

Legacy Time Delay and Sensor Relays

TDRPRO Series

SPDT, 12 A; DPDT, 12 A



TDRPRO Relay

Description

Time delay relays that are programmable, multifunction, multi-voltage, and socket-compatible—offering the ultimate in design flexibility. The thumb-wheel adjustment dials result in no mechanical deviation for supreme accuracy.

Feature	Benefit
Up to 10 functions	5 timing functions controlled via supply voltage 4 timing functions controlled via trigger input 1 memory latching function
Broad timing range	0.1 s to 9990 hr
Panel-mounting adapter	Panel mountable
Dust cover	Retains settings and keeps dust out
Universal power supply	12–240 Vac/Vdc
Thumb-wheel adjustment for function / timing	Helps ensure accuracy and reduces timing deviations
2 LED status indicators	Indicate coil power, timing out, and output state
RoHS compliant	Environmentally friendly

Input Voltage	Timing Range	Functions Available (1)	Contact Configuration	Rated Current	Standard Part Number
12–240 Vac/Vdc	100 ms to 9990 hr	A,B,C,D,E,F,G,H,I,J	DPDT	12 A	TDRPRO-5100
		A,B,C,D,E,F,G,H,I,J	SPDT	12 A	TDRPRO-5101
		A,B,C	DPDT	12 A	TDRPRO-5102

(1) For function descriptions, see page 31.

Part Number Explanation

TDRPRO - **5100**

Series: **TDRPRO** = 48 x 48 mm Time Delay Relay

Contact Configuration and Number of Functions:

5100 = DPDT, 10 Functions
5101 = SPDT, 10 Functions
5102 = DPDT, 3 Functions

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Specifications

Part Number	TDRPRO-5100	TDRPRO-5101	TDRPRO-5102
Input Characteristics			
Input Voltage Range	12–240 Vac/Vdc	12–240 Vac/Vdc	12–240 Vac/Vdc
Operating Voltage	85–115% of nominal	85–115% of nominal	85–115% of nominal
Maximum Power Consumption (AC)	2.5 VA	2.5 VA	2.5 VA
Maximum Power Consumption (DC)	2 W	2 W	2 W
Output Characteristics			
Contact Configuration	DPDT	SPDT	DPDT
Output Current Rating	12 A	12 A	12 A
Contact Material	Silver alloy	Silver alloy	Silver alloy
Switching Capabilities	12 A, 240 Vac, 50/60 Hz, 30 Vdc 1/3 hp @ 120 Vac 1/2 hp @ 240 Vac Pilot duty B300	12 A, 240 Vac, 50/60 Hz, 30 Vdc 1/3 hp @ 120 Vac 1/2 hp @ 240 Vac Pilot duty B300	12 A, 240 Vac, 50/60 Hz, 30 Vdc 1/3 hp @ 120 Vac 1/2 hp @ 240 Vac Pilot duty B300
Minimum Switching Requirement	100 mA	100 mA	100 mA
Timing Characteristics			
Functions Available (1)	A,B,C,D,E,F,G,H,I,J	A,B,C,D,E,F,G,H,I,J	A,B,C
Time Scales	7	7	7
Time Ranges	0–999 by 0.1 s 0–999 by 1 s 0–999 by 0.1 min 0–999 by 1 min 0–999 by 0.1 hr 0–999 by 1 hr 0–999 by 10 hr	0–999 by 0.1 s 0–999 by 1 s 0–999 by 0.1 min 0–999 by 1 min 0–999 by 0.1 hr 0–999 by 1 hr 0–999 by 10 hr	0–999 by 0.1 s 0–999 by 1 s 0–999 by 0.1 min 0–999 by 1 min 0–999 by 0.1 hr 0–999 by 1 hr 0–999 by 10 hr
Repeatability of the Time Delay at Constant Voltage and Temperature	0.1%	0.1%	0.1%
Reset Time	150 ms	150 ms	150 ms
Operate Time (3)	25 ms maximum	25 ms maximum	25 ms maximum
Release Time (3)	25 ms maximum	25 ms maximum	25 ms maximum
General Characteristics			
Electrical Life (Operations at Rated Current) (2)	100,000 operations	100,000 operations	100,000 operations
Mechanical Life (Unpowered) (2)	10,000,000 operations	10,000,000 operations	10,000,000 operations
Dielectric Strength (Input to Contacts)	2500 Vrms	2500 Vrms	2500 Vrms
Storage Temperature Range	–30 to +70 °C (–22 to +158 °F)	–30 to +70 °C (–22 to +158 °F)	–30 to +70 °C (–22 to +158 °F)
Operating Temperature Range	–20 to +60 °C (–4 to +140 °F)	–20 to +60 °C (–4 to +140 °F)	–20 to +60 °C (–4 to +140 °F)
Weight	133 g (4.69 oz)	133 g (4.69 oz)	133 g (4.69 oz)
Input Indication	Green LED	Green LED	Green LED
Output Indication (Blinking = Timing; On = Energized)	Red LED	Red LED	Red LED
Enclosure Rating (according to IEC 60529 IP rating)	IP40	IP40	IP40
Approvals	cURus (File: E43641, CCN: NLDX2), CE 61810-1, RoHS, cULus (File: E43641, CCN: NLDX2, UL Listed when used with Schneider Electric socket 70-465)	cURus (File: E43641, CCN: NLDX2), CE 61810-1, RoHS, cULus (File: E43641, CCN: NLDX2, UL Listed when used with Schneider Electric socket 70-464)	cURus (File: E43641, CCN: NLDX2), CE 61810-1, RoHS, cULus (File: E43641, CCN: NLDX2, UL Listed when used with Schneider Electric socket 70-464)

