



# INTERVAL TIMER ADJUSTABLE TIMING RELAY OUTPUT

## 4700

### FEATURES:

- Customer Adjustable Timing
- Reverse Polarity Protection
- Built to MIL-R-83726 Environmentals

### ELECTRICAL SPECIFICATIONS:

**Timing Range:** 50 ms to 600s

**Tolerance:** ±10% **Repeatability:** ±1%

**Recycle Time:** 10 ms (DC), 50 ms (AC)

**Operate Time:** 4 A rated units: 10 ms maximum, 10 A rated units: 20 ms maximum.

**Input data voltage:** 18 to 31 V dc, 105 to 125 VAC 400 Hz

**Current Drain:**

|                                      | DC, 10 A       | AC or DC, 4 A   |
|--------------------------------------|----------------|---|
| Current Drain at 25°C at 28 Volts DC | 135 mA maximum | 1-pole: 100mA maximum;<br>2-pole: 150mA maximum;<br>3 and 4 pole: 200mA maximum |

### Output Data:

|                                     |                                 |                                |
|-------------------------------------|---------------------------------|--------------------------------|
| Contact Rating at 30 Volts DC       | 10 A Resistive<br>5 A Inductive | 4 A Resistive<br>1 A Inductive |
| Contact Rating at 115 Volts, 400 Hz | 5 A Resistive<br>3 A Inductive  | 2 A Resistive<br>1 A Inductive |

### ENVIRONMENTAL SPECIFICATIONS:

**Temperature:** -55°C to +125°C.

**Vibration:** 20 G's, 10 to 2000 Hz.

**Shock:** 50 G's 11 ±1 milliseconds duration.

**Sealing:** Hermetic, 1.3 inches mercury.

**Insulation Resistance:** 1000 Megohms at 500 VDC.

**Dielectric Strength:** 1000 V RMS, 60 Hz at Sea Level, all terminals to case.

**Life:** 4 A rated — 100,000 operations min. 10 A rated — 50,000 operations min.

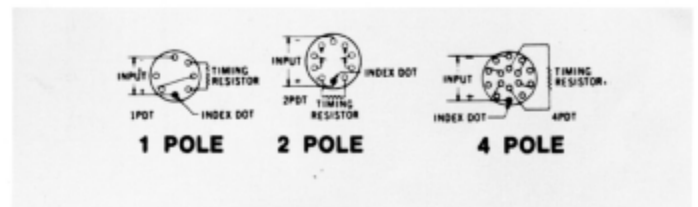
**Weight:** 4 A unit 4.5 oz. max.  
10 A unit 8.5 oz. max.

### OPTIONS:

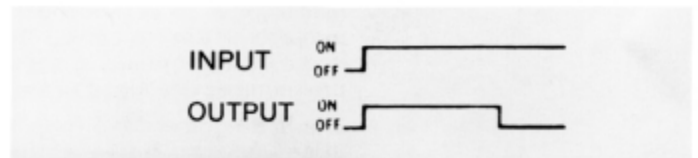
- 60 Hz Operation
- Tighter Tolerances
- Modified Header and Mounting
- Extended Timing Range



### WIRING DIAGRAM



### TIMING DIAGRAM



Apply power and the output will energize. After time-out, the output will revert to de-energized state. Remove and reapply input to recycle.

### SPECIAL NOTES:

#### • ADJUSTABLE TIMING FORMULA:

The resistance required to obtain timing within this range is determined by using the formula:

$$R_x = 400K (T/T_{max.}) - 40K$$

$$R_x = \text{External Res. in OHMS}$$

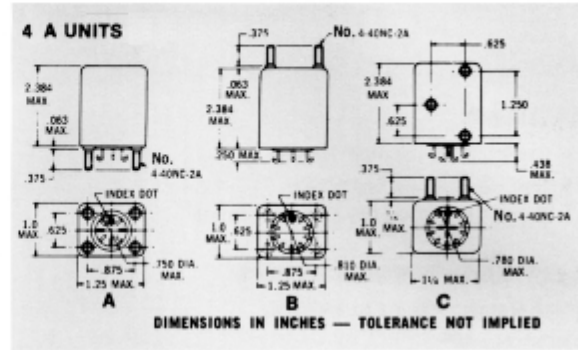
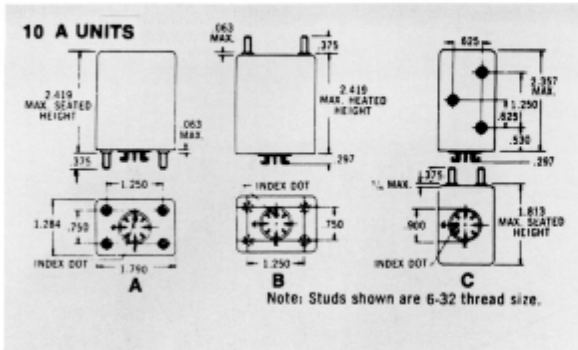
$$T = \text{Desired time in seconds}$$

$$T_{max.} = \text{Maximum time (code)}$$

A high quality deposited carbon ±1%, .1W (min.) resistor is recommended for external resistance.

See Note 1.

## MECHANICAL SPECIFICATIONS



## HOW TO ORDER:

| Type | Series | Contacts | Rating |
|------|--------|----------|--------|
| DC   | 4710   | 1PDT     | 10 Amp |
|      | 4711   | 2PDT     | 10 Amp |
|      | 4721   | 1PDT     | 4 Amp  |
|      | 4722   | 2PDT     | 4 Amp  |
|      | 4724   | 4PDT     | 4 Amp  |
| AC   | 4771   | 1PDT     | 4 Amp  |
|      | 4772   | 2PDT     | 4 Amp  |
|      | 4774   | 4PDT     | 4 Amp  |

Hi-G Adjustable Time Delay Modules cover one decade, e.g., 62 milliseconds to 620 milliseconds; you may select any decade that best suits your application within the range of 50 milliseconds to 240 seconds. (Of course, longer ranges are available on special order.) The upper decade limits is Tmax. in the timing formula and is the timing code number in the part number described in the following paragraph.

The part number for a Hi-G Time Delay Module consists of three elements: The series number (from the Table), a letter signifying mounting style, and the timing code number. The timing code number consists of four digits and gives the time in milliseconds. The first three digits are the significant figures and the last digit is the number of zeros following the significant figures; thus 50 milliseconds would be coded 0500, 1.1 seconds would read 1101, and 1 minute (60 seconds) would be 6002.

A typical part number for an adjustable timing module is 4722-C-1102; this is a DC unit in the  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  temperature range with a 2PDT contact arrangement, in a Style C mounting, and with a time delay of 11 seconds.

**Example:**

**Hi-G Part Number**

4722 — C — 1102

SERIES — MOUNTING — TIMING CODE

### Note 1:

The time delay may be extended beyond the normal "decade" range of above formula by increasing the timing resistance, "Rx", beyond standard 360K max value up to a maximum value of 1.160M.

However, the tolerance and repeatability are not tested and therefore not guaranteed at this high "Rx" value.

Also, some slight non-linearity between Rx and desired time delay will occur.