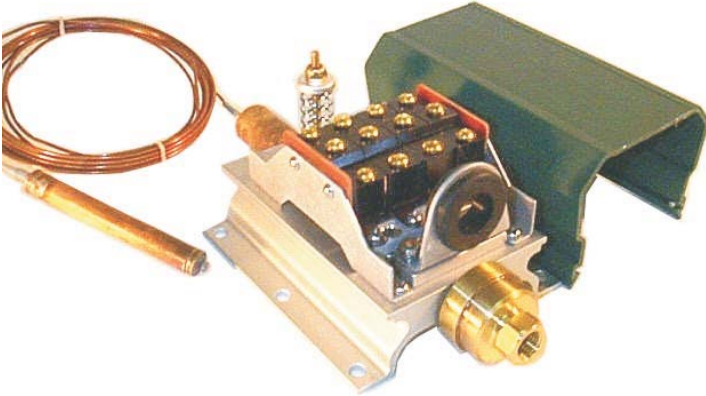




- Built to Customer Specifications
- Temperatures range -40F to 140F
- Up to four SPDT Snap Acting Switches
- Remote Temperature Sensor



GENERAL DESCRIPTION

The series 6TC density switches are rugged temperature compensated pressure switches designed for use on:

- High Voltage Circuit Breakers.
- Gas Insulated Substations.
- Gas Insulated Bus Systems.

A remote bulb at the end of a capillary tube leading to the body where the switching mechanism is located senses the temperature of the gas. The temperature compensation feature allows the pressure switch to ignore pressure changes of the gas due to changing temperature and operate only when a loss of gas is detected indicating a change in density. The switching mechanism is located on a rugged extruded aluminum body. This assembly can be installed in a convenient location as temperature surrounding the assembly does not affect the operation of the switch. The mechanism assembly can operate two, three or four full size SPDT electric switches. A snap on plastic cover is provided to protect the mechanism and switch terminals.

All density switches are manufactured to customer specifications. Once installed, they require no maintenance or field calibration. Each device is factory tested at several temperatures that always include -40F. Solon has evolved the design of components used in these switches that can be combined to meet customer's requirements. This allows Solon to quickly develop new model variations to meet customer's changing specifications.

MODEL SERIES 6TC SF₆ Gas Density Switch Bulb Design

SPECIFICATIONS

Switching

2, 3, or 4 S.P.D.T. snap acting switches

Electrical Connection

Screw terminals standard

Pre-wired with 18" leads available

Switch Contact Ratings

15A; 125, 480 VAC / 6A res.; 28 VDC std.

Setpoint Adjustment

Factory set per customer specifications

Temperature Range

-40°F to 140°F Ambient Standard

0°F to 180°F Available

Accuracy (Standard)

± 1.5 PSI at 70°F

± 3 PSI at temperature extremes 140°F to -40°F

Higher accuracy devices are available

Deadband (Switch Differential)

Fixed; 1-6 PSI Typical (per Cust. requirements)

Pressure Sensing Element

Phosphor Bronze or Stainless Steel Bellows - 100% leak inspected with Helium mass spectrometry to 9×10^{-9} cc/sec.

Pressure Adjustment Range

Phosphor Bronze Bellows: 5-100 PSI; 150 PSI max.

Stainless Stl. Bellows: 5-100 PSI; 300 PSI max.

150-500 PSI; 1000 PSI max.

Pressure Port

¼ NPTF or 7/16-20 SAE are standard; Other port options are available.

Enclosure

Unenclosed design

Base material 6063-T6 extruded aluminum

Cover material rigid PVC

Weight

Approximately 3 lbs (1.4 kg).

