



Installation and Operation Instructions for SELECTRONIC® TATTLETALE® Annunciator Models ST8 and ST4X4

Please read the following information before installing. A visual inspection of this product for damage during shipping is recommended before mounting. It is your responsibility to have a qualified person install this unit and make sure it conforms to NEC and local codes.

GENERAL INFORMATION

WARNING

BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT

- ✓ Disconnect all electrical power to the machine.
- ✓ Make sure the machine cannot operate during installation.
- ✓ Follow all safety warnings of the machine manufacturer.
- ✓ Read and follow all installation instructions.

Certain danger to human safety and to equipment may occur if some equipment is stopped without pre-warning. It is recommended that monitored functions be limited to alarm-only or to alarm before shutdown.

Description

The **ST8** is an eight point TATTLETALE® panel designed to give “first out” indication of cause of alarm or shutdown. The **ST4X4** is similar to the ST8, except four of the sensor inputs are “first out” shutdown and the other four sensor inputs are alarm indication only. This “first out” feature means that only the first fault will be shown by LED; this feature isolates the primary cause of shutdown, and helps simplify troubleshooting. The ST8 and ST4X4 are available in two different types of mounting: flush mounting (“F”), and gimbal mounting (“G”).



Specifications

All specifications apply to both models unless indicated.

Power Input (Operating Voltage): 8–32 VAC, 8–40 VDC

Sensor Inputs: 8 sensor switches, normally open or normally closed dry contacts.

Remote Alarm Output (ST4X4 only): 500 mA, maximum.

Number of Alarm Points: ST8: 8 first out shutdown/alarm.

ST4X4: 4 alarm only and 4 first out shutdown/alarm.

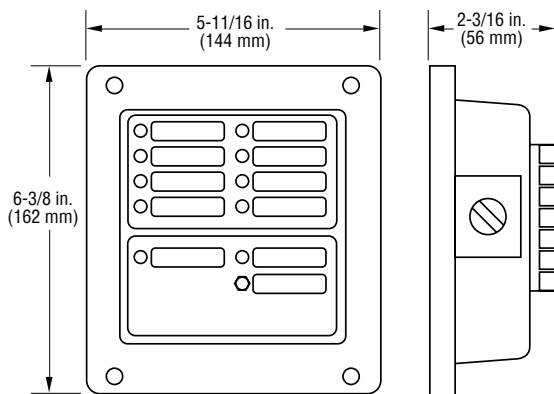
Relay Output: SPDT dry contacts; 2 A @ 28 VDC.

Lockout Time Delay During Startup:

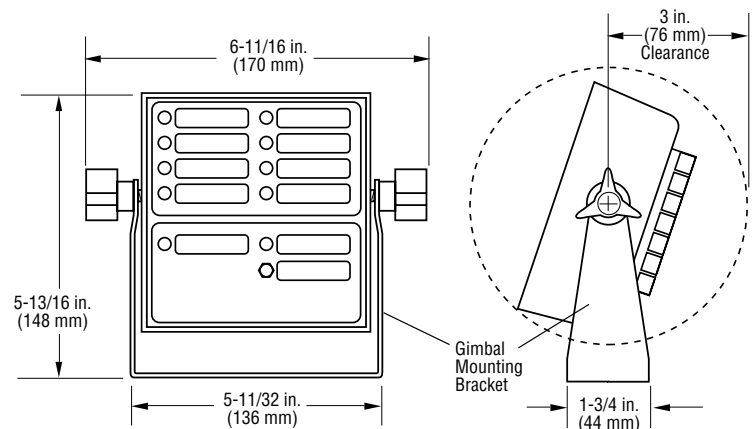
25 to 35 seconds (selectable for each sensor input).

