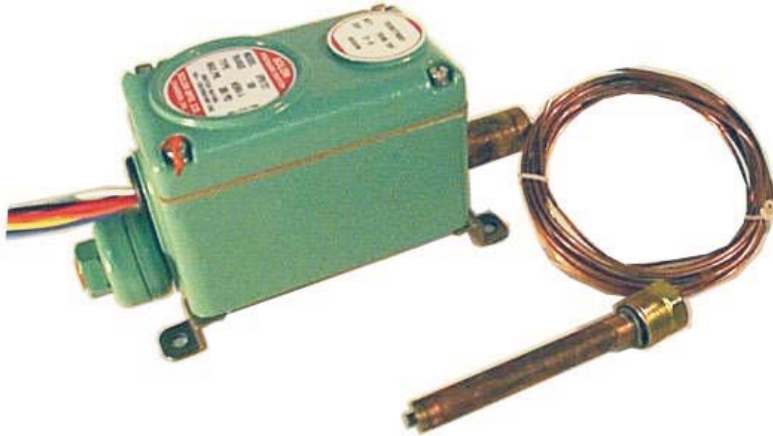




- Built to Customer Specifications
- Temperatures range -40F to 140F
- Two SPDT Snap Acting Switches
- Remote Temperature Sensor



GENERAL DESCRIPTION

The series 5PS 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 housing 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 in a rugged cast aluminum housing. This housing can be installed in a convenient location as temperature surrounding the housing does not affect the operation of the switch. One or two full size SPDT electric switches can be operated by the mechanism in the housing.

The 5PS series density switches have been used to monitor gas density systems since 1975. 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. Constant refinement of design and components allows Solon to quickly develop new model variations to meet customer's changing specifications.

MODEL SERIES 5PS SF₆ Gas Density Switch Bulb Design

SPECIFICATIONS

Switching

2 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
6 X 10⁻⁸ 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

NEMA 1 Standard
NEMA 4 Available
Material 356 Cast Aluminum

Weight

Approximately 3 ½ lbs. (1 ½ kg).

Solon Manufacturing Company

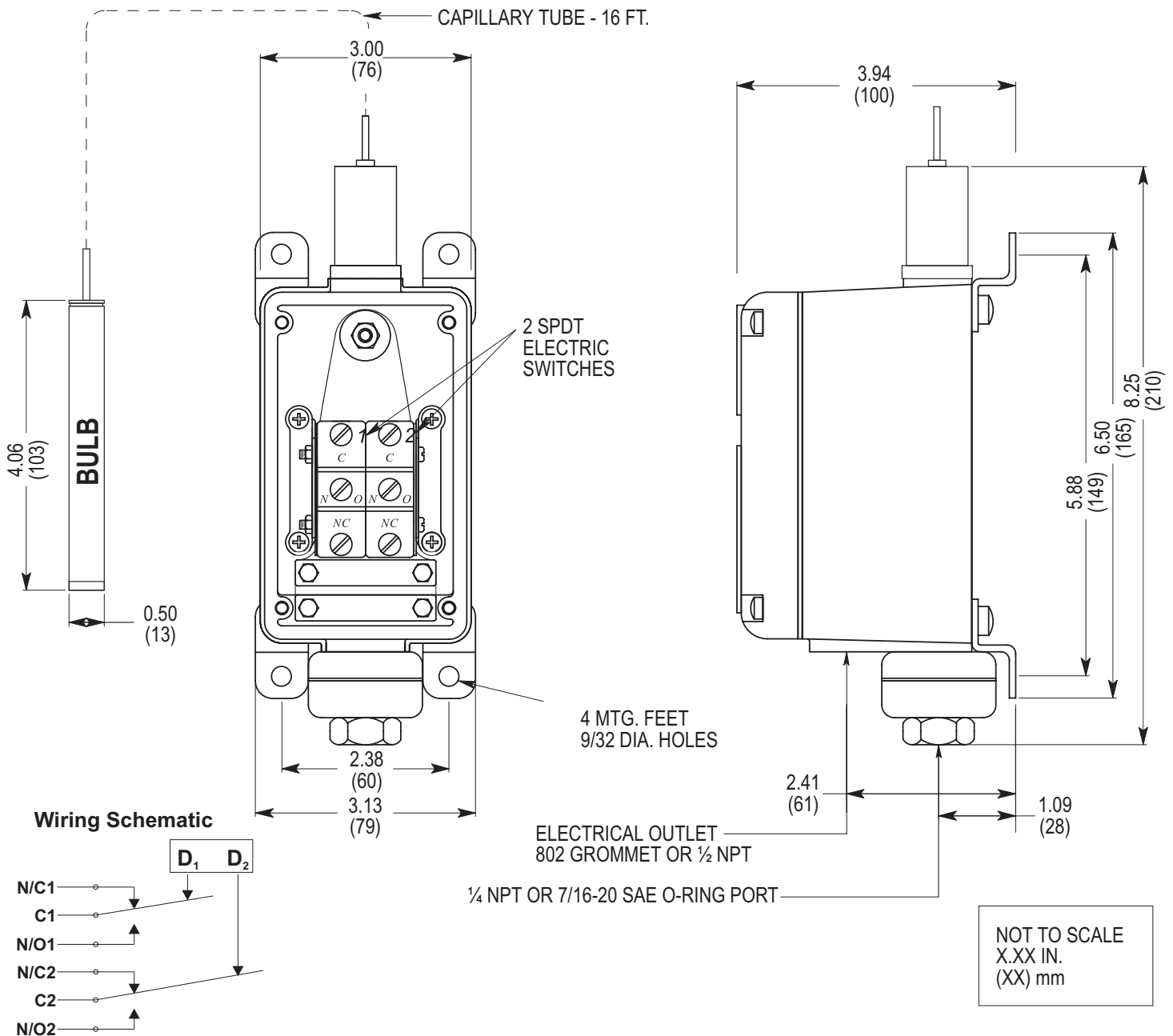
425 Center Street, P.O. Box 207, Chardon, Ohio 44024

(440) 286-7149 800-323-9717 FAX (440) 286-9047

Email: solon@solonmfg.com

SWITCH DIMENSIONS

MODEL SERIES 5PS SF₆ Gas Density Switch Bulb Design



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" (5PS/XXX) to the switch. This ensures that the fit, form, and function of the device will not change.

INSTALLATION NOTES

- Orientation** - The 5PS 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 
800-323-9717