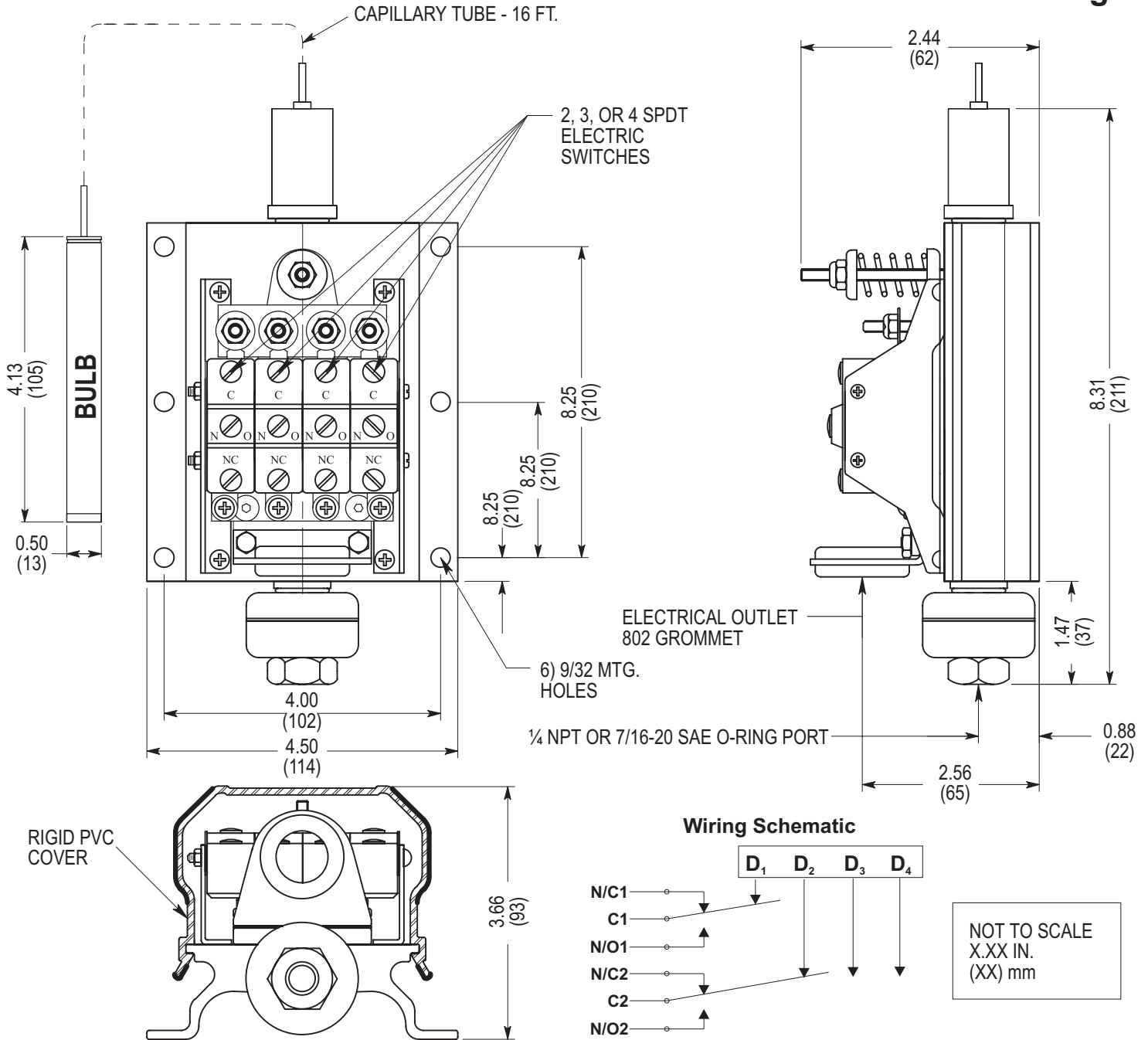
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SWITCH DIMENSIONS



SPECIFYING A SWITCH

1. Specify the set points for each switch. Set points should be given at room temperature (68F) and at either of the temperature extremes.
2. Designate the pressure port fitting.
3. Choose the type of electrical connection;
 - * Screw terminals or,
 - * Prewired - Color coded 18 GA. MTW, 18" Lg.
4. Describe other requirements such as special testing, labeling, tagging, packaging, etc.
5. Once a switch is specified and an order is placed, Solon Mfg. Co. will assign a "slant number" (6TC/XXX) to the switch. This ensures that the fit, form, and function of the device will not change.

INSTALLATION NOTES

- Orientation** - The 6TC will operate satisfactorily in any position.
- Location** - The bulb should be installed where it will follow the temperature of the SF₆ gas (out of direct sunlight.) The location of the switch housing does not effect performance.
- Wiring** - Switches may be wired to 'normally open' or 'normally closed' terminals of the switch contacts.
- Adjustment** - Factory setting to customer specifications is standard. Consult factory for field calibration instructions.

SOLON 
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