

Description

Legacy Time Delay and Sensor Relays

TDR782 Series

DPDT, 5 A; 4PDT, 3 A



TDR782 Relay

Description

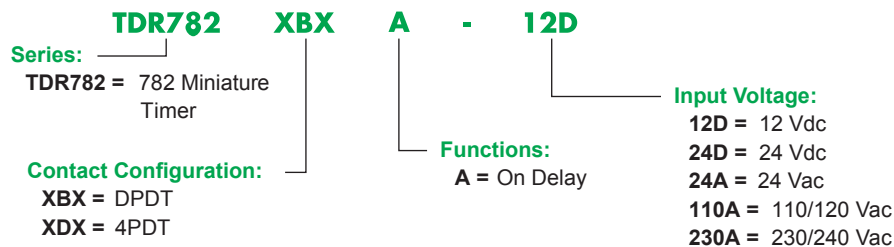
Miniature time delay relay that is single-function, single-voltage, and socket-compatible. Ideal for tight spaces.

Feature	Benefit
Time setting	Selects between 7 different time scales
Socket compatible	Mounts directly to DIN rail or panel
Input/output indication	Shows status at a glance
Time adjustment dial	Fine-tunes the time setting
IEC and NEMA terminal numbering	Allows numbering compatibility

Input Voltage	Functions Available (1)	Timing Range	Contact Configuration	Rated Current	Standard Part Number
AC					
24 Vac	A (On-Delay)	100 ms to 100 hr	4PDT	3 A	TDR782XDXA-24A
			DPDT	5 A	TDR782XBXA-24A
110 Vac	A (On-Delay)	100 ms to 100 hr	4PDT	3 A	TDR782XDXA-110A
			DPDT	5 A	TDR782XBXA-110A
230 Vac	A (On-Delay)	100 ms to 100 hr	4PDT	3 A	TDR782XDXA-230A
DC					
12 Vdc	A (On-Delay)	100 ms to 100 hr	4PDT	3 A	TDR782XDXA-12D
24 Vdc	A (On-Delay)	100 ms to 100 hr	4PDT	3 A	TDR782XDXA-24D
			DPDT	5 A	TDR782XBXA-24D

(1) For function descriptions, see page 31.

Part Number Explanation



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Specifications

Part Number	TDR782XBX	TDR782XDX
Input Characteristics		
Input Voltage Range	24, 110/120, 230/240 Vac 12, 24 Vdc	24, 110/120, 230/240 Vac 12, 24 Vdc
Operating Voltage	Vac	85–115% of nominal
	Vdc	90–110% of nominal
Maximum Power Consumption	1.7 VA @ 24 Vac 2.6 VA @ 120 Vac 3 VA @ 230 Vac 1.5 W @ 12 Vdc 1.2 W @ 24 Vdc	1.7 VA @ 24 Vac 2.6 VA @ 120 Vac 3 VA @ 230 Vac 1.5 W @ 12 Vdc 1.2 W @ 24 Vdc
Output Characteristics		
Contact Configuration	DPDT	4PDT
Output Current Rating	5 A	3 A
Contact Material	Silver alloy	Silver alloy
Maximum Inrush Current	10 A @ < 100 ms	10 A @ < 100 ms
Minimum Switching Requirement	100 mA at 5 Vac/Vdc	100 mA at 5 Vac/Vdc
Timing Characteristics		
Functions Available (1)	A (On-Delay)	A (On-Delay)
Time Scales	7	7
Time Ranges	100 ms to 1 s 1 s to 10 s 0.1 min to 1 min 1 min to 10 min 0.1 hr to 1 hr 1 hr to 10 hr 10 hr to 100 hr	100 ms to 1 s 1 s to 10 s 0.1 min to 1 min 1 min to 10 min 0.1 hr to 1 hr 1 hr to 10 hr 10 hr to 100 hr
Tolerance	5% of mechanical setting	5% of mechanical setting
Repeatability at Constant Voltage and Temperature	0.5%	0.5%
Reset Time	50 ms maximum	50 ms maximum
Temperature Drift	0.05% / °C	0.05% / °C
General Characteristics		
Electrical Life (Operations at Rated Current) (2)	100,000 operations	
Mechanical Life (Unpowered) (2)	10,000,000 operations	
Dielectric Strength (Input to Contacts)	2000 Vrms	
Storage Temperature Range	–40 to +70 °C (–40 to +158 °F)	
Operating Temperature Range	–20 to +60 °C (–4 to +140 °F)	
Weight	43 g (1.52 oz)	
Input Indication	Green LED	
Output Indication (On = Energized)	Amber LED	
Enclosure Rating (According to IEC 60529 IP Rating)	IP50	
Approvals	cURus (File: E191122, CCN: NRNT2, NRNT8), CSA (File No. 254373), CE 61810-1, RoHS	

