

**1-8** TIME DELAY RELAYS

# Delay On Make (Series Load)

## Q1T Series

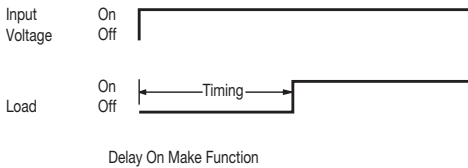
### FEATURES

- 100% functionally tested
- Solid state digital timing
- 20:1 maximum to minimum timing ratio
- Compact size
- Low cost
- Superior transient protection
- Epoxy encapsulated
- Flame-retardant and solvent-resistant polyester thermoplastic housing
- Trimpot on-board with sealed cermet element
- File #E65038

**Operating Logic:** Upon application of input voltage, the time delay starts. At the end of the time delay, the load is energized. Reset is accomplished by removing input voltage.

*Note: The load may be located on either side of the line*

### LOGIC FUNCTION DIAGRAM



### SPECIFICATIONS

#### TIME DELAY

**Adjustment:** On-board Trimpot

**Range:** 50 ms to 10 hours in 9 ranges

**Repeatability:**  $\pm 5\%$  +8 ms max. (0.25% typical) at constant temperature

**Accuracy:** Maximum time -0%, +10%; Minimum time -30%, +0%

#### INPUT

**Operating Voltage:** 12, 24, 120, 240 VAC/DC  $\pm 10\%$  (on DC models, unfiltered supply voltage must be full-wave rectified)

**Frequency:** 50/60 Hz

#### OUTPUT

**Type:** Solid state normally open series load

**Rating:** Maximum current -1 A AC/DC (resistive or inductive)

**Life:** 100,000,000 operations

#### PROTECTION

**Transient Voltage:** Metal oxide varistor (see ratings below)

**Dielectric Breakdown:** 3000 VAC, RMS, terminals to mounting

**Isolation Resistance:** 100 megohms min. between terminals and case

#### MECHANICAL

**Termination:** .25" x .032" male fast-on terminals

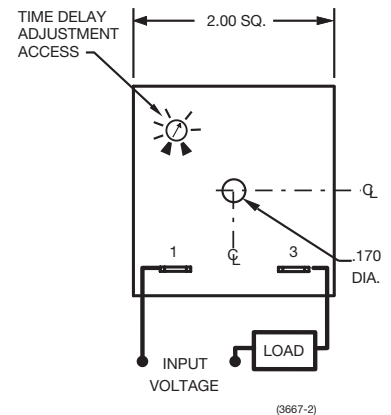
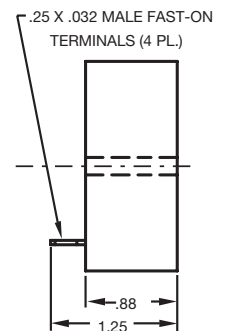
**Mounting:** Surface mount with one #8 screw

#### ENVIRONMENTAL

**Storage Temperature:** -40°C to 85°C

**Operating Temperature:** -40°C to 65°C

**Humidity:** 95% relative



### ORDERING INFORMATION

TIME RANGE	12 VAC/DC $\pm 10\%$	24 VAC/DC $\pm 10\%$	120 VAC/DC $\pm 10\%$	240 VAC/DC $\pm 10\%$
.05 to 1 sec.	Q1T-00001-316	Q1T-00001-317	Q1T-00001-311	Q1T-00001-315
.25 to 5 sec.	Q1T-00005-316	Q1T-00005-317	Q1T-00005-311	Q1T-00005-315
.5 to 10 sec.	Q1T-00010-316	Q1T-00010-317	Q1T-00010-311	Q1T-00010-315
3 to 60 sec.	Q1T-00060-316	Q1T-00060-317	Q1T-00060-311	Q1T-00060-315
15 to 300 sec.	Q1T-00300-316	Q1T-00300-317	Q1T-00300-311	Q1T-00300-315
30 to 600 sec.	Q1T-00600-316	Q1T-00600-317	Q1T-00600-311	Q1T-00600-315
180 to 3600 sec.	Q1T-03600-316	Q1T-03600-317	—	—
.5 to 10 hrs.	Q1T-36000-316	—	—	—

TIME RANGE	24 to 240 VAC/DC $\pm 10\%$
24 to 480 sec.	Q1T-00480-31M

	12 VAC/DC $\pm 10\%$	24 VAC/DC $\pm 10\%$	120 VAC/DC $\pm 10\%$	240 VAC/DC $\pm 10\%$
Reset time, during timing	125 ms	125 ms	125 ms	125 ms
Reset time, after timeout	10 ms	10 ms	10 ms	10 ms
Min. load	10mA DC, 60 mA AC	10mA DC, 40 mA AC	10 mA	10 mA
Max. leakage current	2 mA	4 mA	2 mA	2 mA
Voltage drop at 1 A	3.3 V max.	3.3 V max.	3.3 V max.	3.3 V max.
Power consumption	0.25 VA max.	0.25 VA max.	0.5 VA max.	0.5 VA max.
Peak 1 cycle surge	4 A	4 A	20 A	20 A
Protection	8.8j. MOV	8.8j. MOV	30j. MOV	30j. MOV

Consult factory for any special requirements not listed in catalog (minimum order requirement may apply).