

Single Shot (Pulse Former) TSS Series Timing Module

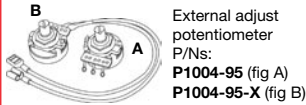


10
YEAR
WARRANTY

- Expands or Decreases Switch Closures
- Momentary or Maintained Initiate Switch
- Totally Solid State
- Encapsulated to Protect Against Shock & Vibration
- Fixed or Adjustable Delays From 0.05 ... 600 s in 4 Ranges
- +/-2% Repeat Accuracy
- +/-5% Factory Calibration

Approvals:

Accessories



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



Mounting bracket
P/N: P1023-6



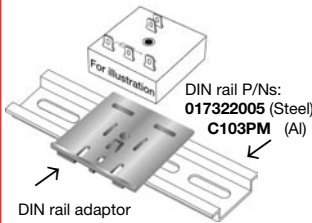
Female quick connect
P/N:
P1015-64 (AWG 14/16)



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



Versa-knob
P/N: P0700-7



DIN rail adaptor
P/N: P1023-20

See accessory pages for specifications.

Description

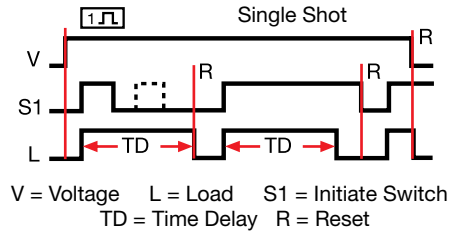
The TSS is a totally solid state timing module. Its 1 A rated solid state output provides an excellent method of time control for exposures, dispensing, or for increasing or decreasing a switch closure. Time delays from 0.05 to 600 seconds, in 4 ranges, cover 90% of all OEM applications. Factory calibration of fixed delays is +/-5% and the repeat accuracy is +/-2%. The TSS can be surface mounted with a single screw, or snapped on a 35mm DIN rail using the P1023-20 accessory adaptor.

Operation

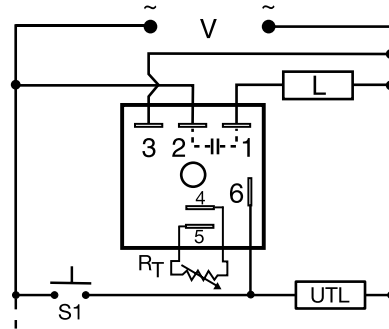
Voltage must be applied before and during timing. Upon momentary or maintained closure of the initiate switch, the output energizes for a measured interval of time. At the end of the delay, the output de-energizes. Opening or reclosing the initiate switch during timing has no effect on the time delay. The output will energize if the initiate switch is closed when input voltage is applied.

Reset: Reset occurs when the time delay is complete and the initiate switch opens. Loss of input voltage resets the time delay and output.

Function



Connection



R_T is used when external adjustment is ordered. Dashed lines are internal connections.

S1 = Initiate Switch L = Timed Load
UTL = Optional Untimed Load

Ordering Table

TSS Series	X Input	X Adjustment	X Time Delay*
	-2 - 24 V AC	-1 - Fixed	-1 - 0.05 ... 3 s
	-4 - 120 V AC	-2 - External Adjust	-2 - 0.5 ... 60 s
	-6 - 230 V A	-3 - Onboard Adjust	-3 - 2 ... 180 s
			-4 - 5 ... 600 s

Example P/N: TSS422 Fixed – TSS410.5

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

Single Shot (Pulse Former)

TSS Series

Timing Module

Dedicated
timers

Technical Data

Time Delay	
Range	0.05 s ... 600 s in 4 adjustable ranges or fixed
Repeat Accuracy	+/-2% or 20 ms, whichever is greater
Tolerance (Factory Calibration)	≤ +/-5%
Reset Time	≤ 150 ms
Initiate Time	≤ 20 ms
Time Delay vs. Temperature & Voltage	≤ +/-10%
Input	
Voltage	24, 120, or 230 V AC
Tolerance	+/-20%
Line Frequency	50 ... 60 Hz
Power Consumption	≤ 2 VA
Output	
Type	Solid state
Form	Normally Open, closed during timing
Maximum Load Current	1 A steady state, 10 A inrush at 60°C
Off State Leakage Current	≅ 5 mA at 230 V AC
Voltage Drop	≅ 2.5 V at 1 A
Protection	
Circuitry	Encapsulated
Dielectric Breakdown	≥ 2000 V RMS terminals to mounting surface
Insulation Resistance	≥ 100 MΩ
Mechanical	
Mounting	Surface mount with one #10 (M5 x 0.8) screw
Package	2 x 2 x 1.21 in. (50.8 x 50.8 x 30.7 mm)
Termination	0.25 in. (6.35 mm) male quick connect terminals
Environmental	
Operating Temperature	- 40°C ... +75°C
Storage Temperature	- 40°C ... +85°C
Humidity	95% relative, non-condensing
Weight	≅ 2.4 oz (68 g)

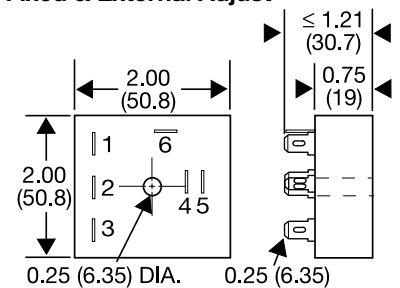
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Desired Time Delay*					R _T
Seconds					
1	2	3	4		Kohms
0.05	0.5	2	5		0
0.3	6	20	60		10
0.6	12	38	120		20
0.9	18	55	180		30
1.2	24	73	240		40
1.5	30	90	300		50
1.8	36	108	360		60
2.1	42	126	420		70
2.4	48	144	480		80
2.7	54	162	540		90
3.0	60	180	600		100

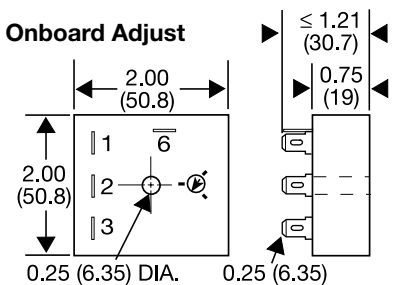
* When selecting an external R_T add at least 20% for tolerance of unit and the R_T.

Mechanical View

Fixed & External Adjust



Onboard Adjust



Inches (Millimeters)