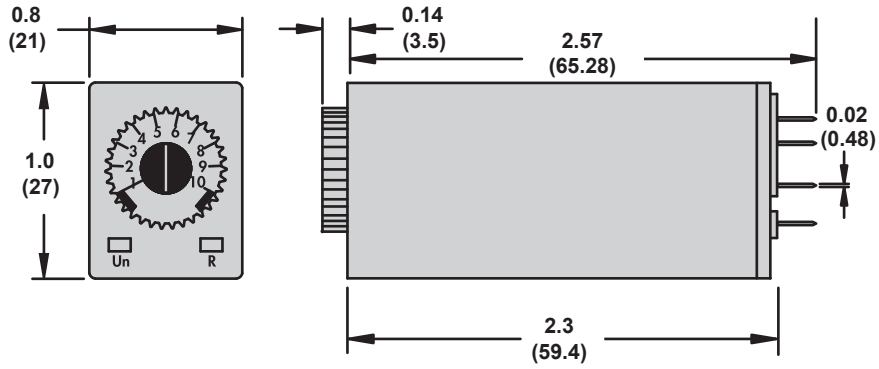
(1) For function descriptions, see page 31.

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

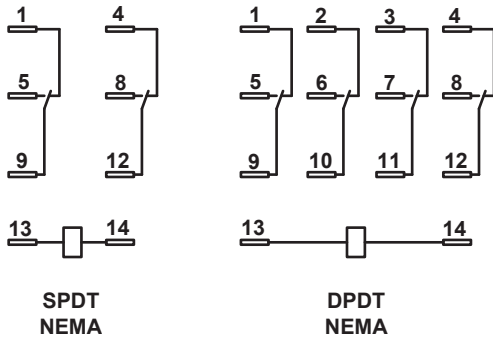
Legacy Time Delay and Sensor Relays

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Dimensions—in. (mm)



Wiring Diagram



Legacy Time Delay and Sensor Relays

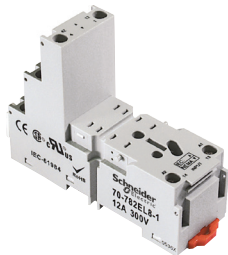
TDR782 Series Accessories



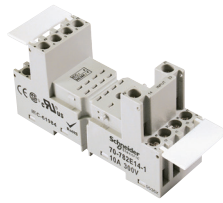
Description

The TDR782 accessories create a complete system solution for all your application needs.

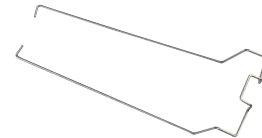
- The 70-782EL socket offers an alternate installation option for plug-in models.
- The 16-TDR782SC retention clip holds the relay securely in place while allowing quick and efficient installation and maintenance.



70-782EL8-1 Socket



70-782E14-1 Socket



16-TDR782SC Retention Clip

Relay Accessories

Description	Function	For Use With Relays	Packaging Quantities	Standard Part Number
Socket	Mounts directly to the DIN rail or panel	TDR782XBX	10	70-782EL8-1
		TDR782XBX TDR782XDX	10	70-782EL14-1
	DIN or panel mounting with rising elevator box terminals	TDR782XBX TDR782XDX	10	70-782E14-1
	DIN or panel mounting with screw terminals and clamping plates	TDR782XBX TDR782XDX	10	70-782D14-1
		TDR782XBX TDR782XDX	10	70-461-1
	Solder terminals for chassis mounting	TDR782XBX TDR782XDX	10	70-378-1
	Printed circuit terminals	TDR782XBX TDR782XDX	10	70-379-1
Metal Retention Clip	Helps secure the relay in the socket	TDR782●● (1)	10	16-TDR782SC

(1) Replace the bullets (●●) with the the part number suffix. See page 14.

