GE
Sensing

Features

- Virtually position insensitive even at very low pressure 0.01 in w.c. (0.254 mm)
- Fast response time due to low internal volume
- No moving parts to wear out
- Solid-state circuitry for long life
- Compact size
- Low power consumption

Applications

- HVAC monitoring of
  - Filter differential pressures
  - Fan static pressures
  - Clean room pressures
  - Variable air volume systems
  - Velocity pressures
- Medical and analytical instruments
- Liquid level monitoring
- General automation

The Modus S10 Series differential pressure switch is a highly sensitive differential pressure switch, capable of detecting pressure changes of 0.10 in (2.54 mm) of water and greater.

To measure pressure between 0.10 in (2.54 mm) and 5.0 in (127 mm) of water, a differential capacitance cell is used. In the capacitance cell, a very lightweight, responsive diaphragm deflects a small amount when pressure is applied. This deflection results in a change in capacitance, which is detected and processed electronically. Reliability and long life are inherent advantages of the solid-state design. Differential pressure changes greater than 5.0 in (127 mm) of water are detected with a piezoresistive (silicon) sensor. The piezoresistive sensor is a solid state device designed in a Wheatstone bridge configuration. When pressure is applied to the device, the resistance of the bridge changes by a small amount. This resistive change is converted to a voltage and amplified.

A wide selection of standard pressure ranges and electrical ratings is available. The output of Modus S10 Series pressure switch is an SPDT relay contact.

Modus S10 Series

General Eastern Differential Pressure Switch

Modus S10 Series is a General Eastern product. General Eastern has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.

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S10 Series Specifications

General

- Setpoint and deadband are adjusted by means of a 20-turn potentiometer for fine resolution
- Dead band is adjustable to 25% of span
- Repeatability is ±1% of setpoint
- Available with relay energizing either on rising or falling pressure

Pressure

- Measures differential, gage pressure or vacuum
- Suitable for air or inert gases
- Port connections: 3/16 in diameter suitable for:
  - 1/8 in I.D. Tygon™ or polyurethane tubing
  - 1/4 in I.D. polyethylene tubing
- Integral filters at both ports

Electrical

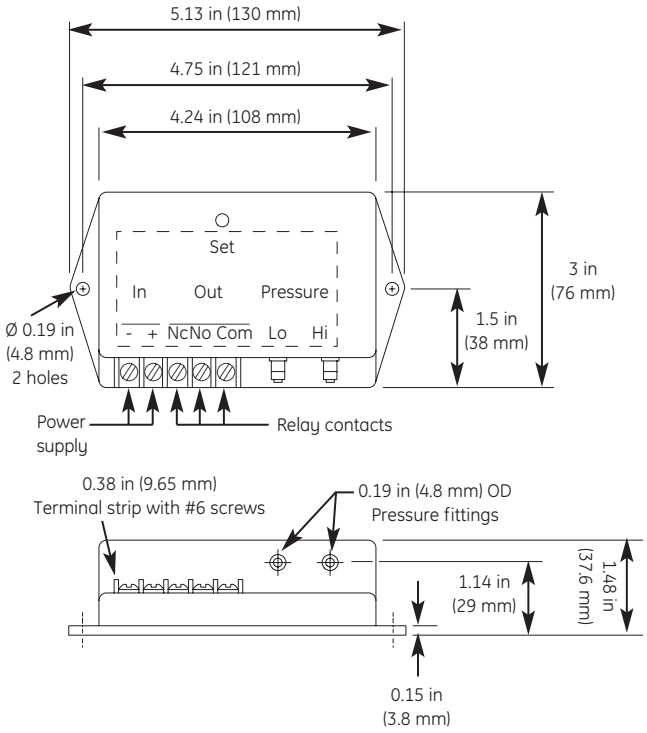
Nominal Input Voltage	Power Consumption	Operating Voltage Range
12 VDC*	0.35 W	9.5 to 16 VDC
24 VDC*	0.35 W	19 to 32 VDC
24 VAC	1.70 W	19 to 32 VAC
120 VAC	1.90 W	100 to 140 VAC

