

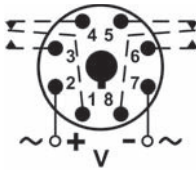
# NON-PROGRAMMABLE | ON DELAY, INTERVAL, TRUE OFF DELAY & FLASHER

## TR-5 SERIES



- ◆ Onboard & remote adjustable or fixed time delays from 0.05 seconds to 2 hours
- ◆ Uses industry-standard 8 pin octal sockets
- ◆ 10A DPDT output contacts



| FUNCTION ■                              | INPUT VOLTAGE<br>50/60Hz.                    | PRODUCT<br>NUMBER **                                     | WIRING/<br>SOCKETS ▲                                                                                                                     |
|-----------------------------------------|----------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ON DELAY</b><br><b>A</b>             | 120V AC/DC<br>12V DC<br>24V AC/DC<br>240V AC | TR-50222-**<br>TR-50226-**<br>TR-50228-**<br>TR-50221-** | 8 PIN OCTAL<br><b>70169-D</b><br><br><b>DIAGRAM 1</b> |
| <b>INTERVAL ON</b><br><b>B</b>          | 120V AC/DC<br>12V DC<br>24V AC/DC<br>240V AC | TR-50522-**<br>TR-50526-**<br>TR-50528-**<br>TR-50521-** |                                                                                                                                          |
| <b>TRUE OFF DELAY</b><br><b>R</b>       | 120V AC/DC<br>12V DC<br>24V AC/DC<br>240V AC | TR-50622-**<br>TR-50626-**<br>TR-50628-**<br>TR-50621-** |                                                                                                                                          |
| <b>FLASHER</b><br>(OFF 1st)<br><b>E</b> | 120V AC/DC<br>12V DC<br>24V AC/DC<br>240V AC | TR-50822-**<br>TR-50826-**<br>TR-50828-**<br>TR-50821-** |                                                                                                                                          |

■ See "Definitions of Timing Functions".

\*\* Complete Product Number using two-digit Code from Table below.

▲ Note: If these products are ordered with the Remote Adjustable Time Delay modification (suffix -Rx), they will require an 11 pin octal socket—see [www.macromatic.com/remote](http://www.macromatic.com/remote) for information. Remote Adjustable Time Delay not available on TR-506 products.

## TIME DELAYS

TR-5 Series Products have three time delay options:

- **Onboard Adjustable Time Delay**--complete Product Number by adding two-digit Code from Table at right, i.e., TR-50222-05 is an On Delay with a time delay range of 0.1-10 seconds.
- **Onboard Fixed Time Delay**--replace two-digit Code with suffix "F" followed by delay [0.1 ... 100] followed by (S) seconds, (M) minutes or (H) hours, i.e., TR-50222-F5S is an On Delay with a time delay fixed at 5 seconds.
- **Remote Adjustable Time Delay**--Selected TR-5 Series products can be built with two terminals for remote adjustable or fixed time delays. See [www.macromatic.com/remote](http://www.macromatic.com/remote) for information.

| ** TIMING RANGE TABLE |      |
|-----------------------|------|
| Time Delay Range      | Code |
| 0.05 - 5 Sec.         | 04   |
| 0.1 - 10 Sec.         | 05   |
| 0.3 - 30 Sec.         | 07✕  |
| 0.6 - 60 Sec.         | 08   |
| 1.2 - 120 Sec.        | 09   |
| 1.8 - 180 Sec.        | 10   |
| 3 - 300 Sec.          | 12   |
| 0.1 - 10 Min.         | 22   |
| 0.3 - 30 Min.         | 15   |
| 0.6 - 60 Min.         | 16✕  |
| 1.2 - 120 Min.        | 17✕  |

✕ Not offered on TR-506

Sockets & Accessories available

Build your Time Delay Relays with the [Online Product Builder](#)



Better. By Design.

**800.238.7474**

[WWW.MACROMATIC.COM](http://WWW.MACROMATIC.COM)

[SALES@MACROMATIC.COM](mailto:SALES@MACROMATIC.COM)

# TR-5 SERIES

## NON-PROGRAMMABLE

### APPLICATION DATA

#### Voltage Tolerance:

AC Operation: +10/-15% of nominal at 50/60 Hz.  
DC Operation: +10/-15% of nominal.

