SenSym

163SC01D48 Transducer

−20 to +120 cm H_2O

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FEATURES

- Superior Price/Performance Replacement for Honeywell/Microswitch 163PC01D48
- Low Pressure Measurements
- High-Level Voltage Output
- Field Interchangeable
- Calibrated and Temperature Compensated

APPLICATIONS

- Medical Equipment
- HVAC
- Flow Monitoring

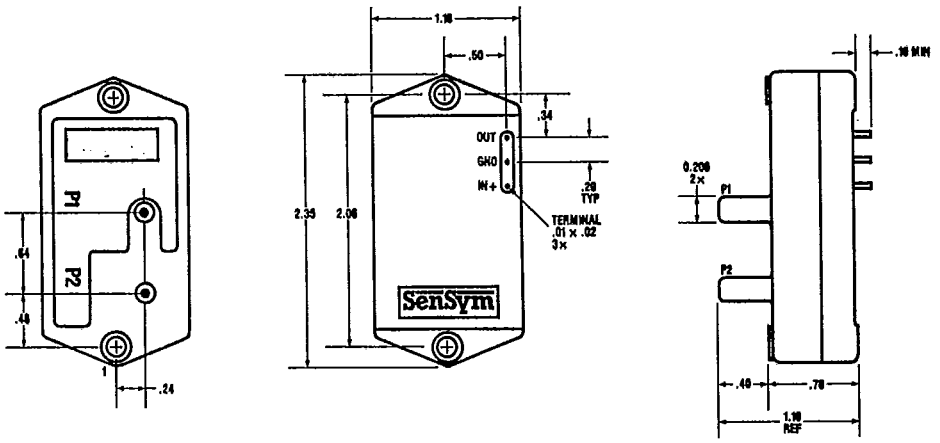
GENERAL DESCRIPTION

The 163SC01D48 transducer provides a signal conditioned output which is directly proportional to applied pressure. This transducer is intended for monitoring low pressures of −20 to +120 cm of water, and feature a high-level voltage output which is calibrated and temperature compensated.

Based on Sensym's precision SX series sensors, the 163SC01D48 is a superior price/performance replacement for the Honeywell/Microswitch 163PC01D48. Offering equivalent pinout and package mounting dimensions, the 163SC01D48 allows direct replacement in existing PC board layouts for the Microswitch in existing PC board layouts for the Microswitch devices.

These devices are designed to be used with non-corrosive, non-ionic gases and liquids. For more demanding or corrosive media applications, Sensysm's ST2000 stainless steel isolated family should be used.

PHYSICAL DIMENSIONS



GENERAL SPECIFICATIONS

T-65-13

163SC01D48

Maximum Ratings

Supply Voltage	6 V_{DC} to 12 V_{DC}
Output Current	
Source	10 mA
Sink	5 mA
Temperature Ranges	
Compensated	+15°C to +45°C
Operating	−40°C to +85°C
Storage	−55°C to +125°C
Overpressure	350 cm H_2O

Reference Conditions

Supply Voltage	10.0 ±0.01 V_{DC}
Reference Temperature	25°C
Common-mode Pressure	0 cm H_2O

PERFORMANCE SPECIFICATIONS (Note 1)

Parameter	Min.	Typ.	Max.	Unit
Pressure Range	−20	—	+120	cm H_2O
Zero Pressure Offset (Note 2)	1.564	1.714	1.864	V
Full-scale Output	5.850	6.000	6.150	V
Full-scale Span (Note 3)	—	5.000	—	V
Sensitivity	—	35.70	—	mV/cm H_2O
Linearity (Note 4)	—	±0.50	—	%FSO
Temperature Effect on Offset (Note 5)	—	±0.50	±0.75	%FSO
Temperature Effect on Span (Note 5)	—	±0.75	±1.00	%FSO
Repeatability and Hysteresis	—	±0.15	—	%FSO
Response Time	—	0.10	1.00	ms

ORDERING INFORMATION

To order, use the following part numbers:

Standard Device Types

Sensym Part #	Operating Pressure Range	Honeywell/Microswitch Equivalent Part #
163SC01D48	−20 to +120 cm H_2O	163PC01D48

Specification Notes:

Note 1: Performance specifications shown are at reference conditions. For devices used in a gage applications pressure is applied to Port 2 and Port 1 is left open to ambient. For differential pressures Port 2 is the high pressure port. All Sensym differential devices feature dual pressure ports and can be used as gage or differential sensors.

Note 2: Offset calibration is set at 0 cm H_2O. Output at −20 cm H_2O is typically 1.00 V_{DC}.

Note 3: Full-scale span is the algebraic difference between the output voltages measured at each end point. (−20 cm H_2O and +120 cm H_2O)

Note 4: Linearity refers to the best straight line fit as measured for offset, full-scale and 1/2 full-scale.

Note 5: Temperature shift refers to the effects of offset and span shifts as measured over 15°C to 45°C relative to 25°C.