# TS2 / TS6 SERIES







TS<sub>6</sub>

TS2

**Description** 

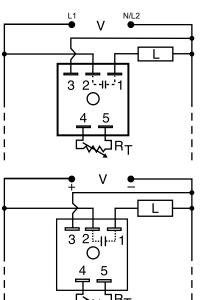
sensitive applications. Operation (Interval)

Upon application of input voltage, the time delay begins. The output energizes during the time delay. At the end of the time delay, the output de-energizes and remains de-energized until input voltage is removed.

The TS2 Series is designed for 24, 120 or 230VAC and the TS6 Series is designed for 12 or 24VDC. These series are capable of controlling load currents of up to 1A steady state, 10A inrush. Encapsulated circuitry and the reliability of a ±2% repeat accuracy make the TS2 and TS6 ideal for cost

Reset: Removing input voltage resets the time delay and the output.

# Wiring Diagram



V = VoltageL = Load

R<sub>T</sub> is used when external adjustment is ordered.

Note: TS6 is not reverse polarity protected.

### **Features & Benefits**

FEATURES	BENEFITS
Analog circuitry	Repeat accuracy $+/-2\%$ , Factory calibration $+/-10\%$
Totally solid state and encapsulated	No moving parts to arc and wear out over time and encapsulated to protect against shock, vibration, and humidity
1A steady, 10A inrush solid-state output	Provides 100 million operations in typical conditions
Rated for operation up to 75°C	Can be used in the harshest environments

### **Accessories**



P1004-XX (fig. A), P1004-XX-X (fig. B) Versa-Pot Panel mountable, industrial potentiometer recommended for remote time delay adjustment.



#### P1023-6 Mounting bracket

The 90° orientation of mounting slots makes installation/removal of modules quick and easy.



#### P0700-7 Versa-Knob

Designed for 0.25 in (6.35 mm) shaft of Versa-Pot. Semi-gloss industrial black finish.

# **Ordering Information**

MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY	SWITCHING MODE	MODEL	INPUT VOLTAGE	ADJUSTMENT	TIME DELAY	SWITCHING MODE
TS22120	24VAC	Fixed	20s	n/a	TS2424	120VAC	External	5 - 600s	n/a
TS2223	24VAC	External	2 - 180s	n/a	TS6116P	12VDC	Fixed	6s	Positive
TS2412	120VAC	Fixed	2s	n/a	TS6122P	12VDC	External	0.5 - 20s	Positive
TS24130	120VAC	Fixed	30s	n/a	TS6123P	12VDC	External	2 - 60s	Positive
TS2421	120VAC	External	0.05 - 3s	n/a	TS6321P	24VDC	External	0.05 - 3s	Positive
TS2422	120VAC	External	0.5 - 60s	n/a	TS6323P	24VDC	External	2 - 180s	Positive
TS2423	120VAC	External	2 - 180s	n/a					

If you don't find the part you need, call us for a custom product 800-843-8848



# TS2 / TS6 SERIES

### **Accessories**



#### P1015-64 (AWG 14/16) **Female Quick Connect**

These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



### P1015-18 Quick Connect to Screw Adapter

Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



#### C103PM (AL) DIN Rail

35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.



#### P1023-20 DIN Rail Adapter

Allows module to be mounted on a 35 mm DIN type rail with two #10 screws.



### VTP(X)(X) Plug-on Adjustment Module

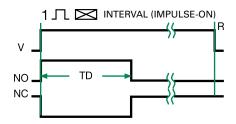
Mounts on modules with in-line adjustment terminals. Rated at 0.25W at 55°C. Available in resistance values from  $5K\Omega$  to  $5M\Omega$ .

#### Selection Table for VTP Plug-on Adjustment Accessory

TS6 12VDC					
D.		Versa-Pot (potentiometer)			
Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N		
<b>1</b> - 0.05-1s	VTP2A	P1004-16	P1004-16-X		
<b>2</b> - 0.5-20s	VTP2E	P1004-16	P1004-16-X		
<b>3</b> - 2-60s	VTP2F	P1004-16	P1004-16-X		
<b>4</b> - 5-120s	VTP2H	P1004-16	P1004-16-X		

TS2 & TS6 All Other Voltages					
·	1.555.571	Versa-Pot (potentiometer)			
Time Delay	VTP P/N	Fig. A P/N	Fig. B P/N		
<b>1</b> - 0.05-3s	VTP4B	P1004-12	P1004-12-X		
<b>2</b> - 0.5-60s	VTP4F	P1004-12	P1004-12-X		
<b>3</b> - 2-180s	VTP4J	P1004-12	P1004-12-X		
<b>4</b> - 5-600s	VTP5N	P1004-13	P1004-13-X		

# **Function Diagram**



V = Voltage

NO = Normally

Open Contact

NC = Normally

**Closed Contact** TD = Time Delay

R = Reset

= Undefined Time

### Selection Guide

R <sub>T</sub> Selection Chart							
Des	B						
	Seconds						
1	2	3	4	Megohm			
0.05	0.5	2	5	0.0			
0.5	10	30	60	0.5			
1.0	20	60	120	1.0			
_	▼ 24VDC or AC ONLY†						
1.5	30	90	180	1.5			
2.0	40	120	240	2.0			
2.5	50	150	300	2.5			
3.0	60	180	360	3.0			
			420	3.5			
			480	4.0			
			540	4.5			
			600	5.0			

<sup>\*</sup> When selecting an external R<sub>T</sub> add at least 20% for tolerance of unit and the R<sub>T</sub>.
† 1 Megohm max for 12 VDC Units

## **Specifications**

#### **Time Delay**

Type

Range 12VDC

Other Voltages

**Repeat Accuracy** 

**Tolerance** 

(Factory Calibration)

Time Delay vs Temp.

& Voltage

**Reset Time** 

Input

Voltage **Tolerance** 

DC Ripple

**Power Consumption** 

Output

Type Form

**Maximum Load Current** 

**Voltage Drop** 

**Protection** 

Circuitry **Polarity** 

Dielectric Breakdown **Insulation Resistance** 

Mechanical

Mounting

**Dimensions** 

**Termination Environmental** 

Operating/Storage

**Temperature** 

Humidity

Weight

Analog circuitry

0.05 - 120s in 4 adjustable ranges or fixed

(1 M $\Omega$  max. R<sub>T</sub>)

0.05 - 600s in 4 adjustable ranges or fixed

±2% or 20ms, whichever is greater

 $\leq \pm 10\%$ 

 $\leq \pm 10\%$ 

≤ 150ms

12 or 24VDC; 24 or 20VAC

±15%

10%

 $DC \le 1W$ ;  $AC \le 2VA$ 

Solid state

NO, closed during timing

1A steady state, 10A inrush at 60°C

 $DC \approx 1.0V @ 1A; AC \approx 2.5V @ 1A$ 

Encapsulated

TS6 is not reverse polarity protected

≥ 2000V RMS terminals to mounting surface

 $\geq 100 \text{ M}\Omega$ 

Surface mount with one #10 (M5 x 0.8) screw

**H** 50.8 mm (2"); **W** 50.8 mm (2");

**D** 30.7 mm (1.21")

0.25 in. (6.35 mm) male quick connect terminals

 $\approx 2.4 \text{ oz } (68 \text{ g})$