

Solid-State Cube Timers

Delay On Make (Alarm Output)

Q1F Alarm Series

The Q1F Delay to Alarm Cube Timer is intended for use as a "delay on make" audible alarm.

Operating Logic: Upon application of the input voltage, the time delay starts. At the end of the preset time delay the audible alarm is activated. Reset is accomplished by removing 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.

Specifications

Time Delay

Adjustment: External resistor, factory fixed on special order (Minimum order requirement)

Range: 50 mS to 10 hours in 9 ranges

Repeatability: $\pm 0.5\%$ + 8 mS maximum (0.25% typ) at constant temperature

Accuracy: Maximum time $\pm 5\%$ at $R_t = 1$ megohm;

Minimum time +0%, -30% at $R_t = 0$ ohm

Reset Time: During Timing .. 300mS
After Timeout150 mS

Input

Operating Voltage: 120 or 240 VAC $\pm 10\%$

Frequency: 50/60 Hz

Output

Type: Solid-state Piezo Audio Alarm

Alarm Frequency: 3.15kHz ± 0.5 kHz

Sound Pressure Level: 76dB @1 Meter

Life: 10,000,000 operations

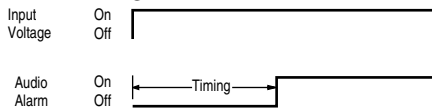
Ordering Information

Time Range	Input Voltage and Appropriate Part Numbers	
	120 VAC 50/60 Hz	240 VAC 50/60 Hz
.05-1 Second	Q1F-00001-3A1	Q1F-00001-3A5
.25-5 Seconds	Q1F-00005-3A1	Q1F-00005-3A5
.5-10 Seconds	Q1F-00010-3A1	Q1F-00010-3A5
3-60 Seconds	Q1F-00060-3A1	Q1F-00060-3A5
15-300 Seconds	Q1F-00300-3A1	Q1F-00300-3A5
30-600 Seconds	Q1F-00600-3A1	Q1F-00600-3A5
180-3600 Seconds	Q1F-03600-3A1	Q1F-03600-3A5
.25-5 Hours	Q1F-18000-3A1	Q1F-18000-3A5
.5-10 Hours	Q1F-36000-3A1	Q1F-36000-3A5

Optional Potentiometer: Part Number ASY-0001M-450



Logic Function Diagram:



Protection

Transient Voltage: Metal oxide varistor

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 75°C

Operating Temperature: 0°C to 65°C

Humidity: 95% relative

AMETEK NCC
National Controls Corp.

Phone 800-323-2593

630-231-5900

Fax 630-231-1377

Internet www.natcon.com

www.nationalcontrols.com

Features

- Loud Audio Alarm for use in Noisy Environments
- File #E165149
- 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.

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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.