


# Flasher

## Q8F Series

### FEATURES

- 100% functionally tested
- Only one timing component required
- Solid state digital timing
- Time delays to 5 minutes standard
- 20:1 maximum to minimum timing ratio
- Low cost
- Compact size
- Superior transient protection
- Flame-retardant and solvent-resistant polyester thermoplastic housing
-  File #E65038

**Operating Logic:** Upon application of voltage to the input terminals, the load is energized for the duration of the preset time delay. At the end of this time delay, the load is de-energized for the duration of the pre-set time delay. The load is then energized again and the timer continues to repeat this on-off cycle until input voltage is removed. Both on and off times are the same and are determined by Rt.

Note: 1) Rt and terminals 4 and 5 are used for external time adjustment; 2) Remote potentiometer leads should be shielded when running close to other wires; 3) The minimum time setting on external resistor-adjustable time delay relays is obtained by shorting together the external resistor terminals of the relay; 4) The maximum time setting within tolerance limits is obtained by using a 1 megohm resistor; 5) Timing values between the minimum and maximum limits are linear with resistance within 10%; 6) Recommend 1/4 W minimum resistor be used.

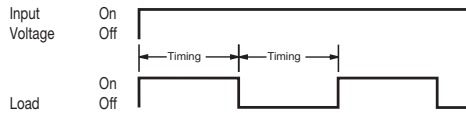
### ORDERING INFORMATION

TIME RANGE	120 VAC $\pm 10\%$
.05 to 1 sec.	Q8F-00001-321
.25 to 5 sec.	—
.5 to 10 sec.	Q8F-00010-321
3 to 60 sec.	Q8F-00060-321
15 to 300 sec.	—

Trigger time (start switch closure)	500 ms
Reset time	500 ms
Min. load	2 mA
Max. leakage current	100 $\mu$ A
Voltage drop at 1 A	3.3 V
Power consumption	4.3 VA max.
Peak 1 cycle surge	20 A
Protection	30j. MOV

Optional Potentiometer: Part Number ASY-0001M-450

### LOGIC FUNCTION DIAGRAM



### SPECIFICATIONS

#### TIME DELAY

**Adjustment:** External resistor, factory fixed on special order (min. order requirement)  
**Range:** 50 ms to 1 minute in 3 ranges  
**Repeatability:**  $\pm 5\%$  +8 ms max. (0.25% typical) at constant temperature

#### Accuracy:

Maximum time  $\pm 2\%$  at Rt = 1 megohm  
 Minimum time +0%, -30% at Rt = 0 ohm

#### INPUT

**Operating Voltage:** 120 VAC  $\pm 10\%$   
**Frequency:** 50/60 Hz

#### OUTPUT

**Type:** Solid state, normally open  
**Rating:** 1 A steady state  
**Life:** 100,000,000 operations

#### PROTECTION

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

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

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

#### MECHANICAL

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

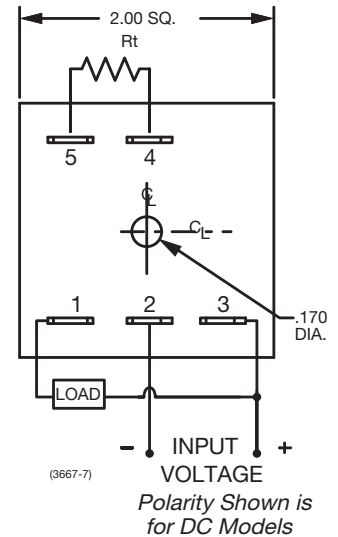
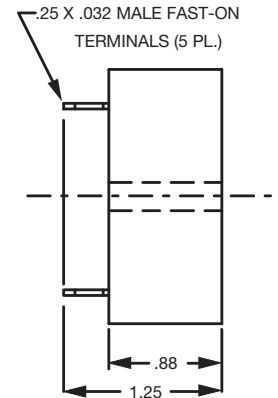
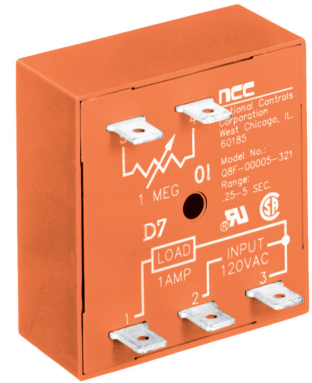
**Mounting:** Surface mount with one #8 screw

#### ENVIRONMENTAL

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

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

**Humidity:** 95% relative



#### 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.

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