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	See table above	10	16-700DIN
DIN Rail End Clip	Holds sockets firmly in place on the DIN rail	—	10	16-DCLIP-1
ID Tags	Allows for identification of circuits in multi-relay applications	70-782EL8-1 70-782EL14-1 70-782E14-1	10	16-782FT-1

Legacy Time Delay and Sensor Relays

TDR782 Series Accessories

Specifications

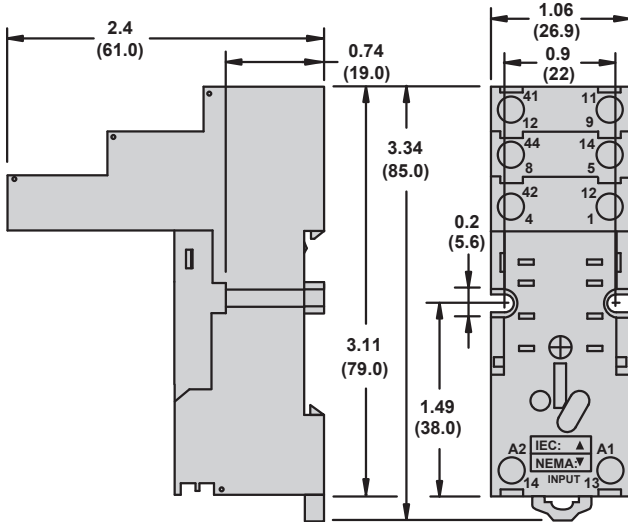
Part Number	70-782EL8-1	70-782EL14-1	70-782E14-1
Contact Configuration	DPDT	4PDT	4PDT
Number of Terminals	8	14	14
Mounting Style	Panel or DIN Rail	Panel or DIN Rail	Panel or DIN Rail
Current Rating	12 A	10 A	10 A
Nominal Voltage Rating	300 V	300 V	300 V
Storage Temperature Range	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °C (-40 to +221 °F)
Protection Category	IP20 (Finger Protection)		
Internal Metal Tracks	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated
Screw Terminals	Steel, Zinc Plated	Steel, Zinc Plated	Steel, Zinc Plated
Screw Style	Combination Head	Combination Head	Combination Head
Screw Size	M3	M3	M3
Terminal Connection	Elevator	Elevator	Elevator
Terminal Layout	Logic	Logic	Non-Logic
Wire Size Capacity	Solid or Stranded Cu: Two 14–16 AWG (1.5–2.5 mm ²)	Solid or Stranded Cu: Two 14–16 AWG (1.5–2.5 mm ²)	Solid or Stranded Cu: Two 14–16 AWG (1.5–2.5 mm ²)
DIN Rail Mounting, EN 60715	35 mm (1.38 in)	35 mm (1.38 in)	35 mm (1.38 in)
Maximum Screw Torque	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)	7 lb-in (0.8 N•m)
Flammability Rating	UL94 Class V-0	UL94 Class V-0	UL94 Class V-0
Body Color	Light Gray	Light Gray	Light Gray
DIN Locking Method	Red Plastic Locking Clip	Red Plastic Locking Clip	Metal Compression Spring
Product Certifications	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787, Class: 3211 07), CE 60947-1, RoHS		

Part Number	70-379-1	70-378-1	70-461-1, 70-782D14-1
Contact Configuration	4PDT	4PDT	4PDT
Number of Terminals	14	14	14
Mounting Style	PCB	Chassis	Panel or DIN Rail
Current Rating	5 A	5 A	10 A
Nominal Voltage Rating	300 V	300 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)
Protection Category	–	–	70-782D14-1: IP20 (Finger Protection)
Internal Metal Tracks	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated
Screw Terminals	Copper Alloy, Zinc Plated	Copper Alloy, Zinc Plated	Steel, Zinc Plated
Screw Style	–	–	Combination Head
Screw Size	–	–	M3 mm
Terminal Connection	PCB	Solder	Screw Clamping
Terminal Layout	Non-Logic	Non-Logic	Non-Logic
Wire Size Capacity	–	Solid or Stranded Cu: Two 14–16 AWG (1.5–2.5 mm ²)	Solid or Stranded Cu: Two 14–16 AWG (1.5–2.5 mm ²)
DIN Rail Mounting, EN 60715	–	–	35 mm (1.38 in)
Maximum Screw Torque	–	–	7 lb-in (0.8 N•m)
Flammability Rating	UL94 Class V-0	UL94 Class V-0	UL94 Class V-0
Body Color	Light Gray	Light Gray	Light Gray
DIN Locking Method	–	–	Red Plastic Locking Clip
Product Certifications	cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787 Class: 3211 07), CE 60947-1, RoHS		70-461-1: cURus (File: E70550, CCN: SWIV2, SWIV8), CSA (File: 40787 Class: 3211 07), CE 60947-1, RoHS 70-782D14-1: cURus (File: E70550), CSA (File: 40787 Class: 3211 07), CE 60947-1, RoHS