DIMENSIONS

ST8-F and ST4X4-F



ST8-G and ST4X4-G

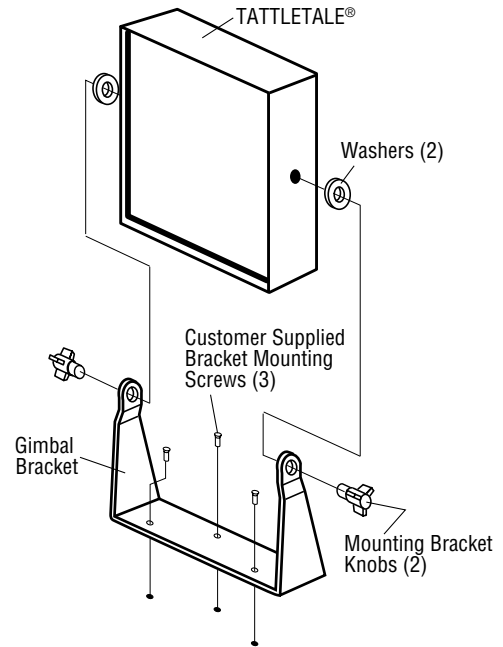
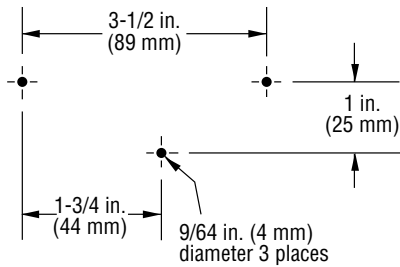


MOUNTING

Gimbal Mount Models (ST8-G and ST4X4-G)

1. Install the gimbal mounting bracket with three screws (customer supplied) according to the mounting hole dimensions shown below. **NOTE:** Verify the TATTLETALE®'s rotation clearance (see *Dimensions*, page 1).
2. Attach the TATTLETALE® to the gimbal bracket with the washer and mounting bracket knobs.

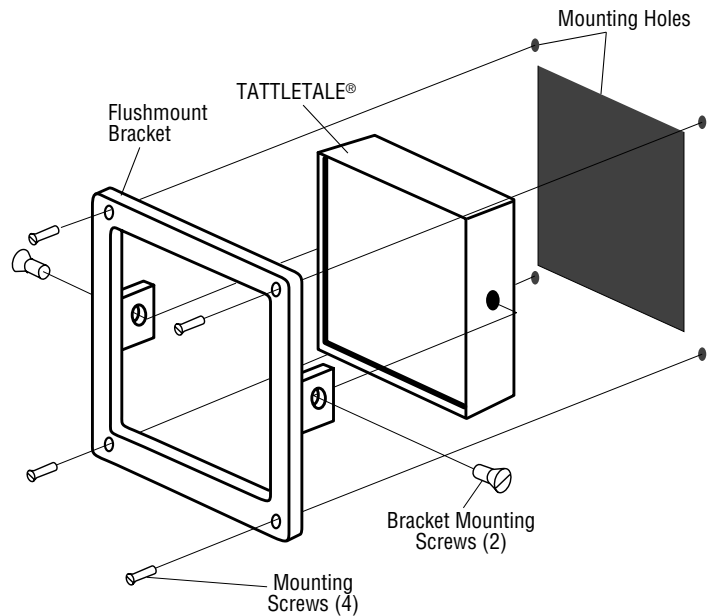
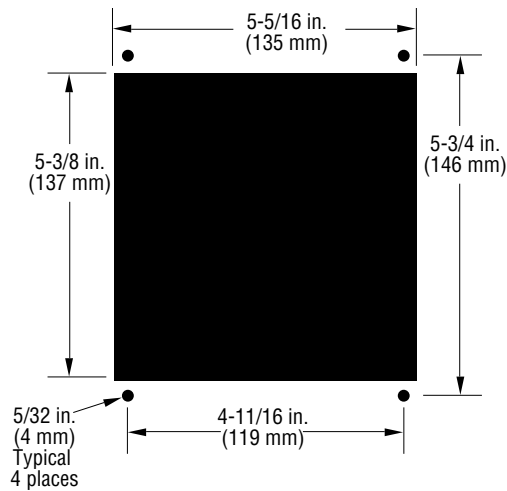
Gimbal Mounting Bracket Hole Dimensions



Panel Mount Models (ST8-F and ST4X4-F)

1. Cut a hole in the panel according to the mounting hole dimensions shown below.
2. Install the flush mount mounting bracket on the TATTLETALE®.
3. Insert the TATTLETALE® into the hole through the front of the panel.
4. Install the four 6-32 x 5/8 screws supplied.