(1) For function descriptions, see page 31.

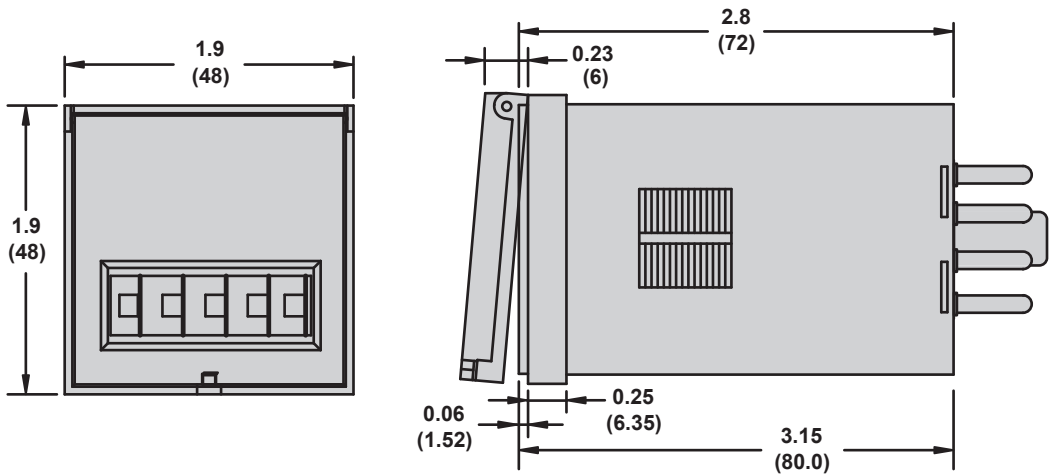
(2) Actual product life varies based on electrical load, duty cycle, application, and environmental conditions.

(3) After the time delay period expires, or upon application of the trigger signal (depending on the selected function).