Dimensions—in. (mm)

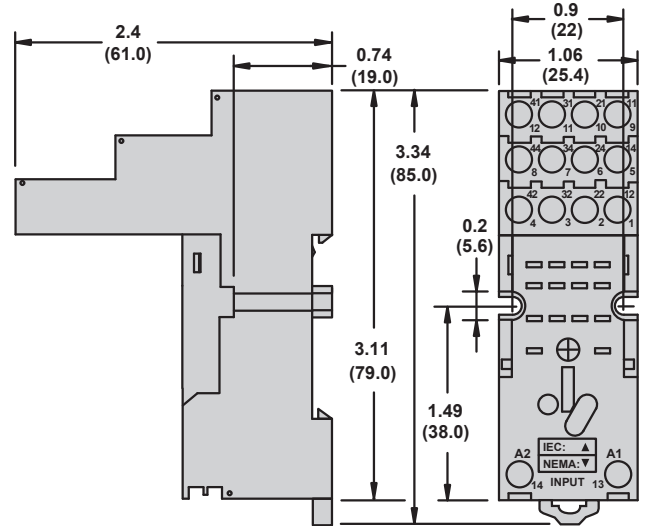
70-782EL8-1

Mounts Directly to the DIN Rail or Panel



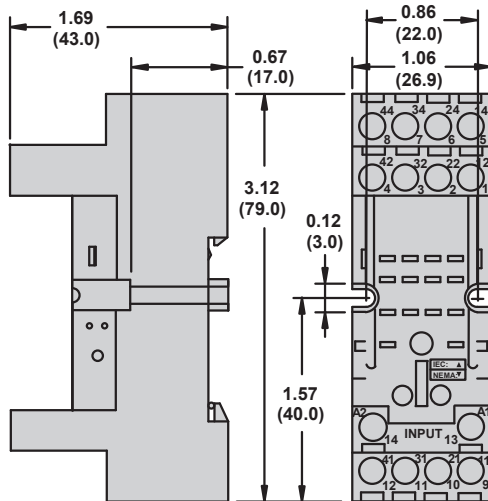
70-782EL14-1

Mounts Directly to the DIN Rail or Panel



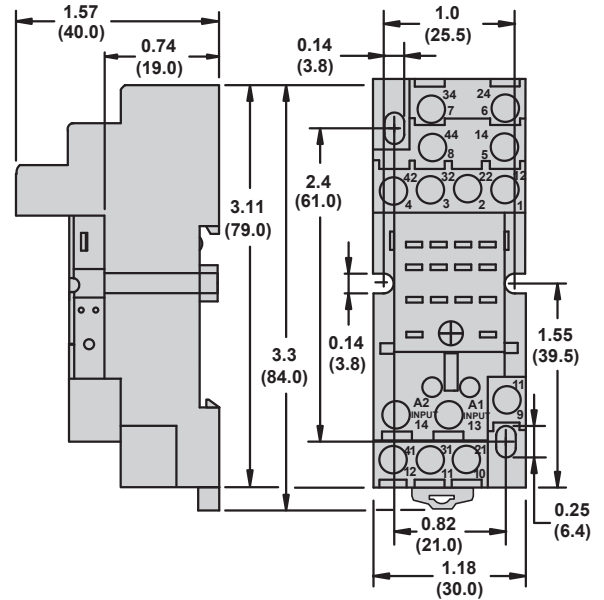
70-782E14-1

DIN or Panel Mounting with Rising Elevator Box Terminals



70-782D14-1

DIN or Panel Mounting with Screw Terminals and Clamping Plates



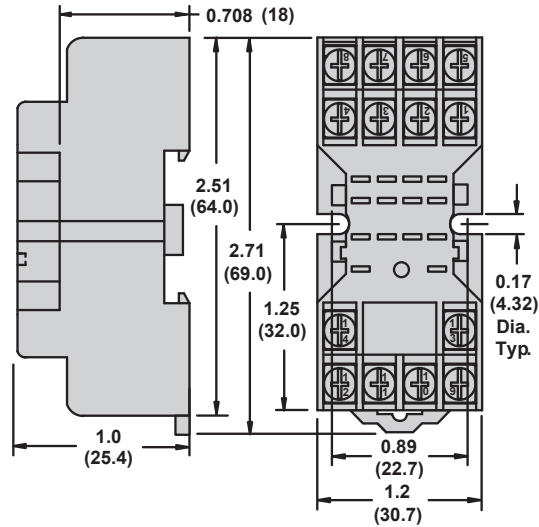
Legacy Time Delay and Sensor Relays

TDR782 Series Accessories

Dimensions—in. (mm)

