# timers

## **Delay On Break (Release)**

# **TSB Series**

## **Timing Module**







- Totally Solid State Encapsulated
- Fixed or Adjustable Delays From 0.05 ... 600 s in 4 Ranges
- +/- 2% Repeat Accuracy
- +/-5% Factory Calibration

Approvals: 71 (F)





## Accessories



External adjust potentiometer P/Ns: P1004-95 (fig A) P1004-95-X (fig B)



Mounting bracket P/N: **P1023-6** 



Female quick connect P/N: P1015-64 (AWG 14/16)



Quick connect to screw adaptor P/N: P1015-18



Versa-knob P/N: **P0700-7** 



P/N: P1023-20

See accessory pages for specifications.

## **Description**

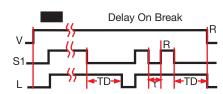
The TSB Series is a totally solid state delay on break timing module. The TSB is available with a fixed, external, or onboard adjustable time delay. Time Delays from .05 to 600 seconds, in 4 standard ranges, cover over 90% of all OEM and commercial appliance timing applications. The repeat accuracy is  $\pm -2\%$ . Operating voltages of 24,120, or 230 V AC are available. The TSB's 1A steady state, 10A rated solid state output is perfect for direct control of solenoids, contactors, relays, lamps, buzzers, and small heaters. The TSB can be surface mounted with a single screw, or snapped on 35 mm DIN rail using the P1023-20 adaptor.

#### Operation

Input voltage must be applied before and during timing. Upon closure of the initiate switch, the output energizes. The time delay begins when the initiate switch opens. The output remains energized during timing. At the end of the time delay, the output de-energizes. The output will energize if the initiate switch is closed when input voltage is applied.

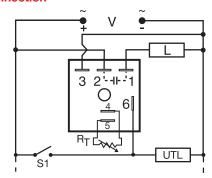
Reset: Reclosing the initiate switch during timing resets the time delay. Loss of input voltage resets the output and the time delay.

#### **Function**



V = Voltage L = Load S1 = Initiate Switch TD = Time Delay R = Reset t = Incomplete Time Delay → = Undefined time

### Connection



R\_ is used when external adjustment is ordered. Dashed lines are internal connections. S1 = Initiate Switch UTL = Optional Untimed Load L = Load

### **Ordering Table**

TSB Series

Input -2 - 24 V AC 4 - 120 V AC -6 - 230 V AC

Adjustment -1 - Fixed External

Adjust - Onboard Adjust

Time Delay\*

**-1 -** 0.05 ... 3 s **-2 -** 0.5 ... 60 s 2 ... 180 s 5 ... 600 s

Example P/N: TSB422 Fixed - TSB410.5

\* If Fixed Delay is selected, insert delay [0.05 ... 600] in seconds.