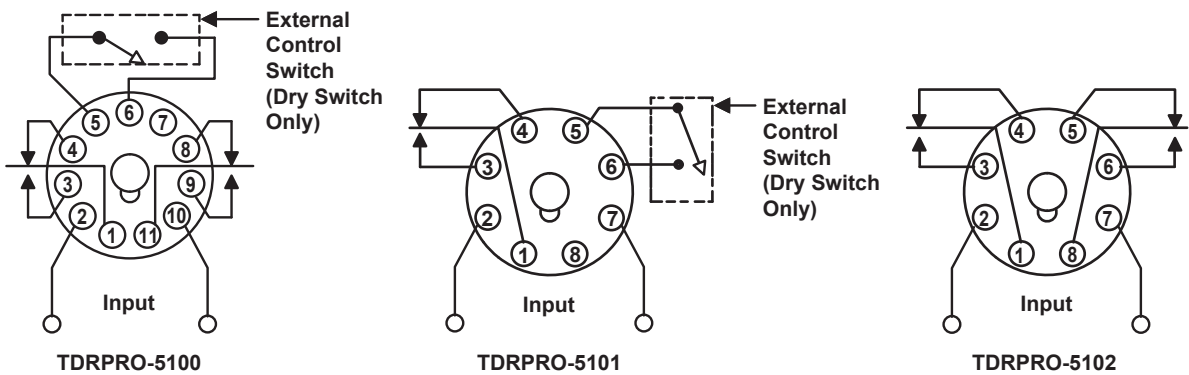
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TDRPRO Series
SPDT, 12 A; DPDT, 12 A

Dimensions—in. (mm)



Wiring Diagrams



Legacy Time Delay and Sensor Relays

TDRPRO Series Accessories



Description

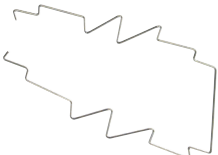
The TDRPRO accessories create a complete system solution for your application needs. The 70-750DL socket offers an alternative installation option for plug-in models. The 16-TDRPROSC retention clip holds the relay securely in place while allowing quick and efficient installation and maintenance.



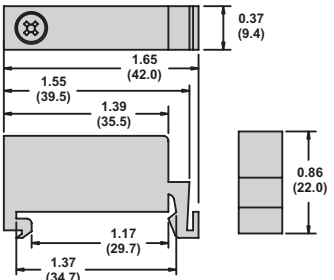
70-750DL8-1 Socket



70-750E8-1 Socket



16-TDRPROSC Retention Clip



16-DCLIP-1 DIN Rail End Clip

Relay Accessories

Description	Function	For Use With Relays	Packaging Quantities	Standard Part Number
Socket	Mounting directly to DIN Rail or Panel	TDRPRO-5101, TDRPRO-5102	10	70-750DL8-1
	Panel Mounting with Screw Terminals and Clamping Plates		10	70-169-1
	DIN or Panel Mounting with Elevator Terminals	TDRPRO-5101	10	70-750E8-1
	DIN or Panel Mounting with Screw Terminals and Clamping Plates		10	70-464-1
	Mounting directly to DIN Rail or Panel	TDRPRO-5100	10	70-750DL11-1
	DIN or Panel Mounting with Elevator Terminals		10	70-750E11-1
	DIN or Panel Mounting with Screw Terminals and Clamping Plates		10	70-465-1
	Panel Mounting with Screw Terminals and Clamping Plates		10	70-170-1
Metal Retention Clip	Helping secure the relay in the socket	TDRPRO	10	16-TDRPROSC

Socket Accessories

Description	Function	For Use With Sockets	Packaging Quantities	Standard Part Number
Metal DIN Rail, 1 m (39.3 in.)	Quick installation and removal of sockets	Compatible with all sockets listed in the table above.	10	16-700DIN
DIN Rail End Clip	Holding sockets firmly in place on the DIN rail		10	16-DCLIP-1
ID Tags	Identification of circuits in multi-relay applications	70-750E8-1, 70-750EL8-1, 70-750DL8-1, 70-750E11-1, 70-750EL11, 70-750DL11-1	10	16-750/782FT-1
Insulated Coil Bus Jumper System	Wireless socket connection		10	16-750/788CBJ-1

