# **Pr**Sense Relay Timers

## **Off-Delay Relay Timers T2S-FD Series**

### **Overview**

The T2S-FD series offers a single off-delay timing function in a cost-effective design and compact size. The T2S-FD series is an ideal choice for many industrial applications. Models in this series utilize a microprocessor-based design for reliable performance and maximum flexibility. Units feature a 1A continuous/10A inrush solid state output that is perfect for high duty cycle/long life applications All products are encapsulated for robust protection of internal components. This series is offered in a wide range of adjustable timing ranges.

### **Features**

- Three time delay options
- Pushbutton thumbwheels for digital set of time delay and function
- Universal 24-240VAC and 12-125VDC
- 1A continuous, 10A inrush SPNO timed solid state relay output



T2S-FD-30-240A

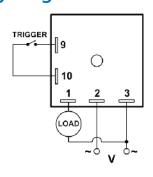
| Off-Delay Relay Timers T2S-FD Series |         |            |                   |            |                                  |              |
|--------------------------------------|---------|------------|-------------------|------------|----------------------------------|--------------|
| Part Number                          | Price   | Timer Type | Timing Range      | Voltage    | Output Type                      | Drawing Link |
| T2S-FD-30-125D                       | \$42.50 | Off-delay  | 0.1 to 10 seconds | 12-125 VDC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-30-240A                       | \$39.50 | Off-delay  | 0.1 to 10 seconds | 24-240 VAC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-31-125D                       | \$42.50 | Off-delay  | 1 to 100 seconds  | 12-125 VDC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-31-240A                       | \$39.50 | Off-delay  | 1 to 100 seconds  | 24-240 VAC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-32-125D                       | \$42.50 | Off-delay  | 0.1 to 10 minutes | 12-125 VDC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-32-240A                       | \$39.50 | Off-delay  | 0.1 to 10 minutes | 24-240 VAC | (1) SPNO timed solid state relay | PDF          |
| T2S-FD-33-125D                       | \$42.50 | Off-delay  | 1 to 100 minutes  | 12-125 VDC | (1) SPNO timed solid state relay | <u>PDF</u>   |
| T2S-FD-33-240A                       | \$39.50 | Off-delay  | 1 to 100 minutes  | 24-240 VAC | (1) SPNO timed solid state relay | PDF          |

| Off-Delay Relay Timers Specifications                      |   |                |  |  |
|--|---|----------------|--|--|
| Models   | T2S-FD-3x-240A  | T2S-FD-3x-125D |  |  |
| Input Specifications                                       |   |                |  |  |
| Nominal Voltage  | 24-240VAC   | 12-125VDC      |  |  |
| Nominal Consumption  | Maximum 1VA   |                |  |  |
| Nominal Frequency  | 50/60 Hz  |                |  |  |
| Voltage Tolerance  | AC operation: +10 to -15% of nominal voltage, 50/60 Hz DC operation: +10 to -15% of nominal voltage                                       |                |  |  |
| Contact Specifications                                     |   |                |  |  |
| Minimum Load Current                                       | 20mA  |                |  |  |
| Туре   | (1) SPNO  |                |  |  |
| Switching Capacity 1A continuous, 10A inrush @ 65°C, pilot |   |                |  |  |
| Electrical Lifetime  | ectrical Lifetime No predictable failure if used within operating param   |                |  |  |
| Reset Time   |   |                |  |  |
| Triggered with Input Voltage                               | 0.05 seconds  |                |  |  |
| Functions Triggered with<br>Control Switch                 | 0.04 seconds  |                |  |  |
| Time Circuit Specifications                                |   |                |  |  |
| Setting Accuracy   | Maximum setting (adjustable): +5%, -0%<br>Minimum setting (adjustable): +0%, -50%<br>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 Rela                   | y Timers Specifications   |  |  |
|----------------------------------|---|--|--|
| General Specifications           |   |  |  |
| Connection                       | 0.25 inch male quick-connect terminals  |  |  |
| Ambient Temperature              | -28 to +65°C<br>[-18 to +149°F]   |  |  |
| Storage Temperature              | -40 to +85°C<br>[-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<br>cURus File E222847                                  |  |  |

<sup>\*</sup>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**



# **Pr**Sense Relay Timers

## **Timing Charts**

#### T2L Series (-4X Suffix)

| Function                  | Series              | Operation  |                            | Timing Chart |
|---------------------------|---------------------|--|----------------------------|--------------|
| ON DELAY Delay on Operate | T2L<br>(-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<br>VOLTAGE<br>OUTPUT | t            |

Note: Please see inserts for more information

## T2L, T2R, & T2S Series

| Function   | Product<br>Series          | Operation  | Timing Chart  |
|--|----------------------------|--|---|
| ON DELAY<br>Delay on Operate                                       | T2L-ND<br>T2R-ND<br>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.   | OUTPUT t t  |
| INTERVAL ON<br>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.   | OUTPUT t t  |
| SINGLE SHOT<br>One Shot<br>Momentary<br>Interval                   | T2R-SST<br>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<br>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 TRIGGER OUTPUT  t <t t<="" td=""></t> |

Note: Please see inserts for more information