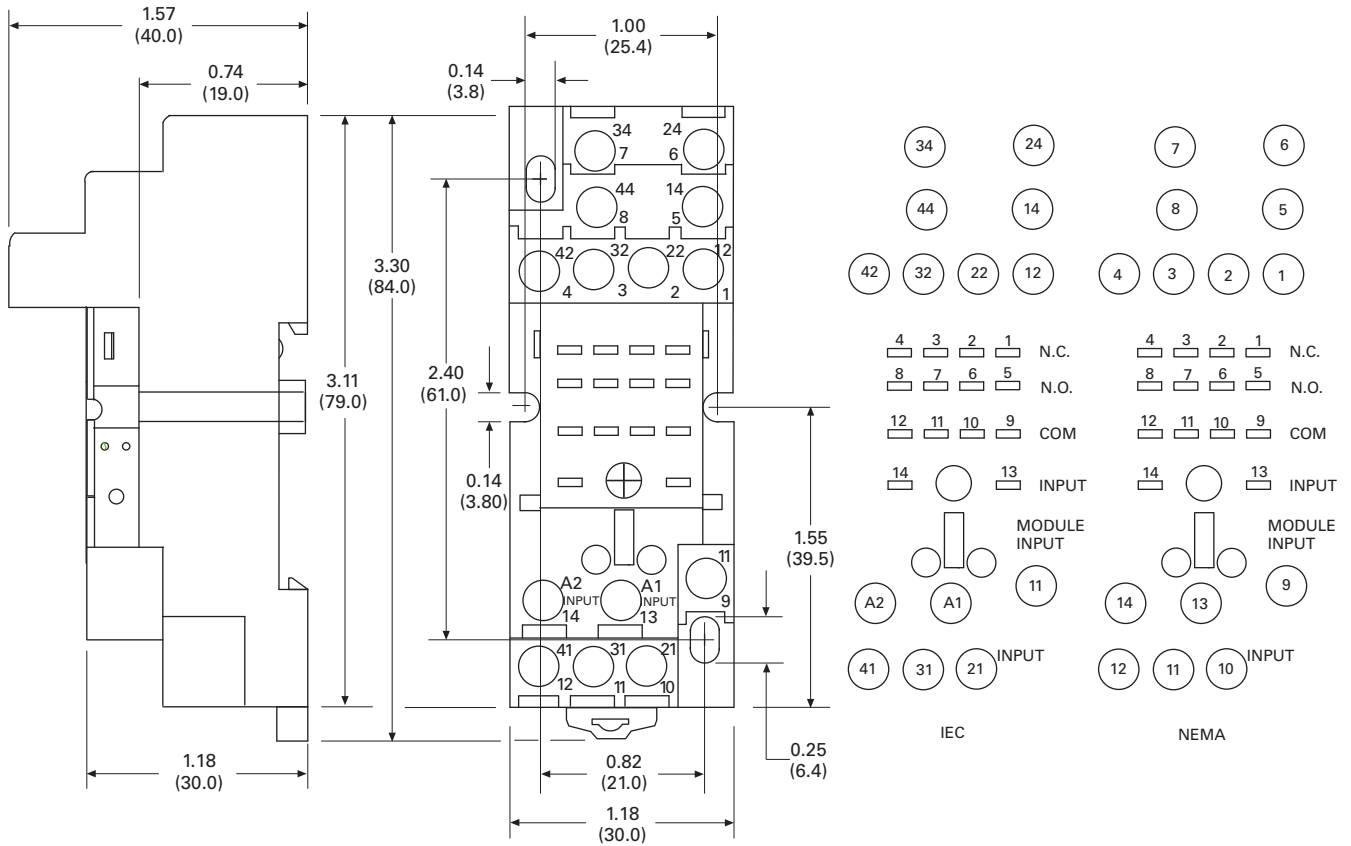


D2PA6

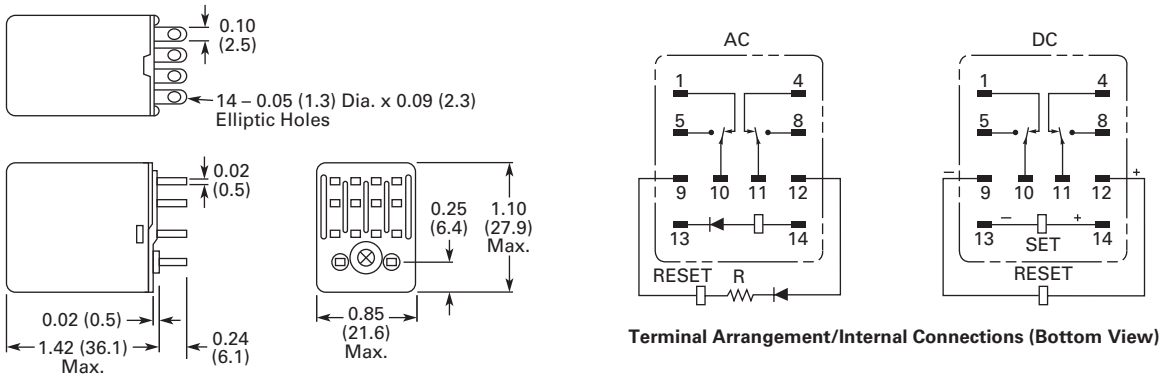


Approximate Dimensions in Inches (mm)

