

**Economical model for
Delay ON release
operation**



- Inexpensive and compact fixed or adjustable time delay
- Models feature 11 pin plug-in base or square base design; plug-in square base also features universal blade type terminals for solder or quick connect terminals; printed circuit terminals are available on square base units (see ordering information)
- Polycarbonate dust cover has low moisture absorption and high impact strength
- Delay time is obtained by using a CMOS integrated circuit, an internal potentiometer controlled oscillator, a programmable binary counter, and output controlled logic
- Available in five voltages and DPDT 10 ampere output contacts
- Gold diffused low-level contacts optional
- Available in 15 standard time ranges from .1 second to 4.5 hours
- Optional flange mounting
- Push to test, simulating timed out condition, optional
- All standard configurations recognized under the components program of Underwriters Laboratories, Inc. - file E39906, CSA certified by request only - file LR26861

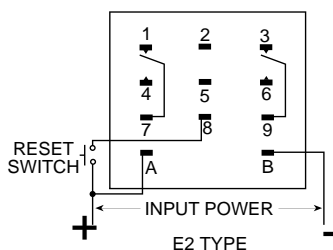
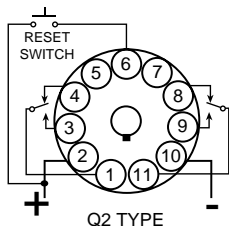
SPECIFICATIONS

- Repeat Timing Accuracy:** $\pm 1.5\%$ under fixed conditions
- Fixed Time Accuracy:** $\pm 5\%$ at rated voltage and room temperature (99 time range)
- Reset Time:** 16 milliseconds min.
- Drop-Out Speed:** 30 milliseconds typical (including bounce)
- Minimum Setting:** 10% of full range
- Input Voltage Variation:** Rated voltage +10%, -15%
- Polarity Protection:** Inverse polarity protection on DC units
- Transient Protection:** Immune to 600 volts peak transients up to 50 microseconds in duration
- Insulation Resistance:** 100 megohms min.
- Dielectric Strength:**
500 volts R.M.S.
60 Hz between open contacts
1500 volts R.M.S.
60 Hz between all elements
- Operating Temperature Range:** 14° to 104°F (-10° to 40°C)
- Storage Temperature Range:** -4° to 185°F (-20° to 85°C)
- Life Expectancy Mechanical:** In excess of 10 million operations
- Electrical:** 100,000 min. at full rated resistive load
- Duty Cycle:** Continuous
- Weight:** Approximately 4 oz. (113 Gr.) all models

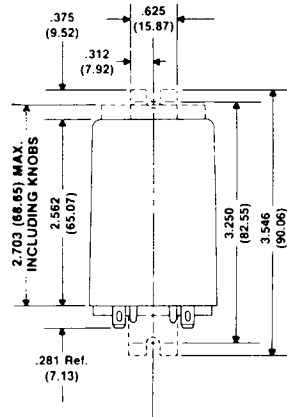
OUTPUT RATING

| Materials | Rating |
|-----------|----------------------------|
| Silver | 10 amp, 28 VDC (resistive) |
| Cadmium | 10 amp, 250 VAC |
| Oxide | 1/4 HP, 250 VA, 125 VAC |
| (AgCdO) | 1/3 HP, 240 VA, 250 VAC |

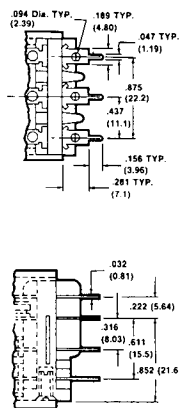
11
RELAYS
ACCESSORIES



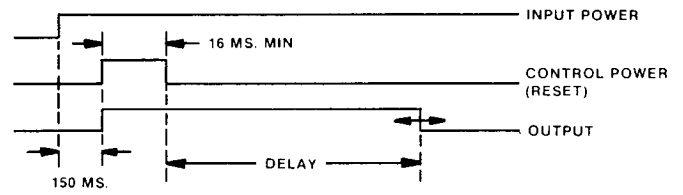
Flanged Case



Printed Circuit

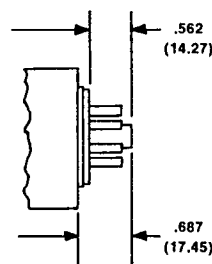
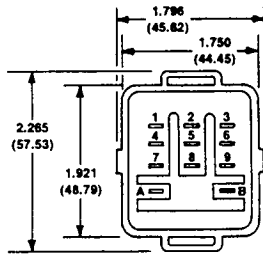


Logic Function Diagram

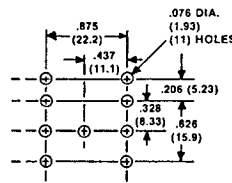


Power applied to input terminals at all times ("A" and "B" square base) (2 and 10, 11 pin plug-in).

Application of control power to terminal 8 of square base or terminal 6 of 11 pin plug-in resets the timing circuit and energizes the relay. Removal of control power starts timing. Relay de-energizes after time delay.



Suggested PC Board Layout



| | Sockets | Retainers |
|--------|-----------|---------------|
| Type Q | 60SR3P05 | N/A |
| | 60SR3P06 | 60SFA201 Clip |
| | 60SR3P51 | N/A |
| Type E | 60SR3B05 | 60SFA201 Clip |
| | 60SR3B51 | N/A |
| | 4270-0681 | N/A |

ORDERING INFORMATION

81 **E** **2** **A6** **01**

RELAY TYPE

| Sym. | Description |
|------|------------------|
| 81 | Time Delay Relay |

CONTACT MATERIALS

| Sym. | Description |
|------|---|
| E | Silver Cadmium Oxide, 10 amp, Universal Plug-In, .187 Solder, Quick Connect |
| H | Silver Cadmium Oxide, 10 amp, Printed Circuit, Special Order Only |
| Q | Silver Camium Oxide, 10 amp, Plug-In, 11 Pin (Round) |

CONTACT FORM

| Sym. | Description |
|------|-------------|
| 2 | DPDT |

VOLTAGE & FREQUENCY

| Sym. | Description |
|------|-------------|
| Z6 | 24V 60 Hz |
| A6 | 120V 60 Hz |
| B6 | 240V 60 Hz |

TIME RANGE

| Sym. | Description | Sym. | Description |
|------|-----------------|------|-----------------------------|
| 00 | Unprogrammed | 09 | 25.6 - 256 Sec. |
| 01 | .1 - 1 Sec. | 10 | .85 - 8.5 Min. |
| 02 | .2 - 2 Sec. | 11 | 1.7 - 17 Min. |
| 03 | .4 - 4 Sec. | 12 | 3.4 - 34 Min. |
| 04 | .8 - 8 Sec. | 13 | 6.8 - 68 Min. |
| 05 | 1.6 - 16 Sec. | 14 | 13.6 - 136 Min. |
| 06 | 3.2 - 32 Sec. | 15 | .45 - 4.5 Hr. |
| 07 | 6.4 - 64 Sec. | 99 | Fixed Timing (Specify Time) |
| 08 | 12.8 - 128 Sec. | | |