

Selection Guide

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General Purpose Plug-In Relay

Selection Guide

General Purpose Relay Selection Characteristics






- Current Rating: 1A – 30A
- Contact Arrangement: SPDT, DPDT, 3PDT, 4PDT, etc.
- Coil Voltage: 6V – 240V AC/ 6V – 110V DC
- Mounting Options: Socket, Flange, DIN Rail, Panel
- Specifications: CSA, CE, IEC, NEMA, UL, etc.
- Other: Physical Dimensions, Maximum Voltage, Mechanical/Electrical Life, etc.

Table 49-41. General Purpose Plug-In Relays Selection Guide

Relay Series								
	D2PF/D2PR		D3PF/D3PR		D4PR			
Approvals								
Features	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)		Polycarbonate Cover Indicator Lamp Available Panel and DIN Mounting Socket Has Built-In Hold Down Spring			
Contact Data	DPDT	DPDT Latching	4PDT	SPDT	DPDT	3PDT	SPDT	DPDT
Max. Allowable Load	D2PF: 10A at 120V AC D2PR: 5A at 240V AC	3A at 220V AC	3A at 240V AC	12A at 120V AC	12A at 120V AC	10A at 240V AC	10A at 250V AC	5A at 240V AC
Material	Ag (Au Flashed)			AgCdO (Au Flashed)		AgCdO		
Resistance	50 Milliohms (Initial)			50 Milliohms (Initial)		100 Milliohms (Initial)		
Dielectric Strength	1500V			1500V		5000V		
Coil Data	AC		DC		Power VA (V AC) Watts (V DC)			
	6 – 240V AC		6 – 110V DC		1.2 VA 1.1 Watts		24 – 240V AC (D3PF) / 6 – 240V AC (D3PR) 12 – 110V DC (D3PF) / 6 – 110V DC (D3PR) 2.75 VA 1.2 Watts	
					0.9 VA 0.5 Watts		6 – 240V AC 6 – 110V DC	
General Data	Ambient Temperature		Operational Storage		Maximum Pick-Up		Maximum Release	
	-40 – 158°F (-40° – 70°C)		-40 – 221°F (-40° – 105°C)		20 / 25 Milliseconds		20 / 25 Milliseconds	
					15 Milliseconds		10 Milliseconds	
					15 Milliseconds		10 (AC)/5 (DC) Milliseconds	
	Life		Mechanical Operations		Electrical Operations			
	10 Million		5 Million (D3PF) / 10 Million (D3PR)		200,000 (D3PF) / 100,000 (D3PR)		10 Million 100,000	
Page Number	Pages 49-35 – 49-42		Pages 49-43 – 49-48		Pages 49-49 – 49-51			

Selection Guide

Table 49-41. General Purpose Plug-In Relays Selection Guide (Continued)

Relay Series											
	D5PF/D5PR	D7PF/D7PR	D8PR	D9PR							
Approvals											
Features	Polycarbonate Cover	Polycarbonate Cover	Dust Cover	Dust Cover							
	Indicator Lamp and Pushbutton Available	Indicator Lamp and Pushbutton Available	Panel, DIN and Flange Mounting	Pushbutton Available							
	Panel, DIN and PC Board Mounting	Panel, DIN and Flange Mounting	Quick-Connect and Screw Terminals	Panel Mounting Screw Terminals							
Contact Data											
Configuration	SPDT	DPDT	3PDT	SPDT	DPDT	3PDT	4PDT	SPST-NO	DPST-NO	4PST	
										NO	NC
Max. Allowable Load	15A at 240V AC	15A at 240V AC	15A at 240V AC	20A at 277V AC	15A at 120V AC	15A at 120V AC	15A at 120V AC	30A at 220V AC	25A at 220V AC	25A at 220V AC	8A at 220V AC
Material	AgCdO (Au Flashed)			AgCdO				AgCdO		AgCdO	
Resistance	50 Milliohms (Initial)			50 Milliohms (Initial)				50 Milliohms (Initial)		50 Milliohms (Initial)	
Dielectric Strength	1500V (D5PF) / 2000V (D5PR)			1000V(D7PF1, D7PF2, D7PF3) / 1500V				4000V		4000V	
Coil Data											
AC	24 – 110V AC (D5PF) 6 – 240V AC (D5PR)			6 – 240V AC				6 – 240V AC		24 – 240V AC	
DC	24 – 110V DC (D5PF) 6 – 110V DC (D5PR)			6 – 110V DC				12 – 24V DC		12 – 110V DC	
Power VA (V AC) Watts (V DC)	2.75 VA 1.2 Watts			3.0 VA (D7PF3, D7PF4) / 2.55 VA 2.3 Watts (D7PF1, D7PF2, D7PF4); 3.4 Watts (D7PF3) / 1.5 Watts				2.5 VA 1.9 Watts		2.6 VA 2.0 Watts	
General Data											
Ambient Temperature Operational Storage	-22 – 122°F (-30° – 50°C) -22 – 212°F (-30° – 100°C)			-40 – 158°F (-40° – 70°C) -40 – 212°F (-40° – 100°C)				-4 – 185°F (-20° – 85°C) -4 – 185°F (-20° – 85°C)		-13 – 140°F (-25° – 60°C) -13 – 140°F (-25° – 60°C)	
Maximum Pick-Up	24 Milliseconds			20 Milliseconds (D7PF1, D7PF4) 25 Milliseconds (All Others)				30 Milliseconds		50 Milliseconds	
Maximum Release	26 Milliseconds			20 Milliseconds / 25 Milliseconds				30 Milliseconds		50 Milliseconds	
Life Mechanical Operations Electrical Operations	5 Million 200,000 (D5PF) / 100,000 (D5PR)			10 Million 100,000 (D7PR3, D7PR4, D7PF1) 150,000 (D7PF3, D7PF4) 200,000 (D7PF2, D7PR1, D7PR2)				5 Million 100,000		1 Million 100,000	
Page Number	49-52 – 49-55			Pages 49-56 – 49-66				Pages 49-67 – 49-70		Pages 49-71, 49-72	

D2PF Series

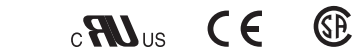


D2PF Series Relay

Features

- Flag indicator shows relay status in manual or powered condition
- Bi-polar 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 I.D. tag/write label used for identification of relays in multi-relay circuits

Standards and Certifications



When used with accompanying Cutler-Hammer® screw terminal socket.

Technical Data and Specifications

Table 49-42. D2PF Coil Resistance

Coil Voltage	Ohms	mA ^①
		50 Hz
6V AC	9.6	200
6V DC	40	150
12V AC	46	100
12V DC	160	75
24V AC	180	50
24V DC	650	37
48V DC	2600	18
110V DC	11000	10
120V AC	4430	10
240V AC	15700	5

① At 60 Hz for AC Coils.

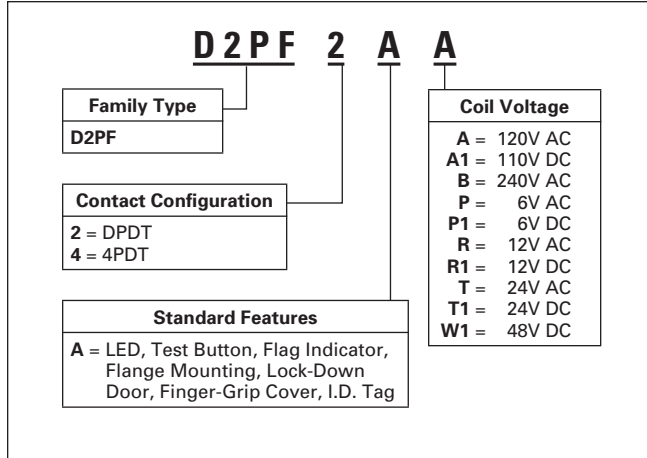
Table 49-43. D2PF2 and D2PF4 Relay Specifications

	D2PF2	D2PF4
	Resistive Load (p.f. = 1.0)	Inductive Load (p.f. = 1.0)
Coil		
Pickup Voltage (Max.)	85% AC; 80% DC (% of nominal)	
Drop Out Voltage (Min.)	10% AC; 10% DC (% of nominal)	
Maximum Voltage	110% of nominal	
Insulation System per UL Standard 1446	Class B 266°F (130°C)	
Contacts		
Rated Load	120V AC – 10A 277V AC, 28V DC – 8A (UL), 10A (CSA)	120V AC – 3A 277V AC, 28V DC – 3A
Maximum hp Ratings	1/3 hp, 120V AC 1 hp, 277V AC	1/10 hp, 120V AC 1/10 hp, 277V AC
Contact Material	Silver Tin Oxide (Gold Flashed)	Fine Silver, Gold Diffused
Pilot Duty	B300	
Utilization Category (IEC)	AC-15	
Min. Permissible Load	100mA @ 5V DC or 0.5W	
Contact Resistance	100 Milliohms Max. @ 6V, 1A	
Dielectric Strength		
Coil to Contacts	1500V RMS	
Across Open Contacts	1000V RMS	
Contacts to Frame	1500V RMS	
Insulation Resistance	100 Megohms Min. @ 500V DC	
Temperature		
Operating	-40 – 158°F (-40 – 70°C)	
Storage	-40 – 221°F (-40 – 105°C)	
Life Expectancy		
Electrical at Rated Resistive Load	200,000 Operations	
Mechanical at No Load	10 Million Operations	
Weight		
Approximate Weight	0.079 lbs. (36G)	0.081 lbs. (37G)

D2PF Series — Full Featured

Catalog Number Structure

Table 49-44. D2PF Series Catalog Numbering System ①



① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

Table 49-45. D2PF Relay/Socket Quick Reference

Relay Type	Socket	Socket Type	Hold Down Clip
D2PF2	D2PA6	Screw Terminal	PQC-1342
	D2PA7	Screw Terminal, Finger-Safe	Included with Socket
D2PF4	D2PA6	Screw Terminal	PQC-1342
	D2PA7	Screw Terminal, Finger-Safe	Included with Socket

Table 49-46. D2PF Socket Specifications

Catalog Number	Electrical Ratings	Mounting Torque	Hook-up Wire Range
D2PA6	10A, 300V	7 – 8 in-lbs. (0.79 – 0.90 Nm)	AWG 14 to 28 Solid or Stranded
D2PA7	10A, 300V	7 – 8 in-lbs. (0.79 – 0.90 Nm)	AWG 14 to 20 Solid or Stranded

Product Selection

Table 49-47. D2PF Product Selection

	Std. Pack	Catalog Number	Price U.S. \$
DPDT			
6V AC 6V DC		D2PF2AP D2PF2AP1	
12V AC 12V DC		D2PF2AR D2PF2AR1	
24V AC 24V DC		D2PF2AT D2PF2AT1	
48V DC		D2PF2AW1	
110V DC		D2PF2AA1	
120V AC		D2PF2AA	
240V AC		D2PF2AB	
4PDT			
6V AC		D2PF4AP	
12V AC 12V DC		D2PF4AR D2PF4AR1	
24V AC 24V DC		D2PF4AT D2PF4AT1	
48V DC		D2PF4AW1	
110V DC		D2PF4AA1	
120V AC		D2PF4AA	
240V AC		D2PF4AB	
Sockets and Accessories			
4-Pole DIN or Panel Mount Socket	10	D2PA6	
Hold Down Clip	10	PQC-1342	
4-Pole DIN or Panel Mount Socket — Finger-Safe	10	D2PA7	
DIN Rail End Stop ②	200	FFP-M	

② Additional end stop options available on Page 55-74.

Dimensions

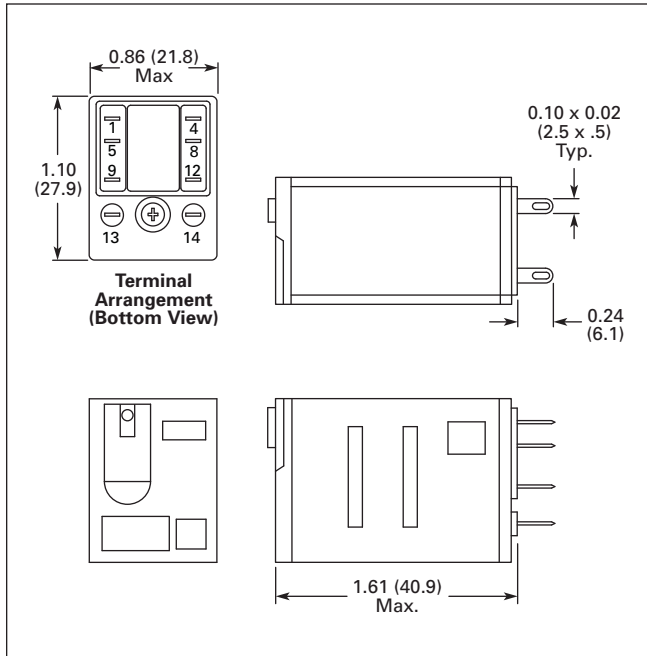


Figure 49-41. D2PF2 — Approximate Dimensions in Inches (mm)

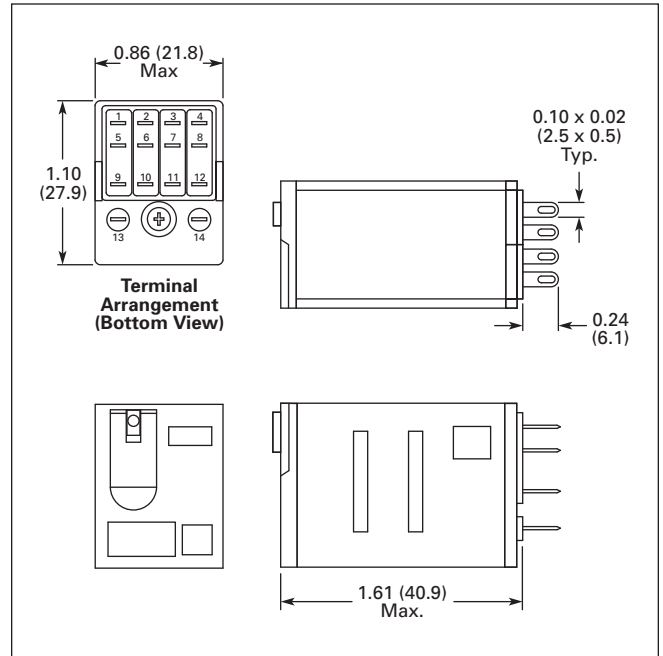


Figure 49-42. D2PF4 — Approximate Dimensions in Inches (mm)

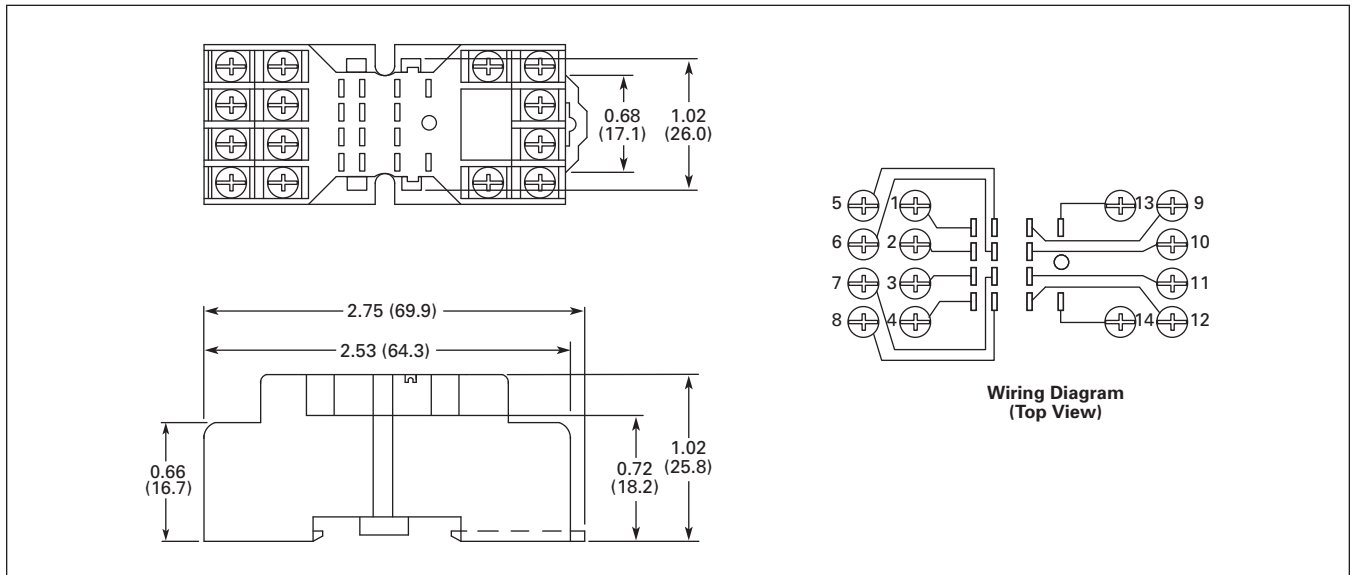


Figure 49-43. D2PA6 — Approximate Dimensions in Inches (mm)

