Schneider Electric/Legacy Electric Time Delay and Sensor Relays

TDRPRO Series
SPDT, 12 A; DPDT, 12 A

TDRPRO Relay

Description

Time delay relays that are programmable, multi-function, multi-voltage, and socket-compatible - offering the user 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 function of memory latching
Broad timing range	0.1 Seconds to 9990 hours
Panel mount adapter	Panel mountable
Dust cover	Retains settings / 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 inicators	Indicate coil power / timing out / output state
RoHS compliant	Environmentally friendly

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

(1) For function descriptions, see pages 33 and 34.

Part Number Explanation

TDRPRO - **5100**

Series:
TDRPRO = 48 x 48 mm Time Delay Relay

Contact Configuration/# 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 to 240 Vac/Vdc	12 to 240 Vac/Vdc	12 to 240 Vac/Vdc
Operating Voltage	85% to 115% of Nominal	85% to 115% of Nominal	85% to 115% of Nominal
Maximum Power Consumption (AC)	2.5 VA	2.5 VA	2.5 VA
Maximum Power Consumption (DC)	2W	2W	2W
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 Capabilties	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 to 999 by 0.1 sec 0 to 999 by sec 0 to 999 by 0.1 min 0 to 999 by min 0 to 999 by 0.1 hr 0 to 999 by hr 0 to 999 by 10 hr	0 to 999 by 0.1 sec 0 to 999 by sec 0 to 999 by 0.1 min 0 to 999 by min 0 to 999 by 0.1 hr 0 to 999 by hr 0 to 999 by 10 hr	0 to 999 by 0.1 sec 0 to 999 by sec 0 to 999 by 0.1 min 0 to 999 by min 0 to 999 by 0.1 hr 0 to 999 by hr 0 to 999 by 10 hr
Repeatability of the time delay @ 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°C (-22°F) to +70°C (+158°F)	-30°C (-22°F) to +70°C (+158°F)	-30°C (-22°F) to +70°C (+158°F)
Operating Temperature Range	-20°C (-4°F) to +60°C (+140°F)	-20°C (-4°F) to +60°C (+140°F)	-20°C (-4°F) to +60°C (+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 (Blinks = Timing or On = Energized)	RED LED	RED LED	RED LED
Enclosure Rating (according to IEC 60529 IP rating)	IP40	IP40	IP40
Approvals	cURus (File No. E43641), CE 61810-1, RoHS, cULus (UL Listed [File No. E43641] when used with Schneider Electric/ Legacy Electric socket 70-465)	cURus (File No. E43641), CE 61810-1, RoHS, cULus (UL Listed [File No. E43641] when used with Schneider Electric/ Legacy Electric socket 70-464)	cURus (File No. E43641), CE 61810-1, RoHS, cULus (UL Listed [File No. E43641] when used with Schneider Electric/ Legacy Electric socket 70-464)

(1) For function descriptions, see pages 33 and 34.
(2) Actual product life will vary based on electrical load, duty cycle, application, and environmental conditions.
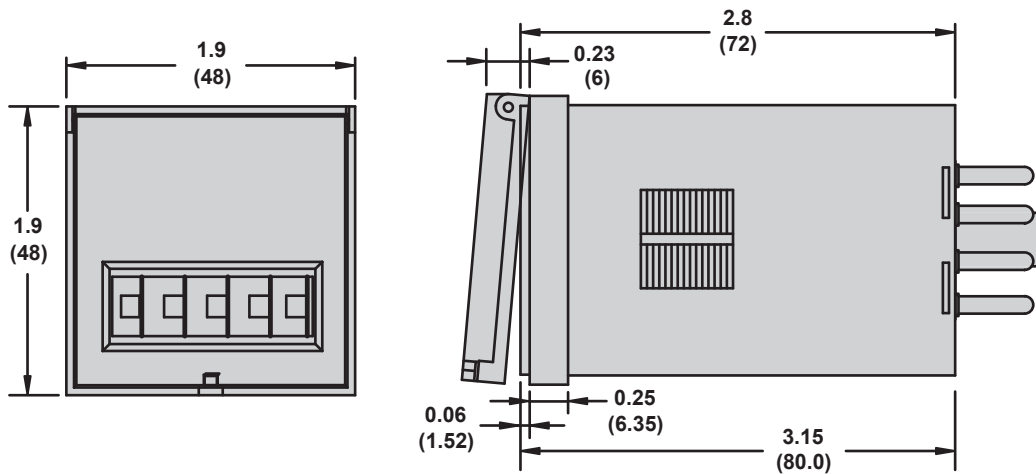*(3) After the time delay period expires or upon trigger signal application (depends on selected function).*

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Dimensions — inches (millimeters)

1.9 (48)
1.9 (48)
2.8 (72)
0.23 (6)
0.06 (1.52)
0.25 (6.35)
3.15 (80.0)

Wiring Diagrams

EXTERNAL CONTROL SWITCH (DRY SWITCH ONLY)

INPUT

TDRPRO-5100

EXTERNAL CONTROL SWITCH (DRY SWITCH ONLY)

INPUT

TDRPRO-5101

INPUT

TDRPRO-5102