

# proSense® Relay Timers

## Off-Delay Relay Timers T2R-FD Series

### Overview

The T2R-FD series offers a single off-delay timing function in a cost-effective design and compact size. The T2R-FD series is an ideal choice for many industrial applications. They utilize a microprocessor-based design for reliable performance and maximum flexibility. A 10A SPDT relay output can handle most pilot duty and fractional horsepower loads. All products are encapsulated for robust protection of internal components. This series is offered in a wide range of adjustable timing ranges.

### Features

- Cost effective design and compact 2 x 2in enclosure
- Encapsulated for protection
- 10A SPDT relay output contacts
- 24VAC/VDC and 120VAC/VDC models available



**T2R-FD-30-24AD**

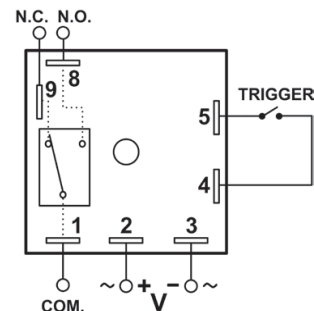
Off-Delay Relay Timers T2R-FD Series						
Part Number	Price	Timer Type	Timing Range	Voltage	Output Type	Drawing Link
<a href="#">T2R-FD-30-24AD</a>	\$43.50	Off-delay	0.1 to 10 seconds	24 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-30J-120A</a>	\$43.50	Off-delay	0.1 to 10 seconds	120 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-31-24AD</a>	\$43.50	Off-delay	1 to 100 seconds	24 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-31J-120A</a>	\$43.50	Off-delay	1 to 100 seconds	120 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-32-24AD</a>	\$43.50	Off-delay	0.1 to 10 minutes	24 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-32J-120A</a>	\$43.50	Off-delay	0.1 to 10 minutes	120 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-33-24AD</a>	\$43.50	Off-delay	1 to 100 minutes	24 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>
<a href="#">T2R-FD-33J-120A</a>	\$43.50	Off-delay	1 to 100 minutes	120 VAC/VDC	(1) SPDT timed relay	<a href="#">PDF</a>

Off-Delay Relay Timers Specifications		
Models	T2R-FD-3x-24AD	T2R-FD-3xJ-120A
<b>Input Specifications</b>		
Nominal Voltage	24VAC/VDC	120VAC/VDC
Nominal Consumption	Maximum 2VA	
Nominal Frequency	50/60 Hz	
Voltage Tolerance	AC operation: +10/-15% of nominal at 50/60 Hz DC operation: +10/-15% of nominal	
<b>Contact Specifications</b>		
Type	(1) SPDT	
Switching Capacity	10A @ 240VAC, 30VDC 7A @ 28VDC SPDT 1/4 HP @ 120VAC (N.O.)	
Electrical Lifetime	Full load: 100,000 operations	
Mechanical Lifetime	10,000,000 operations	
<b>Reset Time</b>		
Triggered with Input Voltage	0.1 seconds	
Functions Triggered with Control Switch	0.04 seconds	
<b>Time Circuit Specifications</b>		
Setting Accuracy	Maximum setting (adjustable): +5%, -0% Minimum setting (adjustable): +0%, -50% Fixed time delay: ±2% or 50ms, whichever is greater	
Start-up Time	Time from when power is applied until unit is timing: 0.05 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	

Off-Delay 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 E191059, CE

\*To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.


### Wiring Diagram



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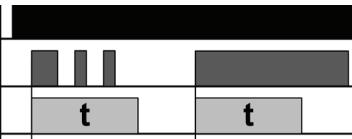
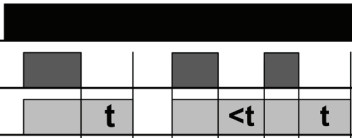
## Timing Charts

### T2L Series (-4X Suffix)

Function	Series	Operation	Timing Chart	
<b>ON DELAY</b> 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	

Note: Please see inserts for more information

### T2L, T2R, & T2S Series

Function	Product Series	Operation	Timing Chart	
<b>ON DELAY</b> 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	
<b>INTERVAL ON</b> 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	
<b>SINGLE SHOT</b> 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	
<b>OFF DELAY</b> 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 application of the trigger during the time delay will reset the time delay (t) and the output remains energized.	INPUT VOLTAGE	

Note: Please see inserts for more information