

876 Series – Barometric Pressure Transducers

- ▶ Instant Warm-Up
- ▶ Barometric Pressure: 600 to 1100 or 800 to 1100 hPa/mb
- ▶ Low Power Consumption (for Battery or Solar Power)

The 876 Series features an extremely accurate and stable ceramic sensor to deliver a great value in environmental pressure measurement. Gems' glass-fused ceramic capacitive sensing capsule offers inherent thermal stability and low hysteresis in a proven, simple design. A custom ASIC used in the 876 Series achieves long-term stability and high accuracy, and its low power requirements (as low as 5 VDC) allow the sensor to operate in remote battery or solar powered applications. An integrated mounting bracket and 1/8" tube pressure connection ease installation.

Common Specifications

Input	
Pressure Range	See ordering chart
Proof Pressure	20 psia (30 psia for 20 psia range)
Fatigue Life	>1 million cycles
Performance	
Long Term Drift	0.25% FS/6 months
Accuracy	±0.25% FS
Thermal Error Zero	1% FS
Thermal Error Span	1% FS
Compensated Temperatures	30°F to +130°F (0°C to +55°C)
Operating Temperatures	0°F to +175°F (-18°C to +79°C)
Storage Temperatures	-65°F to +250°F (-55°C to +121°C)
Zero Tolerance	±25 mV
Span Tolerance	±50 mV
Mechanical Configuration	
Pressure Port	1/8" Tube Fitting
Wetted Parts	Stainless Steel, Alumina Ceramics, Gold, Elastomer
Electrical Connection	2 ft. Multiconductor Cable
Enclosure	Stainless Steel with Mounting Bracket
Vibration	2g from 5 Hz to 400 Hz
Acceleration	10g
Shock	50g (operating, 1/2 sine 10mg)
Approvals	CE
Weight	3.5 oz.

Individual Specifications

Supply Voltage (Vs)	Excitation	Output (3-wire)
9.0-14.5 VDC	12 VDC	0.1-5.1 VDC
21.6-26.0 VDC	24 VDC	0.1-5.1 VDC
4.9-7.1 VDC	5 VDC	0.5-4.5 VDC



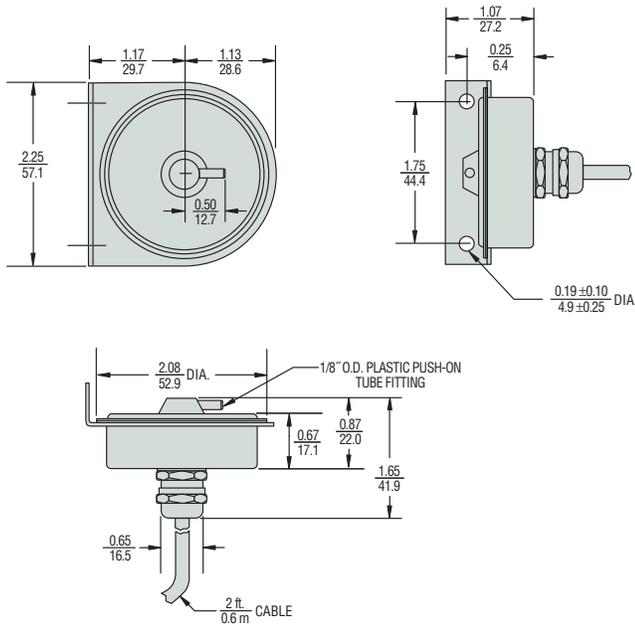
Applications

- Environmental Monitoring Systems
- Weather Measurement Systems
- Weather and Environmental Data Logging
- Barometric Pressure Compensation for Internal Combustion Engine Performance
- Cleanroom Barometric Pressure Compensation
- Automotive Emissions Test Equipment

How They Operate

A glass-fused ceramic sensing capsule detects changes in barometric pressure. As pressure increases or decreases, the capacitance changes. This change in capacitance is detected and converted to a linear analog signal by Gems' custom ASIC-based circuit, producing an output signal proportional to applied pressure.

Dimensions



How to Order

Use the **bold** characters from the chart below to construct a product code.

SELECT **876** - **6-11mb** - **12 V** - * - * - * - *

1. Series **876** - 876 Series

2. Pressure Range Code
 Barometric:
6-11mb - 600 to 1100 mb
8-11mb - 800 to 1100 mb
0-20P - 0 to 20 psia

3. Excitation/Output

Code	Excitation	Output
12 V	12 VDC	0.1-5.1 VDC
24 V	24 VDC	0.1-5.1 VDC
5 V	5 VDC	0.5-4.5 VDC

4. Options (*Add as suffix to base part code as needed)

715 - 0.1% FS accuracy.
839 - 1/8" NPT pressure port.
 Cable Length:
803-810 - For cable length of 3 to 10 feet (2 ft. is standard).
 Please specify cable length by code (e.g., 810 for 10 ft. cable).
 Consult factory for cable longer than 10 ft.
 Calibration Certification:
901 - 11-point calibration certificate.

PRESSURE TRANSDUCERS