

Schneider Electric Time Delay and Sensor Relays

Catalog
2021



SE Time Delay and Sensor Relays

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Description

SE Time Delay and Sensor Relays

820 Series

SPDT, 15 A; DPDT, 15 A



Description

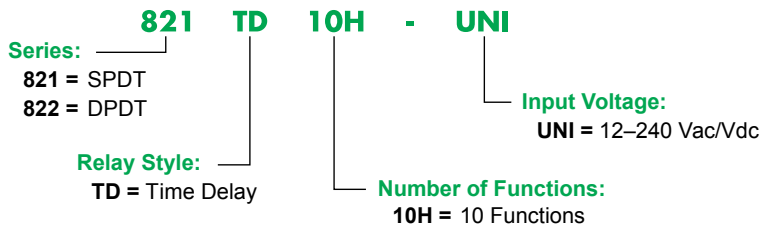
The 820 Series time delay relays are 35-mm DIN-rail mountable products offering ten different timing functions, ultra-wide timing range (10 ms to 10 days), and a universal voltage input (12–240 Vac/Vdc), all in a slim 17.5 mm (0.69 in.) modular package.

Feature	Benefit
Up to 10 functions	<ul style="list-style-type: none"> 5 timing functions controlled via supply voltage 4 timing functions controlled via trigger input 1 memory latching function Meets most timing requirements
Contact configuration	SPDT or DPDT
Universal power supply	12–240 Vac/Vdc
2 LED status indicators	Shows status at a glance
Only 17.5 mm (0.69 in.) wide	Ideal for tight spaces
DIN-rail mountable	Easy installation (screwdriver required)
RoHS compliant	Environmentally friendly

Input Voltage	Functions Available (1)	Timing Range	Contact Configuration	Rated Current	Standard Part Number
12–240 Vac/Vdc	A,B,C,D,E,F,G,H,I,J	10 ms to 10 days	SPDT	15 A	821TD10H-UNI
			DPDT	15 A (2 pairs of contacts)	822TD10H-UNI

(1) For function descriptions, see page 31.