D2PF Series — Full Featured

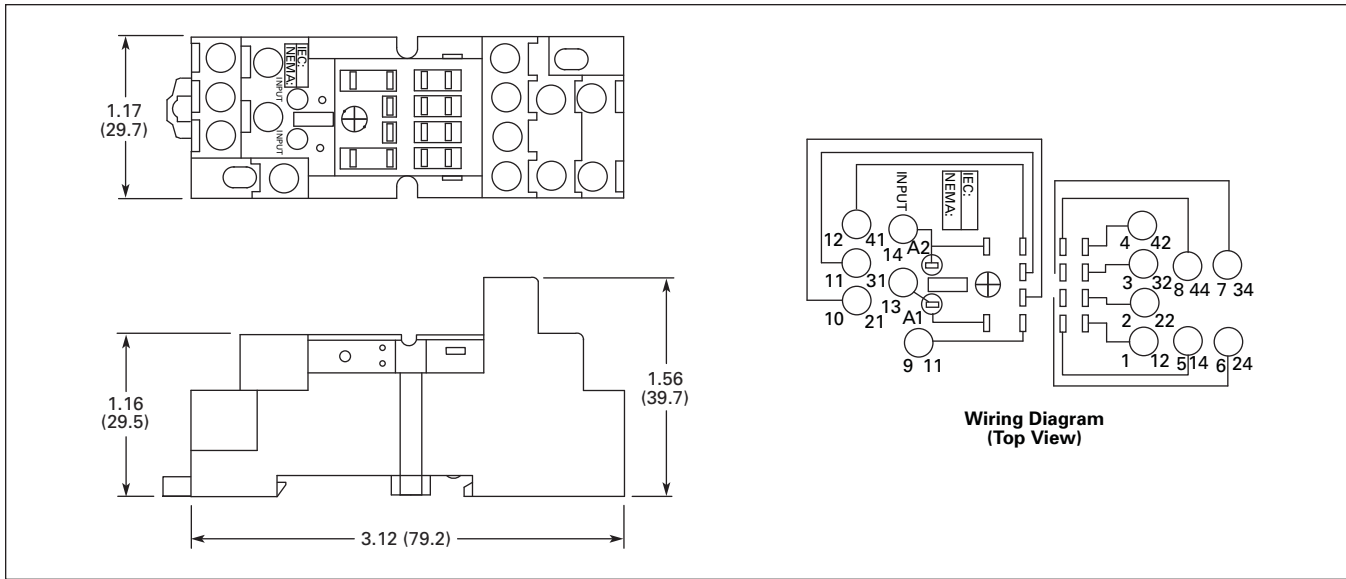


Figure 49-44. D2PA7 — Approximate Dimensions in Inches (mm)

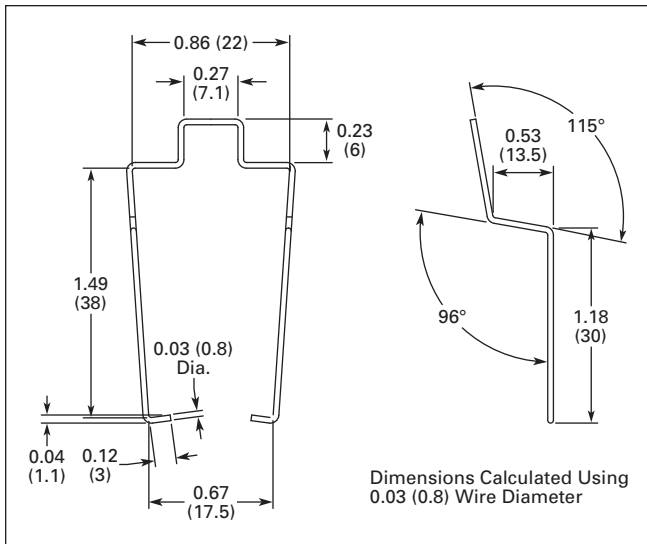


Figure 49-45. PQC-1342 — Approximate Dimensions in Inches (mm)

D2PR Series — Standard

D2PR Series





D2PR Series Relay

Features

- Ultra-high sensitivity relay with quick response
- Designed small, 2-pole type break 5A load and 4-pole type, 3A load
- High reliability, long life
- Panel, DIN rail and flange mounting
- Small size

Standards and Certifications

 File # E37317, E65657

 File # LR217017, LR217069



Technical Data and Specifications

Table 49-48. D2PR Coil Resistance

Coil Voltage	Ohms	mA	
		50 Hz	60 Hz
6V AC	11	234	200
12V AC	41	86.5	74
24V AC	180	48	41
48V AC	788	21	18
120V AC	4430	12.9	11
240V AC	15700	7	6
6V DC	40	150	
12V DC	160	75	
24V DC	650	36.9	
48V DC	2600	18.5	
110V DC	11000	10	

Table 49-49. D2PR Socket Specifications

Catalog Number	Electrical Ratings	Mounting Torque	Hook-Up Wire Range
D2PA4	7A, 250V	.785 Nm – 1.18 Nm	AWG 14 Max.
D2PA6	10A, 300V	7 – 8 in-lbs	AWG 14 to 28 Solid or Stranded

Table 49-50. D2PR Relay Specifications

	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)
D2PR2		
Rated Load	240V AC 5A 30V DC 5A	240V AC 2A 30V DC 2A
Carry Current	5A	5A
Max. Operating Voltage	250V AC/125V DC	250V AC/125V DC
Max. Operating Current	5A	5A
Contact Material	Silver Cadmium Oxide	Silver Cadmium Oxide
Max. Switching Capacity	1100 VA 120W	440 VA 48W
Min. Permissible Load	100 mA, 5V DC	100 mA, 5V DC
Pickup Voltage (max.)	80% AC, 75% DC	80% AC, 75% DC
Drop Out Voltage (min.)	30% AC, 10% DC	30% AC, 10% DC
Voltage (max.)	110%	110%
Mechanical Life (min.)	10,000,000 operations	10,000,000 operations
Electrical Life @ All Contact Ratings (min.)	200,000 operations	200,000 operations
Maximum hp Ratings	1/6 hp (120V AC)	1/6 hp (120/240V AC)

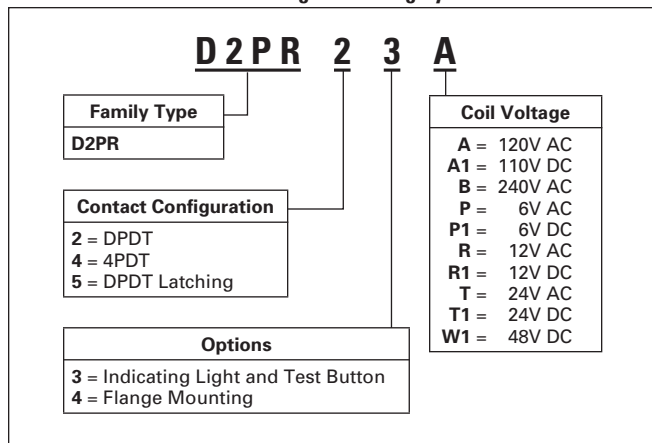
D2PR4		
Rated Load	240V AC 3A 30V DC 3A	240V AC 0.8A 30V DC 1.5A
Carry Current	3A	3A
Max. Operating Voltage	250V AC/125V DC	250V AC/125V DC
Max. Operating Current	3A	3A
Contact Material	Ag (Au Flashed)	Ag (Au Flashed)
Max. Switching Capacity	660 VA 72W	176 VA 36W
Min. Permissible Load	1 mA, 1V DC	1 mA, 1V DC
Pickup Voltage (max.)	80%	80%
Drop Out Voltage (min.)	30% AC, 10% DC	30% AC, 10% DC
Voltage (max.)	110%	110%
Mechanical Life (min.)	10,000,000 operations	10,000,000 operations
Electrical Life @ All Contact Ratings (min.)	200,000 operations	200,000 operations
Maximum hp Ratings	1/10 hp (120/240V AC)	1/10 hp (120/240V AC)

D2PR5		
Rated Load	250V AC 5A 30V DC 5A	250V AC 2A 30V DC 2A
Carry Current	3A	3A
Max. Operating Voltage	250V AC/125V DC	250V AC/125V DC
Max. Operating Current	3A	3A
Contact Material	Ag (Au flashed)	Ag (Au flashed)
Max. Switching Capacity	660 VA 72W	176 VA 36W
Min. Permissible Load	100 mA, 1V DC	100 mA, 1V DC
Pickup Voltage (max.)	80%	80%
Drop Out Voltage (min.)	30% AC, 10% DC	30% AC, 10% DC
Set/Reset Voltage (max.)	80%	80%
Voltage (max.)	110%	110%
Mechanical Life (min.)	100 million operations	100 million operations
Electrical Life @ All Contact Ratings (min.)	200,000 operations	200,000 operations
Maximum hp Ratings	1/8 hp (265V AC)	1/8 hp (265V AC)

D2PR Series — Standard

Catalog Number Structure

Table 49-51. D2PR Series Catalog Numbering System ^①



^① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

Table 49-52. D2PR Relay/Socket Quick Reference

Relay Type	Socket	Hold Down Spring/Clip
D2PR2	D2PA6	PMC-A1
D2PR4	D2PA6	PMC-A1
D2PR5	D2PA4	PYC-A1

Product Selection

Table 49-53. D2PR Product Selection ^②

	Std. Pack	Catalog Number	Price U.S. \$
Standard DPDT			
Coil Voltage: 24V AC 110V AC 240V AC		D2PR2T D2PR2A D2PR2B	
12V DC 24V DC		D2PR2R1 D2PR2T1	
DPDT with Indicating Light and Test Button			
24V AC 110V AC 24V DC		D2PR23T D2PR23A D2PR23T1	
DPDT Flange Mount			
110V AC		D2PR24A	
Standard 4PDT			
Coil Voltage: 24V AC 110V AC		D2PR4T D2PR4A	
12V DC 24V DC 110V DC		D2PR4R1 D2PR4T1 D2PR4A1	
4PDT with Indicating Light and Test Button			
24V AC 110V AC		D2PR43T D2PR43A	
12V DC 24V DC 110V DC		D2PR43R1 D2PR43T1 D2PR43A1	
4PDT Flange Mount			
110V AC		D2PR44A	
DPDT Latching			
110V AC 24V DC		D2PR5A D2PR5T1	
DIN Rail or Panel Mount Socket and Accessories			
4-Pole Socket Spring Clip DIN Rail End Stop	10 100 100	D2PA6 PMC-A1 PFP-M	
DIN Rail or Panel Mount Socket and Accessories for D2PR5 Latching Relays			
4-Pole Socket Hold-Down Spring DIN Rail End Stop ^③	10 100 100	D2PA4 PYC-A1 PFP-M	

^② Additional coil voltages available — consult Sales Office or Customer Support Center.

^③ Additional end stop options available on Page 55-74.

Dimensions

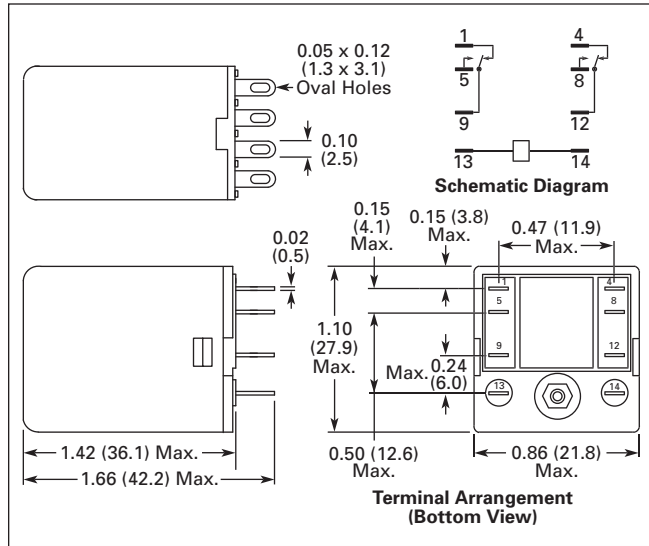


Figure 49-46. D2PR2 — Approximate Dimensions in Inches (mm)

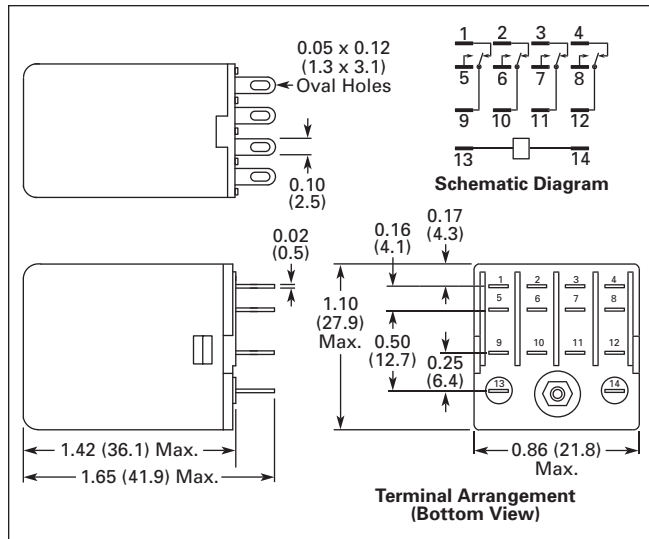


Figure 49-47. D2PR4/D2PR44 — Approximate Dimensions in Inches (mm)

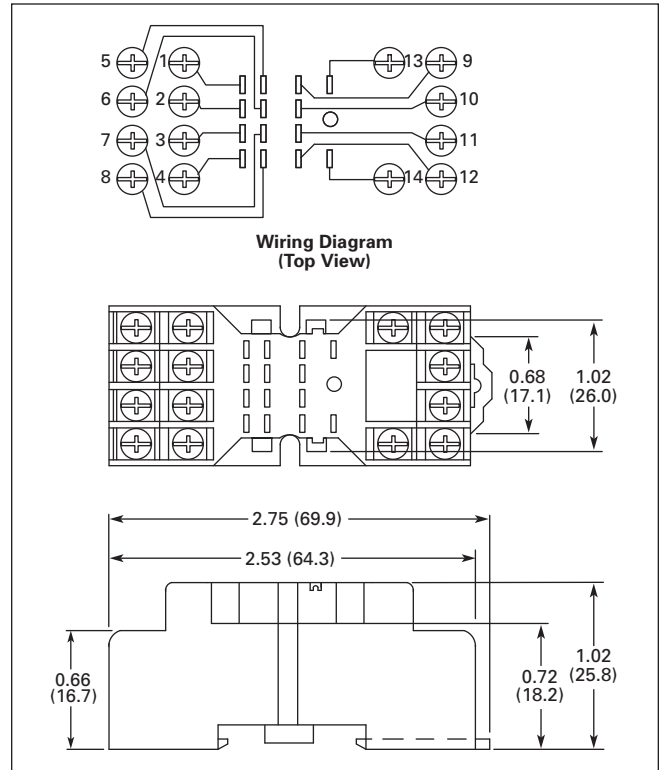


Figure 49-48. D2PA6 — Approximate Dimensions in Inches (mm)

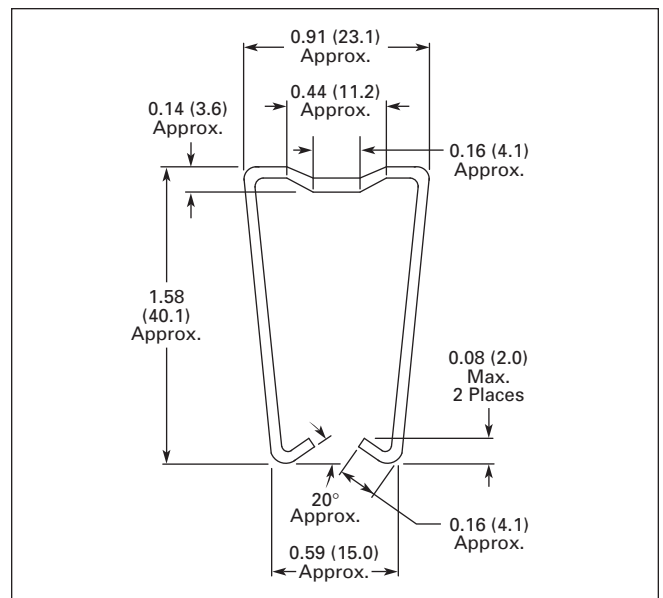


Figure 49-49. PMC-A1 Spring Clip for D2PA6

D2PR Series — Standard

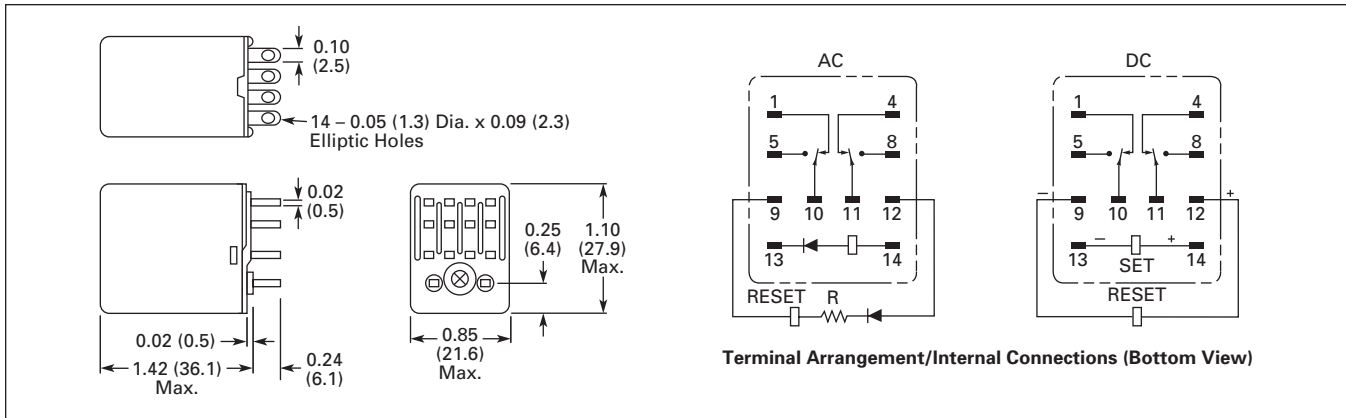


Figure 49-50. D2PR5 — Approximate Dimensions in Inches (mm)

