PrSense[®] Relay Timers

On-Delay Inline Relay Timers T2L-ND Series Overview Features

The T2L-ND series of on-delay inline (series connection) relay timers is connected in series with the load, requiring only 2 terminals/connections. These products feature a universal input voltage of 24-240VAC and 12-48VDC. The inline solid state two-terminal output is rated 1A continuous/10A inrush pilot duty, and is ideal for high duty cycle and long-life applications. The enclosure is encapsulated for robust protection.

The T2L-ND series is offered in both an analog or digital programing versions. The analog versions offer time setting via an onboard potentiometer, and the digital versions are set through the use of a 10-postion DIP switch which offers a greater setting accuracy than is found on the analog models.

- Cost effective design and compact 2 x 2 inch enclosure
- Encapsulated for protection
- Two-terminal series connection with the load
- Solid state 1A continuous/10A inrush pilot duty output
- Universal input voltage range: 24-240VAC and 12-48VDC
- DIP switch for accurate digital setting of time delay or easy to use analog potentiometer models are available



T2L-ND-30-240U



T2L-ND-40-240U

On-Delay Inline Relay Timers T2L-ND Series							
Part Number	Price	Timer Type	Timing Range	Voltage	Output Type	Drawing Link	
T2L-ND-30-240U	\$25.00	On-delay	0.1 to 10 seconds	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	
T2L-ND-31-240U	\$25.00	On-delay	1 to 100 seconds	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	<u>PDF</u>	
T2L-ND-32-240U	\$25.00	On-delay	0.1 to 10 minutes	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	
T2L-ND-33-240U	\$25.00	On-delay	1 to 100 minutes	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	
T2L-ND-40-240U	\$37.50	On-delay	0.1 to 102.3 seconds selectable	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	
T2L-ND-41-240U	\$37.50	On-delay	1 to 1,023 seconds selectable	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	
<u>T2L-ND-42-240U</u>	\$37.50	On-delay	10 to 10,230 seconds selectable	24-240 VAC and 12-48 VDC	(1) SPNO timed solid state relay	PDF	

On-Delay Inline Relay Timers Specifications

General Specifications	
Connection	0.25 inch male quick-connect terminals
Ambient Temperature	-28 to +65°C [-18 to +149°F]
Storage Temperature	-40 to +85°C [-40 to +185°F]
Protection Rating	IP00
Mounting	Surface with one #8 or #10 screw and a maximum tightening torque of 15 in•lb.
Mounting Orientation	Any
Weight	0.15 lb
Agency Approvals and Standards*	cURus File E222847, CE

*To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page. Specifications continued on following page.

Wiring Diagram



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T2L-ND Series On-Delay Inline Relay Timers

On-Delay Inline Relay Timers Specifications (continued)							
Series	T2L-ND-3x	T2L-ND-4x					
Input Specifications							
Nominal Voltage	AC operation: +10 to -15% of nominal voltage, 50/60 Hz +5% DC operation: +10 to -15% of nominal voltage						
Nominal Consumption	nption Maximum 1VA						
Contact Specifications							
Minimum Load Current	20mA						
Туре	(1) SPNO						
Switching Capacity	Normally open solid state 1A continuous, 10A inrush @ 65ºC, pilot duty						
Lifetime							
	No predictable failure if used within operating parameters						
Reset Time							
Reset Time	0.05 seconds						
Time Circuit Specifications							
Setting Accuracy	Maximum setting (adjustable): +5%, -0% Minimum setting (adjustable): +0%, -50% Fixed time delay: ±2% or 50ms, whichever is greater	Constant voltage and temperature within specifications: +2% of set time or +50ms, whichever is greater Variable voltage and temperature within specifications: +5% of set time or +50ms, whichever is greater					
Start-up Time	Time from when power is applied until unit is timing: 0.02 seconds						
Maintain Function Time	Time unit continues to operate after power is removed: 0.01 seconds						
Repeat Accuracy	Constant voltage and temperature within specifications: ±0.1% or ± 0.04 seconds, whichever is greater	Constant voltage and temperature within specifications: +0.1% of set time or +0.02 seconds, whichever is greater Variable voltage and temperature within specifications: +1% of set time or +0.02 seconds, whichever is greater					

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Timing Charts

T2L Series (-4X Suffix)

Function	Series	Operation	Timing Chart							
ON DELAY Delay on Operate	T2L (-4x Suffix)	Upon application of input voltage, the time delay (t) begins. At the end of the time delay (t), the output is energized. Input voltage must be removed to reset the time delay relay & de-energize the output.	INPUT VOLTAGE OUTPUT		t			t		

Note: Please see inserts for more information

T2L, T2R, & T2S Series

Function	Product Series	Operation	Timing Chart
ON DELAY Delay on Operate	T2L-ND T2R-ND T2S-ND	Upon application of input voltage, the time delay (t) begins. At the end of the time delay (t), the output is energized. Input voltage must be removed to reset the time delay relay & de-energize the output.	INPUT VOLTAGE Image: Colored state OUTPUT t
INTERVAL ON Interval	T2S-TT	Upon application of input voltage, the output is energized and the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Input voltage must be removed to reset the time delay relay.	INPUT VOLTAGE Image: Colored state OUTPUT t
SINGLE SHOT One Shot Momentary Interval	T2R-SST T2S-SST	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output is energized and the time delay (t) begins. During the time delay (t), the trigger is ignored. At the end of the time delay (t), the output is de-energized and the time delay is ready to accept another trigger.	INPUT VOLTAGE TRIGGER OUTPUT t t
OFF DELAY Delay on Release Delay on Break Delay on De-Energization	T2R-FD T2S-FD	Upon application of input voltage, the time delay relay is ready to accept a trigger. When the trigger is applied, the output is energized. Upon removal of the trigger, the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Any applica- tion of the trigger during the time delay will reset the time delay (t) and the output remains energized.	INPUT VOLTAGE TRIGGER OUTPUT <u>t <t t<="" u=""></t></u>

Note: Please see inserts for more information