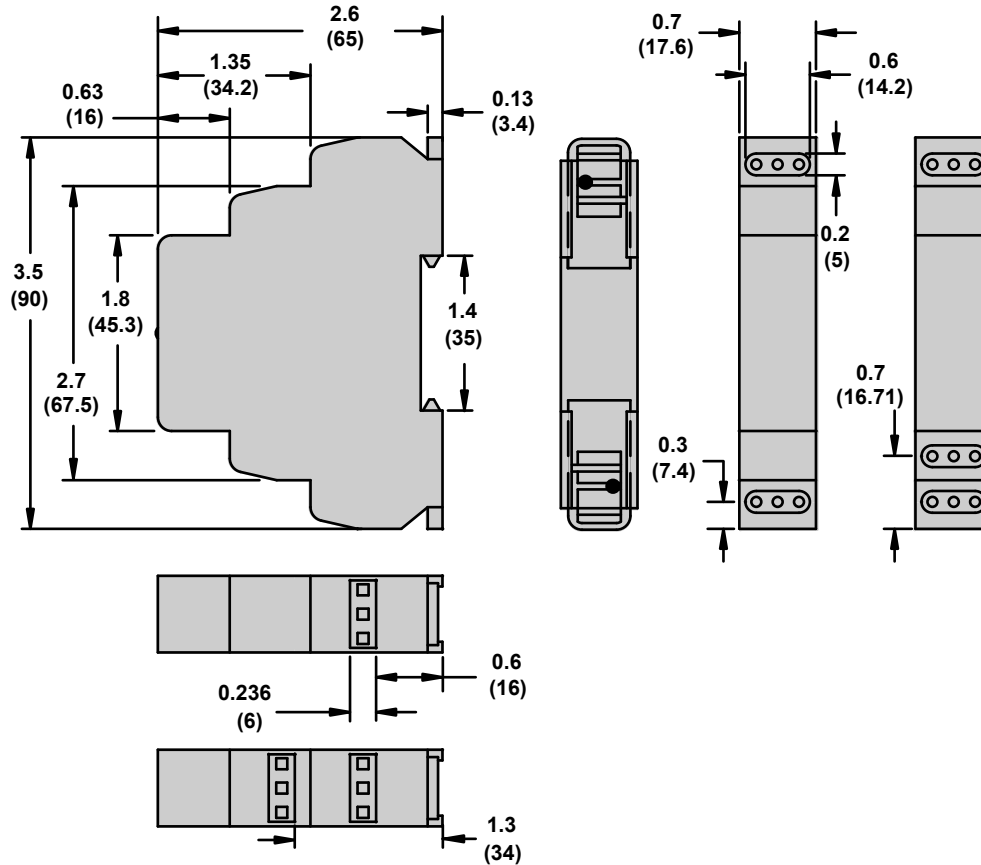
Part Number Explanation



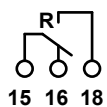
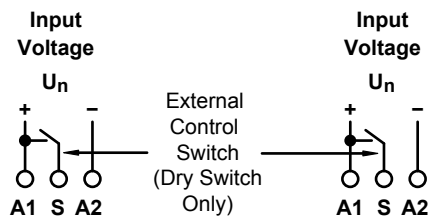
SE Time Delay and Sensor Relays

820 Series
SPDT, 15 A; DPDT, 15 A

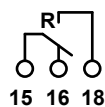
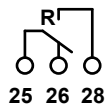
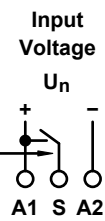
Dimensions—in. (mm)



Wiring Diagram



821TD10H-UNI



822TD10H-UNI

15—Common
16—Normally Closed
18—Normally Open

25—Common
26—Normally Closed
28—Normally Open

SE Time Delay and Sensor Relays

831 Series
SPDT, 15 A

Specifications

Part Number	831VS-120A	831VS-240A	831VS-24D
Input Characteristics			
Nominal Input Voltage	120 Vac	240 Vac	24 Vdc
Absolute Input Voltage Maximum	200 Vac	280 Vac	35 Vdc
Upper Supply Voltage Range	85–150 Vac	160–276 Vac	18–30 Vdc
Lower Supply Voltage Range	30–99% of upper preset	30–99% of upper preset	30–99% of upper preset
Maximum Power Consumption	1.2 VA	1.2 VA	1.2 W
Time Delay	adjustable, 0–10 s	adjustable, 0–10 s	adjustable, 0–10 s
Accuracy			
Mechanical Setting	5%	5%	5%
Repeat Accuracy	<1%	<1%	<1%
Temperature Variation	<1% / °C	<1% / °C	<1% / °C
Hysteresis (from fault to normal)	2–6% of adjusted value	2–6% of adjusted value	2–6% of adjusted value
Output Characteristics			
Contact Configuration	SPDT	SPDT	SPDT
Output Current Rating	15 A @ 120, 240 Vac, 24 Vdc	15 A @ 120, 240 Vac, 24 Vdc	15 A @ 120, 240 Vac, 24 Vdc
Breaking Capacity	4000 VA/AC1, 384 W/DC	4000 VA/AC1, 384 W/DC	4000 VA/AC1, 384 W/DC
Inrush Current	30 A / <3 s	30 A / <3 s	30 A / <3 s
Maximum Switching Voltage	250 Vac / 24 Vdc	250 Vac / 24 Vdc	250 Vac / 24 Vdc
Minimum Breaking Capacity DC	500 mW	500 mW	500 mW
Mechanical Life (1)	10,000,000 operations	10,000,000 operations	10,000,000 operations
Electrical Life (1)	70,000 operations	70,000 operations	70,000 operations
Contact Material	Silver alloy	Silver alloy	Silver alloy
Switching Capability	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 hp @ 120 Vac 1 hp @ 240 Vac Pilot duty B300	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 hp @ 120 Vac 1 hp @ 240 Vac Pilot duty B300	15 A @ 240 Vac, 50/60 Hz, 24 Vdc 1/2 hp @ 120 Vac 1 hp @ 240 Vac Pilot duty B300
Minimum Switching Requirement	100 mA at 5 Vac/Vdc	100 mA at 5 Vac/Vdc	100 mA at 5 Vac/Vdc
Timing/Sensing Characteristics			
Time Scales	1	1	1
Time Ranges	0–10 s	0–10 s	0–10 s
Tolerance	5% of mechanical setting	5% of mechanical setting	5% of mechanical setting
Repeatability at Constant Voltage and Temperature	1%	1%	1%
Upper Sensing Voltage Range	85–150 Vac	160–276 Vac	18–30 Vdc
Lower Sensing Voltage Range	30–99% of upper preset	30–99% of upper preset	30–99% of upper preset
General Characteristics			
Dielectric Strength (Input to Contacts)	2500 Vac	2500 Vac	2500 Vac
Dielectric Strength (Between Open Contacts)	1600 Vac	1600 Vac	1600 Vac
Mounting Position	Any, 35 mm DIN rail EN 50022	Any, 35 mm DIN rail EN 50022	Any, 35 mm DIN rail EN 50022
Overvoltage Category	III	III	III
Pollution Degree	2	2	2
Storage Temperature Range	–30 to +70 °C (–22 to +158 °F)	–30 to +70 °C (–22 to +158 °F)	–30 to +55 °C (–22 to +131 °F)
Operating Temperature Range	–20 to +55 °C (–4 to +131 °F)	–20 to +55 °C (–4 to +131 °F)	–20 to +55 °C (–4 to +131 °F)
Terminal Wire Capacity (Input and Output)	14 AWG (2.5 mm ²) maximum	14 AWG (2.5 mm ²) maximum	14 AWG (2.5 mm ²) maximum
Terminal Screw Torque	7.1 lb-in (0.8 N·m) maximum	7.1 lb-in (0.8 N·m) maximum	7.1 lb-in (0.8 N·m) maximum
Weight	62 g (2.19 oz)	62 g (2.19 oz)	88 g (3.10 oz)
Input Indication	Green LED		
Output Indication (Blinking = Timing; On = Energized)	Red LED		
Enclosure Rating (according to IEC 60529 IP rating)	IP40		
Approvals	UL (E234203, CCN: NKCR, NKCR7), CE (IEC 60947-1, 61000-4), RoHS		