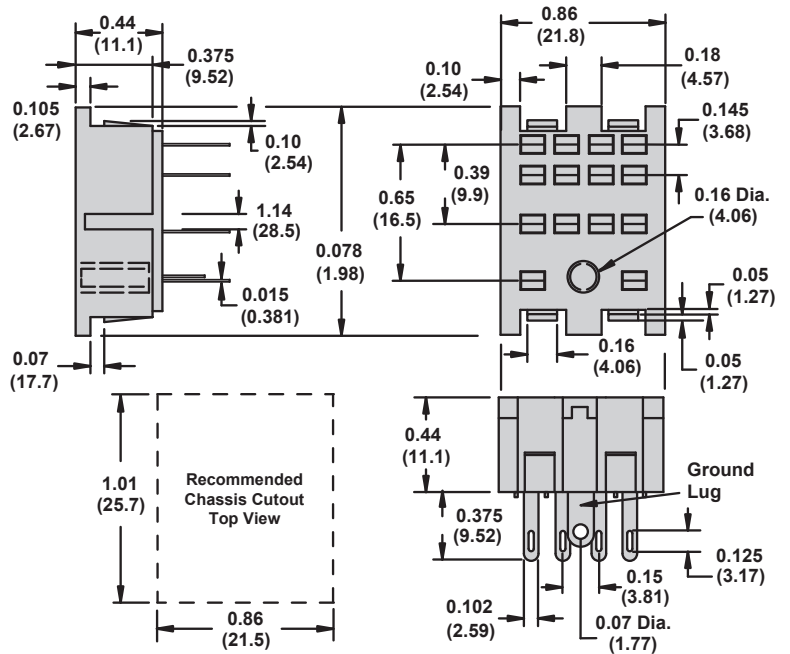
70-461-1

DIN or Panel Mounting with Screw Terminals and Clamping Plates



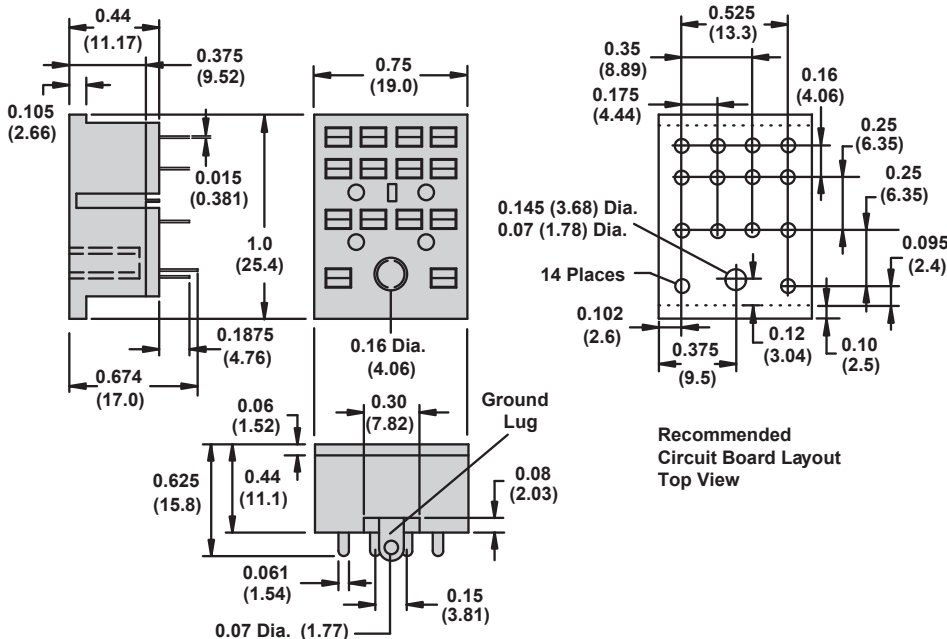
70-378-1

Solder Terminals for Chassis Mount



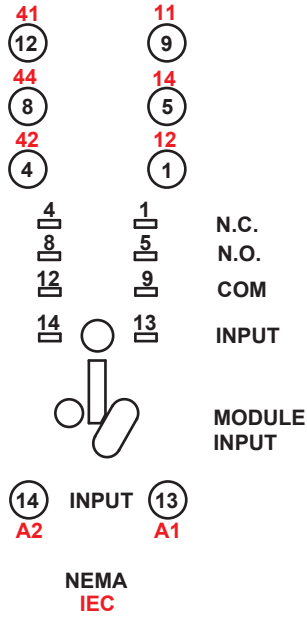
70-379-1

Printed Circuit Terminals

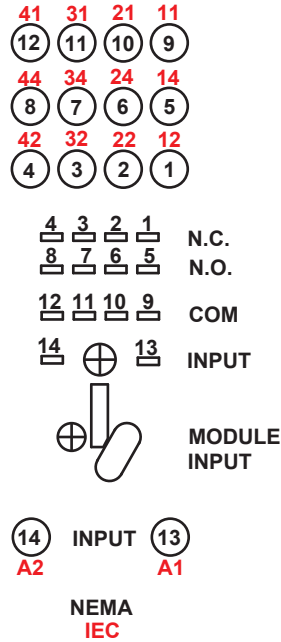