Panel Mounting Hole Dimensions



APPLYING PREPRINTED LABELS

Preprinted labels are supplied with the TATTLETALE®. These labels are pre-cut, pressure sensitive and when properly applied are permanent. To insure proper label application perform the following steps:

1. Be sure the TATTLETALE®'s faceplate is clean and free of oil.

2. Peel one label at a time and position on the faceplate in the box which matches the input sensor position.
3. Before pressing down, be sure label is correctly placed.
4. Press firmly on the label, and leave untouched for several hours.

ELECTRICAL

The Figures below show typical customer switch wiring for the ST8 and ST4X4. Switch wiring should be run separately from other wires; **DO NOT route switch wires with AC power wires since voltages, that may be induced into the switch wires, may exceed rating and cause damage to circuits or cause false trips.**

Figure 1 shows the wiring for a normally open (N.O.) SWICHGAGE® connected between terminal B and the negative power input. A metal jumper is connected between A and B. When the SWICHGAGE® closes the shutdown/alarm circuit will be initiated.

Figure 2 shows the wiring for a normally closed (N.C.) switch connected to input terminals A and B. The factory installed metal link must be removed to use this wiring. When the switch

opens the shutdown/alarm will be initiated.

Figure 3 shows the wiring for a N.O. SWICHGAGE® which is the same as Figure 1 except two wires are run from terminals A and B to the SWICHGAGE®. This Closed Loop™ wiring circuit monitors the wires as well as the switch. If the circuit is opened due to a loose connection or broken wire or the SWICHGAGE® closes, the shutdown/alarm circuit will be initiated.

Figure 4 shows the ST4X4 and ST8 internal SPDT relay in the “run” or operating mode.

Figure 5 shows the remote alarm output circuit for the ST4X4 (not included on ST8). This circuit can be wired to a customer supplied alarm. Circuit is rated at 500 mA, maximum.