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

Description

SE Time Delay and Sensor Relays

841 Series
SPDT, 15 A



841 Relay

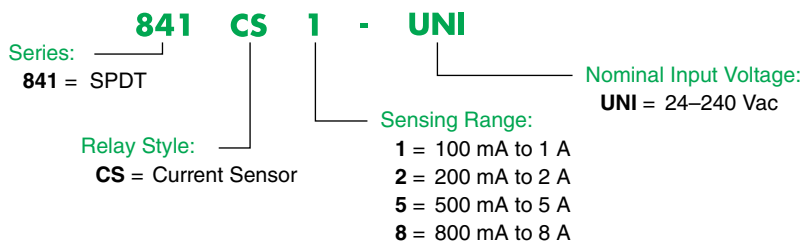
Description

This current sensing relay allows you to monitor the current of one circuit (1–8 A) and switch another circuit in case of an overcurrent condition. The relays are modular and finger protected (according to IEC 60529 IP rating).

Feature	Benefit
Current-sensing adjustment knob	Sense from 10–100% of the rated sensing current
Input/output terminals	Accepts wire up to 14 AWG
Solid-state circuitry	Used for precise sensing and timing control
Input/output indication	Shows status at a glance
DIN rail mounting capability	Mounts directly on a DIN Rail
Narrow width: 17.5 mm (0.69 in.)	Ideal for tight spaces
Wide input range	Works with common AC voltages

Input Voltage	Timing Range	Contact Configuration	Output (A)	Sensing Current Range (AC)	Standard Part Number
24–240 Vac	100 ms to 10 s	SPDT	15	100 mA to 1 A	841CS1-UNI
				200 mA to 2 A	841CS2-UNI
				500 mA to 5 A	841CS5-UNI
				800 mA to 8 A	841CS8-UNI