D2PA7



D2PR5



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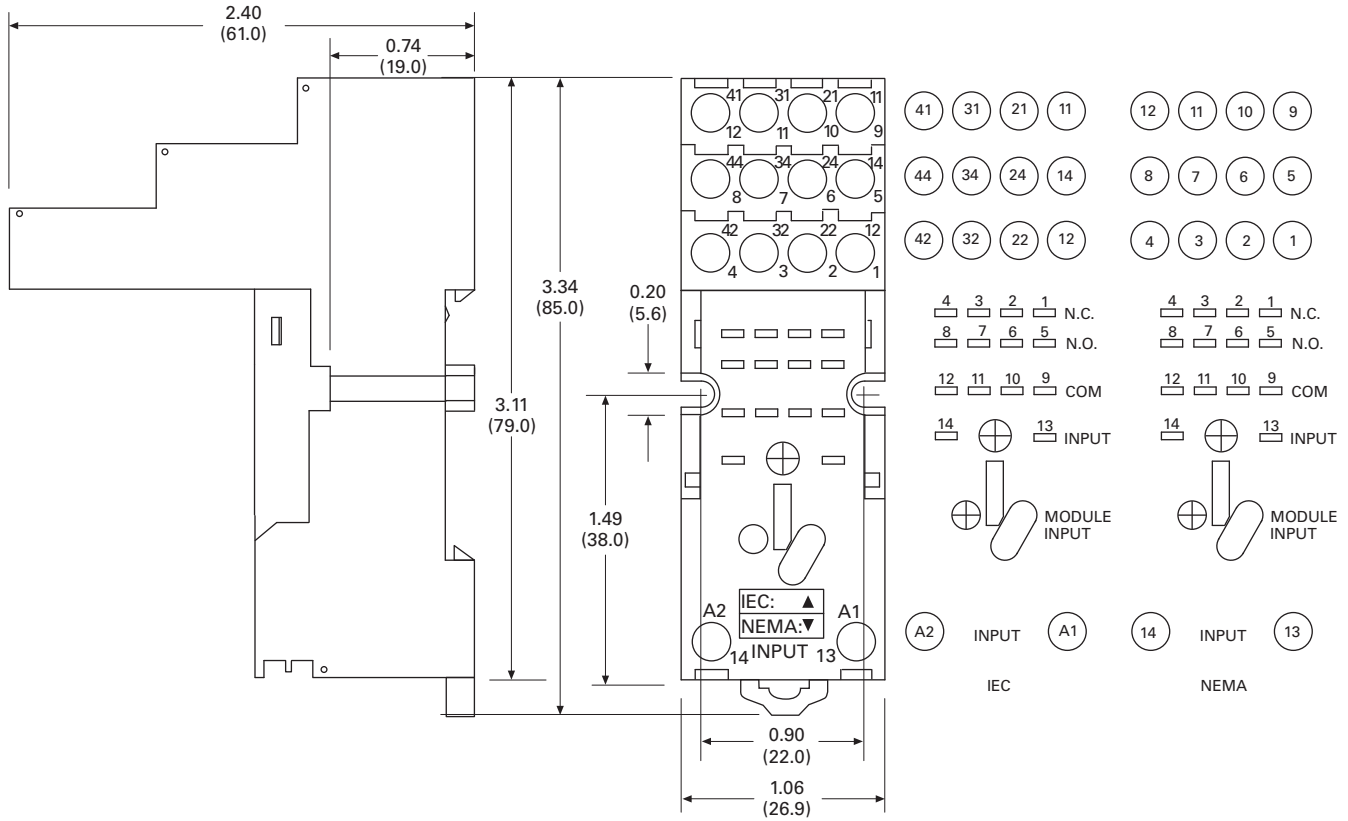
Control Relays and Timers

