


# Repeat Cycle

## Q6F Series

### FEATURES

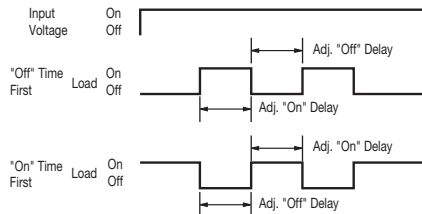
- 100% functionally tested
- Solid state digital timing
- Time delays to 10 hours standard
- 20:1 maximum to minimum timing ratio
- Low cost
- Compact size
- Superior transient protection
- Flame-retardant and solvent-resistant polyester thermoplastic housing
-  File #E65038

**Operating Logic:** Upon application of input voltage, the OFF delay is initiated. At the end of the OFF preset time, the load is activated and the ON delay starts. At the end of the ON preset time, the load is deactivated and a new cycle begins. The ON and OFF cycles will continue to alternate until input voltage is removed.

This timer is available with ON time occurring first logic.

*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 W minimum resistor be used.*

### LOGIC FUNCTION DIAGRAM



### SPECIFICATIONS

#### TIME DELAY

**Adjustment:** External resistor, factory fixed on special order (min. order requirement)

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

**Repeatability:**  $\pm 5\%$  +8 ms max. (.25% typical) at constant temperature

**Accuracy:**  
Maximum time  $\pm 2\%$  at  $R_t = 1$  megohm  
Minimum time  $+0\%$ ,  $-30\%$  at  $R_t = 0$  ohm

#### INPUT

**Operating Voltage:** 120 VAC; 12 VDC;  
24 VAC/DC  $\pm 10\%$ ; (DC models have reverse polarity protection. Unfiltered input voltage to them must be full-wave rectified)

**Frequency:** 50/60 Hz

#### MECHANICAL

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

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

#### OUTPUT

**Type:** Solid state, normally open

**Rating:** 1 A steady state

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

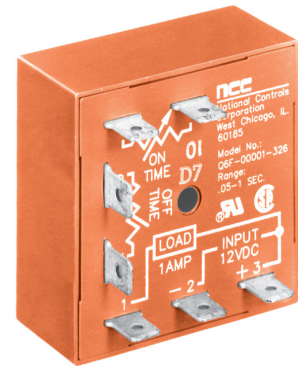
### ORDERING INFORMATION

TIME RANGE	12 VAC/DC $\pm 10\%$	24 VAC/DC $\pm 10\%$	120 VAC $\pm 10\%$
<b>OFF TIME FIRST LOGIC</b>			
.05 to 1 sec.	Q6F-00001-326	Q6F-00001-327	Q6F-00001-321
.25 to 5 sec.	Q6F-00005-326	—	Q6F-00005-321
.5 to 10 sec.	Q6F-00010-326	—	Q6F-00010-321
3 to 60 sec.	Q6F-00060-326	—	Q6F-00060-321
15 to 300 sec.	—	Q6F-00300-327	Q6F-00300-321
30 to 600 sec.	Q6F-00600-326	—	Q6F-00600-321
180 to 3600 sec.	—	—	—
.25 to 5 hrs.	—	—	—
.5 to 10 hrs.	—	—	—
<b>ON TIME FIRST LOGIC</b>			
3 to 60 sec.	Q6F-00060-336	—	Q6F-00060-331
30 to 600 sec.	—	—	Q6F-00600-331

Trigger time (start switch closure)	500 ms	500 ms	500 ms	500 ms
Reset time	500 ms	500 ms	500 ms	500 ms
Min. load	5 mA	5 mA	2 mA	2 mA
Max. leakage current	100 uA	100 uA	100 uA	100 uA
Voltage drop at 1 A	2.1 V max.	3.2 V max.	3.3 V max.	3.3 V max.
Power consumption	2.6 W max.	3.7 VA max.	4.3 VA max.	5.8 VA max.
Peak 1 cycle surge	4 A	4 A	20 A	20 A
Protection	rev. voltage	8.8j. MOV	30j. MOV	30j. MOV

Optional Potentiometer: Part Number ASY-0001M-450

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



### PROTECTION

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

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

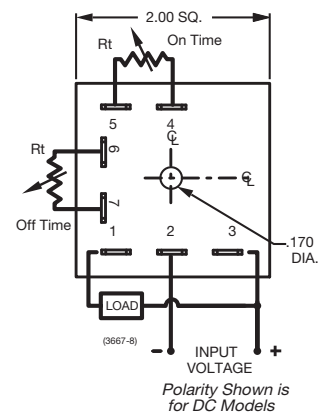
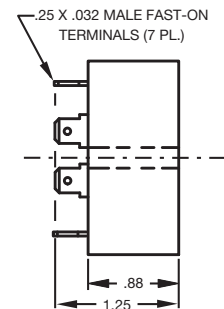
**Insulation Resistance:** 100 megohms min. between terminals and case

### ENVIRONMENTAL

**Storage Temperature:**  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$

**Operating Temperature:**  $-40^{\circ}\text{C}$  to  $65^{\circ}\text{C}$

**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.*