Legacy Time Delay and Sensor Relays

TDRPRO Series Accessories

Specifications

Part Number	70-750DL8-1	70-750DL11-1	70-750E8-1	70-750E11-1
Contact Configuration	DPDT	3PDT	DPDT	3PDT
Number of Terminals	8	11	8	11
Mounting Style	Panel or DIN rail	Panel or DIN rail	Panel or DIN rail	Panel or DIN rail
Current Rating	16 A	5 A	12 A	12 A
Nominal Voltage Rating	300 V	600 V	600 V	300 V
Storage Temperature Range	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)
Protection Category according to IEC 60529 IP rating (finger protection)	IP20	IP20	IP20	IP20
Internal Metal Tracks	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated
Screw Terminals	Steel, Zinc Plated	Steel, Zinc Plated	Steel, Zinc Plated	Steel, Zinc Plated
Screw Style	Combination Head	Combination Head	Combination Head	Combination Head
Screw Size	M3.5 mm	M3.5 mm	M3.5 mm	M3.5 mm
Maximum Screw Torque	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)
Terminal Connection	Screw Clamping	Screw Clamping	Elevator	Elevator
Terminal Layout	Logic	Logic	Non-Logic	Non-Logic
Maximum Wire Size	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)
DIN Rail Mounting, EN 60715	35 mm (1.38 in)	35 mm (1.38 in)	35 mm (1.38 in)	35 mm (1.38 in)
Chassis Mounting Screw Torque	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)
Flammability Rating	94V-0 Class	94V-0 Class	94V-0 Class	94V-0 Class
Body Color	Light Gray	Light Gray	Light Gray	Light Gray
DIN Locking Method	Red Plastic Locking Clip	Red Plastic Locking Clip	Red Plastic Locking Clip	Red Plastic Locking Clip
Agency Approvals	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS

Part Number	70-169-1	70-170-1	70-464-1	70-465-1
Contact Configuration	DPDT	3PDT	DPDT	3PDT
Number of Terminals	8	11	8	11
Mounting Style	Panel	Panel	Panel or DIN rail	Panel or DIN rail
Current Rating	15 A	15 A	15/10 A	15/5 A
Nominal Voltage Rating	300 V	600 V	300/600 V	300/600 V
Temperature Storage Range	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)
Internal Metal Tracks	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated
Screw Terminals	Steel, Zinc Plated	Steel, Zinc Plated	Steel, Zinc Plated	Steel, Zinc Plated
Screw Style	Combination Head	Combination Head	Combination Head	Combination Head
Screw Size	M3.5 mm	M3.5 mm	M3.5 mm	M3.5 mm
Maximum Screw Torque	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)	9 lb-in (1.0 N•m)
Terminal Connection	Screw Clamping	Screw Clamping	Screw Clamping	Screw Clamping
Terminal Layout	Non-Logic	Non-Logic	Non-Logic	Non-Logic
Maximum Wire Size	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm²)
DIN Rail Mounting, EN 60715	35 mm (1.38 in)	35 mm (1.38 in)	35 mm (1.38 in)	35 mm (1.38 in)
Chassis Mount Screw Torque	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)
Flammability Rating	94 V-0 Class	94 V-0 Class	94 V-0 Class	94 V-0 Class
Body Color	Light Gray	Light Gray	Light Gray	Light Gray
DIN Locking Method	–	–	Red Plastic Locking Clip	Red Plastic Locking Clip
Product Certifications	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS			

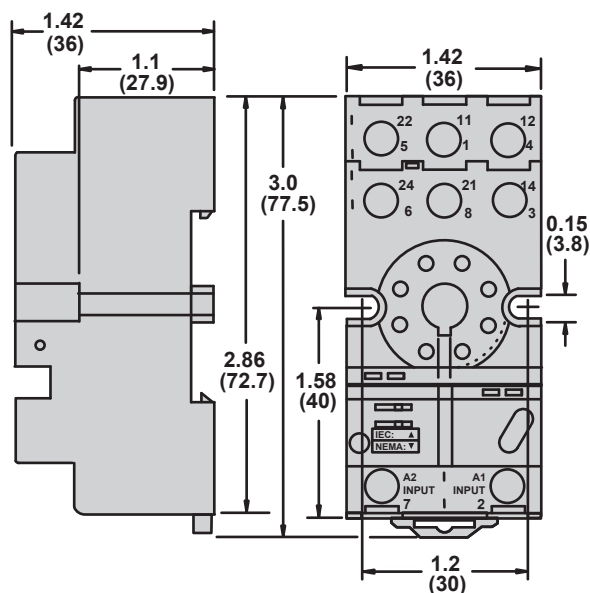
Legacy Time Delay and Sensor Relays

TDRPRO Series Accessories

Dimensions—in. (mm)