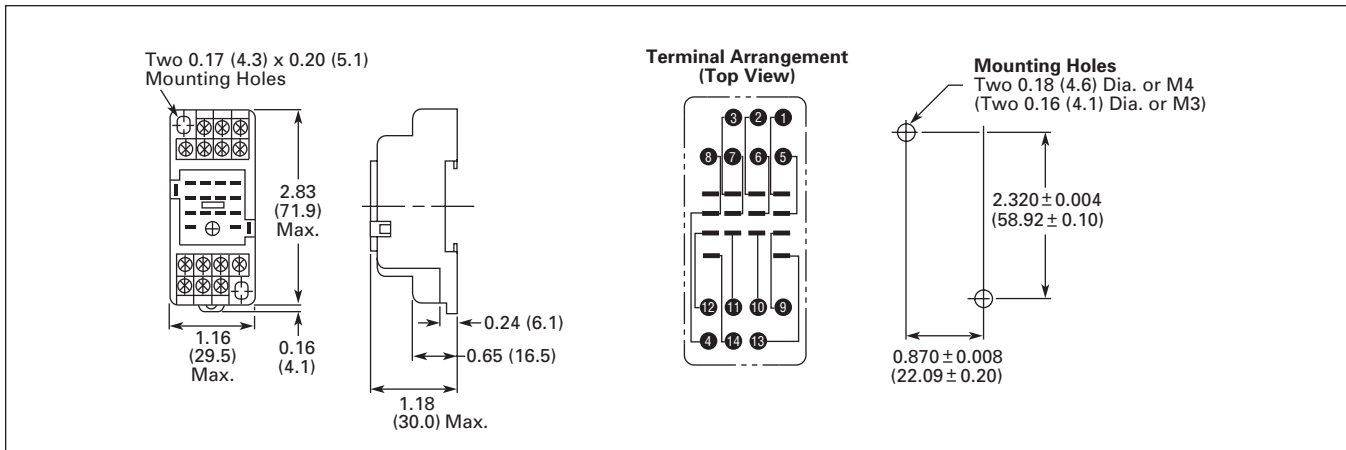


Figure 49-51. D2PA4 Socket for D2PR5 DPDT Latching Relays Only — Approximate Dimensions in Inches (mm)

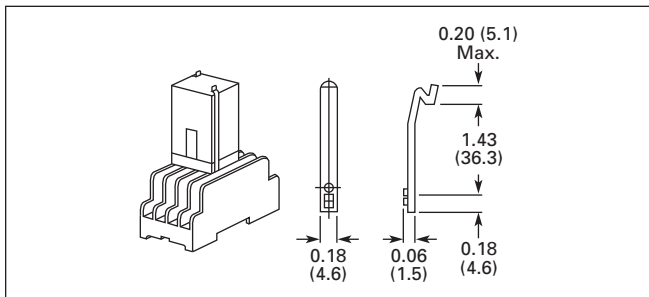


Figure 49-52. PYC-A1 Hold down Clip for D2PA4 Socket — Approximate Dimensions in Inches (mm)

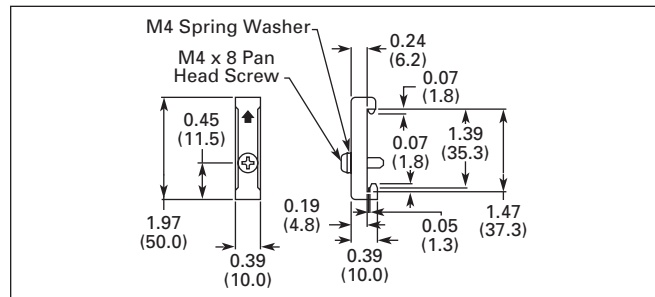


Figure 49-53. PFP-M DIN Rail End Stop — Approximate Dimensions in Inches (mm)

D3PR/D3PF Series



D3 Series Relay

Features

D3PR

- Compact relay capable of breaking relatively large load currents
- The contact operation can be easily checked by push-to-test button
- Panel and DIN rail mounting
- 8- or 11-pin octal plug-in

D3PF

- 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
- I.D. tag/write label to identify relays in multiple-relay circuits
- Bi-polar LED allows for reverse polarity applications

Standards and Certifications




 (CSA approval not applicable to D3PR5 Relays)


 When used with accompanying Cutler-Hammer® screw terminal socket (for D3PF only).

Technical Data and Specifications

Table 49-54. Coil Resistance for D3PR Series

Coil Voltage	Ohms		mA			
	D3PR2/PR3	D3PR5 – DC (Each Coil)	D3PR2/PR3 – AC		D3PR5 – AC	
			50 Hz	60 Hz	50 Hz	60 Hz
6V AC	4.2	—	550	458	—	—
12V AC	18	—	275	229	—	—
24V AC	72	52	137	114	13	11
120V AC	2200	1200	28	23	3.5	2.8
240V AC	7200	3200	13	11	1.7	1.6
6V DC	32	—	187		—	
12V DC	120	88	100		136	
24V DC	470	350	50		69	
48V DC	1900	—	25		—	
110V DC	10000	4000	11		27	

Table 49-55. Coil Resistance for D3PF Series

Coil Voltage	Ohms	mA	
		50 Hz	60 Hz
24V AC	72	398.0	340
120V AC	1,700	76.0	65
240V AC	7,200	28.0	24
12V DC	120	100.0	—
24V DC	470	49.9	—
110V DC	10,000	13.2	—

D3PR/DP3F Series — Standard and Full Featured

Table 49-56. Relay Specifications

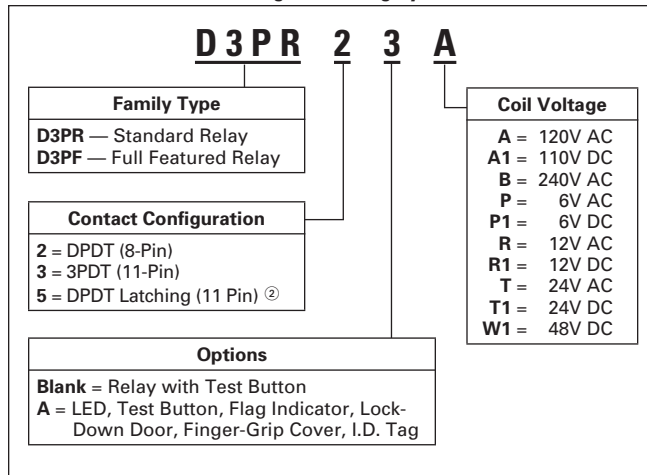
	D3PR2/D3PR3	D3PR2/D3PR3	D3PF2/D3PF3	D3PR5	D3PR5
	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)	Resistive Load (p.f. = 1.0)	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)
Rated Load	240V AC 10A 120V AC 12A 28V DC 10A	240V AC 7A 120V AC 7A 28V DC 7A	240V AC 12A 120V AC 12A 28V DC 12A	240V AC 10A 120V AC 12A 30V DC 10A	240V AC 7A 120V AC 7A 30V DC 7A
Carry Current	10A	10A	12 Amps	10A	10A
Max. Operating Voltage	240V AC/DC	240V AC/DC	110% of nominal	240V AC/DC	240V AC/DC
Contact Resistance	50 milli Ω's Max. @ 10 Amps 120V AC or 24V DC	50 milli Ω's Max. @ 10 Amps 120V AC or 24V DC	50 milli Ω's Max. @ 10 Amps 120V AC or 24V DC	50 milli Ω's Max. @ 10 Amps 120V AC or 24V DC	50 milli Ω's Max. @ 10 Amps 120V AC or 24V DC
Dielectric Strength	1500V	1500V	1500V	1500V	1500V
Approx. Weight	3.5 oz (99.2g)	3.5 oz (99.2g)	3.1 oz (88g)	3.5 oz (99.2g)	3.5 oz (99.2g)
Temperature — Operating	-49 – 131°F (-45 – 55°C) AC -49 – 158°F (-45 – 70°C) DC	-49 – 131°F (-45 – 55°C) AC -49 – 158°F (-45 – 70°C) DC	-22 – 122°F (-30 – 50°C)	-49 – 131°F (-45 – 55°C) AC -49 – 158°F (-45 – 70°C) DC	-49 – 131°F (-45 – 55°C) AC -49 – 158°F (-45 – 70°C) DC
Storage	-40 – 221°F (-40 – 105°C)	-40 – 221°F (-40 – 105°C)	-22 – 212°F (-30 – 100°C)	-40 – 221°F (-40 – 105°C)	-40 – 221°F (-40 – 105°C)
Contact Material	AgCdO (Au Flashed)	AgCdO (Au Flashed)	AgCdO (Au Flashed)	AgCdO (Au Flashed)	AgCdO (Au Flashed)
Max. Switching Capacity	2500 VA 280W	1750 VA 196W	12 Amps	1100 VA 72W	440 VA 60W
Min. Permissible Load	100 mA @ 12V	100 mA @ 12V	100 mA	100 mA @ 12V	100 mA @ 12V
Pickup Voltage (max.)	80%	80%	85% AC; 80% DC	—	—
Drop Out Voltage (min.)	10%	10%	30% AC 10% DC	—	—
Set/Reset Voltage (max.)	—	—	—	80%	80%
Voltage (max.)	110%	110%	110%	110%	110%
Mechanical Life (min.)	10,000,000	10,000,000	5 million (No Load)	10,000,000	10,000,000
Electrical Life @ All Contact Ratings (min.)	100,000	100,000	200,000 operations at Rated Res. Load	100,000	100,000
Maximum hp Ratings	1/3 hp (120V AC) 1/2 hp (240V AC)	1/3 hp (120V AC) 1/2 hp (240V AC)	1/3 hp, 120V AC 1/2 hp, 240V AC	1/3 hp (120V AC) 1/2 hp (240V AC)	1/3 hp (120V AC) 1/2 hp (240V AC)

Table 49-57. Socket Specifications

Catalog Number	Electrical Ratings	Mounting Torque	Hook-Up Wire Range
D3PA2	10A, 600V 15A, 300V	8 – 10 in-lbs	AWG 12 to 22 Solid or Stranded
D3PA3-A2	5A, 600V 15A, 300V	8 – 10 in-lbs	AWG 12 to 22 Solid or Stranded
D3PA6	5A, 600V 16A, 300V	8 – 10 in-lbs	AWG 12 to 20 Solid or Stranded
D3PA7	5A, 600V 16A, 300V	8 – 10 in-lbs	AWG 12 to 20 Solid or Stranded
D3PA4	10A, 260V	N/A	AWG 14 Max.
D3PA5	10A, 260V	N/A	AWG 14 Max.

Catalog Number Structure

Table 49-58. D3 Series Catalog Numbering System ①



① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

② D3PR only.

Table 49-59. Relay/Socket Quick Reference

Relay Type	Socket Type	Socket	Hold Down Spring/Clip
D3PR2	8 Pin Octal	D3PA2 D3PA4 D3PA6	PQC-1344 Not Available PQC-1332
D3PF2	8 Pin Octal	D3PA2	PQC-1344
	8 Pin Octal — Finger-safe terminals	D3PA6	PQC-1332
D3PR3	11 Pin Octal	D3PA3-A2	PQC-1351
		D3PA5	Not Available
		D3PA7	PQC-1332
D3PF3	11 Pin Octal	D3PA3-A2	PQC-1351
		D3PA7	PQC-1332
D3PR5	11 Pin Octal	D3PA3-A2	PQC-1351
		D3PA5	Not Available
		D3PA7	PQC-1332

Product Selection

Table 49-60. D3 Product Selection ③

	Std. Pack	Catalog Number	Price U.S. \$
Standard DPDT with Test Button			
Coil Voltage:			
12V AC	1	D3PR2R	
24V AC	1	D3PR2T	
120V AC	1	D3PR2A	
240V AC	1	D3PR2B	
12V DC	1	D3PR2R1	
24V DC	1	D3PR2T1	
110V DC	1	D3PR2A1	
DPDT Full Featured Relay			
24V AC	1	D3PF2AT	
120V AC	1	D3PF2AA	
240V AC	1	D3PF2AB	
12V DC	1	D3PF2AR1	
24V DC	1	D3PF2AT1	
110V DC	1	D3PF2AA1	
Standard 3PDT with Test Button			
Coil Voltage:			
24V AC	1	D3PR3T	
120V AC	1	D3PR3A	
240V AC	1	D3PR3B	
12V DC	1	D3PR3R1	
24V DC	1	D3PR3T1	
110V DC	1	D3PR3A1	
3PDT Full Featured Relay			
24V AC	1	D3PF3AT	
120V AC	1	D3PF3AA	
240V AC	1	D3PF3AB	
24V DC	1	D3PF3AT1	
110V DC	1	D3PF3AA1	
DPDT Latching ⑤			
24V AC	1	D3PR5T	
120V AC	1	D3PR5A	
DIN Rail Sockets			
2-Pole (8-Pin)	10	D3PA2	
2-Pole (8-Pin) Finger-Safe ⑥	1	D3PA6	
3-Pole (11-Pin)	10	D3PA3	
3-Pole (11-Pin) Finger-Safe ⑥	1	D3PA7	
Panel Mount Sockets			
2-Pole	10	D3PA4	
3-Pole	10	D3PA5	
Accessories			
Hold Down Clip	10	PQC-1344	
Hold Down Clip	25	PQC-1332	
Hold Down Clip	10	PQC-1351	
Hold Down Clip	100	PWC-1325	
Coil Buss Jumper for D3PA6 & D3PA7	25	D3PJ1	
DIN Rail End Stop ④	100	PFP-M	

③ Additional coil voltages available — consult Sales Office or Customer Support Center.

④ Dimensions on **Page 49-51**.

⑤ CSA approval is not applicable to D3PR5 Latching Relays.

⑥ IP20 Rated.

D3PR/DP3F Series — Standard and Full Featured

Dimensions

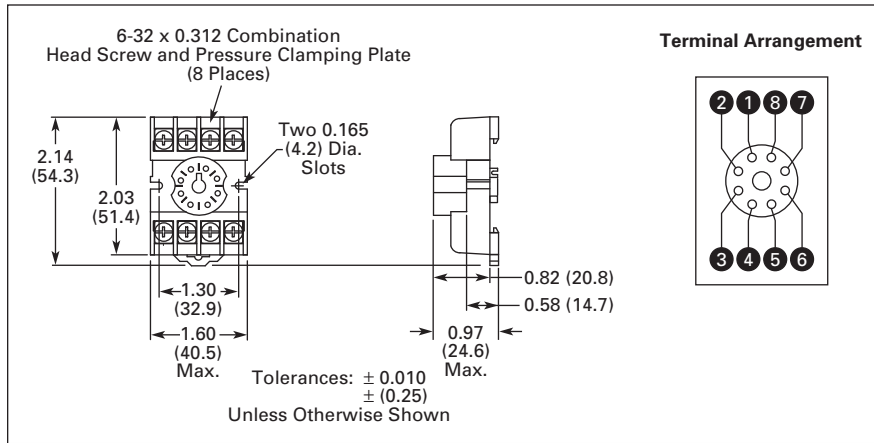


Figure 49-54. D3PA2 — Approximate Dimensions in Inches (mm)

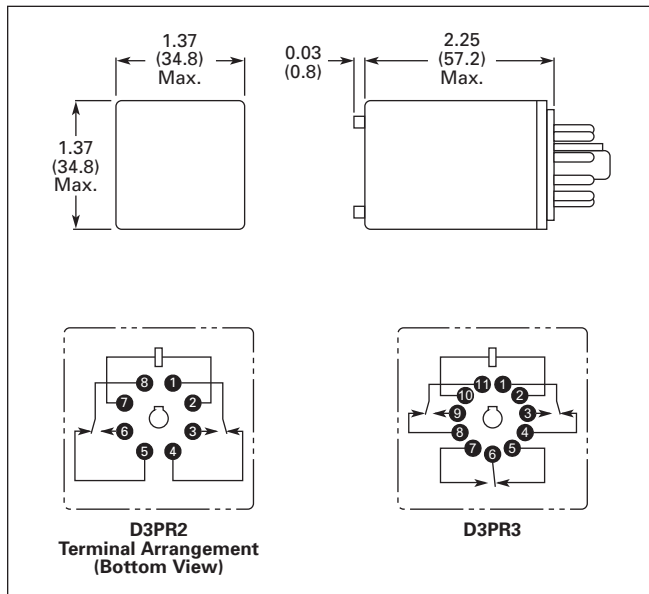


Figure 49-55. D3PR2/D3PR3 — Approximate Dimensions in Inches (mm)

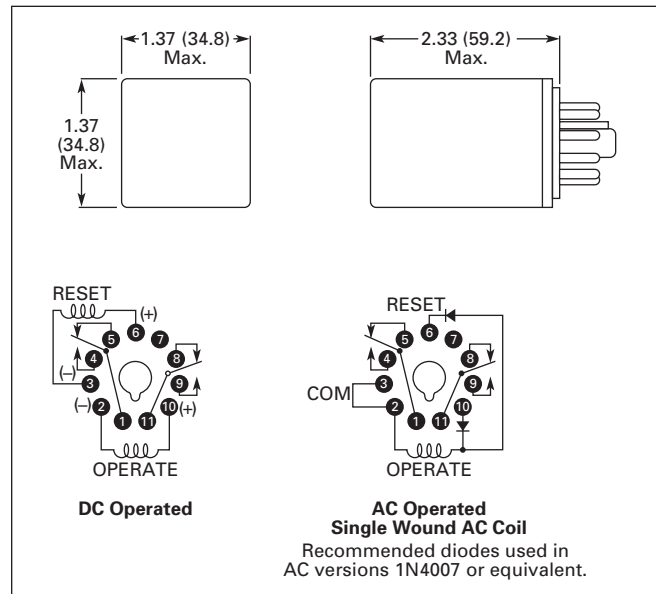


Figure 49-56. D3PR5 — Approximate Dimensions in Inches (mm)

49

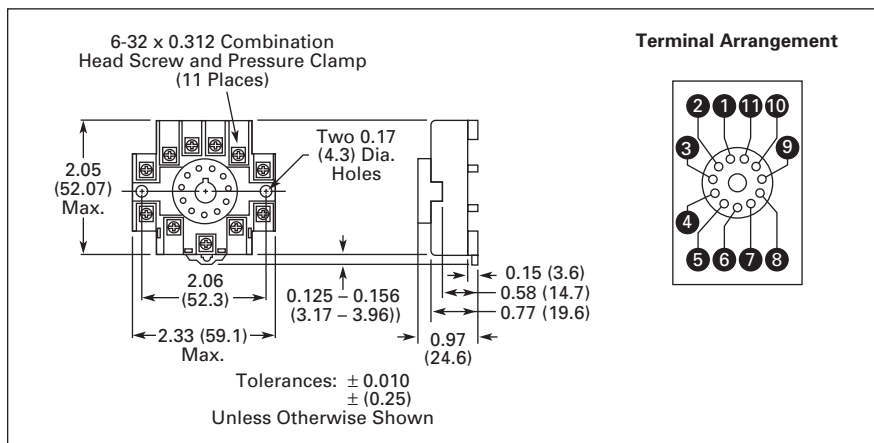


Figure 49-57. D3PA3-A2 — Approximate Dimensions in Inches (mm)