Wiring Diagrams

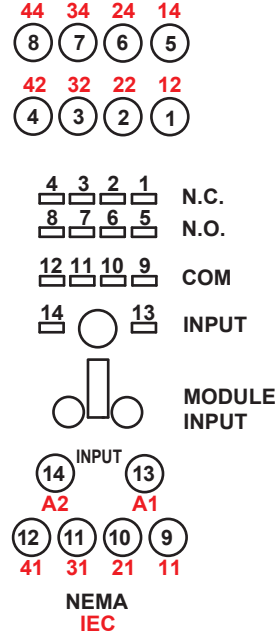
70-782EL8-1



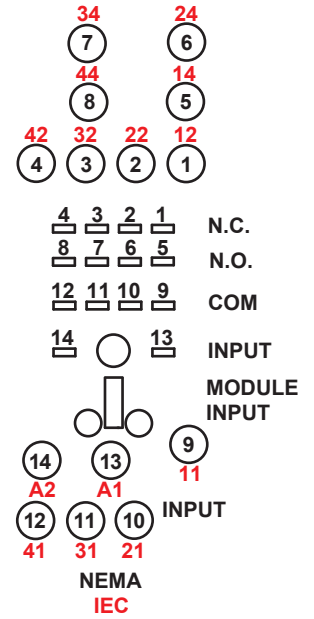
70-782EL14-1



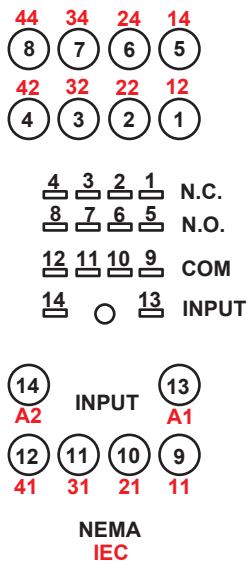
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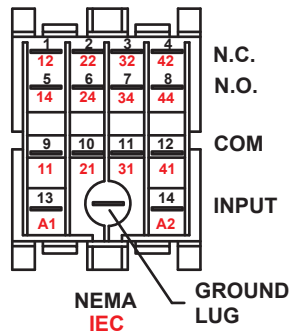
70-782D14-1



70-461-1



70-378-1



70-379-1