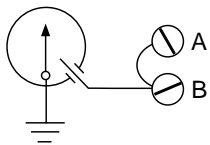


Figure 1: Typical N.O. Sensor Connection

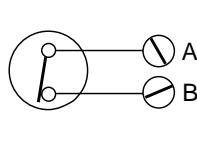


Figure 2: Typical N.C. Sensor Connection

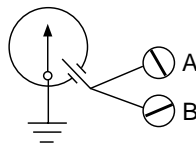


Figure 3: Typical N.O. Closed Loop™ Sensor Connection

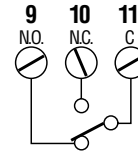


Figure 4: Internal Relay Circuit

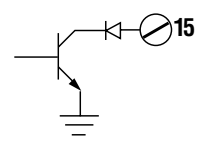
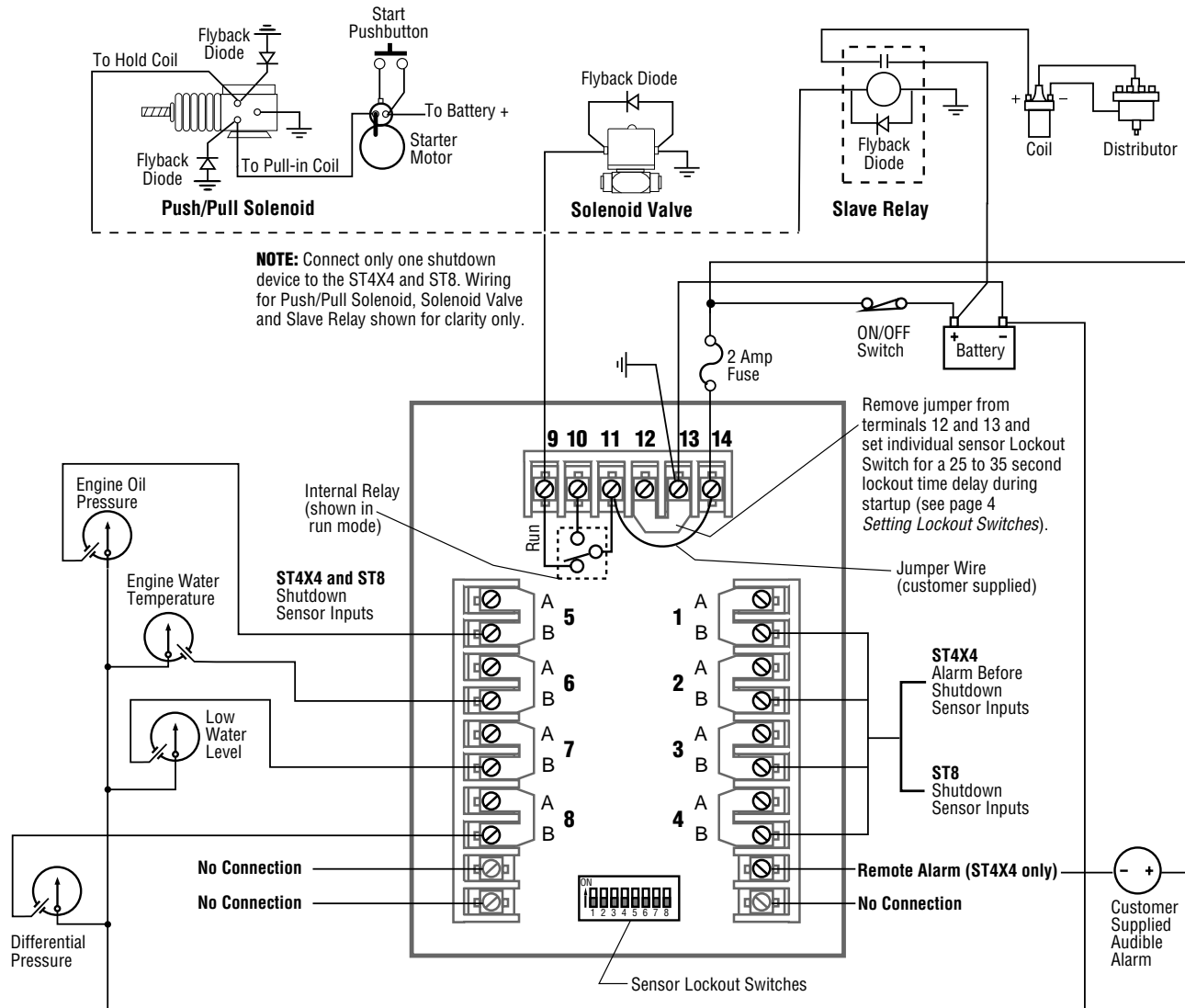


Figure 5: Remote Alarm Circuit (ST4X4 models only)

Typical Wiring

Below is a typical wiring diagram for the ST4X4 and ST8 TATTLETALE®.



ST4X4

1. Apply power to the ST4X4 TATTLETALE® (terminals 13 and 14).
2. The “POWER ON” and “RUN” LED light will switch on. The “POWER ON” LED indicates power has been applied to the ST4X4. The “RUN” LED indicates the internal relay is in the operating mode.
3. The lockout time delay during startup will begin timing. Sensors with lockout time delay selected (see *Setting Lockout Switches* below) will not trip alarm and/or shutdown circuit until time delay times out (25 to 35 seconds). If lockout switches are not set there will not be a time delay.

Alarm Indication

1. The 4 Amber LEDs (inputs 1 thru 4) are for alarm indication only (see drawing below).
2. When an alarm signal is received from a SWICHGAGE®, the alarm LED (terminals 1 thru 4) will light and the remote alarm input (terminal 15) grounds and activates remote alarm. The alarm LED and remote alarm will remain On until the signal or power is removed.

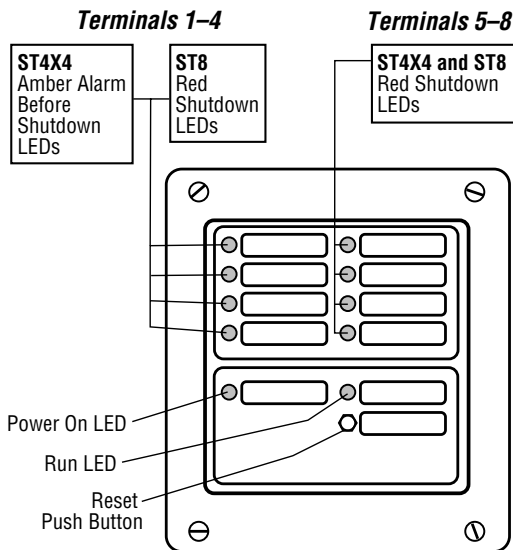


Figure 6

First Out Shutdown Indication

1. The 4 Red shutdown LEDs (inputs 5 thru 8) are for shutdown indication (see **Figure 6**).
2. When shutdown signal is received from a SWICHGAGE®, the shutdown LED will light and internal relay will switch to activate a shutdown device (see *Typical Wiring* page 3). All other shutdown sensor inputs will be locked out.
3. Shutdown LED will remain On even if shutdown switch returns to normal, until the “RESET” push button is pressed or power is removed.