D3PR/DP3F Series — Standard and Full Featured



D3PJ1

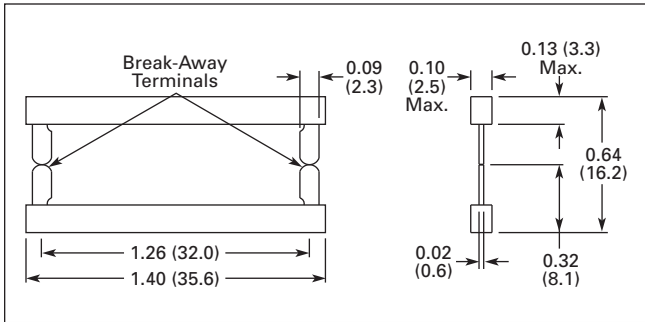


Figure 49-58. D3PJ1 — Approximate Dimensions in Inches (mm)

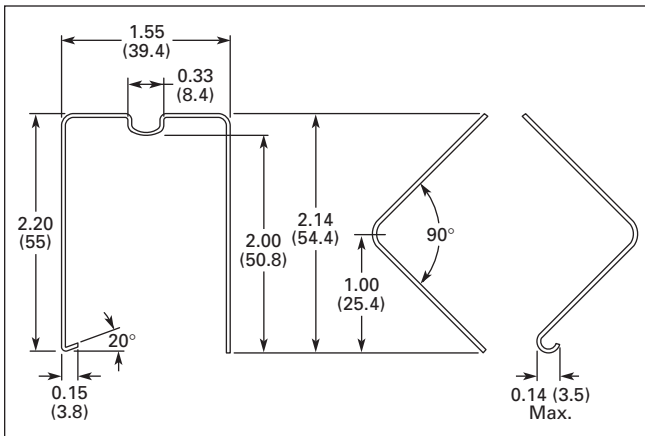


Figure 49-59. PQC-1332 — Approximate Dimensions in Inches (mm)

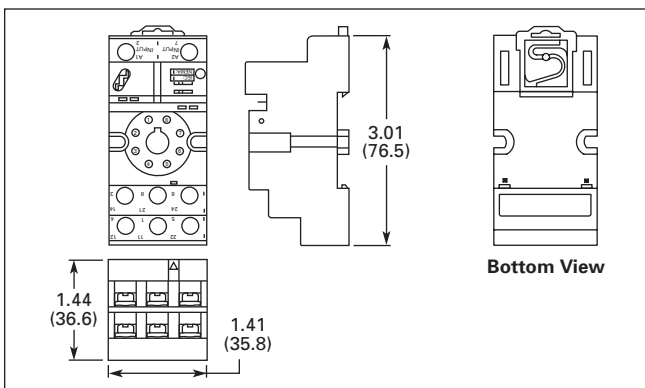


Figure 49-60. D3PA6 — Approximate Dimensions in Inches (mm)

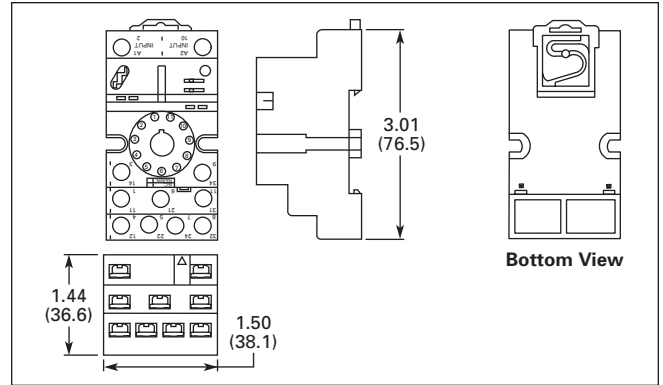


Figure 49-61. D3PA7 — Approximate Dimensions in Inches (mm)

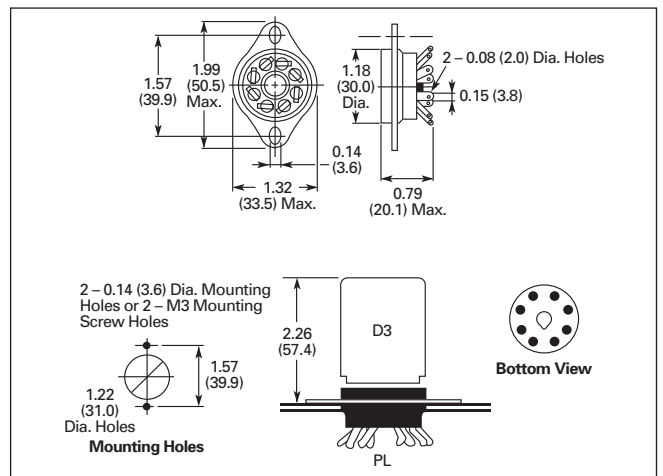


Figure 49-62. D3PA4 — Approximate Dimensions in Inches (mm)

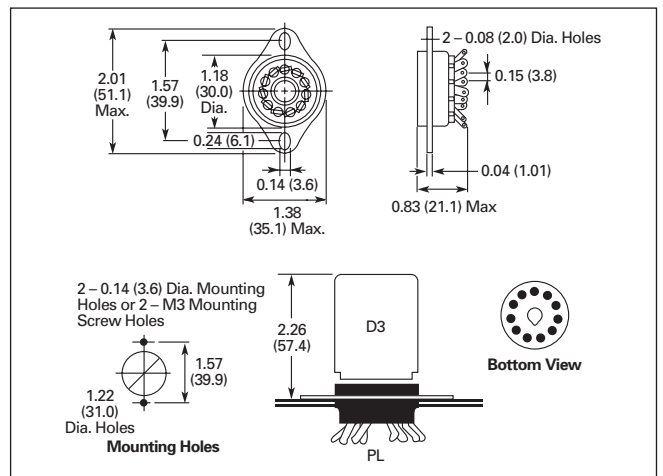


Figure 49-63. D3PA5 — Approximate Dimensions in Inches (mm)

D3PR/DP3F Series — Standard and Full Featured

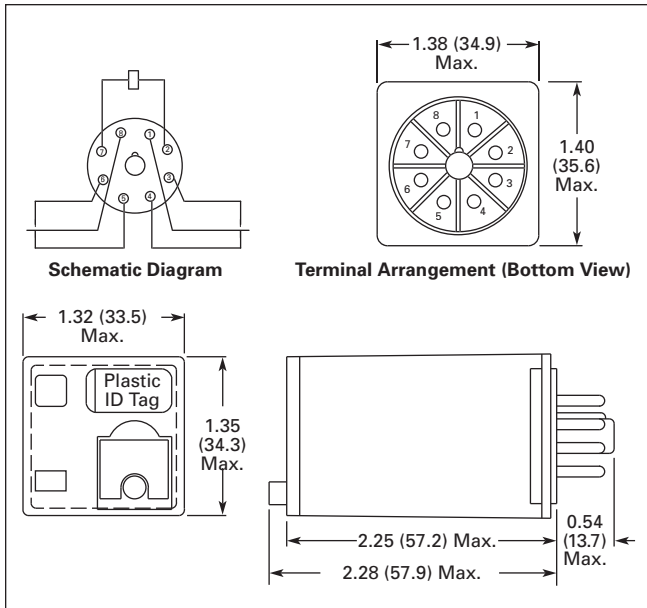


Figure 49-64. D3PF2 — Approximate Dimensions in Inches (mm)

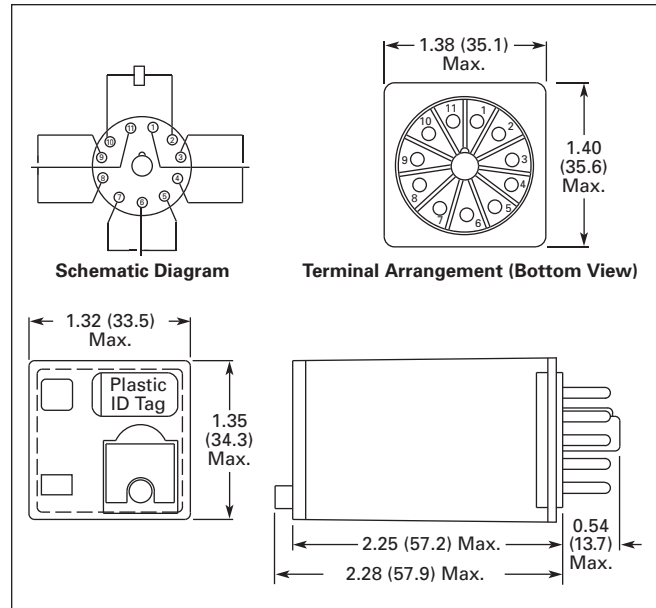


Figure 49-65. D3PF3 — Approximate Dimensions in Inches (mm)

D4 Series — Standard

D4 Series



D4 Series Relay

Features

- Slim-styled power relay
- Socket has built-in hold-down clip
- Panel or DIN rail mounting

Standards and Certifications

- File # E1491, E65657
- File # LR701519
-

Technical Data and Specifications

Table 49-61. Coil Resistance

Coil Voltage	Ohms	mA
		@ 60 Hz AC
6V AC	16	150
12V AC	65	75
24V AC	260	37.5
48V AC	1130	18
110/120V AC	6500	7.5
220/240V AC	30000	3.8
6V DC	68	88.2
12V DC	275	43.6
24V DC	1100	21.8
48V DC	4170	11.5
100/110V DC	22900	4.8

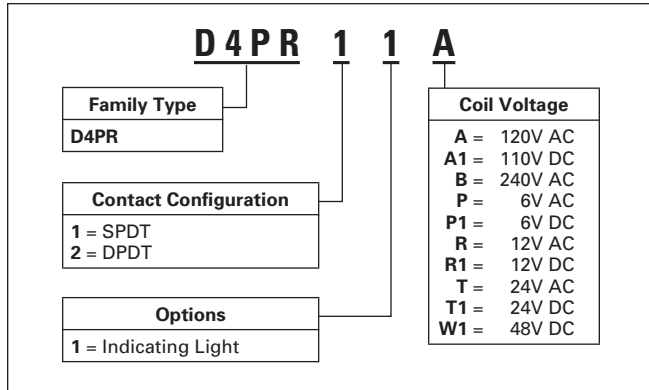
Table 49-62. Specifications

	D4PR1		D4PR2	
	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)
Rated Load	250V AC 10A 30V DC 10A	250V AC 7.5A 30V DC 5A	240V AC 5A 30V DC 5A	250V AC 2A 30V DC 3A
Carry Current	10A	10A	5A	5A
Max. Operating Voltage	380V AC/125V DC	380V AC/125V DC	380V AC/125V DC	380V AC/125V DC
Max. Operating Current	10A	10A	5A	5A
Contact Material	AgCdO	AgCdO	AgCdO	AgCdO
Max. Switching Capacity	2500 VA 300W	1875 VA 150W	1250 VA 150W	500 VA 90W
Min. Permissible Load	100 mA, 5V DC	100 mA, 5V DC	10 mA, 5V DC	10 mA, 5V DC
Pickup Voltage (max.)	80% AC/70% DC	80% AC/70% DC	80% AC/70% DC	80% AC/70% DC
Drop Out Voltage (min.)	30% AC/15% DC	30% AC/15% DC	30% AC/15% DC	30% AC/15% DC
Voltage (max.)	110%	110%	110%	110%
Mechanical Life (min.)	10,000,000 AC/20,000,000 DC	10,000,000 AC/20,000,000 DC	10,000,000 AC/20,000,000 DC	10,000,000 AC/20,000,000 DC
Electrical Life @ All Contact Ratings (min.)	100,000	100,000	100,000	100,000
Maximum hp Ratings	1/3 hp (125V AC) 1/2 hp (250V AC) 1/2 hp (277V AC)	1/3 hp (125V AC) 1/2 hp (250V AC) 1/2 hp (277V AC)	1/6 hp (120V AC) 1/3 hp (240V AC) 1/3 hp (265V AC)	1/6 hp (120V AC) 1/3 hp (240V AC) 1/3 hp (265V AC)

D4 Series — Standard

Catalog Number Structure

Table 49-63. D4 Series Catalog Numbering System ①



① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

Table 49-64. Relay/Socket Quick Reference

Relay Type	Socket	Hold Down Clip
D4PR1	D4PA1	②
D4PR2	D4PA2	②

② Socket has built-in hold down spring.

Product Selection

Table 49-65. D4 Product Selection ③

	Std. Pack	Catalog Number	Price U.S. \$
Standard SPDT			
Coil Voltage:			
24V AC		D4PR1T	
120V AC		D4PR1A	
24V DC		D4PR1T1	
SPDT with Indicating Light			
24V AC		D4PR11T	
120V AC		D4PR11A	
24V DC		D4PR11T1	
Standard DPDT			
24V AC		D4PR2T	
120V AC		D4PR2A	
12V DC		D4PR2R1	
24V DC		D4PR2T1	
DPDT with Indicating Light			
120V AC		D4PR21A	
24V DC		D4PR21T1	
DIN Rail Sockets			
1-Pole	10	D4PA1	
2-Pole	10	D4PA2	
Accessories			
DIN Rail End Stop	100	PPF-M	

③ Additional coil voltages available — consult Sales Office or Customer Support Center.

Dimensions

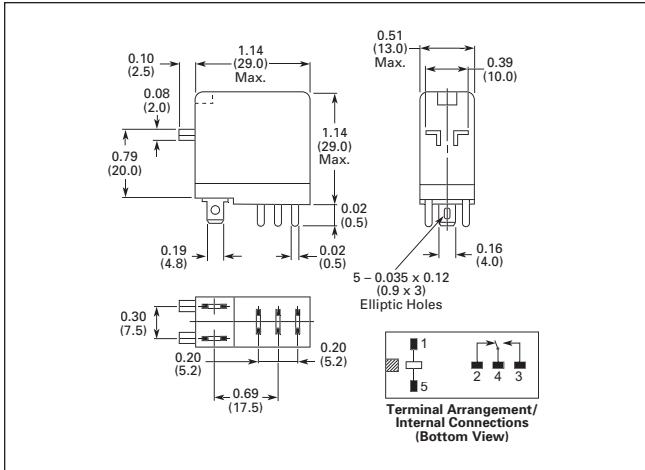


Figure 49-66. D4PR1 — Approximate Dimensions in Inches (mm)

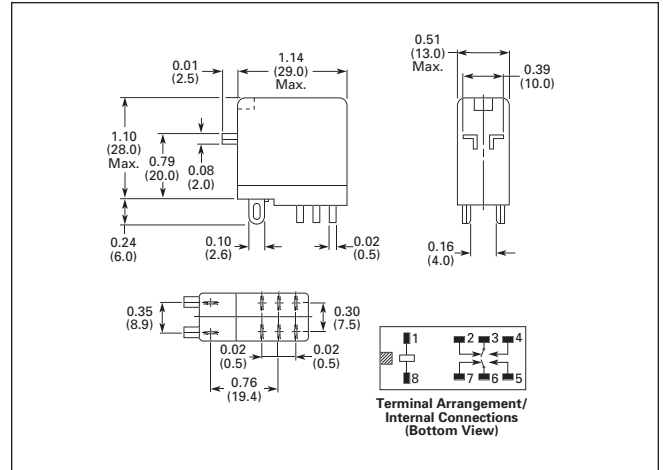


Figure 49-67. D4PR2 — Approximate Dimensions in Inches (mm)

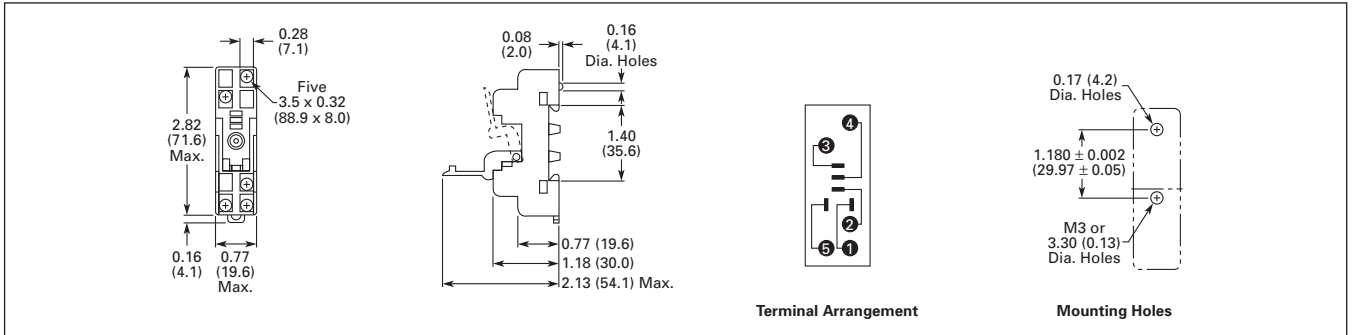


Figure 49-68. D4PA1 — Approximate Dimensions in Inches (mm)

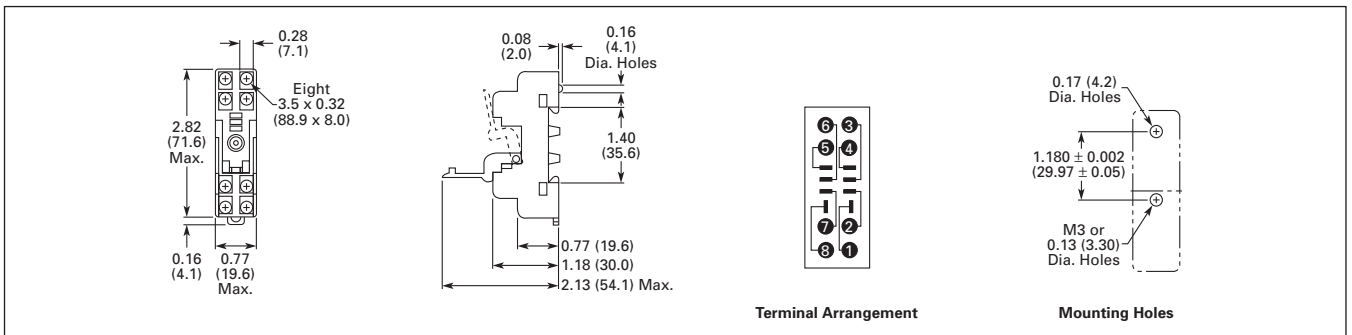


Figure 49-69. D4PA2 — Approximate Dimensions in Inches (mm)

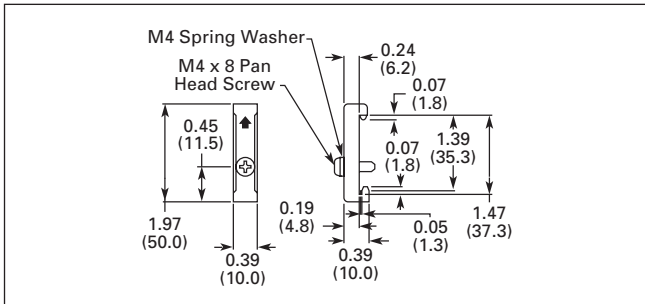


Figure 49-70. PFP-M DIN Rail End Stop — Approximate Dimensions in Inches (mm)

D5PR/D5PF Series



D5 Series Relay

Features

D5PR

- Industrial rated 300V, 15A relay in 2-pole and 3-pole configurations
- Compact design can be panel or DIN rail mounted

D5PF

- 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
- I.D. tag/write label to identify relays in multiple-relay circuits
- Bi-polar LED allows for reverse polarity applications

Standards and Certifications



When used with accompanying Cutler-Hammer® screw terminal socket (D5PF only).

