

# 856 Series – Industrial Pressure Transducers

- ▶ 0-2 to 0-10,000 psi (0 to 700 bar) Pressure Ranges
- ▶ Voltage or Current Output
- ▶ NEMA 4/IP65 with Zero and Span Adjustments

The 856 Series is specifically designed for NEMA4/IP65 service and features a die-cast aluminum enclosure. Their robust capacitive design is resistant to environmental effects, such as shock, vibration, temperature and EMI/RFI. A 17-4 PH stainless steel sensing element does not require isolation from corrosive media. A 1/2" threaded conduit is provided for electrical termination and a removable cover provides easy access to the internal wiring terminal strip.

## Common Specifications

<b>Input</b>	
<b>Pressure Range</b>	0 to 10,000 psig (0 to 700 bar)
<b>Proof Pressure</b>	See ordering chart
<b>Burst Pressure</b>	See ordering chart
<b>Fatigue Life</b>	>1 million cycles
<b>Performance</b>	
<b>Supply Voltage (Vs)</b>	9-30 VDC
<b>Long Term Drift</b>	0.5% FS/year
<b>Accuracy</b>	
<25 psi	±0.25% FS
≥25 psi	±0.13% FS
<b>Thermal Error Zero</b>	
<25 psi	±0.02% FS/°F (±0.036% FS/°C)
≥25 psi	±0.01% FS/°F (±0.018% FS/°C)
<b>Thermal Error Span</b>	
	±0.015% FS/°F (±0.027% FS/°C)
<b>Compensated Temperatures</b>	
	-4°F to +176°F (-20°C to +80°C)
<b>Operating Temperatures</b>	
	-40°F to +260°F (-40°C to +125°C)
<b>Storage Temperatures</b>	
	-40°F to +260°F (-40°C to +125°C)
<b>Zero Tolerance</b>	0.5% of span (adjustable)
<b>Span Tolerance</b>	1% of span (adjustable)
<b>Mechanical Configuration</b>	
<b>Pressure Port</b>	see ordering chart
<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	Two 1/2" Internal Threaded Ports, Screw Terminal Strip
<b>Enclosure</b>	Die-Cast Aluminum, NEMA 4/IP65
<b>Vibration</b>	20g (MIL STD 202, Method 204, Condition C)
<b>Shock</b>	200g (MIL STD 202, Method 213B, Condition C)
<b>Approvals</b>	CE
<b>Weight</b>	13.4 oz

## Individual Specifications

<b>Voltage Output Units</b>	
<b>Output</b>	0.1-5.1 VDC (3 wire)
<b>Current Consumption</b>	6 mA
<b>Min. Load Resistance</b>	5000 ohms
<b>Current Output Units</b>	
<b>Output</b>	4-20 mA (2 wire)
<b>Max. Loop Resistance</b>	(Vs-9) x 50 ohms



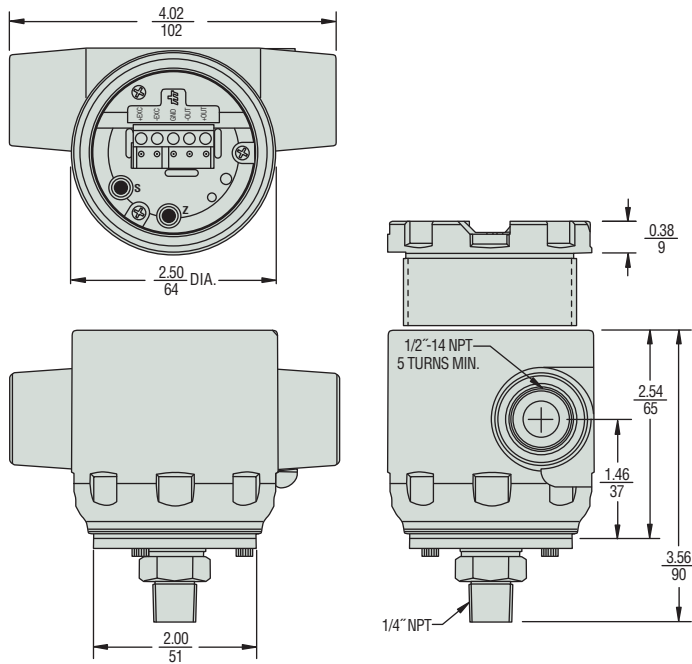
## Applications

- Process Control
- Chemical Processing
- Agricultural Irrigation
- Natural Gas Pipeline
- Grain Processing
- Industrial Pressure Monitoring

## How They Operate

Gems' patented variable capacitance sensor features an insulated electrode plate fastened to the center of the sensor diaphragm, which forms a variable capacitor. 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

1. Series **8561** - 856 Series

2. Pressure Range Code

Pressures – psi			
Code	Range	Proof	Burst
<b>002P</b>	0 - 2	4	250
<b>005P</b>	0 - 5	10	250
<b>010P</b>	0 - 10	20	500
<b>015P</b>	0 - 15	30	500
<b>025P</b>	0 - 25	100	500
<b>050P</b>	0 - 50	150	750
<b>100P</b>	0 - 100	300	1000
<b>150P</b>	0 - 150	300	1000
<b>200P</b>	0 - 200	450	2000
<b>250P</b>	0 - 250	500	2000
<b>500P</b>	0 - 500	1000	3000
<b>600P</b>	0 - 600	1200	3000
<b>10CP</b>	0 - 1000	2000	5000
<b>30CP</b>	0 - 3000	4500	7500
<b>50CP</b>	0 - 5000	7500	10000
<b>10KP</b>	0 - 10000	12000	12500

Pressures – bar			
Code	Range	Proof	Burst
<b>1R6B</b>	0 - 1.6	6	40
<b>004B</b>	0 - 4	10	50
<b>006B</b>	0 - 6	18	60
<b>010B</b>	0 - 10	30	80
<b>016B</b>	0 - 16	32	130
<b>025B</b>	0 - 25	50	170
<b>040B</b>	0 - 40	80	240
<b>060B</b>	0 - 60	120	300
<b>100B</b>	0 - 100	200	400
<b>160B</b>	0 - 160	320	500
<b>250B</b>	0 - 250	380	550
<b>400B</b>	0 - 400	600	800
<b>700B</b>	0 - 700	800	1350

**8561 - 025P - G - 4M - 11 - C**

- 6. Optional **C** - Calibration Certificate
- 5. Output **11** - 4-20 mA  
**22** - 0.1-5.1 Vdc (≥25 psi ranges)
- 4. Pressure Port **2M** - 1/4" NPT (M)  
**4M** - 1/2" NPT (M) (≥25 psi ranges)  
**2F** - 1/4" NPTF (≥25 psi ranges)  
**1M** - 1/8" NPTM (<25 psi ranges)
- 3. Pressure Datum **G** - Gauge (standard)