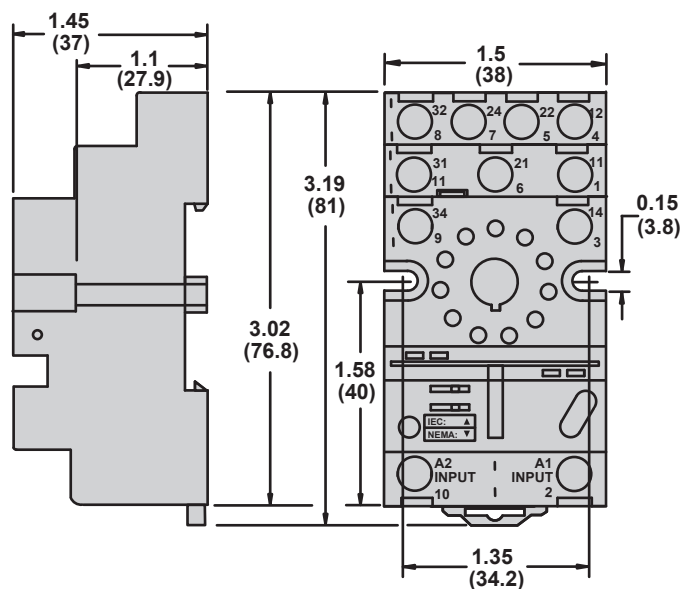
70-750DL8-1

Mounts Directly to the DIN Rail or Panel



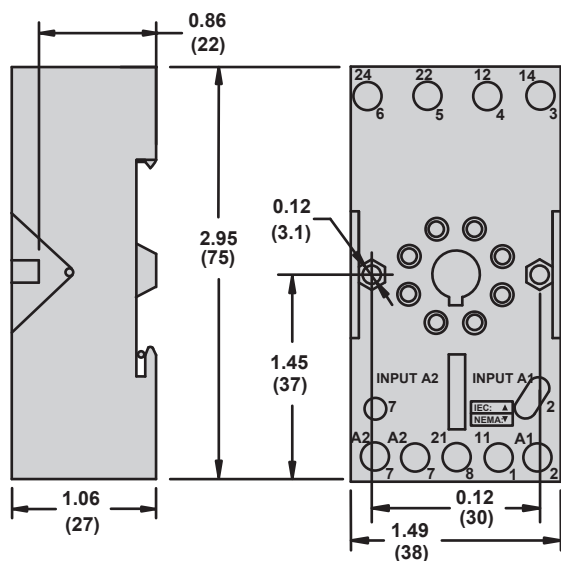
70-750DL11-1

Mounts Directly to the DIN Rail or Panel



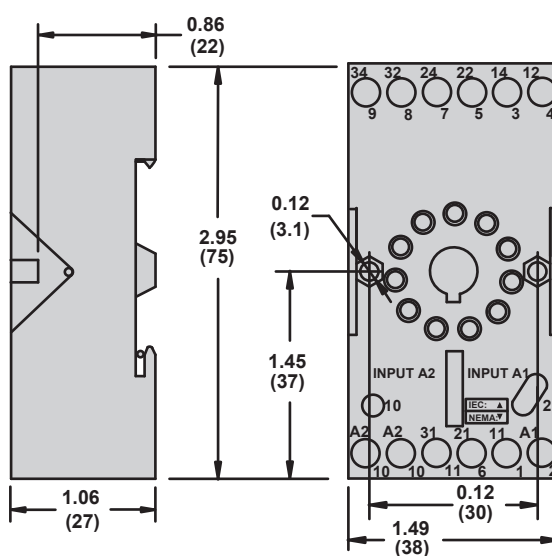
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DIN or Panel Mounting with Elevator Terminals