Technical Data and Specifications

Table 49-66. Coil Resistance for D5PR Series

Coil Voltage	Ohms		mA	
	D5PR2	D5PR3	D5PR2	D5PR3
6V AC	6	4.2	330	458
12V AC	24	18	160	229
24V AC	85	72	80	114
48V AC	330	290	40	57
120V AC	2250	700	16.6	23
240V AC	9100	7200	8.3	11
6V DC	32		187	
12V DC	120		100	
24V DC	470		50	
48V DC	1900		25	
110V DC	10000		11	

Table 49-67. Coil Resistance for D5PF Series

Coil Voltage	Ohms	mA	
		50 Hz	60 Hz
24V AC	72	398.0	340
120V AC	1,700	76.0	65
240V AC	7,200	28.0	24
12V DC	120	100.0	—
24V DC	470	49.9	—
110V DC	10,000	13.2	—

Table 49-68. Socket Specifications

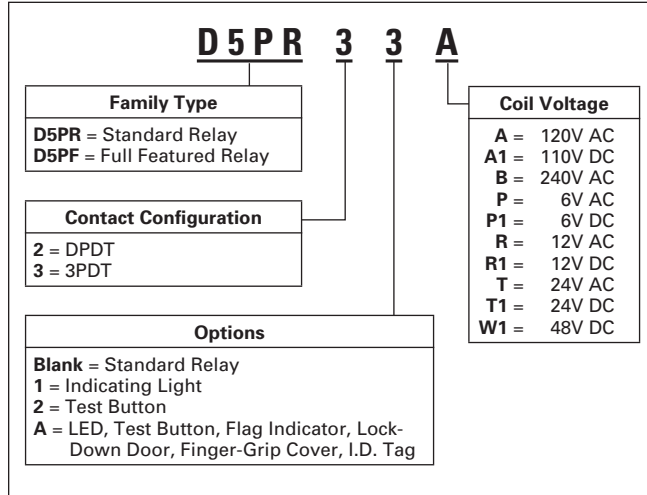
Catalog Number	Electrical Ratings	Mounting Torque	Hook-Up Wire Range
D5PA2	15A, 300V	8 – 10 in-lbs	AWG 12 to 22 Solid or Stranded
D5PA3L D5PA3S	15A, 300V	—	Up to AWG 16 Solid or Stranded

Table 49-69. Relay Specifications

	D5PR (AC)	D5PR (DC)	D5PF2/D5PF3 Resistive Load (p.f. = 1.0)
Rated Load (p.f. = 0.8)	120V AC 15A or 1/3 Hp 240V AC 15A or 1/2 Hp	28V DC, 13A, (1-Pole) 28V DC, 12A, (2-Pole) 28V DC, 11A, (3-Pole)	240V AC 12A 120V AC 12A 28V DC 12A
Carry Current	15A	15A	12A
Max. Operating Voltage	600V AC (3A max.)	125V DC (0.5A max.)	110% of nominal
Max. Operating Current	15A	15A	15A
Dielectric Strength	2000V	2000V	1500V
Approx. Weight	3.1 oz (88g)	3.1 oz (88g)	3.1 oz (88g)
Temperature — Operating Storage	-22 – 122°F (-30 – 50°C) -22 – 212°F (-30 – 100°C)	-22 – 149°F (-30 – 65°C) -22 – 212°F (-30 – 100°C)	-22 – 122°F (-30 – 50°C) -22 – 212°F (-30 – 100°C)
Contact Resistance	50 milli Ω's Max. @ Rated Current	50 milli Ω's Max. @ Rated Current	50 milli Ω's Max. @ Rated Current
Contact Material	AgCdO (Au Flashed)	AgCdO (Au Flashed)	AgCdO (Au Flashed)
Pickup Voltage	85% of Nominal	80% of Nominal	85% AC 80% DC
Dropout Voltage (min.)	10%	10%	30% AC 10% DC
Voltage (max.)	110%	110%	110%
Mechanical Life (min.)	5,000,000	5,000,000	5 million (No Load)
Electrical Life (min.)	100,000	100,000	200,000 operations at Rated Res. Load
Max. hp Ratings	1/3 hp, 120V AC 1/2 hp, 240V AC	1/3 hp, 120V AC 1/2 hp, 240V AC	1/3 hp, 120V AC 1/2 hp, 240V AC

Catalog Number Structure

Table 49-70. D5 Series Catalog Numbering System ①



① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

Table 49-71. Relay/Socket Quick Reference

Relay Type	Socket Type	Socket	Hold Down Spring
D5PR2	11 Pin Screw	D5PA2	D5PB2
	11 Pin Solder	D5PA3S or D5PA3L	D5PB2
D5PR3	11 Pin Screw	D5PA2	D5PB2
	11 Pin Solder	D5PA3S or D5PA3L	D5PB2
D5PF2/D5PF3	11 Pin Screw	D5PA2	PQC-1351
	11 Pin Solder	D5PA3S or D5PA3L	PWC-1325

Product Selection

Table 49-72. D5 Product Selection ②

	Std. Pack	Catalog Number	Price U.S. \$
DPDT			
Coil Voltage:			
24V AC	—	D5PR2T	
120V AC	—	D5PR2A	
240V AC	—	D5PR2B	
12V DC	—	D5PR2R1	
24V DC	—	D5PR2T1	
110V DC	—	D5PR2A1	
DPDT with Indicating Light			
120V AC	—	D5PR21A	
DPDT with Test Button			
120V AC	—	D5PR22A	
3PDT			
24V AC	—	D5PR3T	
120V AC	—	D5PR3A	
240V AC	—	D5PR3B	
12V DC	—	D5PR3R1	
24V DC	—	D5PR3T1	
110V DC	—	D5PR3A1	
3PDT with Indicating Light			
120V AC	—	D5PR31A	
24V DC	—	D5PR31T1	
3PDT with Test Button			
120V AC	—	D5PR32A	
DPDT — 8 Pin			
24V AC	—	D5PF2AT	
120V AC	—	D5PF2AA	
240V AC	—	D5PF2AB	
12V DC	—	D5PF2AR1	
24V DC	—	D5PF2AT1	
110V DC	—	D5PF2AA1	
3PDT — 11 Pin			
24V AC	—	D5PF3AT	
120V AC	—	D5PF3AA	
240V AC	—	D5PF3AB	
12V DC	—	D5PF3AR1	
24V DC	—	D5PF3AT1	
110V DC	—	D5PF3AA1	
DIN Rail or Panel Mounting			
Screw Terminal Socket	10	D5PA2	
Hold Down Spring	100	D5PB2	
Hold Down Clip	100	PWC-1325	
	100	PQC-1351	
End Clamp with Mounting Screw — use with track below, one at each end	100	PFP-M	
35 mm x 7.5 mm Aluminum DIN Mounting Track (2 meter lengths)	20	XBANS3575PL	
Panel Mount Socket — Square Base			
Long 0.130" Solder	10	D5PA3L	
Standard 0.130" Solder	10	D5PA3S	

② Additional coil voltages may be available — consult Sales Office or Customer Support Center.

D5PR/D5PF Series — Standard and Full Featured

Dimensions

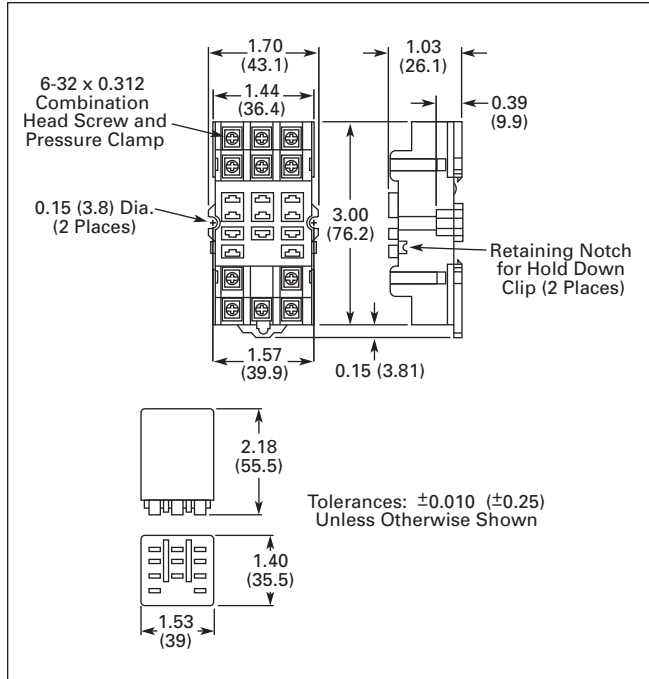


Figure 49-71. D5PA2 — Approximate Dimensions in Inches (mm)

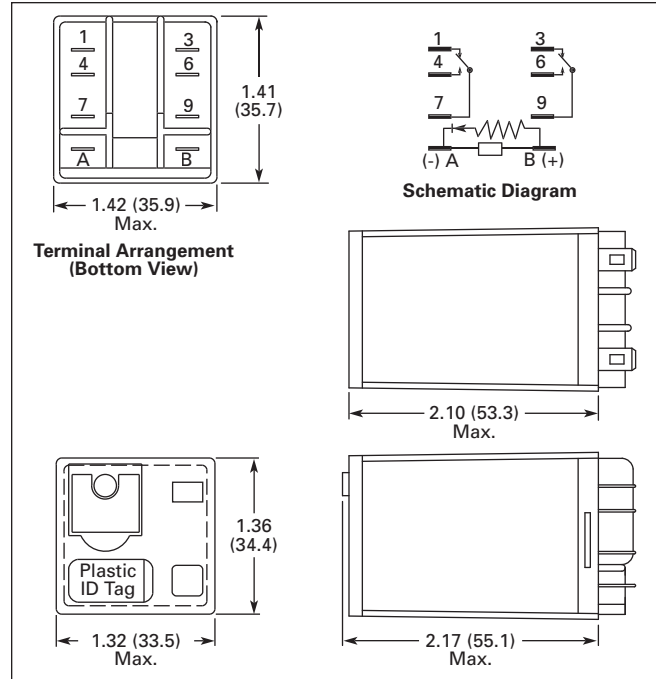


Figure 49-73. D5PF2 — Approximate Dimensions in Inches (mm)

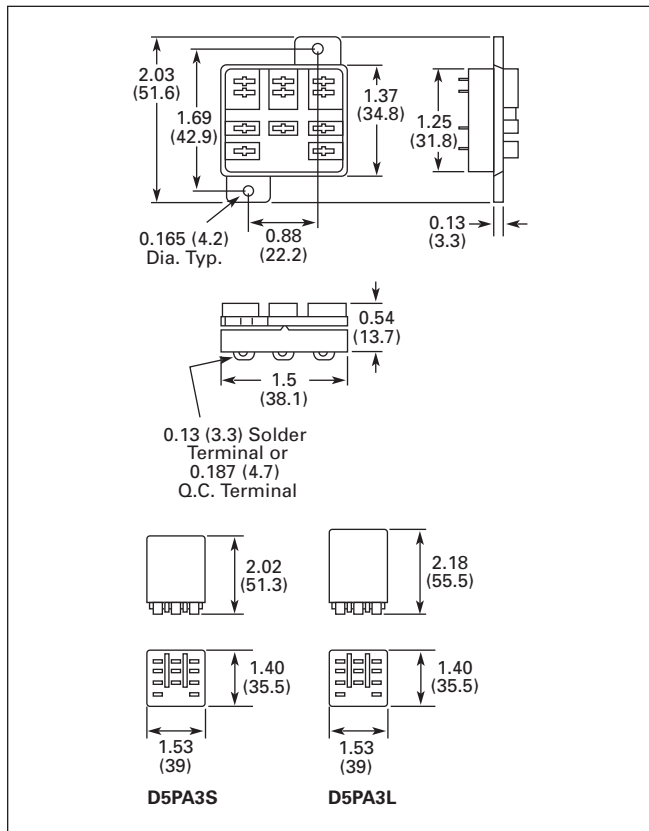


Figure 49-72. D5PA3L and D5PA3S — Approximate Dimensions in Inches (mm)

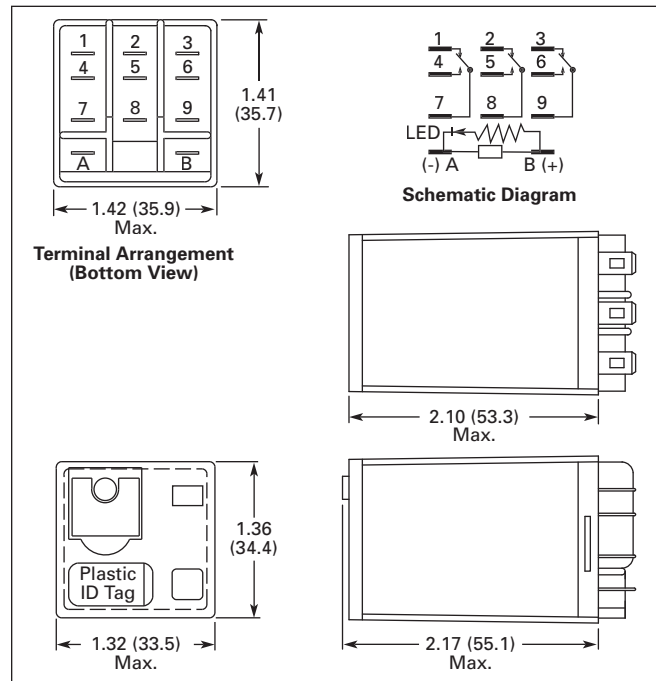


Figure 49-74. D5PF3 — Approximate Dimensions in Inches (mm)

Terminal Arrangements

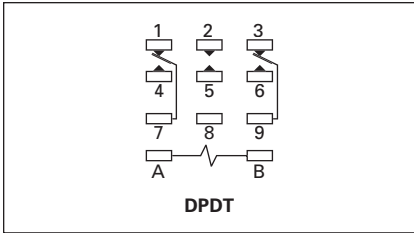


Figure 49-75. D5PR2 (Bottom View)

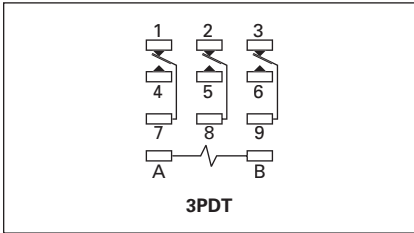
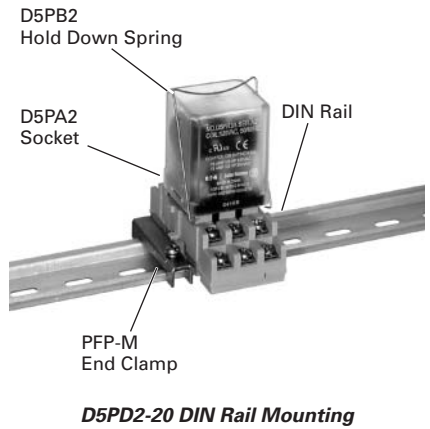


Figure 49-76. D5PR3 (Bottom View)



D7PR Series — Standard



D7PR Series

Features

- Arc barrier equipped relay with high dielectric strength
- Panel, DIN rail and flange mounting

Standards and Certifications

 File # E37317, E65657

 File # LR217017, LR217069




D7 Series Relay

Technical Data and Specifications

Table 49-73. D7PR Coil Resistance

Coil Voltage	Ohms				Milliamps							
	D7PR1	D7PR2	D7PR3	D7PR4	D7PR1	D7PR1	D7PR2	D7PR2	D7PR3	D7PR3	D7PR4	D7PR4
					50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
6V AC	11	11	6.5	5	222.3	190	234	200	326	278	393	336
12V AC	41	41	25.5	20	111.2	95	95.9	82	148	126	202	173
24V AC	180	180	102	80	58.5	50	48	41	77	66	91	78
48V AC	788	788	735	735	21	18	21	18	21.5	18.4	24	20
120V AC	4430	4430	2700	2000	12.9	11	12.9	11	14.7	12.6	17.3	14.8
240V AC	15700	15700	10000	8000	5.9	5	7	6	9.7	8.3	11.4	9.7
6V DC	47	40	25	24	—	127.7	—	150	—	240	—	250
12V DC	188	160	100	96	—	63.8	—	75	—	120	—	125
24V DC	750	650	400	360	—	32	—	36.9	—	60	—	67
48V DC	2600	2600	1600	1600	—	18.5	—	18.5	—	18.5	—	18.5
110V DC	13800	11000	8400	6800	—	8	—	10	—	13	—	16.2