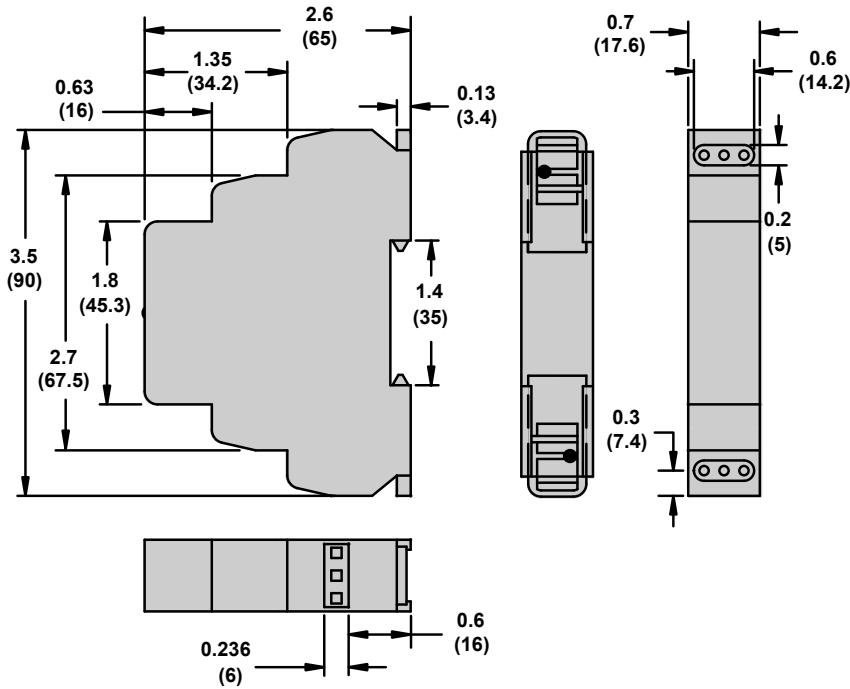
Part Number Explanation



SE Time Delay and Sensor Relays

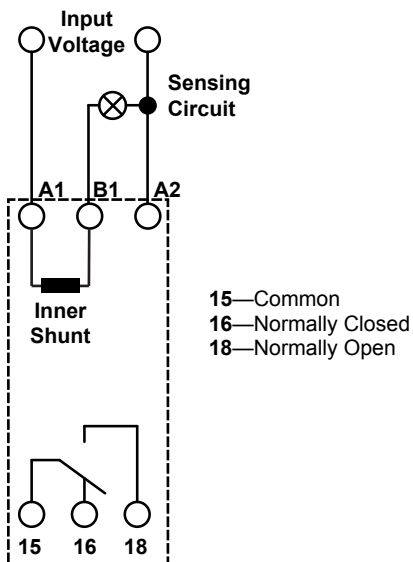
841 Series
SPDT, 15 A

Dimensions—in. (mm)

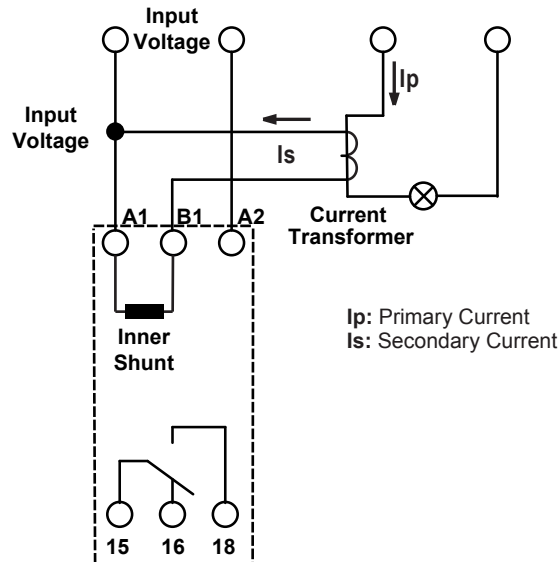


Wiring Diagram

Direct current sensing



Current sensing through a current transformer



Description

SE Time Delay and Sensor Relays

TDR782 Series

DPDT, 5 A; 4PDT, 3 A



TDR782 Relay

Description

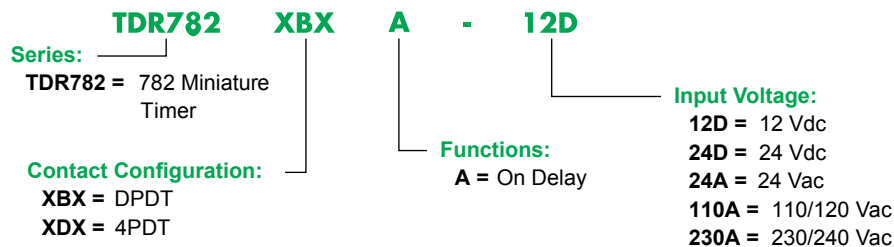
Miniature time delay relay that is single-function, single-voltage, and socket-compatible. Ideal for tight spaces.

