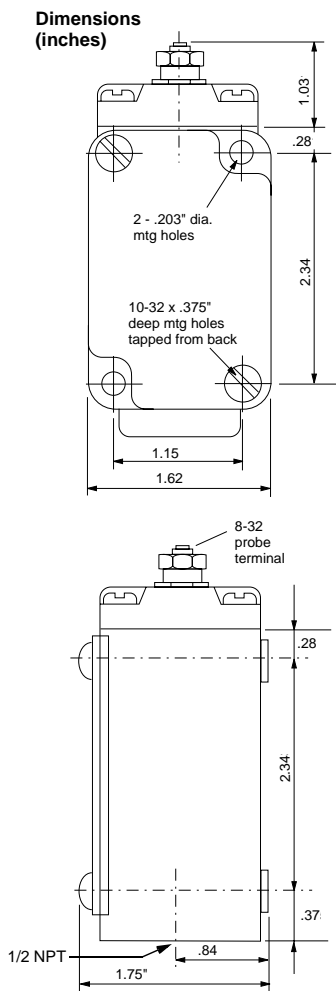


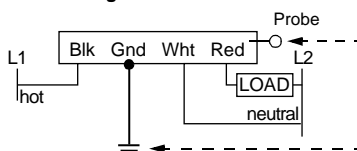
# Instruction Bulletin

Replaces 6008346 REV-2

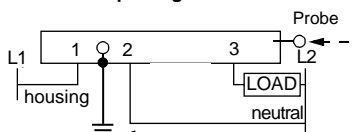
## Grounded Probe Switch ST



### Cable wiring



### Terminal strip wiring



Model ST switches may be wired in series or parallel. For series operation, connect the red lead to the black lead of the other switch, or connect terminal 4 to terminal 1 of the other switch. The voltage drop across each switch (in the closed state) does not exceed 2 Vac.



LISTED  
IND. CONT. EQ-572A

CCN : NKCR  
File No. E42259

STO-8001  
STO-8036  
STO-8042  
STO-8052  
STO-8164  
STO-8166  
STO-8167  
ST1-8002



### FEATURES

- Solid state—no moving parts
- 115 Vac completely self-contained
- Probes up to ten feet long
- High current output—no relay required for most applications
- Rapid response—no warm-up time

### DESCRIPTION

The touch-operated limit switch is a highly reliable solid state limit switch designed for precise conductivity sensing. Applications include high temperature environment, very light targets (conductive), and positive end-point sensing. All models have a neon pilot light to visibly indicate operation of the switch.

## ⚠ DANGER

### HAZARDOUS VOLTAGE

Turn off power before installing or servicing.

**Failure to follow this instruction will result in death or serious injury.**

### GENERAL SPECIFICATIONS

Operating Voltage	105–130 Vac, 50/60 Hz
Maximum Load	3 A break (inductive or resistive)
Maximum Inrush	10 A
Minimum Load	50 mA
Temperature Range	–40 °F to +160 °F
Warm-up Time	None
Housing Rating	NEMA 1, 4, 13

## OPERATION

The switch is actuated by establishing a conductive path between the probe terminal and ground (1 M $\Omega$  or less). The electrical contact to ground operates the switching thyristor. Internal RC snubber and thyrector provide effective protection from typical transients. Normally open models have a 10 ms (maximum) turn-on time. Different off-delay times are offered, so that the design engineer can compensate for relay chatter when the probe is subjected to bounce from irregular contact with the grounded metal point of contact.

## PROBE CHARACTERISTICS

The probe terminal is an 8-32 stud protruding from the center of the head. Extensions may be electrically conductive wire or material suitably insulated from grounded surface and limited in length to 10 ft or less.

- Open voltage: 12 Vdc
- Peak Current: 1 mA

*NOTE: If ground is not available, connect the ground terminal of the switch to the neutral (L2).*

## MODELS

Model No.	Circuit	On Response	Off Delay
STO-8164	Normally Open	10 ms	100 ms
ST1-8165	Normally Closed	100 ms	30 ms
STO-8166	Normally Open	10 ms	400 ms
STO-8167	Normally Open	10 ms	20 ms

Prewired with three feet of no. 16-4 SJTO cable, sealed

Model No.	Circuit	On Response	Off Delay
STO-8001	Normally Open	10 ms	100 ms
ST1-8002	Normally Closed	100 ms	30 ms
STO-8036	Normally Open	10 ms	400 ms
STO-8042	Normally Open	10 ms	20 ms