

Model P892

Low Range Differential Board-Mount Pressure Transducer

For Use with Dry Air or Compatible Dry Inert Gases



FEATURES

- PC Board-Mountable
- Low Power Requirements
- Amplified Linear Output
- Temperature Compensated
- Pressure Ranges from $\pm 1''$ through $\pm 10''$ H₂O
- Ideal for Static Pressure Controls, VAV & Filter Applications
- Field Proven Reliability
- Superior Output Signal Stability
- EMI/RFI & ESD Protection
- CE Mark Certified
- Made in U.S.A.

APPLICATIONS

The **P892** mounts or plugs into a printed circuit board. This reliable sensor is ideal for VAV systems, filter pressure drop, duct air flow, static pressure controls, gaseous leak detection, pneumatic controls, and medical equipment applications.

Supplied by 5 Vdc, the **P892** provides an amplified, linear output voltage proportional to differential pressure.

The innovative electronic circuitry uses Kavlico's state-of-the-art, mixed-signal CMOS ASIC to ensure

higher accuracy and exceptional EMI/RFI and ESD protection. Superior stability makes this sensor the best choice for repeatable, low pressure measurements.

OPERATION

The **P892** is a replacement for Kavlico's P592/P593 models that have set industry performance standards. Key to the superior operation of the **P892** pressure transducer is Kavlico's highly reliable

ceramic, variable capacitance sensing element combined with our new digitally programmable Application Specific Integrated Circuit (ASIC). This same technology is successfully used by Kavlico for

HVAC, automotive, diesel engine, on/off-highway vehicles, hydraulics, and many other applications. Millions of Kavlico sensors are in use worldwide.

QUALITY

Kavlico's sophisticated manufacturing practices have earned the highest quality awards from its customers.

As an ISO 9001 registered and QS-9000 compliant company, Kavlico is committed to total customer satisfaction. Each and every sensor is tested for conformance to its applicable specifications prior to shipment.

OEM DESIGNS

Kavlico designs application specific sensors to meet demanding OEM requirements. Using a broad range of sensing technologies, we provide components with greater EMI and over-voltage protection.

Solutions for tomorrow's sensing applications...Today

Model P892

DS-P892-8/02

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SPECIFICATIONS

Note: Performance Specifications with 5 ± 0.002 Vdc supply at 25°C

Pressure Ranges:	0-1, 0-2, 0-5, 0-10, (in inches of H ₂ O)	$\pm 1, \pm 2, \pm 5, \pm 10$
Proof Pressure:	1.0 PSI (either port)	
Burst Pressure:	1.5 PSI (either port)	
Supply Voltage:	5.0 \pm 0.5 Vdc	
Supply Current:	4mA MAX.	
Output Voltage (Ratiometric):	See "How to Order"	
Calibration Tolerance (@ 5.0 Vdc supply and no load):		
Zero:	± 120 mVdc for $\pm 0.5''$ H ₂ O	± 80 mVdc for all other ranges
Span:	± 120 mVdc for $\pm 0.5''$ H ₂ O	± 80 mVdc for all other ranges
Linearity:	$\pm 0.5\%$ of span MAX.	
Hysteresis/Repeatability:	$\pm 0.05\%$ of span MAX.	
Ratiometricity:	$\pm 1.5\%$ of span, MAX.	
	4.75 to 5.25 Vdc supply	
Temperature Effects (+10°C to +40°C):		
Ranges $\pm 5''$, 0-10'', and $\pm 10''$:	1.5% of span MAX.	
Ranges 0-1'', 0-2'', $\pm 1''$, $\pm 2''$, 0-5'':	3.0% of span MAX.	
Response Time:	15 ms MAX. at 63% full scale	
Turn-on/Warm-up Time:	Less than 1 second, no overshoot	
Output Impedance:	100 Ohms MAX.	
Operating Temp:	-10°C to +60°C	
Storage Temp:	-40°C to +95°C	

Span is the algebraic difference between the highest output voltage and the lowest within the operating pressure range.