70-750E11-1

DIN or Panel Mounting with Elevator Terminals



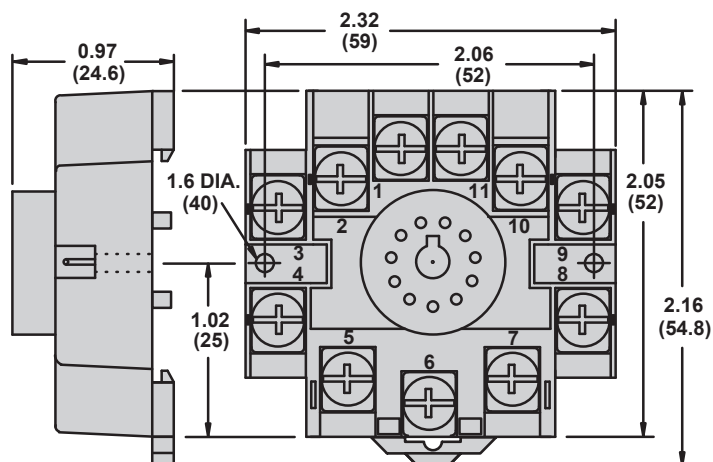
Legacy Time Delay and Sensor Relays

TDRPRO Series Accessories

Dimensions—in. (mm)

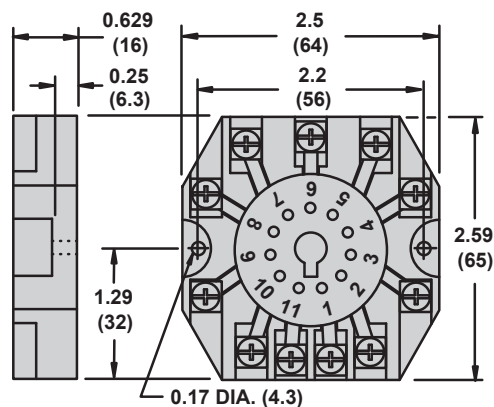
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DIN Mounting with Screw Terminals and Clamping Plates



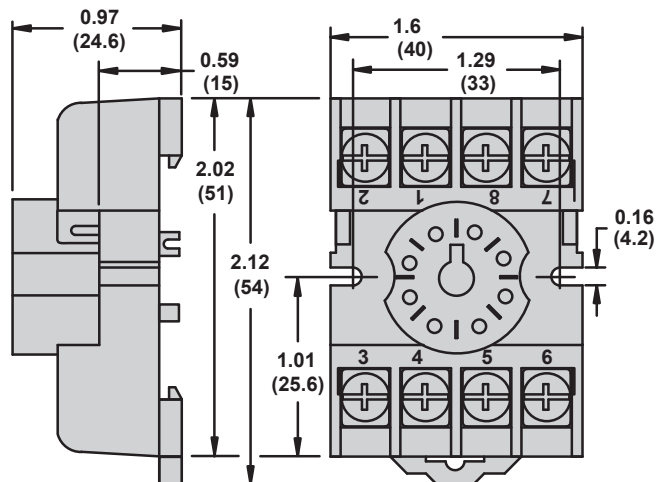
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Panel Mounting with Screw Terminals and Clamping Plates



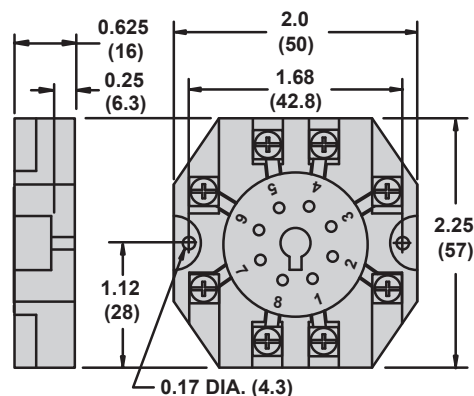
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DIN Mounting with Screw Terminals and Clamping Plates



