DATA COMM FOR BUSINESS

Relay Operational Time Tester RTT-1

RTT Relay Operational Time Tester

FEATURES

- **Measures Relay Activation times in milliseconds**
- **Minimum, Maximum and Average Time**
- **For Power Protection Relaying and Transfer Trip Operational Time Testing**
- **Use to Bench Test TDM versus Packet Network Performance**
- **12 to 60 VDC**
- **Serial port for configuration and results**
- **Indicators for Power and Relay Activation**
- **Small, compact enclosure**

DESCRIPTION

The Relay Operation Time Tester (RTT-1) is a small, compact device that will activate DC relays and measure the relay activation time.

The Output connection turns a relay On. The Input connection measures the time from the Output turning on until the Input turns on. Time is in milliseconds. The internal time resolution is 25 microseconds.

The typical application of the RTT is to measure the time it takes to propagate a Relay On event at one end of a communications link to the corresponding Relay On event at the other end of a communications link. These are typically bench tests where the near end relays and the far end relays are on the same test bench.

The RTT-1 has the following options:

g – go once (a one shot relay event)
r – run continuous
s – stop run
c – clear stats
w – save config (write to memory)
h – help (displays the help screen)
-+ adjust pulse (1 to 1000 ms)
< > adjust delay (10 to 1000 ms)

The RTT-1 is typically connected to a 48v relay. As the the Output "Pulse Width"is increased, the Input "pulse" time value increases. If the relay is slow and the pulse width is set too small, the result in an “error”.

When running continuous, the stats will only be displayed if the "Delay Time" is 500ms or more. If the “Delay Time” is set for less than 500 ms, the stats will be displayed only in summary and only after the ”Stop Run” command.

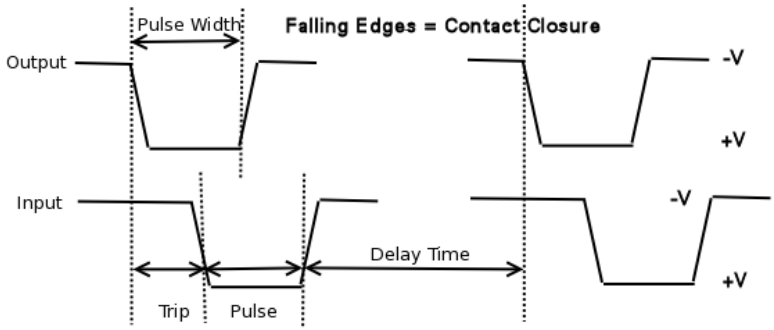
Sample Results:

Once:
test: 1, fail: 0
trip: 4ms, min: 4ms, max: 4ms, avg: 4ms
pulse: 9ms, min: 9ms, max: 9ms, avg: 9ms

Continuous with Delay Time < 500 ms
test: 53, fail: 0
trip: 4ms, min: 4ms, max: 4ms, avg: 4ms
pulse: 19ms, min: 19ms, max: 19ms, avg: 19ms

Continuous with Delay Time > or = 500 ms
test: 57, fail: 0
trip: 4ms, min: 4ms, max: 4ms, avg: 4ms
pulse: 19ms, min: 19ms, max: 19ms, avg: 19ms
test: 58, fail: 0
trip: 4ms, min: 4ms, max: 4ms, avg: 4ms
pulse: 19ms, min: 19ms, max: 19ms, avg: 19ms
etc. until a “Stop Run” command is received

SPECIFICATIONS



Product I/O, Indicators, Controls

I/O
- Power In, 12 to 60 VDC
- Power In powers unit and the Output +/-
- Output +/- to control relay On/Off state
- Input +/- used to read relay On/Off status
- Measures Relay on time in milliseconds with 25 microsecond accuracy

Indicators (front panel)
- Power and relay input

Controls
- Serial RS232 port @ 9600 bps, 8,N,1

Physical/Electrical
Power requirements: 12 to 60 VDC
User provides desired power supply (12 to 60 VDC) to match relays being tested. Power supply for relay and the RTT-1
Maximum 0.3 amp load for relay due to RTT-1 FET limit
5"" x 3" x 1"
0.25 lb

Environmental
- Operating Temp: -40º to +85º C
- Storage Temperature: -50º to +95º C
- Humidity: <95% Non-condensing

Ordering:
Part Number: RTT-1

Power and Serial Control Port

Relay Control I/O and Indicators

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