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

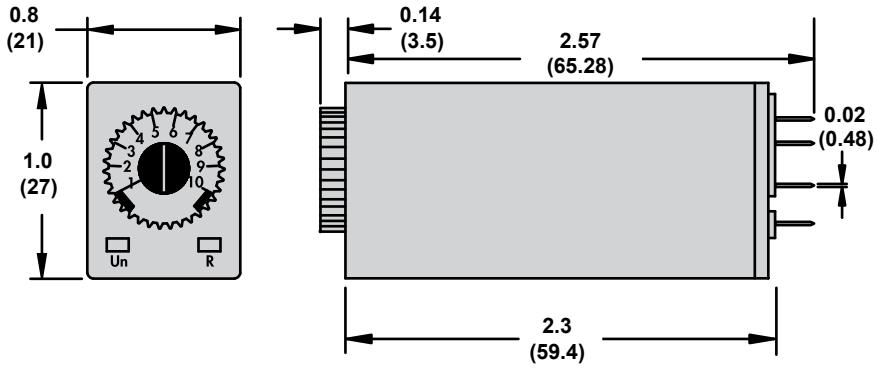


Dimensions, Wiring Diagram

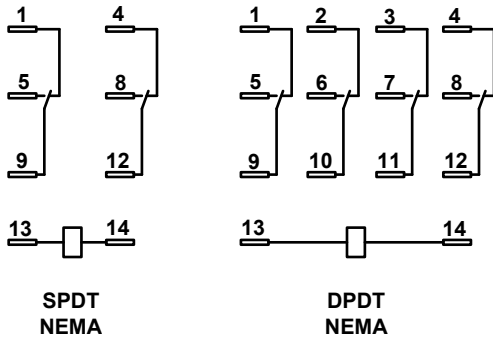
SE Time Delay and Sensor Relays

TDR782 Series
DPDT, 5 A; 4PDT, 3 A

Dimensions—in. (mm)



Wiring Diagram



SE 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		

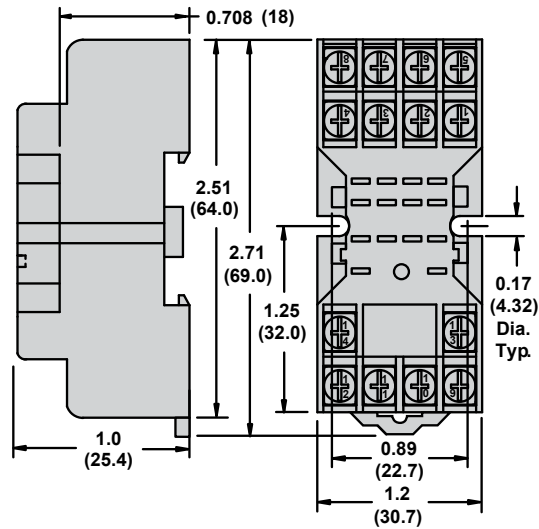
Part Number	70-379-1	70-378-1	70-461-1, 70-782D14-1
Contact Configuration	4PDT	4PDT	4PDT
Number of Terminals	14	14	14
Mounting Style	PCB	Chassis	Panel or DIN Rail
Current Rating	5 A	5 A	10 A
Nominal Voltage Rating	300 V	300 V	300 V
Storage Temperature Range	-40 to +105 °C (-40 to +221 °F)	-40 to +105 °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

SE Time Delay and Sensor Relays

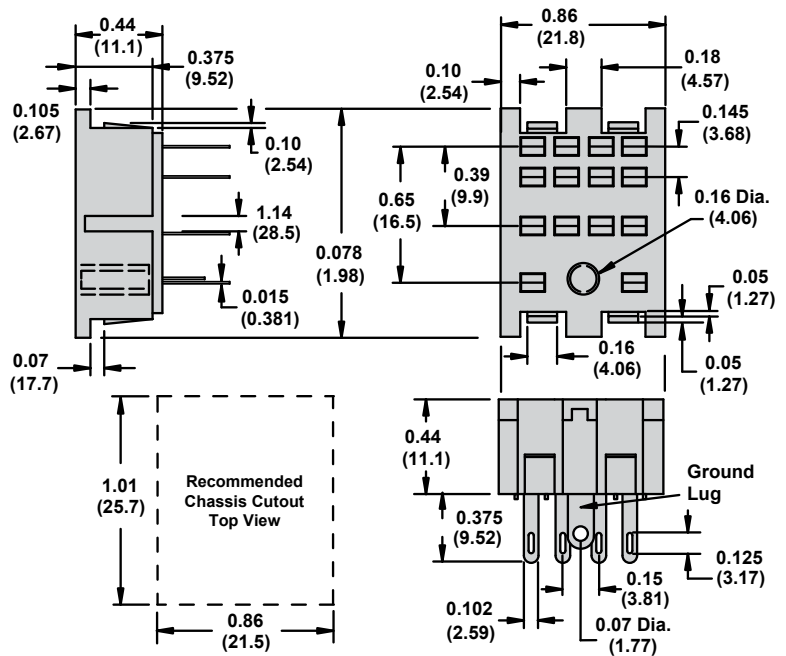
TDR782 Series Accessories

Dimensions—in. (mm)