Humidity:	95% RH, non-condensing
Vibration:	10G's peak to peak sinusoidal, 10-20 kHz
Shock:	50G's 1/2 sine wave
Weight:	2.5 oz. MAX.
Elec. Termination:	3 solderable pins, tin plated
Mounting Position:	Vertical, pressure ports facing down
Pressure Connection:	1/8" dia. tube fitting with barb for 3/16 ID tubing
Recommended Interface Impedance:	25K Ohm MIN. resistance between transducer output and ground, in parallel with 0.2 uF MAX. capacitance
Over-voltage/Reverse Polarity Protection:	16 Vdc / -6 Vdc
Materials in Contact with Media:	96% alumina sensing element; silicone seal; non-conductive Petra® 130 FR thermoplastic housing
Certifications:	CE Mark, certified to the EMC Directive 89/336/EEC

INSTALLATION

The case of this device is non-conductive. Three center-mounted pins provide electrical connection to the PC board for input, ground, and output. During installation of flexible tubes onto the pressure ports, tubes must be left open to ambient atmosphere to avoid overpressure. The transducer is designed to be mounted vertically with pressure ports facing down.

HOW TO ORDER

A typical order number has two codes, separated by one hyphen. Standard seal material is silicone. Standard pressure connection is a flared tube fitting. OEM options are available.

P892 Pressure Transducer

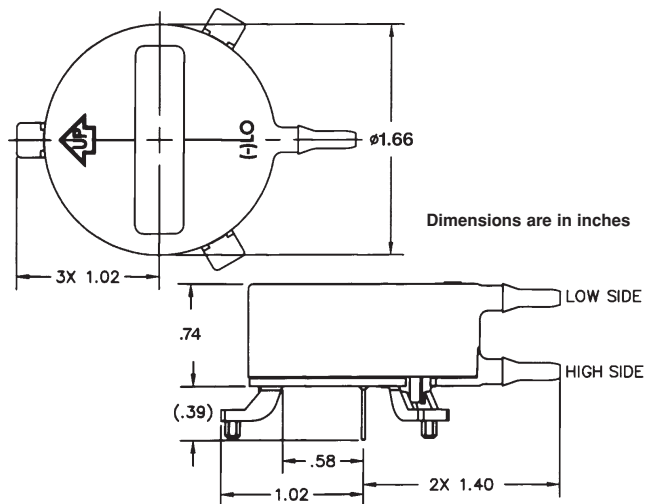
Pressure Range	Nominal Output Voltage Range (Ratiometric)
2B $\pm 2.0''$ H ₂ O	0.25 to 4.00 Vdc
5 0-5.0'' H ₂ O	0.25 to 4.00 Vdc
5B $\pm 5.0''$ H ₂ O	0.25 to 4.00 Vdc
10 0-10.0'' H ₂ O	0.25 to 4.50 Vdc
10B $\pm 10.0''$ H ₂ O	0.25 to 4.75 Vdc

P892 - 5B

Example: P892-5B for $\pm 5.0''$ H₂O

Contact Kavlico for alternative pressure ranges, pressure connections or voltage ranges.

OUTLINE DRAWING



Warranty: Kavlico warrants that its products will be free from defective materials and workmanship for a period of one (1) year from date of delivery to the original purchaser and that its products will conform to Kavlico's specifications or standards. Any product found to be defective will be replaced or repaired at the sole option of Kavlico.

Note: Kavlico reserves the right to change its specifications at any time without notice. Kavlico is not expert in the customer's technical field and therefore does not warrant the suitability of its product for the application selected by the customer.

Kavlico products are manufactured or covered by one or more of the following patents: 4329732, 4388668, 4398426, 4425799, 4426673, 4617607, 4680971, 4735098, 4974117, 5315877, 5329819, 5540086 with other U.S. and foreign patents pending.



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