**TNL Timers**

The TNL Interval On meets the needs of customers who require IC digital timing circuits with octal, magnal round and QC bases for plug-in installation. The units are available in SPDT and DPDT relay forms up to 10 amp with fixed or adjustable time periods.

**Timing Mode**

Application of input voltage to the timer energizes the load and starts the time delay. At the end of the time delay, the load is de-energized. Removal and re-application of input voltage resets the timer.

**FEATURES**

- CMOS IC digital timing
- Multi-board construction
- Relays are sealed
- Proven circuitry
- Standard octal (8 pin), magnal (11 pin) plug-ins or 4.75 mm (0.187") blade terminal mountings
- Fixed or variable time adjustment
- Optional remote time adjustment
- Timing ranges from 0.1 to 1000 seconds standard (special time settings and ranges up to 72 hours also available)
- ±0.1% Repeat accuracy
- 100% Operational testing before shipping

**SPECIFICATIONS**

- **Input Voltages:** VAC: 24, 120, 230, 50/60Hz  
  VDC: 12, 24  
  *Special AC or DC voltages available*
- **Operating Voltage:** ±20% of nameplate voltage
- **Relay Contact Ratings:** 5 amps DPDT, 10 amps DPDT Optional
- **Repeat Accuracy:** ±0.1% under fixed operating conditions
- **Reset Time:** 50 milliseconds
- **Tolerances:** Fixed: ±10%, Optional: ±5%, ±1%  
  Variable: +20%, -0, Optional: +10%, -0%
- **Life Expectancy:**  
  *Mechanical:* 1 million operations  
  *Electrical:* Up to 100,000 operations at full current load
- **Protection:**  
  *Polarity Protection:* All DC units have reverse polarity protection.  
  *Transient Protection:* 25 joules
- **Temperature Ranges:**  
  *Storage:* -40°C to +85°C  
  *Operating:* -25°C to +65°C
- **Housing Material:** High-impact, UL-approved black Lexan

**PLUG-IN RELAY, IC DIGITAL**
### Examples of Time Ranges

<table>
<thead>
<tr>
<th>Interval On</th>
<th>Series</th>
<th>Input Voltage</th>
<th>Examples of Time Ranges</th>
<th>Tolerance</th>
<th>Time Adjust. Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>TNL</td>
<td>1</td>
<td>120 VAC</td>
<td>0001 0.1 to 1 sec.</td>
<td>Standard</td>
<td>A Variable knob</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>230 VAC</td>
<td>0010 0.1 to 10 sec.</td>
<td></td>
<td>B Variable on timer</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>24 VAC</td>
<td>0100 1 to 100 sec.</td>
<td></td>
<td>C Variable with external potentiometer</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>24 VDC</td>
<td>1000 10 to 1000 sec.</td>
<td></td>
<td>D AOT supplied</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>12 VDC</td>
<td>Any range up to 72 hours</td>
<td>Optional</td>
<td>E Factory-fixed time</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>SPECIAL AC</td>
<td></td>
<td>Optional</td>
<td>F Adjust: +10% -0%</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>SPECIAL DC</td>
<td>Specify time in full seconds or hours followed by the letter “S” or “H” and the decimal amount of the main time unit. Examples: 5S is 5.5 secs</td>
<td>Optional</td>
<td>G Fixed time with customer supplied resistor</td>
</tr>
</tbody>
</table>

### Time Adjusts.

- **A** Standard (Fixed: ±10%, Variable: ±20%, -0%)
- **B** Variable with external potentiometer AOT supplied
- **C** Factory-fixed time
- **D** Fixed time with customer supplied resistor

### Base Style

- **1-8** Pin Round Octal Base
- **2-11** Pin Round Magnal Base
- **3-11** Pin Spade .187 Quick Connect

### Options

- **X** Standard 5 amps
- **H** 10 amps (8 amps UL Recognized for USA and Canada.)

**EXAMPLE:** TNL 3 0010 X A 1 H

This is a “TN” series timer, Interval On, 24 volt AC, 10 second variable time period (standard tolerance), with adjustment knob on timer, 8 pin octal base, 10 amp relay.

*Specifications subject to change without notice.*