Table 49-74. D7PR Relay Specifications

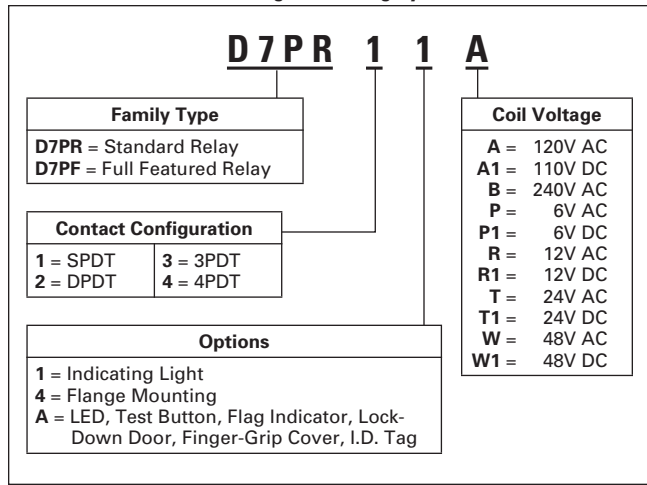
	D7PR1		D7PR2/D7PR3/D7PR4	
	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)	Resistive Load (p.f. = 1)	Inductive Load (p.f. = 0.4, L/R = 7 ms)
Rated Load	120/240V AC 15A 30V DC 15A	120/240V AC 10A 30V DC 7A	120/240V AC 10A (D7PR2 only) 30V DC 10A (D7PR2 only) 250V AC 10A (D7PR3/D7PR4 only) 120V AC 15A (D7PR2 only) 28V DC 10A (D7PR3/D7PR4 only)	120/240V AC 7.5A 30V DC 5A
Carry Current	15A	15A	10A	10A
Max. Operating Voltage	250V AC/125V DC	250V AC/125V DC	250V AC/125V DC	250V AC/125V DC
Max. Operating Current	15A	15A	10A	10A
Contact Material	AgCdO	AgCdO	AgCdO	AgCdO
Max. Switching Capacity	1700 VA 360W	1100 VA 170W	1100 VA 240W	830 VA 120W
Min. Permissible Load	100 mA, 5V DC	100 mA, 5V DC	100 mA, 5V DC	100 mA, 5V DC
Pickup Voltage (max.)	80%	80%	80%	80%
Drop Out Voltage (min.)	30% AC, 10% DC	30% AC, 10% DC	30% AC, 10% DC	30% AC, 10% DC
Voltage (max.)	110%	110%	110%	110%
Mechanical Life (min.)	10,000,000 AC 100,000,000 DC	10,000,000 AC 100,000,000 DC	10,000,000 AC 100,000,000 DC	10,000,000 AC 100,000,000 DC
Electrical Life @ All Contact Ratings (min.)	200,000	200,000	200,000	200,000
Maximum hp Rating	1/3 hp (120V AC)	1/2 hp (240V AC)	1/3 hp (120V AC) (D7PR2 only)	1/2 hp (240V AC) (D7PR2 only)

Table 49-75. D7PR Socket Specifications

Catalog Number	Electrical Ratings	Mounting Torque	Hook-Up Wire Range
D7PA2	15A, 250V	.785 Nm – 1.18 Nm	AWG 14 Max.
D7PA3	10A, 300V	7 – 8 in-lbs	AWG 12 to 22 Solid or Stranded
D7PA4	10A, 300V	7 – 8 in-lbs	AWG 12 to 22 Solid or Stranded
D7PA5	15A, 250V	N/A	AWG 14 Max.

Catalog Number Structure

Table 49-76. D7 Series Catalog Numbering System ①



① For deciphering Catalog Numbers. Do not use for ordering as not all combinations are readily available.

Table 49-77. Relay/Socket Quick Reference

Relay Type	Socket	Hold Down Spring
D7PR1	D7PA2/D7PA5	PMC-A1
D7PR2	D7PA2/D7PA5	PMC-A1
D7PR3	D7PA3	PYC-B2
D7PR4	D7PA4	PYC-B2
D7PF1/D7PF2	D7PA9/D7PA5	PQC-1342
D7PF1/D7PF2	D7PAA	Included w/socket
D7PF3	D7PA3	PYC-B2
D7PF4	D7PA4	PYC-B2
D7PF3	D7PAB	PQC-1350
D7PF4	D7PAD	PQC-1351

Product Selection

Table 49-78. D7 Product Selection ②

	Catalog Number	Price U.S. \$
Standard SPDT		
Coil Voltage: 24V AC 120V AC 240V AC	D7PR1T D7PR1A D7PR1B	
6V DC 12V DC 24V DC	D7PR1P1 D7PR1R1 D7PR1T1	
SPDT with Indicating Light		
24V AC 120V AC	D7PR11T D7PR11A	
24V DC	D7PR11T1	
SPDT Flange Mount		
120V AC	D7PR14A	
SPDT Full Featured Relay		
120V AC 110V DC 12V DC 24V AC 24V DC	D7PF1AA D7PF1AA1 D7PF1AR1 D7PF1AT D7PF1AT1	

Table 49-78. D7 Product Selection, continued ②

	Std. Pack	Catalog Number	Price U.S. \$
Standard DPDT			
24V AC 120V AC 240V AC		D7PR2T D7PR2A D7PR2B	
12V DC 24V DC 48V DC 110V DC		D7PR2R1 D7PR2T1 D7PR2W1 D7PR2A1	
DPDT Full Featured Relay			
Coil Voltage: 120V AC 110V DC 240V AC 12V DC 24V AC 24V DC		D7PF2AA D7PF2AA1 D7PF2AB D7PF2AR1 D7PF2AT D7PF2AT1	
DPDT Flange Mount			
24V AC 120V AC		D7PR24T D7PR24A	
Standard 3PDT			
120V AC 12V DC 24V DC		D7PR3A D7PR3R1 D7PR3T1	
3PDT with Indicating Light			
120V AC 12V DC 24V DC		D7PR31A D7PR31R1 D7PR31T1	
3PDT Flange Mount			
120V AC		D7PR34A	
3PDT Full Featured Relay			
120V AC 110V DC 240V AC 12V DC 24V AC 24V DC		D7PF3AA D7PF3AA1 D7PF3AB D7PF3AR1 D7PF3AT D7PF3AT1	
Standard 4PDT			
Coil Voltage: 24V AC 120V AC 24V DC 110V DC		D7PR4T D7PR4A D7PR4T1 D7PR4A1	
4PDT Full Featured			
Coil Voltage: 120V AC 240V AC 12V AC 12V DC 24V AC 24V DC 48V DC		D7PF4AA D7PF4AB D7PF4AR D7PF4AR1 D7PF4AT D7PF4AT1 D7PF4AW1	
4PDT Flange Mount			
120V AC 24V DC		D7PR44A D7PR44T1	
DIN Rail Mount Sockets			
1- and 2-Pole 1- and 2-Pole Finger-Safe ③ 3-Pole 3-Pole Finger-Safe ③ 4-Pole 4-Pole Finger-Safe ③	10 10 10 10 10 10	D7PA2 D7PAA D7PA3 D7PAB D7PA4 D7PAD	
Panel Mount Sockets			
1- and 2-Pole	10	D7PA5	
Accessories			
Spring Clip DIN Rail End Stop Hold Down Spring	100 100 100	PMC-A1 PPF-M PYC-B2	

② Additional coil voltages available — consult Sales Office or Customer Support Center.

③ IP20 rated.

Dimensions

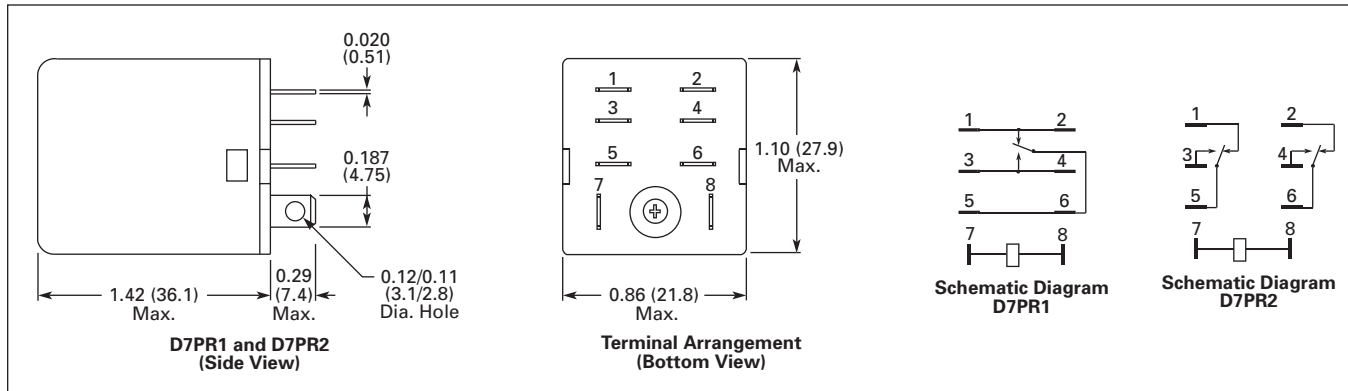


Figure 49-77. D7PR1 and D7PR2 — Approximate Dimensions in Inches (mm)

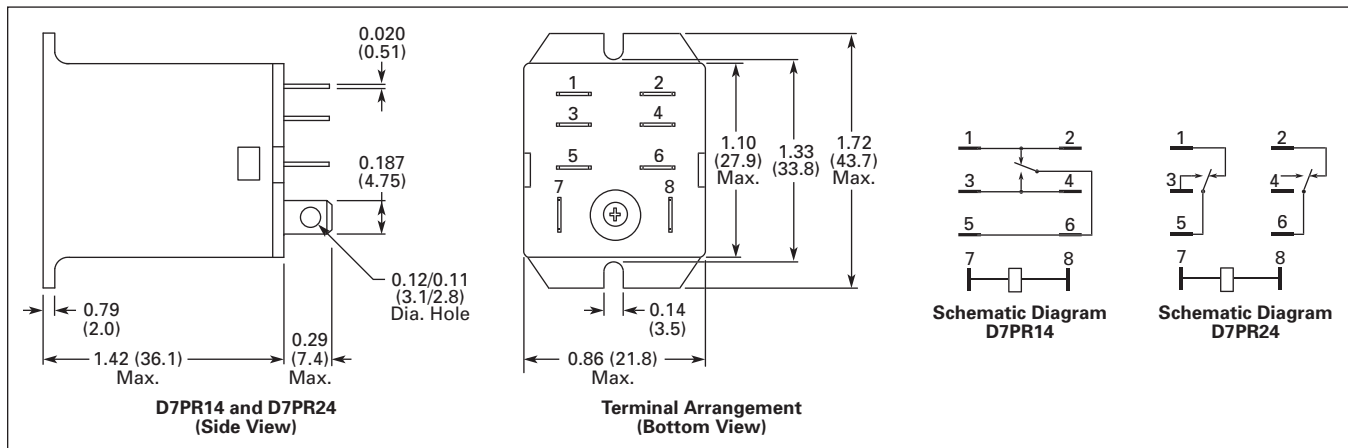


Figure 49-78. D7PR14 and D7PR24 — Approximate Dimensions in Inches (mm)

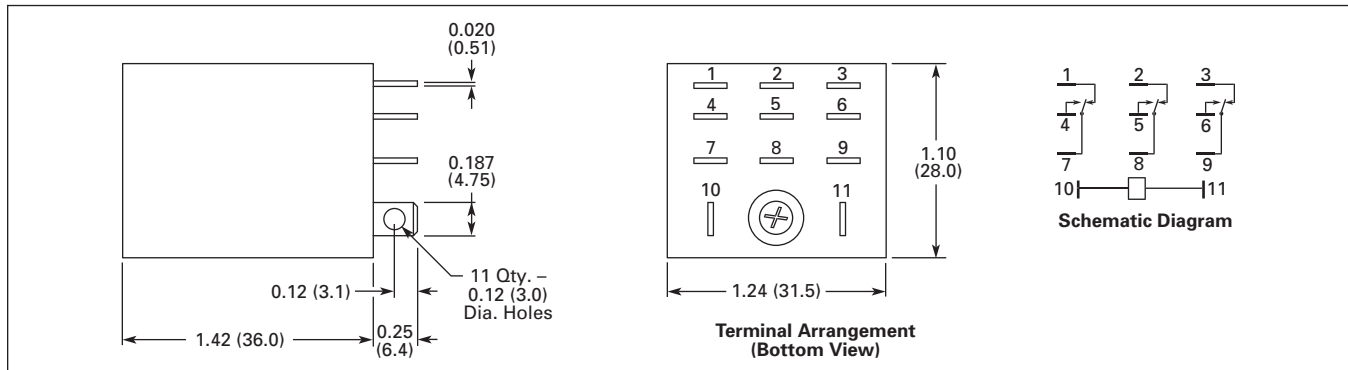


Figure 49-79. D7PR3 — Approximate Dimensions in Inches (mm)

**Control Relays & Timers
General Purpose Plug-In Relays**

D7PR Series — Standard

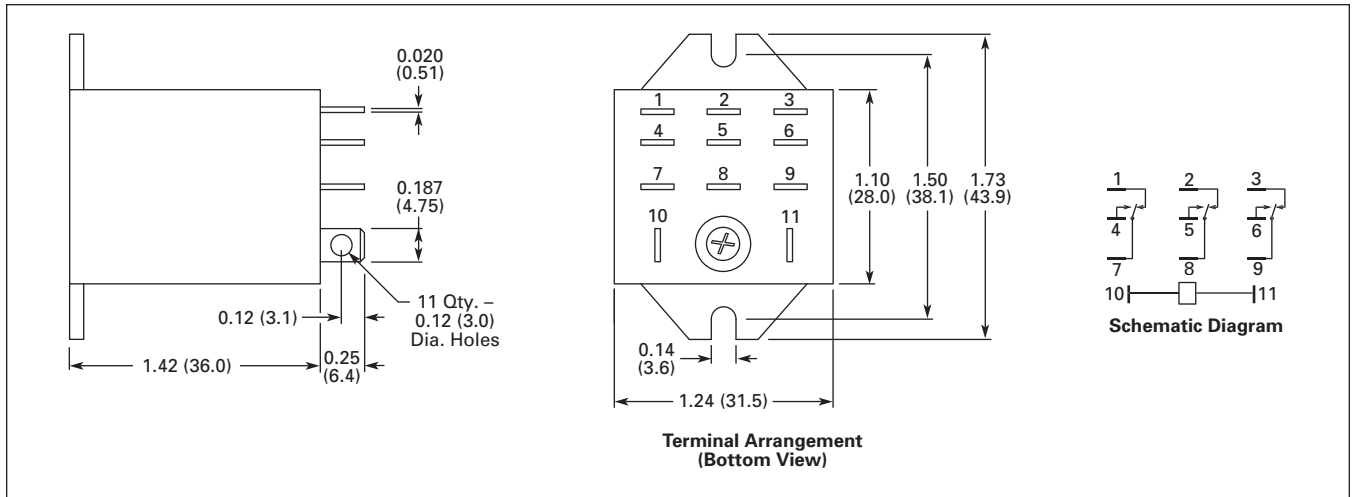


Figure 49-80. D7PR34 — Approximate Dimensions in Inches (mm)

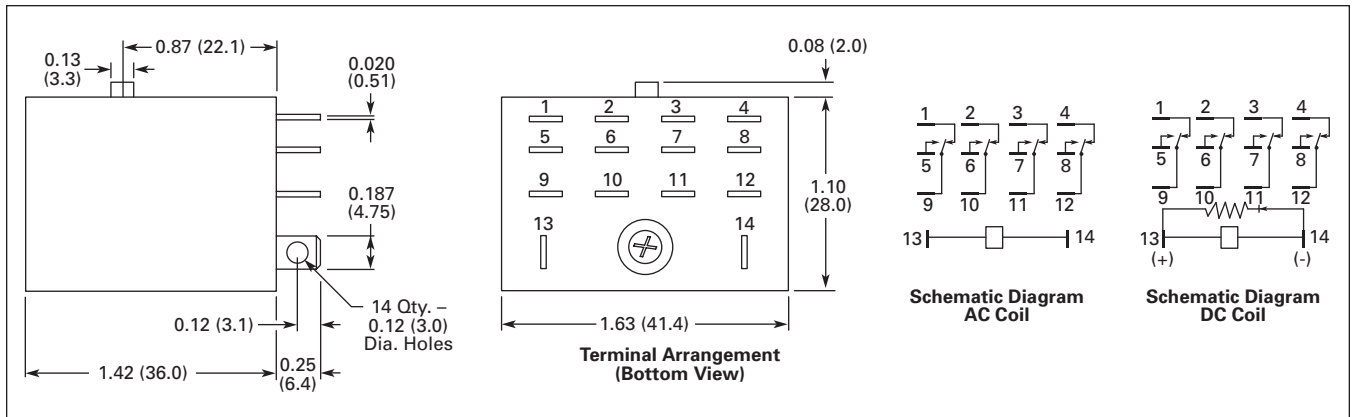


Figure 49-81. D7PR43 — Approximate Dimensions in Inches (mm)