ST8

1. Apply power to the ST8 TATTLETALE® (terminals 13 and 14).
2. The “POWER ON” and “RUN” LED light will switch On. The “POWER ON” LED indicates power has been applied to the ST8. The “RUN” LED indicates the internal relay is in the operating mode.
3. The lockout time delay during startup will begin timing. Sensors with lockout time delay selected (see *Setting Lockout Switches* below) will not trip alarm or shutdown circuit until time delay times out (25-35 seconds). If lockout switches are not set there will not be a time delay during startup.
4. The 8 Red shutdown LEDs are for shutdown indication (see **Figure 6**).
5. When a shutdown signal is received from a SWICHGAGE®, the shutdown LED will light and internal shutdown relay will switch to activate a shutdown device (see *Typical Wiring* page 3). All other shutdown sensor inputs are locked out.
6. Shutdown LED will remain on even if conditions return to normal. To clear the LED, power must be removed or push button reset is operated.

Setting Lockout Switches

Lockout switches allow you to lockout shutdown/alarm sensors during startup. For instance, on a pressure SWICHGAGE®, the lockout time delay allows time for pressure to build up thus lifting the pointer off the low limit contact. If the lockout time delay is not set the TATTLETALE® will initiate the shutdown/alarm sequence. Each sensor input on the ST4X4 and ST8 has a lockout time delay at startup with a length of 25 to 35 seconds.

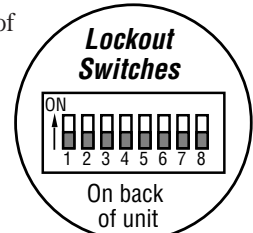


Figure 7

1. Locate the lockout switches on back of the unit (see **Figure 7**).
2. Determine which sensors you wish to lock out. Switch the corresponding sensor lockout switch “ON”. **A SENSOR CAN BE LOCKED-OUT ONLY WHEN ITS LOCKOUT SWITCH IS SWITCHED “ON”.**
3. Remove the jumper between terminals 12 and 13. This will activate the time delay. If this jumper is not removed the lockout time delay will not function.

In order to consistently bring you the highest quality, full featured products, we reserve the right to change our specifications and designs at any time.



■ **Frank W. Murphy Manufacturer**
 P.O. Box 470248; Tulsa, Oklahoma 74147; USA
 tel. (918) 627-3550 fax (918) 664-6146
 e-mail fwmurphy@ionet.net

■ **Frank W. Murphy Southern Division**
 P.O. Box 1819; Rosenberg, Texas 77471; USA
 tel. (281) 342-0297 fax (281) 341-6006
 e-mail murphysd@intertex.net

■ **Frank W. Murphy, Ltd.**
 Church Rd.; Laverstock, Salisbury SP1 1QZ; U.K.
 tel. +44 1722 410055 fax +44 1722 410088 tlx 477088
 e-mail sales@fwmurphy.co.uk

■ **Frank W. Murphy Pte., Ltd.**
 26 Siglap Drive; Republic of Singapore 456153
 tel. +65 241-3166 fax +65 241-8382
 e-mail fwmurphy@fwmurphy.com.sg

■ **Murphok Pty., Ltd.**
 1620 Hume Highway; Campbellfield, Vic 3061; Australia
 tel. +61 3 9358-5555 fax +61 3 9358-5558
 e-mail murphy@macquarrie.com.au

■ **Murphy de México, S.A. de C.V.**
 Blvd. Antonio Rocha Cordero 300, Fracción del Aguaje
 San Luis Potosí, S.L.P.; México 78384
 tel. +52-48-206264 fax +52-48-206336
 e-mail murmexsl@sanluis.podernet.com.mx

■ **Murphy Switch of California**
 P.O. Box 900788; Palmdale, California 93590; USA
 tel. (805) 272-4700 fax (805) 947-7570
 e-mail sales@murphyswitch.com

■ **Frank W. Murphy France**
 tel. +33 1 30 762626 fax +33 1 30 763989