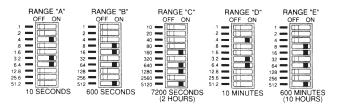
## **TBG Series**

# **FIME DELAY RELAYS**

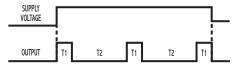
#### **OPERATION**

When supply voltage is applied to the input, the relay energizes and ON time (T1) begins. Upon completion of the ON time, the relay de-energizes and the OFF time (T2) begins. Upon completion of the OFF time, the relay energizes and one cycle is complete. This ON/OFF cycling continues until supply voltage is removed from the input. The ON/OFF delay periods are independently selectable within the same range.

#### **DIP SWITCH OPERATION**

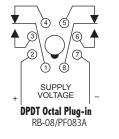


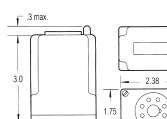
Digital selection of the time delay is accomplished by the use of ten (10) binary switches, each marked with a time increment. The time periods, of which there are five (5) ranges, represented by each switch in the ON position is added together to obtain the desired time delay. No more trial-by-error adjustments.



WIRING







1

UU UU

00

| MO | DEI |    | MD | ED |
|----|-----|----|----|----|
| MU | DEL | NU | ИD | ЕΠ |
|    |     |    |    |    |

| BG                                       |                                   |  |   | Α   |  |  |  |
|--|-----------------------------------|--|---|---|--|--|--|
|  |                                   |  |   |   |  |  |  |
|  | 12                                | D  |   |   |  |  |  |
| 24 Volts AC/DC                           |                                   | Α  |   |   |  |  |  |
| 48 Volts DC                              |                                   | D  |   |   |  |  |  |
| 120 Volts AC/DC                          |                                   |  |   |   |  |  |  |
|  | 240                               | Α  |   |   |  |  |  |
| TIME DELAY RANGE                         |                                   |  |   |   |  |  |  |
| 0.1 to 102.3 SEC in 0.1 SEC Increments   |                                   |  |   |   |  |  |  |
| 1.0 to 1,023 SEC in 1.0 SEC Increments   |                                   |  |   |   |  |  |  |
| 10 to 10,230 SEC in 10 SEC Increments C  |                                   |  |   |   |  |  |  |
| 0.1 to 102.3 MIN in 0.1 MIN Increments D |                                   |  |   |   |  |  |  |
| 1.0 to 1,023 MIN in 1.0 MIN Increments E |                                   |  |   |   |  |  |  |
| HOUSING                                  |                                   |  |   |   |  |  |  |
|  | EC In<br>EC In<br>EC In<br>IIN Ir | 12     24     48     120     240     EC Incremen     EC Incremen     EC Incremen     EC Incremen | 12D24A48D120A240AEC IncrementsEC IncrementsEC IncrementsEC IncrementsIIN Increments | 12 D   24 A   48 D   120 A   240 A   EC Increments A   EC Increments C   IIN Increments D |  |  |  |



### Repeat Cycle-ON Time First DIP Switch TDR

#### SPECIFICATIONS

#### TIME DELAY RANGE

|                | LAT K       | ANGE   |
|----------------|-------------|--|
|                | Α           | 0.1 to 102.3 SEC in 0.1 SEC Increments           |
|                | В           | 1.0 to 1,023 SEC in 1.0 SEC Increments           |
|                | С           | 10 to 10,230 SEC in 10 SEC Increments            |
|                | D           | 0.1 to 102.3 MIN in 0.1 MIN Increments           |
|                | Е           | 1.0 to 1,023 MIN in 1.0 MIN Increments           |
| OUTPUT         |             | 10 A @ 250 VAC or 24 VDC, resistive              |
| RATING         |             |  |
| ACCURA         | CY          | Setting $\pm 2\%$ or $\pm 50$ mSEC; whichever is |
|                |             | greater  |
|                | -           | Repeat $\pm 0.1\%$ or $\pm 8.3$ mSEC; whichever  |
|                |             | is greater                                       |
| <b>RESET</b> 1 | IMES        | Before Time Out 100 mSEC                         |
|                |             | After Time Out 50 mSEC                           |
| SUPPLY         |             | 12, 24, 48, 120 or 240 VAC,                      |
| VOLTAG         | E           | 50/60 Hz; or DC; ±10%                            |
| FALSE T        | RANSF       | ER No  |
| REVERS         | E           | Yes  |
| POLARI         | ΓY          |  |
| PROTEC         | TED         |  |
| POWER          |             | 3 VA, approximately                              |
| REQUIR         | ED          |  |
| DUTY C         | <b>YCLE</b> | Continuous                                       |
| TEMPER         | ATURE       | Operate 32° to 131°F (0° to +55°C)               |
| RATING         |             | Storage -49° to 185°F (-45° to +85°C)            |
| LIFE           |             | Mechanical 10 million operations, minimum        |
| EXPECT         | ANCY        | Electrical 100,000 Operations @ rated            |
|                |             | load   |
| INDICAT        | ORS         | LED glows when relay is energized.               |
| ISOLATI        | ON          | 1,500 volts, input/output                        |
| WEIGHT         |             | 0.4 lbs.   |
|                |             |  |