ENGINE START CONTROL

Timing Mode

Operation 1: With terminal G open, timing begins when sensor contact is closed. After time out, if sensor stays closed, the relay transfers. Opening sensor contact will reset timer and drop out relay.

Operation 2: With sensor open, timing begins when G terminal goes to ground. If sensor closes during timing, the relay will transfer. If sensor stays open after timing ends, the relay will not transfer until the sensor closes.

FEATURES

- Automotive-rated 10-amp relay
- 12VDC and 24VDC models available
- 3 standard time periods available 15, 30, 60sec
- Compact 2” square case
- Sturdy alternative to unsealed relay

TGA Timers

TGA is a delay timer used in engine starting circuits to bypass ground-connected sensors during cranking and initial run.

The 10 amp internal relay has normally-open and normally-closed contacts, internally connected to the battery connection (b).

The relay contacts can disconnect the ignition coil, or various types of fuel valves during a sensed fault, or energize a shut-down solenoid if one is used.

A sense terminal (s) is used to connect to ground-connected fault sensors.

OPERATION 1

KEY SWITCH
G TERMINAL
S TERMINAL
RELAY
DELAY
DELAY

OPERATION 2

KEY SWITCH
G TERMINAL
S TERMINAL
RELAY
DELAY
**SPECIFICATIONS**

- **Input Voltage:** 12 or 24 VDC
- **Time Delay:** Timing Mode: Delay on Make  
  Type: Digital CMOS  
  Standard Time Ranges: 15, 30 or 60 seconds  
  Time Adjustment: Factory-fixed time period
- **Repeatability:** ±0.5%
- **Setting Accuracy:** ±10% of nominal time
- **Reset/Recycle Time:** 25 milliseconds
- **Initiate Time:** 6 milliseconds or less
- **Relay Output Form:** Standard SPDT
- **Relay Life Expectancy:** Mechanical: 20 million operations  
  Electrical: 100,000 operations
- **Protection:** Reverse polarity protection  
  Transient Protection: 18 joules  
  Dielectric Strength: 1800V RMS 60Hz internal MOV
- **Temperature Ranges:** Storage: -40°C to +85°C  
  Operating: -25°C to +65°C
- **Physical Data:** Mounting: Surface with one #8 screw  
  Connection & Termination: 0.25” quick connects

**OPTIONS SELECTION**

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<td>24VDC</td>
<td>015S 15 sec 030S 30 sec 060S 60 sec</td>
<td>C Factory fixed</td>
<td>1 SPDT 10 Amp Rating</td>
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**EXAMPLE** TGA 4 015S C 1 is a 24VDC TGA series engine start control with a factory fixed time range of 15 seconds and single pole(double throw) 10 amp rating.