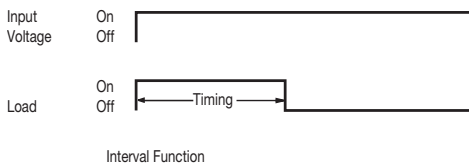# Interval
Q4F Series

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*
- *🇺🇱 ᶜ🇺🇱 File #E65038*

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 W minimum resistor be used.

LOGIC FUNCTION DIAGRAM

Interval Function

SPECIFICATIONS

TIME DELAY
Adjustment: External resistor**,** factory fixed on special order (min. order required)

Range: 50 ms to 10 hours in 9 ranges

Repeatability: ±.5% +8 ms max. (0.25% typical) 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% (DC 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 A steady state

Life: 100,000,000 operations

PROTECTION
Transient Voltage: Metal oxide varistor, see ratings below

Dielectric Breakdown: 3000 VAC, RMS, terminals to mounting

Insulation Resistance: 100 megohms min. between terminals and case

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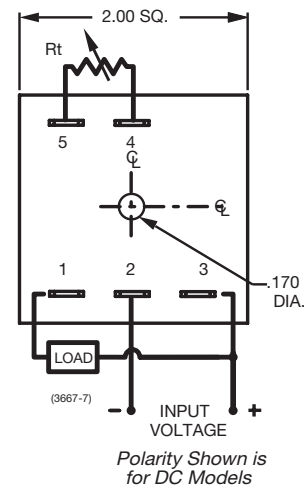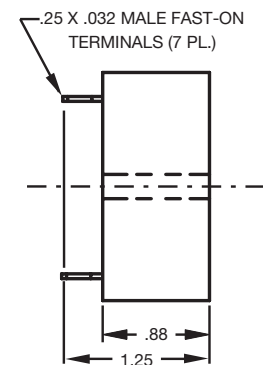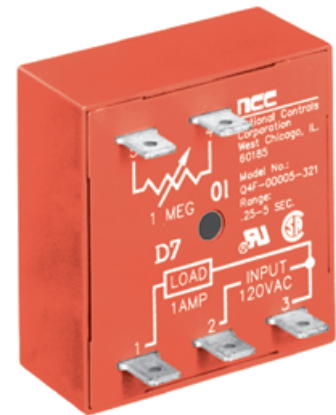**Termination:** .25" x .032" male fast-on terminals

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

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

.88
1.25

2.00 SQ.

.170 DIA.

Polarity Shown is for DC 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:

$$Rt = \frac{Trequired - Tminimum}{Tmaximum - Tminimum} \times 1,000,000 \text{ ohms}$$

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).

ORDERING INFORMATION

TIME RANGE	12 VDC ±10%	24 VAC/DC ±10%	120 VAC ±10%	240 VAC ±10%
.05 to 1 sec.	Q4F-00001-326	—	Q4F-00001-321	Q4F-00001-325
.25 to 5 sec.	Q4F-00005-326	Q4F-00005-327	Q4F-00005-321	Q4F-00005-325
.5 to 10 sec.	Q4F-00010-326	Q4F-00010-327	Q4F-00010-321	Q4F-00010-325
3 to 60 sec.	Q4F-00060-326	Q4F-00060-327	Q4F-00060-321	—
15 to 300 sec.	Q4F-00300-326	—	Q4F-00300-321	—
30 to 600 sec.	Q4F-00600-326	—	Q4F-00600-321	Q4F-00600-325
180 to 3600 sec.	Q4F-03600-326	Q4F-03600-327	Q4F-03600-321	—
.25 to 5 hrs.	—	Q4F-18000-327	Q4F-18000-321	—
.5 to 10 hrs.	Q4F-36000-326	Q4F-36000-327	Q4F-36000-321	Q4F-36000-325

	12 VDC	24 VAC/DC	120 VAC	240 VAC
Trigger time *(start switch 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 at 1 A	2.1 V	3.2 V	3.3 V	3.3 V
Power consumption	3.0 W max.	3.0 VA max.	3.0 VA max.	3.0 VA max.
Peak 1 cycle surge	4 A	4 A	20 A	20 A
Protection	rev. V / 8.8j. MOV	8.8j. MOV	30j. MOV	30j. MOV

Optional Potentiometer: Part Number ASY-0001M-450