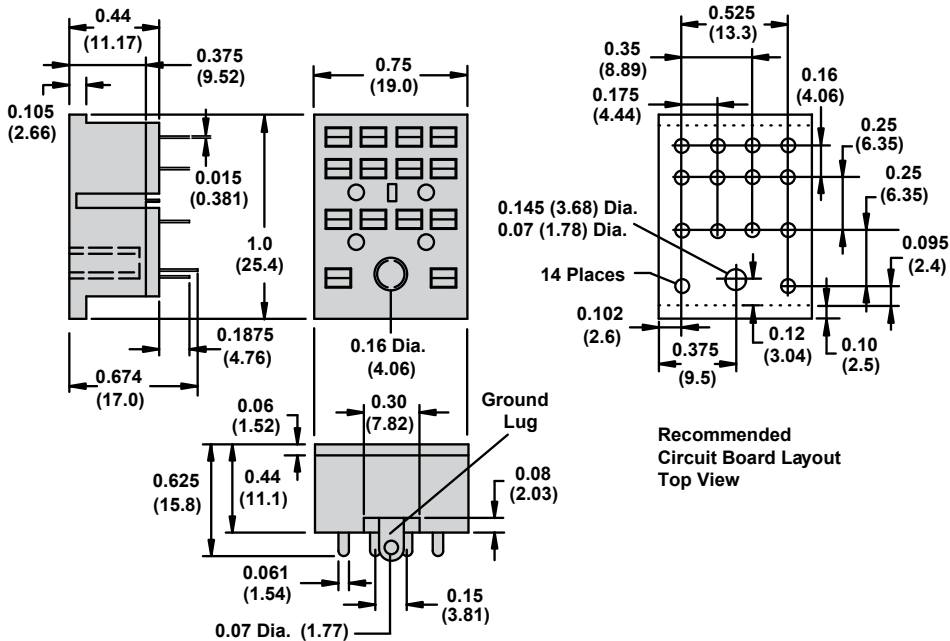
70-461-1
DIN or Panel Mounting with Screw Terminals and Clamping Plates



70-378-1
Solder Terminals for Chassis Mount



70-379-1
Printed Circuit Terminals



SE Time Delay and Sensor Relays

TDRPRO Series

SPDT, 12 A; DPDT, 12 A



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.



TDRPRO Relay

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

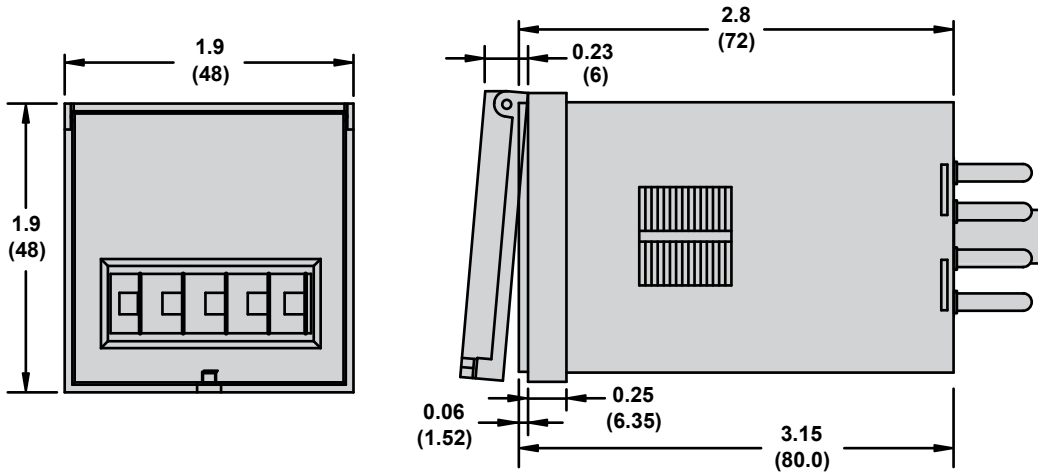
Contact Configuration and Number of Functions:

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

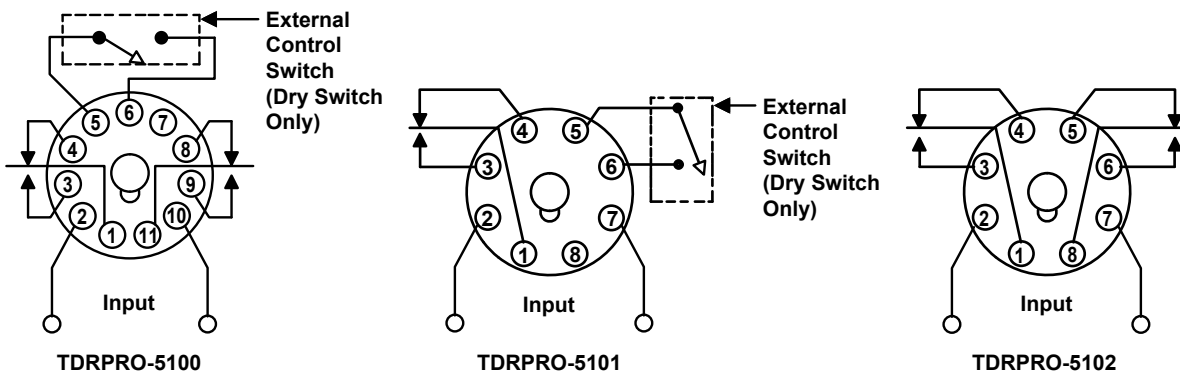
SE Time Delay and Sensor Relays

TDRPRO Series
SPDT, 12 A; DPDT, 12 A

Dimensions—in. (mm)