General Purpose Plug-In Relays

Approximate Dimensions in Inches (mm)

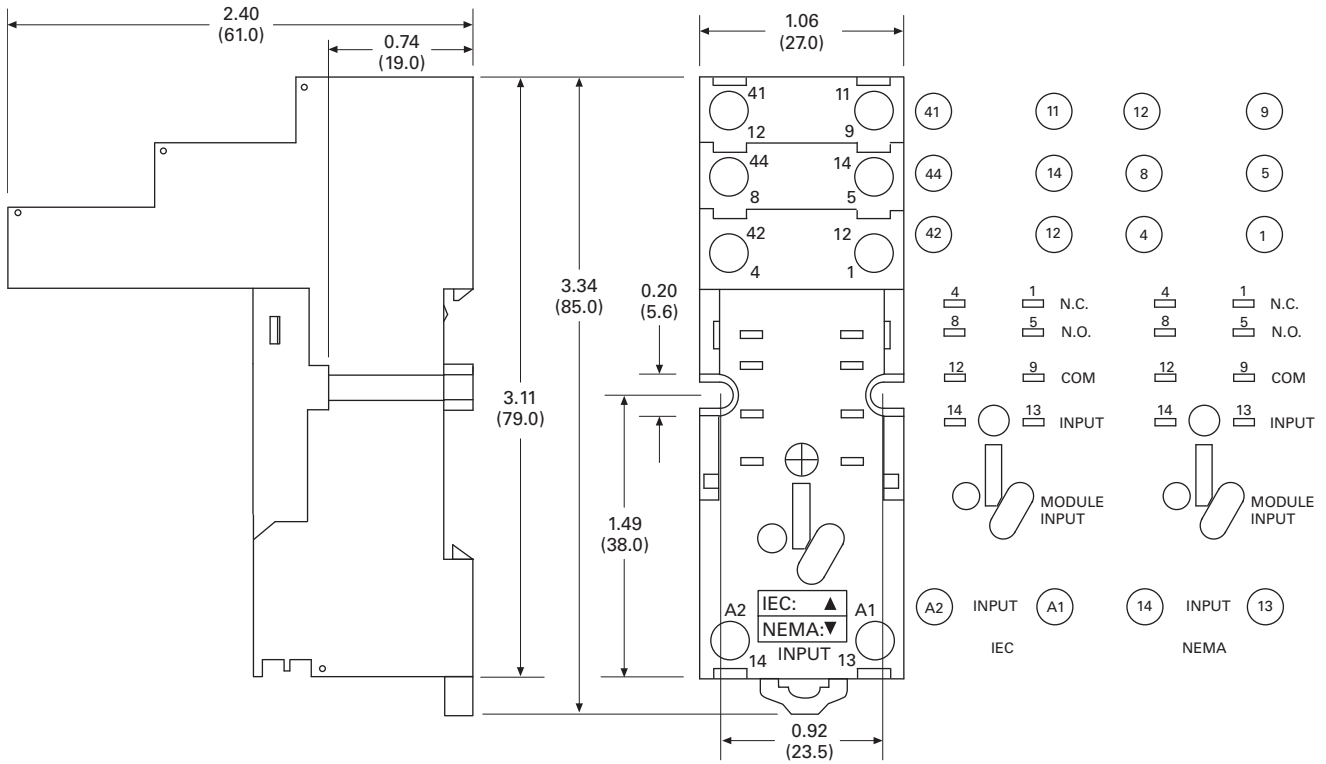
D2PAP

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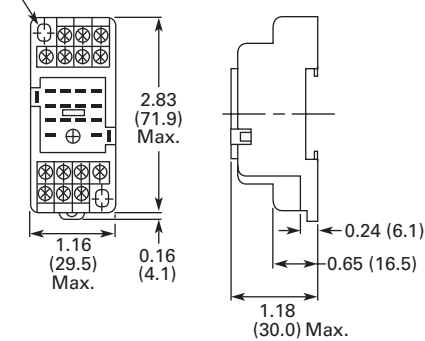
Approximate Dimensions in Inches (mm)

D2PAL

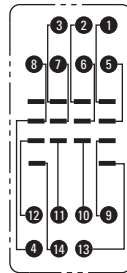


D2PA4 Socket for D2PR5 DPDT Latching Relays Only

Two 0.17 (4.3) x 0.20 (5.1) Mounting Holes



Terminal Arrangement (Top View)



Mounting Holes

Two 0.18 (4.6) Dia. or M4
(Two 0.16 (4.1) Dia. or M3)

