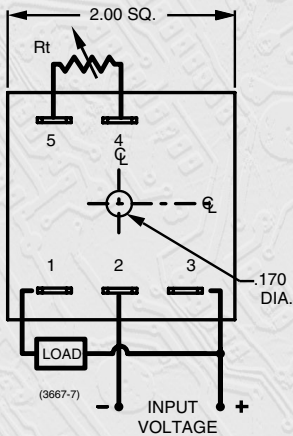
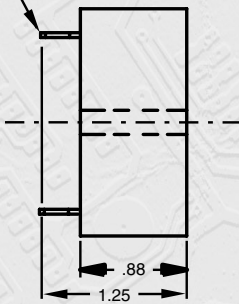


Features

- File #E65038
- Time Delays To 10 Hours Standard
- 100% Life Tested
- Solid-State Digital Timing
- 20:1 Maximum To Minimum Timing Ratio
- Low Cost
- Compact Size
- Superior Transient Protection
- Flame-Retardant and Solvent-Resistant Polyester Thermoplastic Housing
- Made in U.S.A.

.25 X .032 MALE FAST-ON TERMINALS (7 PL.)



Polarity Shown is for D.C. Models

External Resistance/Time Delay Relationship

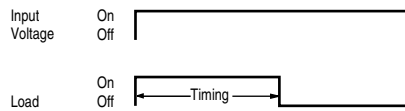
1 megohm external resistance is required to obtain the maximum time for all ranges. To determine the actual resistance needed to obtain the required time delay, use the following formula:

$$R_t = \frac{T_{\text{required}} - T_{\text{minimum}}}{T_{\text{maximum}} - T_{\text{minimum}}} \times 1,000,000 \text{ ohms}$$

Note: Due to component tolerances, the actual time obtained will normally be within 5% of desired time.



Logic Function Diagram:



Specifications

Time Delay

Adjustment: External resistor, factory fixed on special order (Minimum order requirement)
Range: 50 mS to 10 hours in 9 ranges
Repeatability: ±.5% + 8 mS maximum (0.25% typ.) at constant temperature.
Accuracy:
 Maximum time ± 2% at Rt = 1 megohm
 Minimum time +0%-30% at Rt = 0 ohm

Input

Operating Voltage: 120, 24 VAC/DC ± 10% (D.C. models have reverse polarity protection. Unfiltered input voltage to them must be full-wave rectified)
Frequency: 50/60 Hz

Output

Type: Solid-state, normally open
Rating: 1 amp. steady state
Life: 100,000,000 operations

Solid-State Cube Timers

Interval Q4F Series

Operating Logic: Upon application of input voltage the load energizes and the timing cycle starts. At the completion of the preset time delay, the load is de-energized. Reset is accomplished by removal of input voltage.

Note: 1) Remote potentiometer leads should be shielded when running close to other wires; 2) The minimum time setting on external resistor-adjustable time delay relays is obtained by shorting together the external resistor terminals of the relay; 3) The maximum time setting within tolerance limits is obtained by using a 1 megohm resistor; 4) Timing values between the minimum and maximum limits are linear with resistance within 10%; 5) Recommend 1/4 watt minimum resistor be used.

Protection

Transient Voltage: Metal oxide varistor, see ratings below
Dielectric Breakdown: 3000 VAC, RMS, terminals to mounting
Insulation Resistance: 100 megohms minimum 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

Input Voltage and Appropriate Part Numbers				
Time Range	12 VDC ± 10%	24 VAC/DC ± 10%	120 VAC ± 10%	240 VAC ± 10%
.05-1 Second	Q4F-00001-326	Q4F-00001-327	Q4F-00001-321	Q4F-00001-325
.25-5 Seconds	Q4F-00005-326	Q4F-00005-327	Q4F-00005-321	Q4F-00005-325
.5-10 Seconds	Q4F-00010-326	Q4F-00010-327	Q4F-00010-321	Q4F-00010-325
3-60 Seconds	Q4F-00060-326	Q4F-00060-327	Q4F-00060-321	Q4F-00060-325
15-300 Seconds	Q4F-00300-326	Q4F-00300-327	Q4F-00300-321	Q4F-00300-325
30-600 Seconds	Q4F-00600-326	Q4F-00600-327	Q4F-00600-321	Q4F-00600-325
180-3600 Seconds	Q4F-03600-326	Q4F-03600-327	Q4F-03600-321	Q4F-03600-325
25-5 Hours	Q4F-18000-326	Q4F-18000-327	Q4F-18000-321	Q4F-18000-325
5-10 Hours	Q4F-36000-326	Q4F-36000-327	Q4F-36000-321	Q4F-36000-325

Trigger Time (Start Sec. Closure)	75 mS	50 mS	150 mS	150 mS
Reset Time	75 mS	50 mS	150 mS	150 mS
Min. Load	5 mA	5 mA	2 mA	2 mA
Max. Leakage Current	20 uA	20 uA	100 uA	100 uA
Voltage Drop @ 1A	2.1 Volts	3.2 Volts	3.3 Volts	3.3 Volts
Power Consumption	3.0 Watts Max.	3.0 VA Max.	3.0 VA Max.	3.0 VA Max.
Peak 1 Cycle Surge	4 Amp	4 Amp	20 Amp	20 Amp
Protection	rev. volt / 8.8j. MOV	8.8j. MOV	30j. MOV	30j. MOV

Optional Potentiometer: Part Number ASY-0001M-450