Wiring Diagrams



SE 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 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)
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

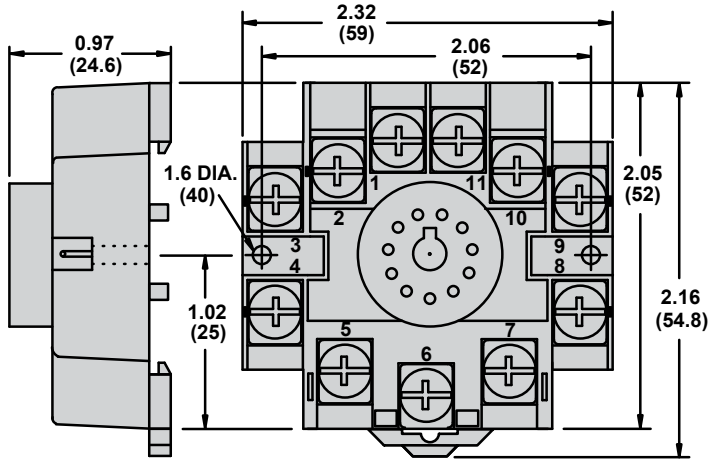
Part Number	70-169-1	70-170-1	70-464-1	70-465-1
Contact Configuration	DPDT	3PDT	DPDT	3PDT
Number of Terminals	8	11	8	11
Mounting Style	Panel	Panel	Panel or DIN rail	Panel or DIN rail
Current Rating	15 A	15 A	15/10 A	15/5 A
Nominal Voltage Rating	300 V	600 V	300/600 V	300/600 V
Temperature Storage Range	-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 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)	Solid or Stranded Cu: two 12–14 AWG (2.5–4 mm ²)
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			

SE Time Delay and Sensor Relays

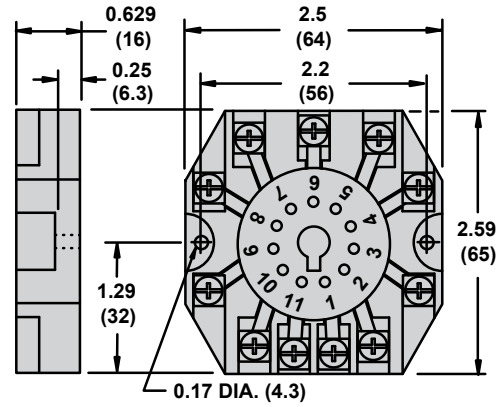
TDRPRO Series Accessories

Dimensions—in. (mm)

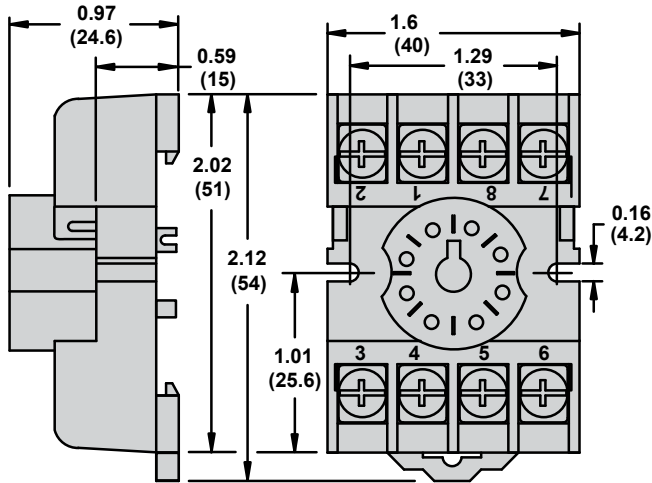
70-465-1
DIN Mounting with Screw Terminals and Clamping Plates



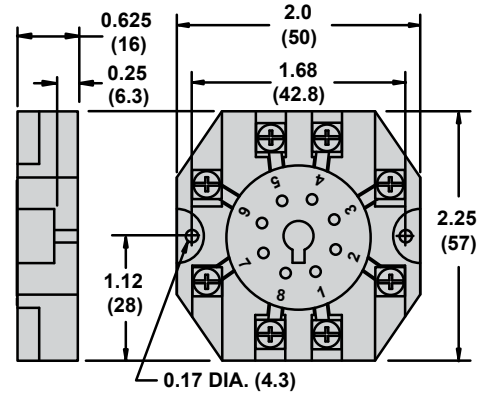
70-170-1
Panel Mounting with Screw Terminals and Clamping Plates



70-464-1
DIN Mounting with Screw Terminals and Clamping Plates



70-169-1
Panel Mounting with Screw Terminals and Clamping Plates



SE Time Delay and Sensor Relays

Definition

A time delay is a controlled period between the functioning of two events. A time delay relay combines an electromechanical output relay and a control circuit. The control circuit is composed of solid-state components that control the operation of the relay and the timing range.