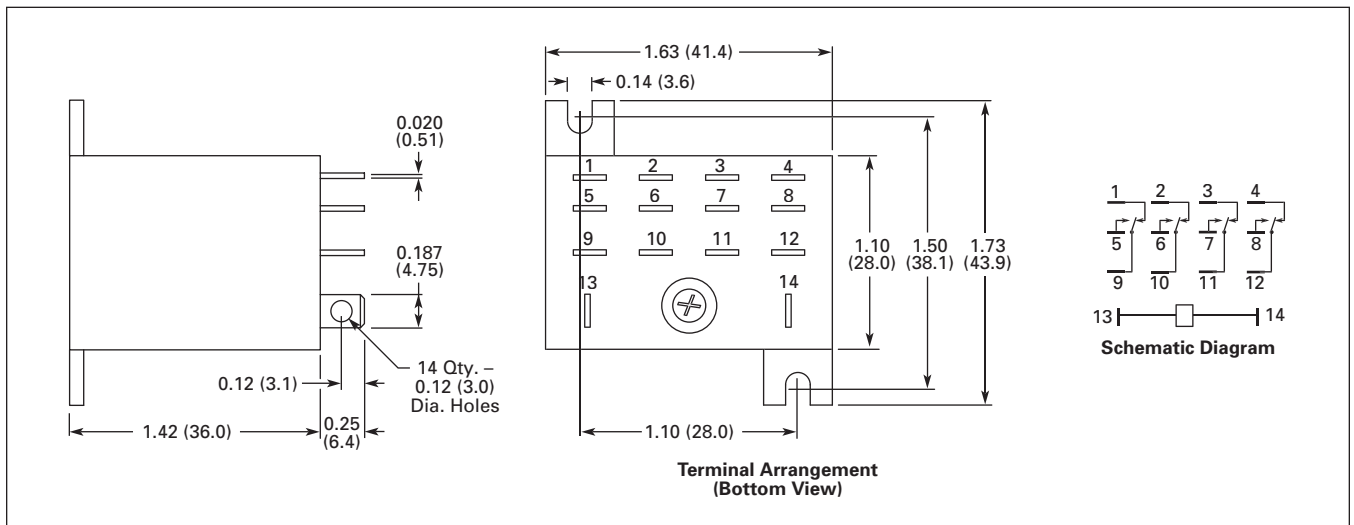


Figure 49-82. D7PR44 — Approximate Dimensions in Inches (mm)

D7PR Series — Standard

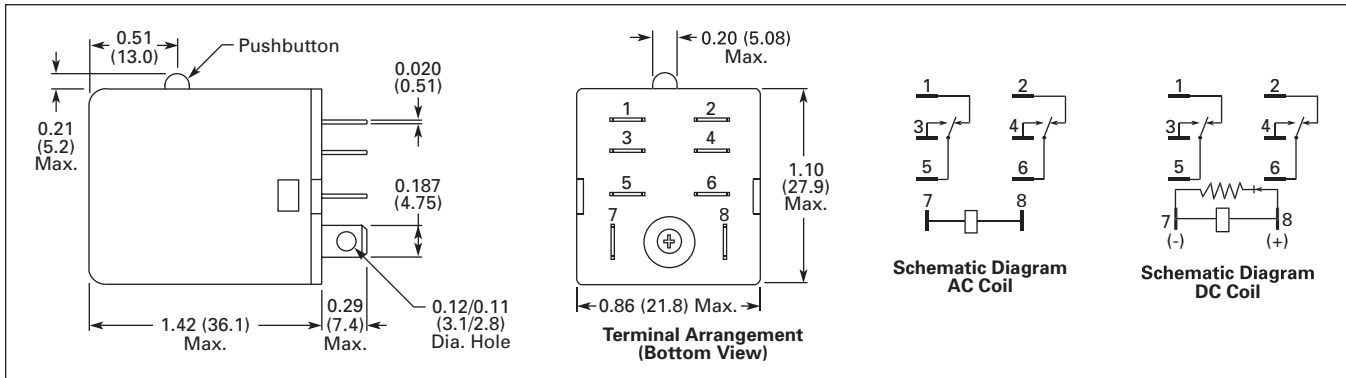


Figure 49-83. D7PR23 — Approximate Dimensions in Inches (mm)

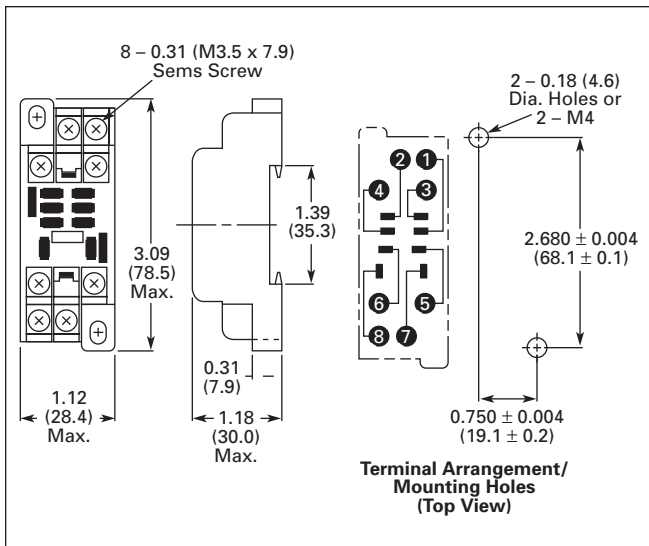


Figure 49-84. D7PA2 — Approximate Dimensions in Inches (mm)

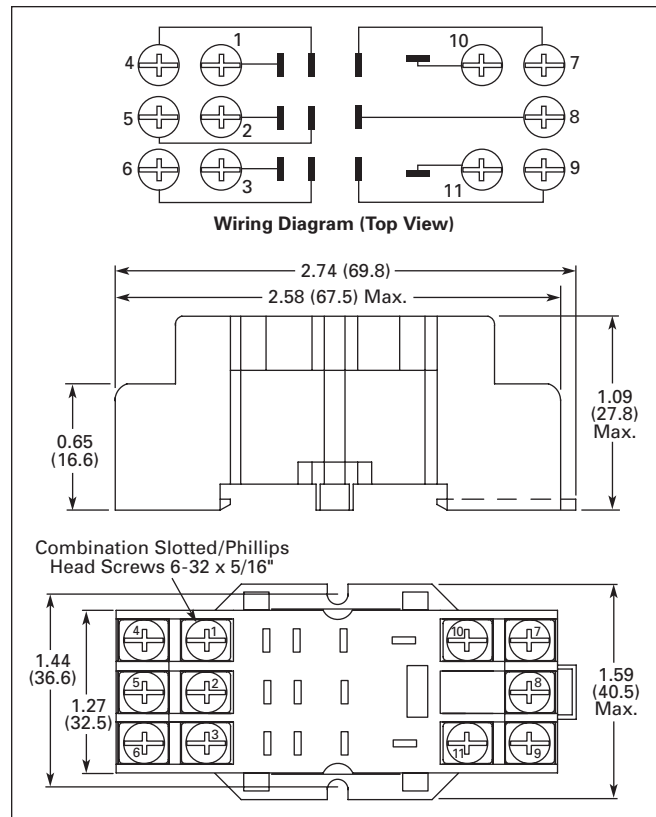


Figure 49-85. D7PA3 — Approximate Dimensions in Inches (mm)

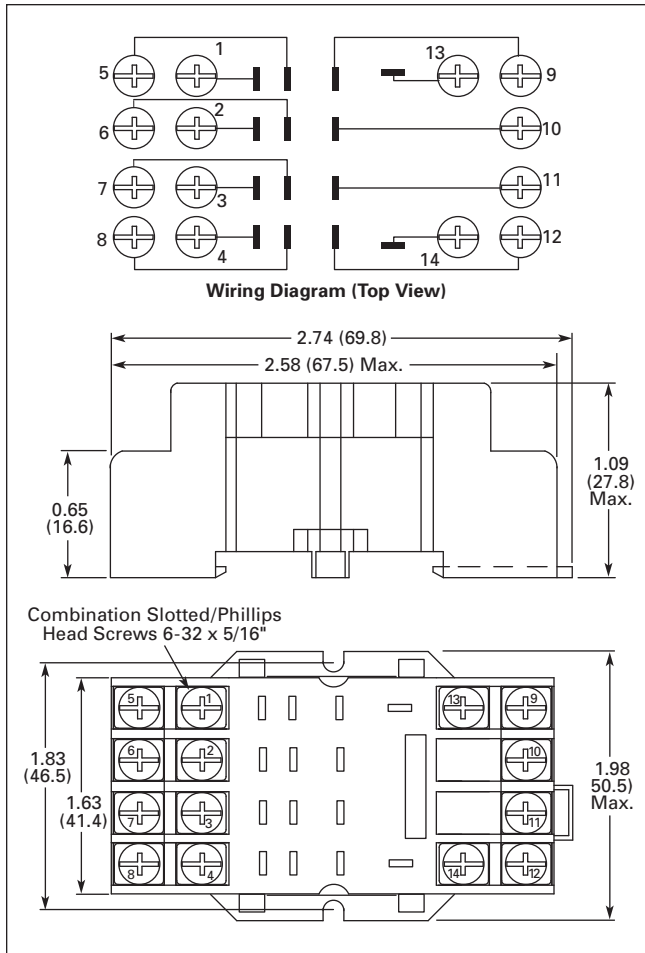


Figure 49-86. D7PA4 — Approximate Dimensions in Inches (mm)

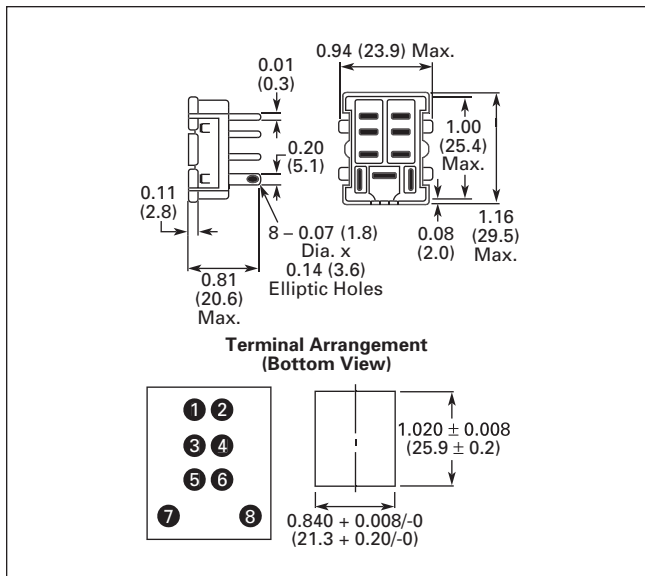


Figure 49-87. D7PA5 — Approximate Dimensions in Inches (mm)

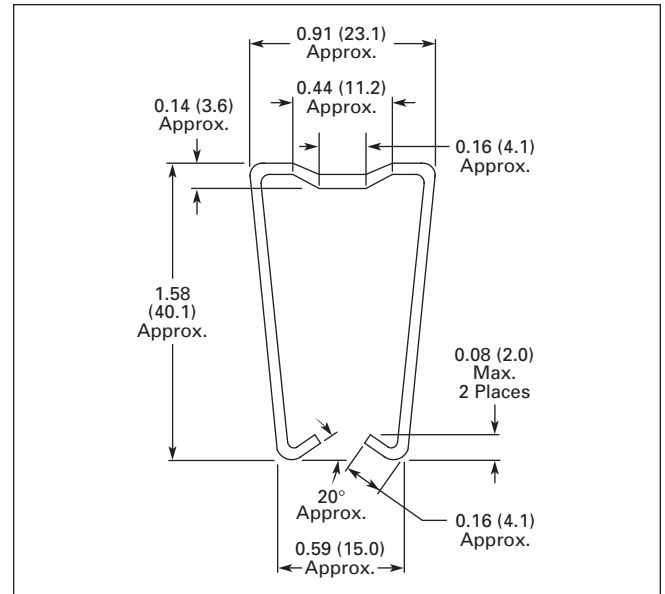


Figure 49-88. PMC-A1 Hold Down Clip — Approximate Dimensions in Inches (mm)

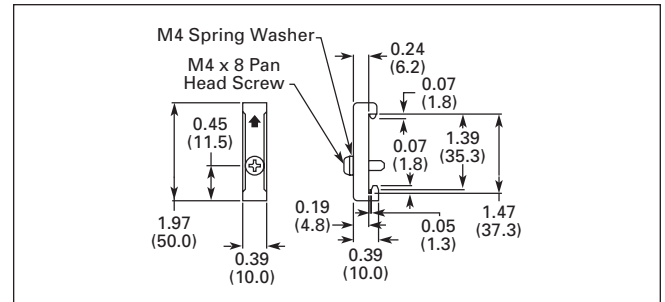


Figure 49-89. PFP-M DIN Rail End Stop — Approximate Dimensions in Inches (mm)

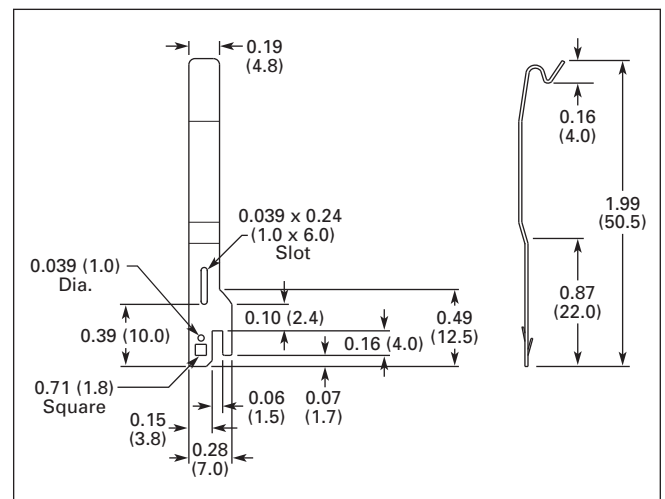


Figure 49-90. PYC-B2 Hold Down Spring — Approximate Dimensions in Inches (mm)

D7PF Series — Full Featured

D7PF Series



D7PF Series Relay

Features

- Flag indicator shows relay status in manual or powered condition
- Bi-polar 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 I.D. tag/write label used for identification of relays in multi-relay circuits

Standards and Certifications



Technical Data and Specifications

Table 49-79. D7PF Coil Resistance

Coil Voltage	Ohms				Amps ^①			
	D7PF1	D7PF2	D7PF3	D7PF4	D7PF1	D7PF2	D7PF3	D7PF4
6V AC	9.5	9.5	6	5.4	0.167	0.168	0.27	0.255
12V AC	46	46	25.3	21.2	0.081	0.082	0.148	0.164
24V AC	180	180	103	84.5	0.042	0.041	0.08	0.09
48V AC	770	770	460	338	0.018	0.018	0.035	0.044
120V AC	3830	3830	2770	2200	0.012	0.012	0.016	0.018
240V AC	15700	15700	12100	9120	0.004	0.004	0.006	0.008
6V DC	40	40	25	24	0.15	0.15	0.24	0.25
12V DC	160	160	100	96	0.075	0.075	0.120	0.125
24V DC	650	650	400	388	0.037	0.037	0.060	0.062
48V DC	2600	2600	1600	1550	0.018	0.018	0.030	0.031
110V DC	11000	11000	8600	7340	0.010	0.010	0.013	0.015

^① At 60 Hz for AC Coils.

D7PF Series — Full Featured

Table 49-80. D7PF Relay Specifications

	D7PF1 Resistive Load (p.f. = 1.0)	D7PF2 Resistive Load (p.f. = 1.0)	D7PF3 Resistive Load (p.f. = 1.0)	D7PF4 Resistive Load (p.f. = 1.0)
Coil				
Pickup Voltage (Max.)	85% AC; 80% DC (% of nominal)			
Drop Out Voltage (Min.)	10% AC; 10% DC (% of nominal)			
Maximum Voltage	110% of nominal			
Insulation System per UL Standard 1446	Class B 266°F (130°C)			
Contacts				
Rated Load	277V AC, 28V DC – 20A 220V DC – 0.5A	120V AC – 15A 277V AC, 28V DC – 12A 220V DC – 0.5A	120V AC, 28V DC – 15A 277V AC – 12A 220V DC – 0.5A	120V AC, 28V DC – 15A 277V AC – 12A 220V DC – 0.5A
Maximum hp Ratings	1/2 hp, 120V AC 1 hp, 250V AC		1/2 hp, 120V AC 3/4 hp, 250V AC	
Contact Material	Silver Alloy, Gold Flashed			
Pilot Duty	B300			
Utilization Category (IEC)	AC-15			
Min. Permissible Load	100mA @ 5V DC or 0.5W			
Contact Resistance	100 Milliohms Max @ 6V, 1A			
Dielectric Strength				
Coil to Contacts	2500V RMS			
Across Open Contacts	1500V RMS	1000V RMS	1000V RMS	1000V RMS
Pole to Pole	—	2500V RMS	2500V RMS	2500V RMS
Insulation Resistance	100 Megohms Min. @ 500V DC			
Temperature				
Operating	-40 – 158°F (-40 to 70°C)			
Storage	-40 – 221°F (-40 to 105°C)			
Life Expectancy				
Electrical at Rated Resistive Load	100,000 Operations	200,000 Operations	150,000 Operations	150,000 Operations
Mechanical at No Load	10 Million Operations			
Weight				
Approximate Weight	0.079 lbs. (36g)	0.079 lbs. (36g)	0.132 lbs. (60g)	0.176 lbs. (80g)

Table 49-81. D7PF Socket Specifications

Catalog Number	Electrical Ratings	Mounting Torque	Hook-Up Wire Range
D7PA3	10A, 300V	7 – 8 in-lbs	AWG 12 to 22 Solid or Stranded
D7PA4	10A, 300V	7 – 8 in-lbs	AWG 12 to 22 Solid or Stranded
D7PA5	15A, 250V	N/A	AWG 14 Max.
D7PAA	16A, 300V	8 – 10 in-lbs	20 – 12 AWG
D7PAB	16A, 300V	8 – 10 in-lbs	20 – 12 AWG
D7PAO	16A, 300V	8 – 10 in-lbs	20 – 12 AWG
D7PA9	10A, 300V	7 – 8 in-lbs	20 – 12 AWG