#### Load (Burden):

Maximum of 2 VA for all voltages

#### Setting Accuracy:

Maximum Setting (Adjustable): +5%, -0%  
Minimum Setting (Adjustable): +0%, -50%  
Fixed Time Delay:  $\pm 2\%$  or 50ms, whichever is greater

**Repeat Accuracy** (constant voltage and temperature):  
 $\pm 0.1\%$  or  $\pm 0.04$  seconds, whichever is greater

#### Reset Time:

|                               |               |
|-------------------------------|---------------|
| Input Voltage (All Functions) | 0.100 Seconds |
| Triggered Functions only      | 0.04 Seconds  |

#### 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 for all units

**Temperature:** Operating: -28° to 65°C (-18° to 149°F)  
Storage: -40° to 85°C (-40° to 185°F)

#### Output Contacts:

(All TR-5 Series Products except TR-506 & TR-546)  
DPDT 10A @ 240V AC/30V DC,  
1/2HP @ 120/240V AC (N.O.), 1/3HP @ 120/240V AC (N.C.)  
B300 & R300; AC15 & DC13

(TR-506 & TR-546)  
DPDT 10A @ 240V AC; 8A @ 28V DC,  
1/2 HP @ 240V AC, 1/4HP @ 120V AC  
B300 & R300

#### Life:

Mechanical: 10,000,000 operations (2,000,000 operations  
on TR-506 & TR-546 Series only)  
Full Load: 100,000 operations

#### Compatibility:

Using a solid state switch to initiate the time sequence is acceptable. See [www.macromatic.com/leakage](http://www.macromatic.com/leakage) or contact Macromatic for information regarding leakage current limits and other solid state design considerations.

#### Triggering Off Delay, Single Shot or Watchdog Units:

Timing sequence must be initiated only after input voltage is applied to unit. Minimum required trigger switch closure time is 0.05 seconds.

**IMPORTANT FOR TR-506 & TR-546 SERIES ONLY:** These relays are shipped from the factory in the OFF state. A shock to the relay during shipping or installation may cause it to change to the ON state. It is recommended that input voltage be applied to the product for at least 0.1 second and removed to cycle the unit to the OFF state prior to use in the application. Please note that it will take as long as the OFF Delay setting to reset the unit once input voltage has been removed.

#### Approvals:

(All TR-5 Series Products  
except TR-506 & TR-546)

  
File #E109466 File #LR45565

(TR-506 & TR-546 only)

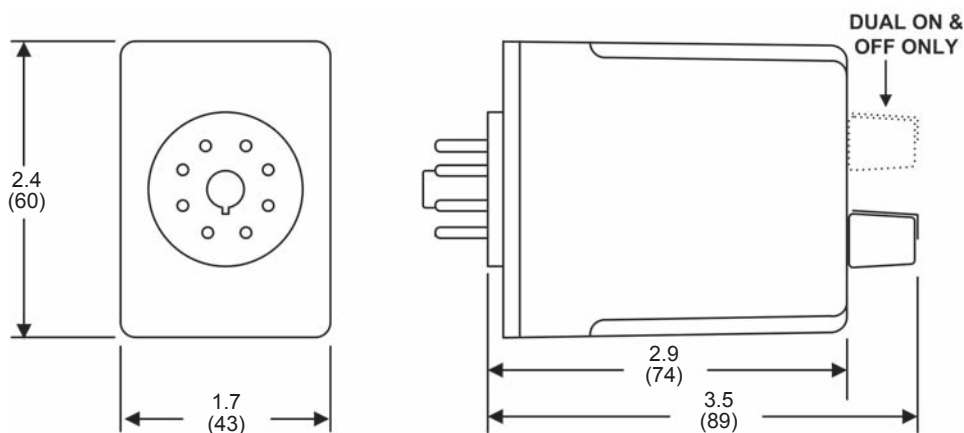
  
File #E109466

(All TR-5 Series  
Products)

  
Low Voltage &  
EMC Directives  
EN60947-1, EN60947-5-1

 **LISTED**  
IND. CONT. EQUIP.  
SOUT.  
with  
appropriate  
socket  
File #E109466

### DIMENSIONS



All Dimensions in  
Inches (Millimeters)