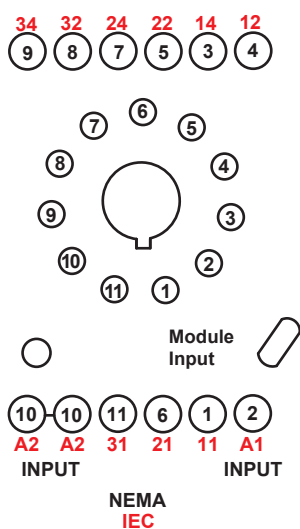
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Panel Mounting with Screw Terminals and Clamping Plates

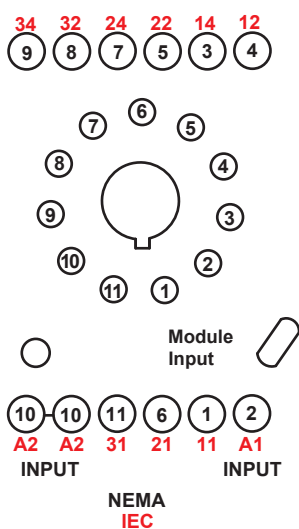


Wiring Diagrams

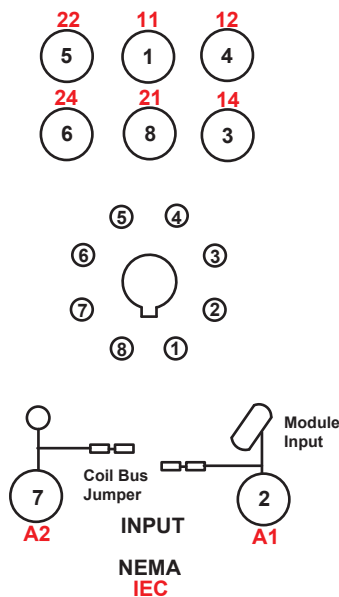
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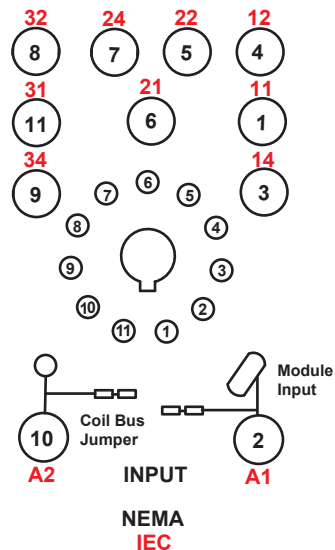
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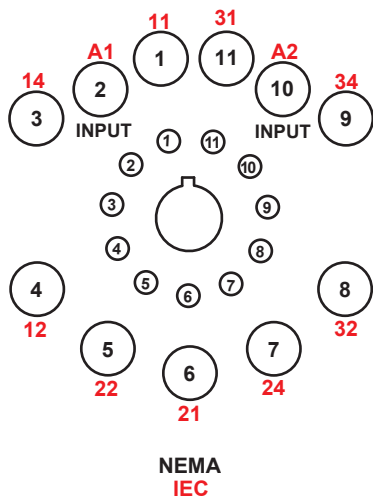
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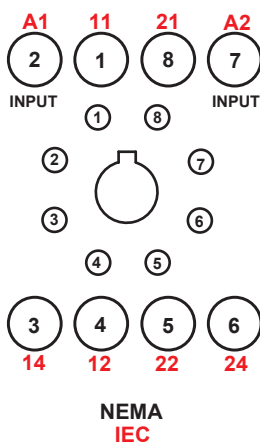
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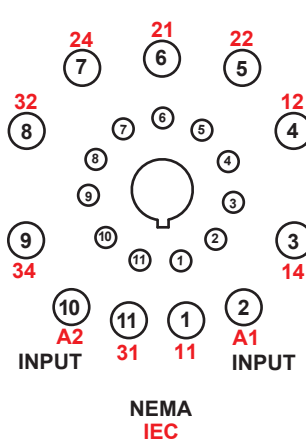
70-465-1



70-464-1



70-170-1



70-169-1