Dimensions

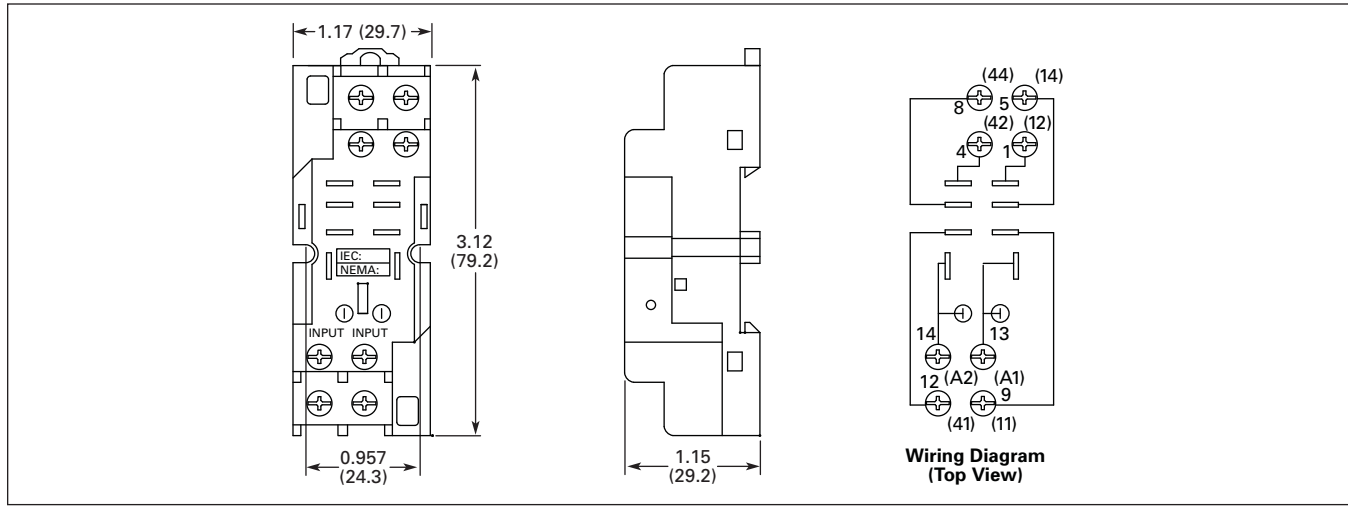


Figure 49-91. D7PAA — Approximate Dimensions in Inches (mm)

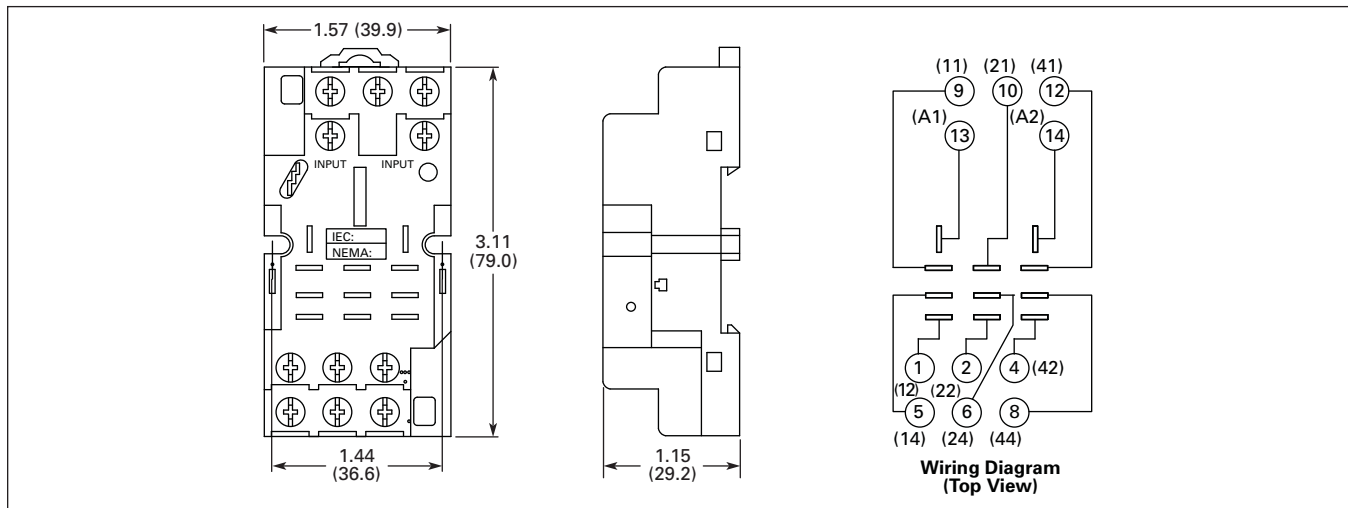


Figure 49-92. D7PAB — Approximate Dimensions in Inches (mm)

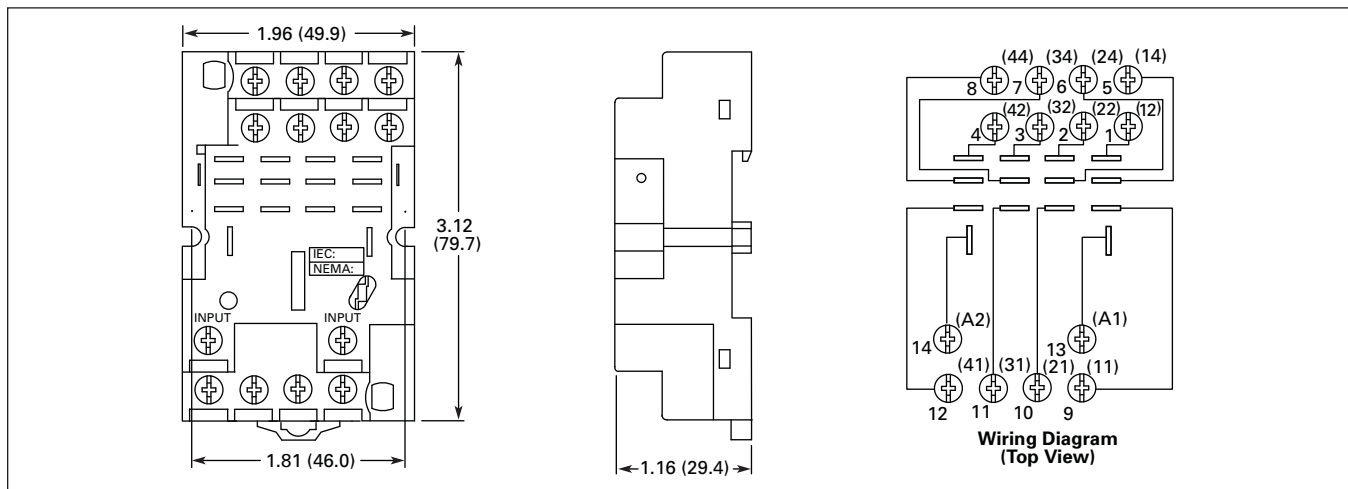


Figure 49-93. D7PAD — Approximate Dimensions in Inches (mm)

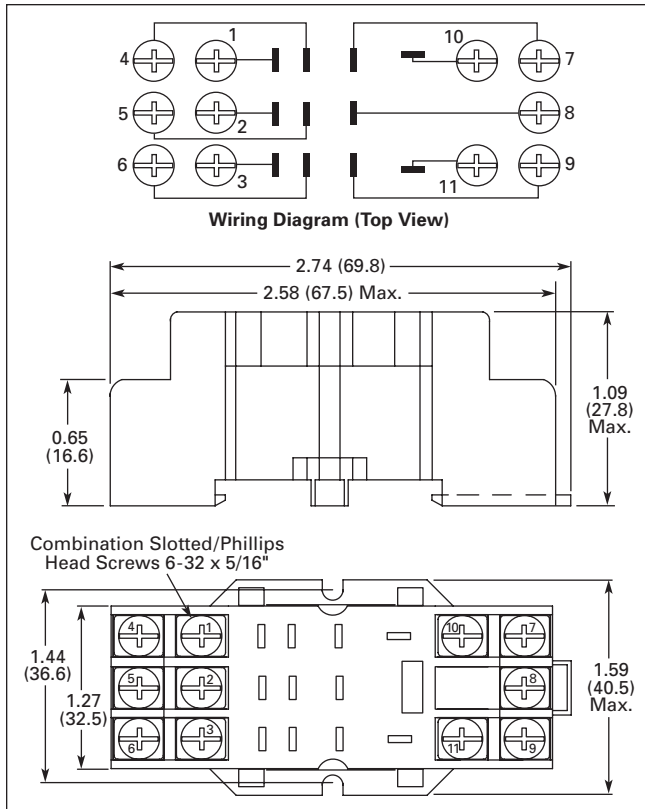


Figure 49-94. D7PA3 Standard Mount — Approximate Dimensions in Inches (mm)

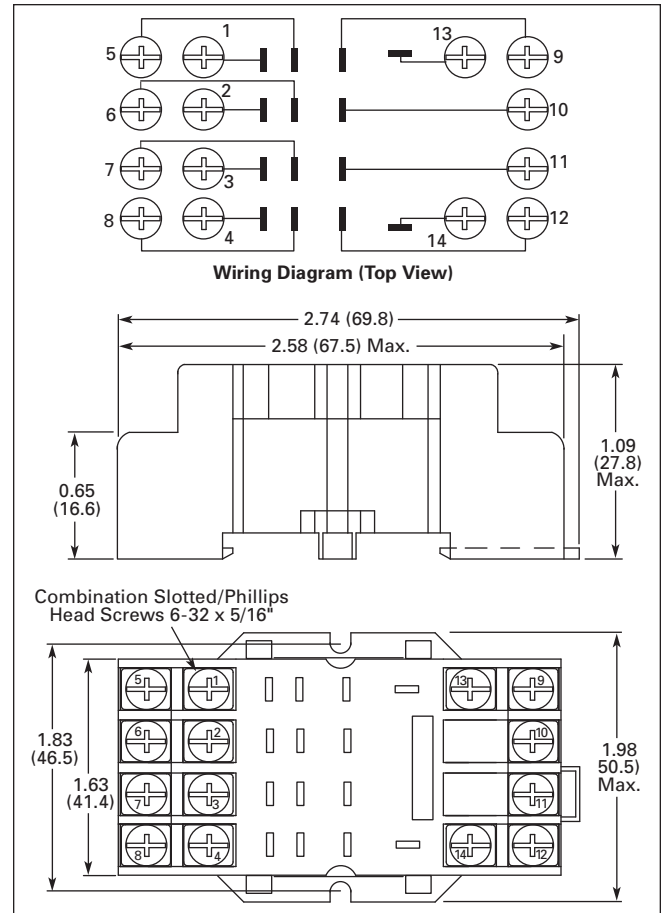


Figure 49-96. D7PA4 Panel Mount — Approximate Dimensions in Inches (mm)

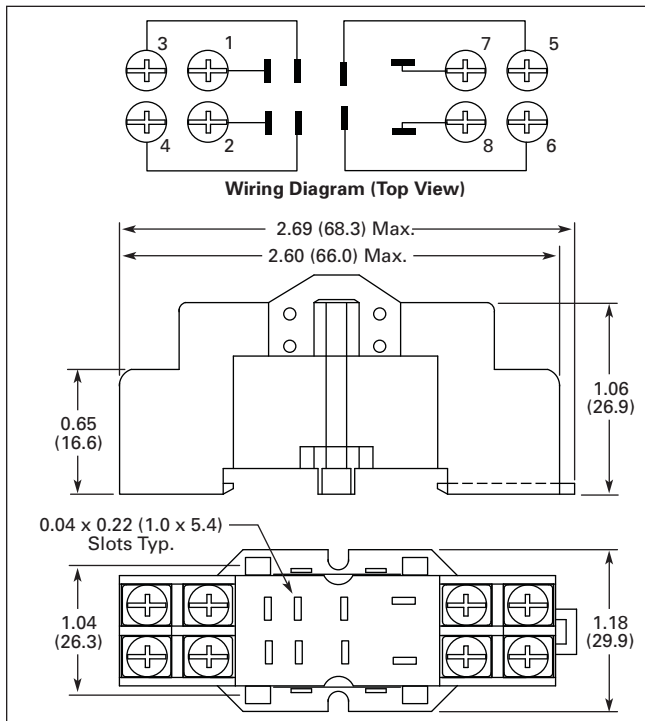


Figure 49-95. D7PA9 Standard Mount — Approximate Dimensions in Inches (mm)

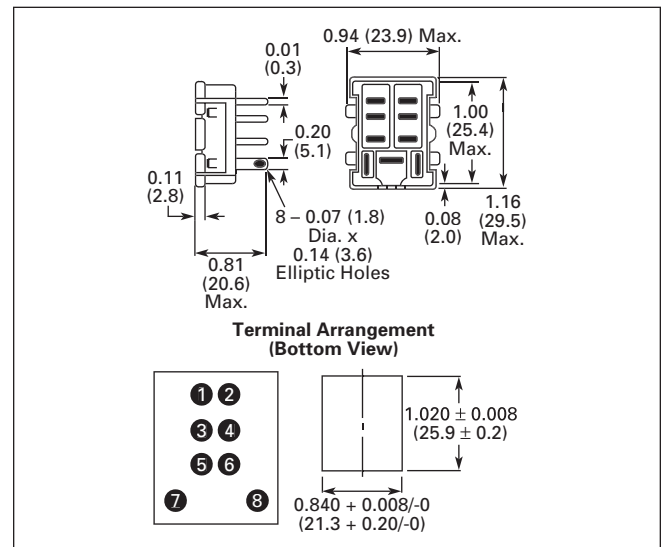


Figure 49-97. D7PA5 Panel Mount — Approximate Dimensions in Inches (mm)

D7PF Series — Full Featured

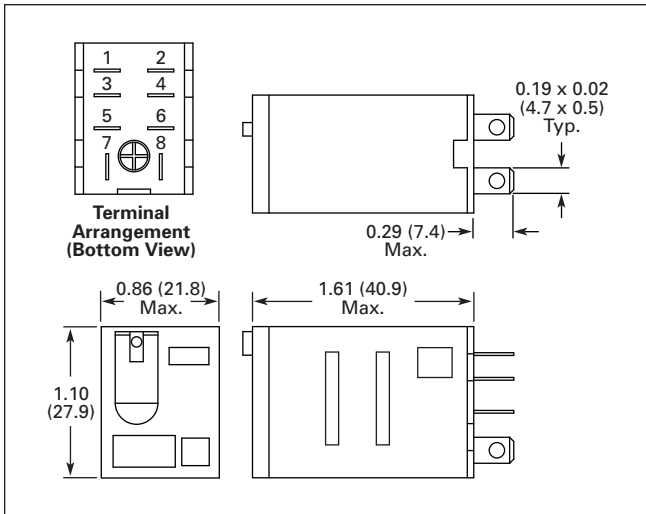


Figure 49-98. D7PF1 — Approximate Dimensions in Inches (mm)

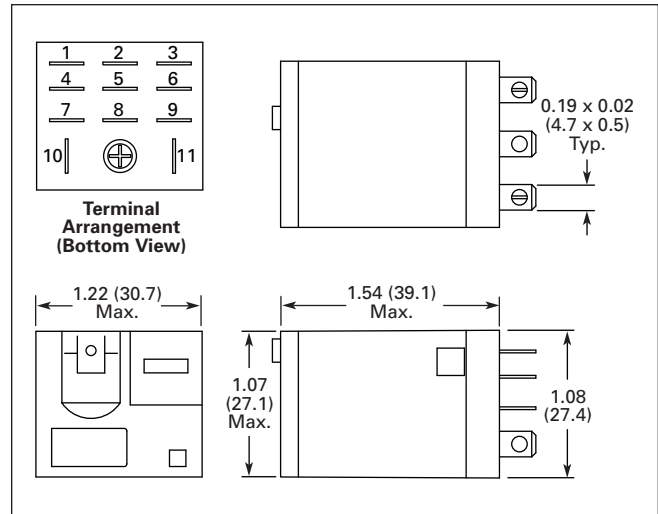


Figure 49-100. D7PF3 — Approximate Dimensions in Inches (mm)

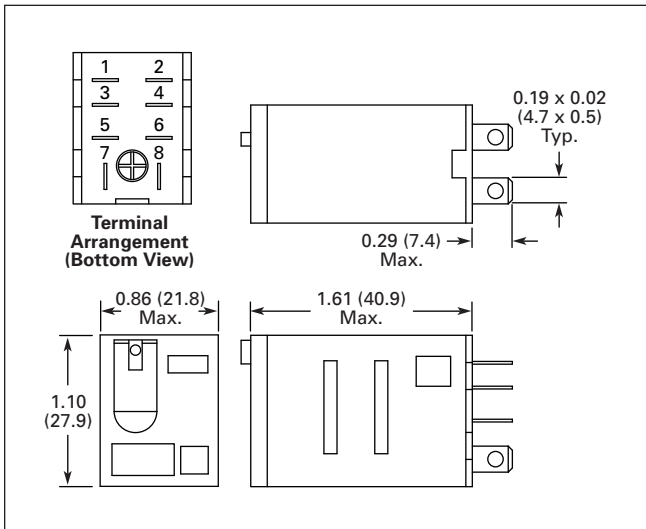


Figure 49-99. D7PF2 — Approximate Dimensions in Inches (mm)

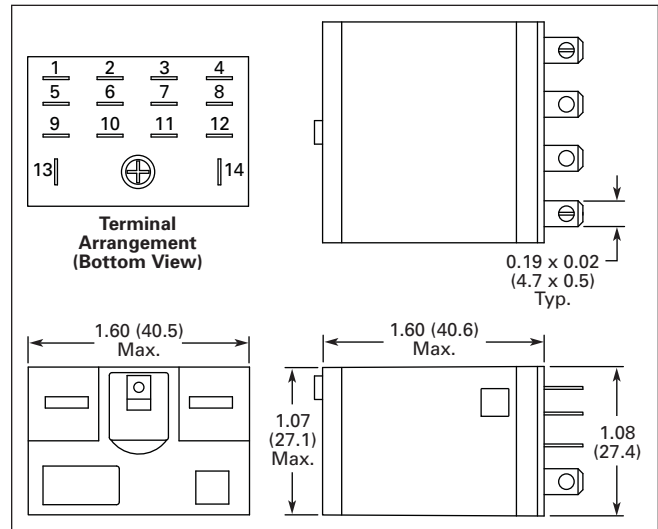


Figure 49-101. D7PF4 — Approximate Dimensions in Inches (mm)