Time Delay Relays
DEDICATED - DELAY-ON-BREAK

TRB Series

Description

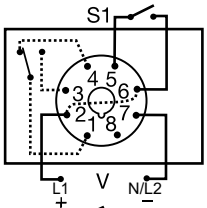
The TRB series combines an isolated, 8 A electromechanical relay output with digital timing circuitry. False trigger of the TRB by a transient is unlikely because of the complete isolation of the circuit from the line prior to initiation. The initiate contact is common to one side of the line and may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

Operation (Delay-on-Break)

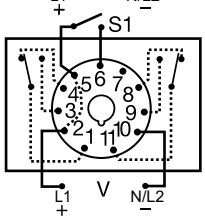
Input voltage must be applied before and during timing. Upon closure of the initiate switch, the output relay energizes. The time delay begins when the initiate switch is opened (trailing edge triggered). The output remains energized during timing. At the end of the time delay, the output de-energizes. 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 time delay and output.

Wiring Diagram



8-pin octal SPDT



11-pin DPDT

Features & Benefits

FEATURES	BENEFITS
Complete isolation of circuit from line	No false trip due to transients
Industry standard 8 or 11-pin connection	Provides easy installation and field replacement
Isolated, 8 A, SPDT or DPDT output contacts	Allows control of loads with independent voltage sources
Digital circuitry	Repeat accuracy +/- 2 %

Ordering Information

MODEL	INPUT VOLTAGE	ADJUSTMENT	OUTPUT FORM	TIME TOLERANCE	TIME DELAY
TRB120A2Y30	120 V ac	Onboard	Octal, SPDT	+ /- 10 %	1–30 s
TRB120A3X600	120 V ac	Lock shaft	Octal, SPDT	+ /- 20 %	7–600 s
TRB120A4Y120	120 V ac	Onboard	11-pin, DPDT	+ /- 10 %	2–120 s
TRB24D10Y10	24 V dc/28 V dc	Fixed	11-pin, DPDT	+ /- 10 %	10 s

Accessories

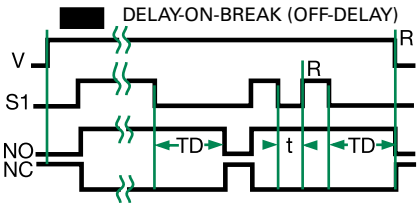
OT08PC 8-pin Octal Socket for UL listing*
8-pin 35 mm DIN-rail or surface mount. Rated at 10 A @ 600 V ac. Surface mounted with two #6 screws or snaps onto a 35 mm DIN rail.

OT11PC Octal Socket for UL listing*
11-pin surface & DIN rail mountable. Rated for 10 A @ 300 V ac

P1011-6 Octal Socket for UL listing*
8-pin surface mount socket with binder head screw terminals. Rated 10 A @ 600 V ac.

C103PM (AL) DIN Rail
35 mm aluminum DIN rail available in a 36 in. (91.4 cm) length.

Function Diagram



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

Specifications

Time Delay	
Type	Digital circuitry
Range	See "Ordering Information" table
Repeat Accuracy	±2 %
Fixed Time Tolerance & Setting Accuracy	±5, 10, or 20 %
Initiate Time	≤ 70 ms
Reset Time	≤ 75 ms
Recycle Time	≤ 250 ms
Time Delay vs Temp. & Voltage	≤±5 %
Input	
Voltage	24/28 V dc; 120 V ac
Indicator	LED indicates relay is energized
Tolerance	
24V dc/ac	-15 %–20 %
120 V ac	-20 %–10 %
AC Line Frequency	50/60 Hz
Power Consumption	≤ 3.25W
Output	
Type	Electromechanical relay
Form	Isolated SPDT or DPDT
Rating	8 A resistive @ 120/240 V ac 1/3 hp @ 120/240 V ac
Life	Mechanical - 1 x 10^7; Electrical - 1 x 10^6
Protection	
Insulation Resistance	≥ 100 MΩ
Isolation Voltage	≥ 1500 V rms between input to output
Polarity	Dc units are reverse polarity protected
Mechanical	
Mounting	Plug-in socket
Dimensions	**H** 44.45 mm (1.75"); **W** 60.33 mm (2.38"); **D** (with socket) 104.78 mm (4.13")
Termination	Octal 8-pin plug-in or 11-pin plug-in
Environmental	
Operating/Storage Temperature	-20 °C to 65 °C / -30 °C to 85 °C
Weight	≅ 4 oz (113 g)
Safety Marks	
UL (socket required)*	UL 508 (E57310)

*UL Listed when used with Part Number OT08-PC, RB08-PC, OT11-PC, or RB11-PC manufactured by Custom Connector Corp.

Note: Manufacturer's recommended screw terminal torque for the OT series sockets is 12 in-lbs.

Mouser Electronics

Authorized Distributor

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Littelfuse:

TRB120A3X600 TRB120A2Y30 TRB120A4Y120