

Single Shot, Interval (Pulse Former) TRS Series Time Delay Relay



5

- Knob Adjustable Time Delays
- Fixed or Adjustable Delays
From 0.05 ... 600 s in Ranges
- Analog Circuitry +/-2% Repeat Accuracy
- AC and DC Operating Voltages are Available
- 10 A, Isolated SPDT and DPDT Contacts

Approvals:

** 8 pin models used in combination with P1011-6 socket only.

Description

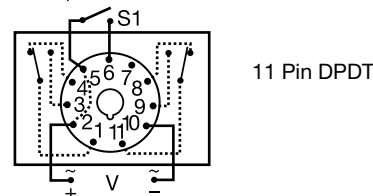
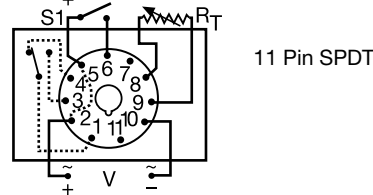
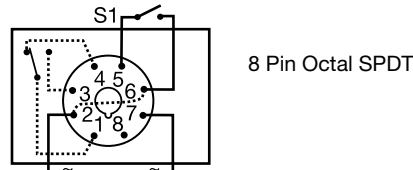
The TRS Series combines a 10 A isolated electromechanical relay output with analog timing circuitry. False trigger of the TRS by a transient is unlikely because of the complete isolation of the circuit from the line prior to initiation. The initiate contact is common to one side of the line and may be utilized to operate other loads. Installation is easy due to the TRS's industry standard 8 or 11 pin plug-in base wiring.

Operation

Input voltage must be applied to the input before and during timing. Upon momentary or maintained closure of the initiate switch (leading edge triggered), 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. Applying input voltage with the initiate switch closed will energize the load and begin the time delay.

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

Connection

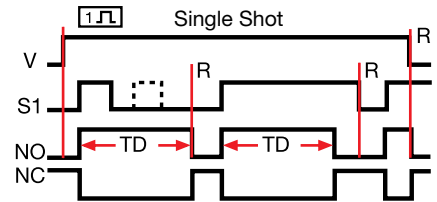


S1 = Initiate Switch

Relay contacts are isolated. Dashed lines are internal connections.

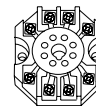
R_T is used when external adjustment is ordered.

Function

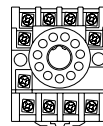


V = Voltage S1 = Initiate Switch
TD = Time Delay R = Reset
NO = Normally Open NC = Normally Closed

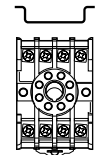
Accessories



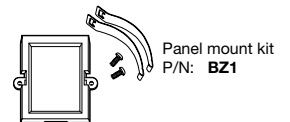
Octal socket for UL Listing
P/N: P1011-6



11 pin socket
P/N: NDS-11



Octal 8 pin socket
P/N: NDS-8



See accessory pages for specifications.

Ordering Table

TRS Series

X	Input
24A	24 V AC
24D	24 V DC / 28 V DC
110D	110 V DC
120A	120 V AC
230A	230 V AC

X	Adjustment and Output Form
1	Fixed, Octal, SPDT (AC Volts only)
10	Fixed, 11 Pin, DPDT
2	Knob Adjust, Octal, SPDT (AC Volts only)
3	Lock Shaft Adjust, Octal, SPDT (AC Volts only)
4	Knob Adjust, 11 Pin, DPDT
7	Ext. Adjust, 11 Pin, SPDT without Potentiometer

X	Time Tolerance
X	+/-20%
Y	+/-10%
Z	+/- 5%

X	Time Delay* (Seconds)
0.05 ...	1
0.05 ...	2
0.05 ...	3
0.1 ...	5
0.1 ...	10
1 ...	30
1 ...	60
2 ...	120
2 ...	180
7 ...	240
7 ...	300
7 ...	360
7 ...	420
7 ...	480
7 ...	600

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

Example P/N:

TRS120A2Y30 = 120 VAC, knob adjust, Octal, SPDT output, +/-10%, 1 to 30 s
TRS24D10Y600 = 24 VDC, fixed at 600 s, +/-10%, 11 pin base, DPDT output

Single Shot, Interval (Pulse Former)

TRS Series

Time Delay Relay

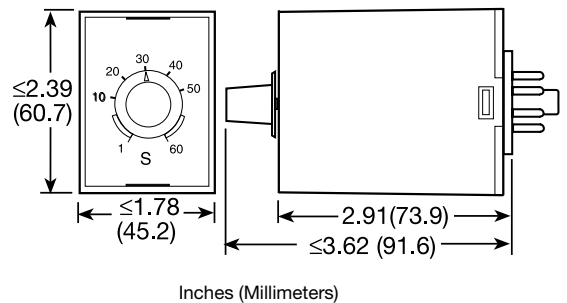
Dedicated
timers

Technical Data

Time Delay Type Range Repeat Accuracy Fixed Time Tolerance & Setting Accuracy Initiate Time Reset Time Recycle Time Time Delay vs. Temperature & Voltage	Analog circuitry 50 ms ... 10 m in 15 adjustable ranges or fixed +/-2% or 20 ms, whichever is greater +/-5, 10, or 20% ≤ 70 ms ≤ 75 ms ≤ 250 ms ≤ +/-10%
Input Voltage Tolerance Frequency Power Consumption	24 or 110 V DC; 24, 120, or 230 V AC (DC voltages on DPDT output models only) -15% ... +20% -20% ... +10% 50 ... 60 Hz ≤ 3.25 W
Output Type Form Rating Life	Electromechanical relay Isolated SPDT or DPDT 10 A resistive at 120/240 V AC & 28 V DC; 1/3 hp at 120/240 V AC Mechanical: 1 x 10 ⁷ ; Electrical: 1 x 10 ⁶
Protection Insulation Resistance Isolation Voltage Polarity	≥ 100 MΩ ≥ 1500 V RMS between input & output terminals DC units are reverse polarity protected
Mechanical Mounting Termination Package	Plug-in socket 8 Pin octal or 11 Pin plug-in 3.62 x 2.39 x 1.78 in. (91.6 x 60.7 x 45.2 mm)
Environmental Operating Temperature Storage Temperature Weight	-20°C ... +65°C -30°C ... +85°C ≅ 6 oz (170 g)

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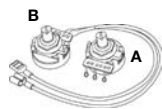
Mechanical View



Time Delay*	
Range	R _T
Seconds	Megohm
0.05...1	1.0
0.05...2	2.0
0.05...3	3.0
0.1...5	5.0
0.1...10	3.0
1...30	1.5
1...60	3.0
2...120	2.0
2...180	3.0
7...240	1.5
7...300	2.0
7...360	2.0
7...420	3.0
7...480	3.0
7...600	5.0

* When selecting an external R_T add at least 15...30% for tolerance of unit and the R_T.

Accessories



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



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

External R_T P/N Selection Table

Figure	Value	Part Number
A	1 M ohm	P1004-16
A	1.5 M ohm	P1004-15
A	2 M ohm	P1004-14
A	3 M ohm	P1004-12
A	5 M ohm	P1004-13
B	1 M ohm	P1004-16-X
B	1.5 M ohm	P1004-15-X
B	2 M ohm	P1004-14-X
B	3 M ohm	P1004-12-X
B	5 M ohm	P1004-13-X