

Proximity Sensors

ST Grounded Probe Switch

The touch switch is a highly reliable AC solid-state presence sensor designed for precise conductivity sensing. Applications include high temperature, light conductive, aggressive mechanical, and chemical environments that target positive end-point sensing. All models have a visible neon pilot light to indicate operation of the switch.

Features

- Diecast zinc housing
- Solid state—no moving parts
- 115 Vac, completely self-contained
- Probes up to 10 ft (3 m) long
- High current output—no relay required for most applications
- Fast response—no warm-up time
- 0.5 in. (12.7 mm) NPT conduit entrance
- UL Recognized

Operation

The switch is actuated when a conductive path is established between the probe terminal and ground (1 MΩ or less). The electrical contact to ground operates the switching thyristor. Internal RC snubber and varistor provide effective protection from typical transients. Normal open models have a 10 ms (maximum) turn on time. Different off-delay times are offered to permit compensation for relay chatter when the probe is subjected to bounce from irregular contact with the grounded metal point of contact.

NOTE: For isolated circuits where the ground is not common, the ground terminal of the switch should be connected to the neutral. The metal target to be detected by the probe should also then be wired to the neutral.

Probe characteristics

The probe terminal is an 8-32 stud protruding from the center of the head. *Extensions may be any electrically conductive wire or material suitably insulated from grounded surface and limited in length to 10 ft (3 m) or less.*

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

Switch models

Circuit type	Voltage (nominal)	Current load (maximum)	Leakage current (maximum)	On delay	Off delay	Catalog Number
Terminal screws						
N.O.	120 Vac	3 A	1.7 mA	10 ms	100 ms	STO8164
N.C.	120 Vac	3 A	1.7 mA	100 ms	30 m s	ST18165
N.O.	120 Vac	3 A	1.7 mA	10 ms	400 ms	STO8166
N.O.	120 Vac	3 A	1.7 mA	10 ms	20 ms	STO8167
Pre-wired with 3 ft (0.9 m) of cable						
N.O.	120 Vac	3 A	1.7 mA	10 ms	100 ms	STO8001
N.C.	120 Vac	3 A	1.7 mA	100 ms	30 ms	ST18002
N.O.	120 Vac	3 A	1.7 mA	10 ms	400 ms	STO8036
N.O.	120 Vac	3 A	1.7 mA	10 ms	20 ms	STO8042

