

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

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

Individual Specifications

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



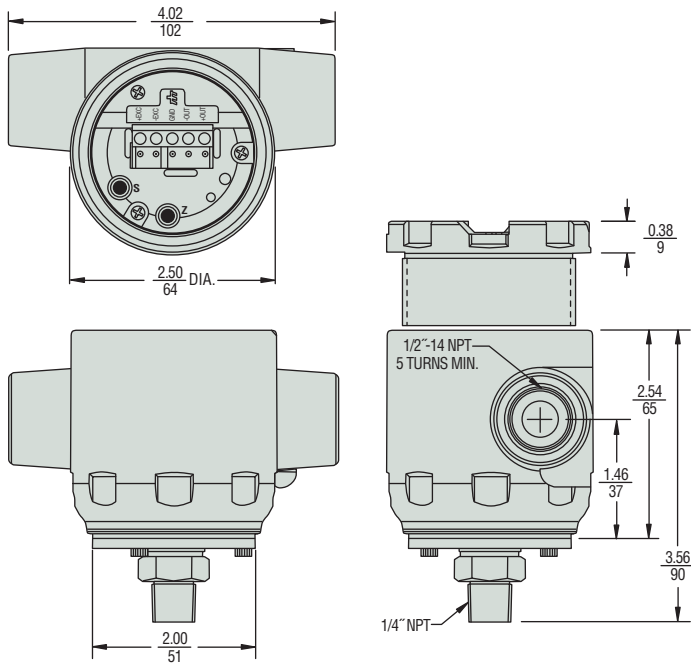
Applications

- 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 |
| 002P | 0 - 2 | 4 | 250 |
| 005P | 0 - 5 | 10 | 250 |
| 010P | 0 - 10 | 20 | 500 |
| 015P | 0 - 15 | 30 | 500 |
| 025P | 0 - 25 | 100 | 500 |
| 050P | 0 - 50 | 150 | 750 |
| 100P | 0 - 100 | 300 | 1000 |
| 150P | 0 - 150 | 300 | 1000 |
| 200P | 0 - 200 | 450 | 2000 |
| 250P | 0 - 250 | 500 | 2000 |
| 500P | 0 - 500 | 1000 | 3000 |
| 600P | 0 - 600 | 1200 | 3000 |
| 10CP | 0 - 1000 | 2000 | 5000 |
| 30CP | 0 - 3000 | 4500 | 7500 |
| 50CP | 0 - 5000 | 7500 | 10000 |
| 10KP | 0 - 10000 | 12000 | 12500 |

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