*Protected against reversal of polarity

- Connections by means of 3/8 in terminal strip with #6 screw
- Output is SPDT (1 Form C) relay contacts rated at
  - 5A @ 30 VDC/120 VAC Resistive
  - 4A @240 VAC Resistive
- Electrical life expectancy 100 x 10^3 ops. minimum
- Isolation between coil and contacts 2000 VAC 1 minute

Physical

Dimensions (w x l x h)
3.00 in x 5.15 in x 1.40 in
(76.2 mm x 130.81 mm x 35.56 mm)



Modus S10 Series dimensions

Weight
0.5 lb (230 g)

Case
Flame retardant glass-reinforced NORYL™

Environmental

Operating Temperature Range
32°F to 115°F (0°C to 45°C)

Effect of Temperature on Set Point
±0.05%/°C

Operating Humidity Range
20% to 90% R.H. non-condensing

Shock Resistance
10 G (11 ms)

Vibration Resistance
5 G to 50Hz

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S10 Series Specifications

Table A - Standard Pressure Ranges

English			Metric Units					
Pressure Code	Pressure Range English	Maximum Safe Momentary Overpressure	Pressure Code	Pressure Range Pascals	Maximum Safe Momentary Overpressure	Pressure Range Code	Pressure Safe Momentary Pascals	Maximum Overpressure
01E	0 to 0.100 in H_20		01P	0 to 25.0 Pa		01M	0 to 2.50 mm H_20	
02E	0 to 0.200 in H_20	5 in H_20	02P	0 to 50.0 Pa	1.25 kPa	02M	0 to 5.00 mm H_20	125 mm
03E	0 to 0.300 in H_20		03P	0 to 75.0 Pa		03M	0 to 7.50 mm H_20	
04E	0 to 0.500 in H_20		04P	0 to 100.0 Pa		04M	0 to 10.00 mm H_20	
05E	0 to 1.00 in H_20		05P	0 to 250 Pa		05M	0 to 25.0 mm H_20	
06E	0 to 2.00 in H_20	20 in H_20	06P	0 to 500 Pa	5 kPa	06M	0 to 50.0 mm H_20	500 mm
07E	0 to 3.00 in H_20		07P	0 to 750 Pa		07M	0 to 75.0 mm H_20	
08E	0 to 5.00 in H_20		08P	0 to 1.00 kPa		08M	0 to 100 mm H_20	
09E	0 to 10.0 in H_20	5 psid	09P	0 to 2.50 kPa	35 kPa	09M	0 to 250 mm H_20	3.5 m
11E	0 to 20.0 in H_20		11P	0 to 5.00 kPa		11M	0 to 500 mm H_2O	
12E	0 to 30.0 in H_20		12P	0 to 7.50 kPa		12M	0 to 750 mm H_20	
13E	0 to 50.0 in H_20		13P	0 to 10.0 kPa		13M	0 to 1.00 m H_20	
14E	0 to 100 in H_20	15 psid	14P	0 to 25.0 kPa	100 kPa	14M	0 to 2.5 m H_20	10 m
15E	0 to 1.00 psid		15P	0 to 50.0 kPa		15M	0 to 5.0 m H_20	
16E	0 to 2.00 psid	-	-	-	-			
17E	0 to 3.00 psid	-	-	-	-			
18E	0 to 5.00 psid	-	-	-	-			
19E	0 to 15.0 psid	30 psid	16P	0 to 100 kPa	200 kPa	16M	0 to 10.0 m H_20	20 m
20E	0 to 30.0 psid	60 psid	17P	0 to 200 kPa	400 kPa	17M	0 to 20.0 m H_20	40 m

Ordering Information

Record selected option in blank indicated at bottom of form.

S10

Code	Pressure Range (PPP)
X	See reference Table A

Code	Supply Voltage (SV)
A	12 VDC
B	24 VDC
C	24 VAC
D	120 VAC

Code	Relay (R)
R	Energizing on rising pressure
F	Energizing on falling pressure

S10 - ___ - ___ - ___ **Typical model number.**

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920-245A

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