Typical time delay functions include:

- On-Delay
- Repeat Cycle (Starting Off)
- Interval
- Off-Delay
- Retriggerable One-Shot
- Repeat Cycle (Starting On)
- Pulse Generator
- One-Shot
- On- and Off-Delay
- Memory Latch

Each function is explained in the table on page 31. Time delay relays offer a broad choice of timing ranges from less than one second to many days. There are many choices of timing adjustments from calibrated external knobs, DIP switches, thumb-wheel switches, or a recessed potentiometer.

Principle of Operation

Time delay relays are simply control relays with a time delay built in. Their purpose is to control an event based on time. The difference between relays and time delay relays is *when* the output contacts open and close:

- on a control relay, contacts change state when voltage is applied and removed from the coil
- on time delay relays, contacts change state before or after a pre-selected, timed interval

Typically, time delay relays are initiated or triggered by one of two methods:

- application of input voltage (On-Delay, Interval On, Flasher, Repeat Cycle, Delayed Interval, and Interval/Flasher)
- opening or closing of a trigger signal (Off-Delay, Single Shot, and Watchdog)

These trigger signals can be one of two designs:

- a control switch (dry contact)—for example, limit switch, push button, float switch
- voltage (commonly known as a power trigger)

Definitions:

Input Voltage: Control voltage applied to the input terminals (see the wiring diagrams on page 31). Depending on the function, input voltage either initiates the unit or readies it to initiate when a trigger signal is applied.

Trigger Signal: On certain timing functions, a trigger signal initiates the unit after input voltage has been applied. As noted above, this trigger signal can either be a control switch (dry contact switch) or a power trigger (voltage).

Output (Load): A time delay relay has an internal relay (usually mechanical) with contacts that open and close to control the load. The contacts are represented by the dotted lines in the wiring diagrams.

NOTE: For the time delay relay to operate properly, voltage must be applied to power the load being switched by the relay's output contacts.

SE Time Delay and Sensor Relays

Applications

Schneider Electric time delay and sensor relays provide cost effective solutions for your industrial timing and sensing needs. Available in a wide array of forms, fits, and functions, these timers offer flexibility and performance for process control and industrial building applications.

Typical Examples of Timer Applications



Automation Panels

Process controls, motor controls, emergency lighting



Food & Beverage

Commercial/industrial cooking equipment, filtration systems, bottling, chillers, convection ovens



Packaging Machinery

Conveyor motors, food processors, product/shrink wrap, solenoid controls



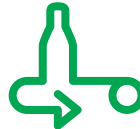
Lighting Control

Traffic signal systems, motorway information systems, theatrical lighting, ballast lighting



Power Supplies

Universal power supplies, battery backup systems



Material Handling

Motor control, conveyor controls



HVAC & Refrigeration

Anti-condensation equipment, compressor controls, blower controls, motorized duct/vent controls



Appliances

Air conditioners, water heaters, portable heaters, spa controls, water pumps

SE Time Delay and Sensor Relays

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16-750/782FT-1	<u>25</u>
16-782FT-1	<u>17</u>
16-788C1	<u>13</u>
16-DCLIP-1	<u>13. 17. 25</u>
16-TDR782SC	<u>17</u>
16-TDRPROSC	<u>25</u>
70-169-1	<u>25. 26</u>
70-170-1	<u>25. 26</u>
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70-464-1	<u>25. 26</u>
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70-750DL8-1	<u>25. 26</u>
70-750DL11-1	<u>25. 26</u>
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70-750E11-1	<u>25. 26</u>
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70-782EL8-1	<u>17. 18</u>
70-782EL14-1	<u>17. 18</u>
821TD10H-UNI	<u>4. 5</u>
822TD10H-UNI	<u>4. 5</u>
831VS-24D	<u>7. 8</u>
831VS-120A	<u>7. 8</u>
831VS-240A	<u>7. 8</u>
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TDRPRO-5102	<u>22. 23</u>

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