

VTM1 Series, On-Delay, Timing Module



Product Facts

- On-delay timing mode
- Reliable solid state timing circuitry
- Excellent transient protection
- Compact design
- Flame retardant, solvent resistant housing
- File E60363, File LR33434



Timing Specifications

Timing Mode — On-Delay

Timing Ranges — 0.5 to 10 / 3 to 60 sec.; 0.5 to 10 / 3 to 60 min.

Timing Range Selection —

Screwdriver select via recessed 8-position selector dial.

Timing Adjustment — External resistor or potentiometer. An external resistance of 1 megohm is required to obtain the maximum time for all ranges. To determine the actual resistance needed to obtain the required time delay, use the following formula for time between max. and min. time

$$R_t = \left(\left(\frac{T_{REQ} - T_{MIN}}{T_{MAX} - T_{MIN}} \right) \times 1,000,000 \right) + 5000 \text{ ohms}$$

Accuracy —

Repeat Accuracy — ±0.5% + 8ms max. (0.25% typical) at constant temperature for load between 20mA to 1Amp.

Accuracy: Maximum time ±2% at Rt=1 Meg-Ohms.
Minimum time: +0%, -30% at Rt=0 Ohms.

Reset Time — 100 ms, max., before time-out; 10 ms, max., after time-out.

Output Switch Data

Arrangement — Solid state 1 Form A (SPST-NO)

Rating — 1A, inductive, at nominal operating voltage.

Expected Electrical Life — 10,000,000 operations at rated load.

Initial Dielectric Strength — Between Terminals and Mounting — 3,000VAC rms.

Between Input and Output — 1,500VAC rms.

Input Data @ 25°C

Voltage — 12 VAC/VDC, 24VAC/VDC, 120 VAC/VDC.

Line voltage with high inductive voltage noise could affect timer performance. Add transorb or MOV at noise source (for example: contactors coil, motor) is recommended.

Power Requirement — 3W max.

Transient Protection —

Non-repetitive transients of the following magnitudes will not cause spurious operation of affect function and accuracy.

Operating Voltage	<0.1 ms	<1 ms
12, 24 VAC/VDC	860V*	208V*
120 VAC/VDC	2,580V	2,150V*

* Min. source impedance of 100 ohm.

Environmental Data

Temperature Range —

Storage — -40°C to +85°C

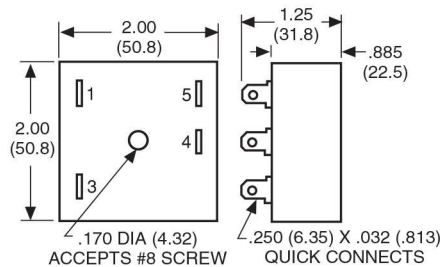
Operating — -40°C to +65°C

Mechanical Data

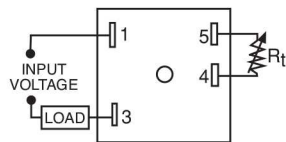
Mounting — Panel mount with one #8 screw.

Termination — 0.250 in (6.35) quick connect terminals.

Weight — 3 oz. (84g) approximately



Outline Dimensions



An external resistance of 1 megohm is required to obtain the maximum time for all ranges. To determine the actual resistance needed to obtain the required time delay, use the following formula for time between max. and min. time

$$R_t = \left(\left(\frac{T_{REQ} - T_{MIN}}{T_{MAX} - T_{MIN}} \right) \times 1,000,000 \right) + 5000 \text{ ohms}$$

Ordering Information

VTM1	A	CD
Series VTM1 On-Delay Timing Module	Input Voltage A = 120VAC/VDC E = 24VAC/VDC Q = 12VAC/VDC	Time Range CD = 0.5 - 10 sec. DD = 3 - 60 sec. FD = 0.5 - 10 min. GD = 3 - 60 min.

Authorized distributors are likely to stock the following:

VTM1ECD
VTM1EDD

Users should thoroughly review the technical data before selecting a product part number. It is recommended that user also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.