

ELECTRONIC PRESSURE MEASUREMENT PRODUCTS**Model 88 Pressure Transmitter****5-Year
Warranty****DESCRIPTION**

The Model 88 is the most durable, accurate and cost-effective pressure transmitter presently available. A full-featured, all stainless steel transmitter, it is designed for years of stable performance in even the toughest environmental and media conditions. Approvals include ratings for CSA, for both intrinsic safety and explosion-proof, and FM for explosion-proof only. The Model 88 also meets NACE standards for offshore applications. A five year warranty is standard for the 88C.

The small size and light weight of the Model 88 transmitter eliminates the need for complicated mounting hardware and mechanical supports, thereby reducing installation time substantially. The integral junction box permits simple field wiring without the need for additional hardware, adding to the speed and ease of installation.

A 4 to 20 mA output is standard with a 12 to 40 VDC power supply. With all 316 stainless steel welded construction, the Model 88 is compatible with corrosive media and hazardous environments. With the cover retained by a stainless steel chain and no internal jumpers for span turndown, losses due to misplaced or dropped parts are eliminated.

FEATURES

- A miniature, low-priced, full-featured transmitter – just 1.67 lb.
- All welded 316 stainless steel construction and wetted parts (no aluminum)
- Ranges from 0 to 3 through 0 to 5000 psig (0 to 0.2 to 0 to 350 bar)
- 0.25% accuracy
- Zero and span adjustability
- Full 5:1 range turndown
- Integral junction box
- FM for explosion-proof; CSA for explosion-proof and intrinsically safe
- 4 to 20 mA output at 12 to 40 VDC
- 5-year warranty

OPERATION

The heart of the Model 88 pressure transmitter is a silicon piezoresistive sensing chip. This miniature microetched semiconductor gives a voltage output proportional to the applied pressure. The chip is isolated from the process media by a stainless steel diaphragm. A silicone oil or other specified fill fluid is used to transmit the process pressure to the sensor.

An amplifier PCB enclosed in a sealed chamber is used to convert the millivolt signal from the sensor to a calibrated 4 to 20 mA transmitter output. Feedthroughs for EMI and RF protection are used between the amplifier board and the terminal housing.

Each transmitter is tested over both pressure and temperature ranges. A compensator circuit is used to bring the output of the sensor into specification. After compensation, every transmitter is tested a second time for pressure and temperature effects to ensure that it meets performance and specifications.

**Model 88
Transmitters**



ELECTRONIC PRESSURE MEASUREMENT PRODUCTS

Model 88 Pressure Transmitter

SPECIFICATIONS

Functional Specifications

Service: Liquid, gas or vapor

Range Limits:

- 0/3 to 0/6 psi (0/0.2 to 0/0.4 bar) consult factory
- 0/6 to 0/15 psi (0/0.4 to 0/1 bar)
- 0/15 to 0/30 psi (0/1 to 0/2 bar)
- 0/20 to 0/100 psi (0/1.4 to 0/7 bar)
- 0/60 to 0/300 psi (0/4 to 0/20 bar)
- 0/200 to 0/1000 psi (0/14 to 0/70 bar)
- 0/600 to 0/3000 psi (0/40 to 0/200 bar)
- 0/1000 to 0/5000 psi (0/70 to 0/350 bar)

Output: 4 to 20 mA DC, limited to 30 mA DC

Power Supply: 12 to 40 VDC with reverse polarity protection

Loop Resistance: 1400 ohms maximum at 40 volts

Turndown: 5:1

Zero Adjust: ±10%

Span Adjust: ±10%

Temperature Limits:

- Electronics (Ambient): -40° to 140° F (-40° to 60° C)
- Process Interface: -40° to 212° F (-40° to 100° C)
- Storage: -40° to 212° F (-40° to 100° C)

Overrange: 300% upper range limit

Humidity Limits: 0 to 100% RH

Performance Specifications

Accuracy: ±0.25% of calibrated span including linearity, hysteresis and repeatability

Response Time: Time constant of 20 milliseconds

Stability: ±0.5% of upper range limit for six months

Temperature Effect (includes zero and span):

- Compensated: -20° to 180° F (-29° and 82° C)
- Between 30° and 130° F (-1° and 54° C): ±1% of URL per 50° F (28° C)
- Between -20° and 180° F (-29° and 82° C): ±1.6% of URL per 50° F (28° C)

Power Supply Effect: ±0.005 full scale per volt

Surge Protection: Standard

Vibration Effect: ±0.1% of upper range limit for 3 g to 200 Hz

Position Effect: 0.05%/90° tilt

Overrange Effect: ±0.15% full scale per 200% of maximum range

Physical Specifications

Process Wetted Parts: 316 stainless steel

NonWetted Parts: 316 stainless steel

Cast Head: CF-8M (316 cast stainless steel)

O-ring: BUNA-N

Fill Fluid: DC 200 silicone (standard)

Process Connection: 1/2 NPTF

Electrical Connection: 1/2 NPTF

Weight: 1.67 lbs.

Classifications

Model 88C

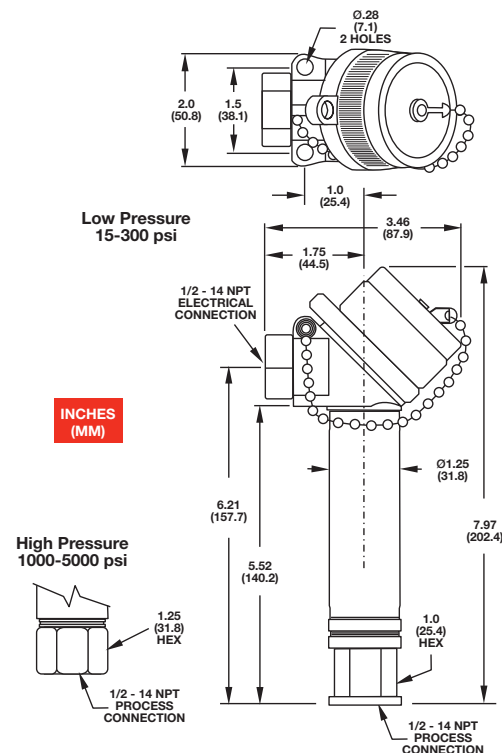
Factory Mutual:

Explosion-proof for Class I, II, III, Division 1, Groups B, C, D, E, G for hazardous locations. NEMA 4 Enclosure.

Canadian Standards Association:

Exia-intrinsically safe for Class I, Division 1 and 2, Groups A, B, C, D; Class II, Groups E, F, G when connected per AMETEK Dwg. BK750483.

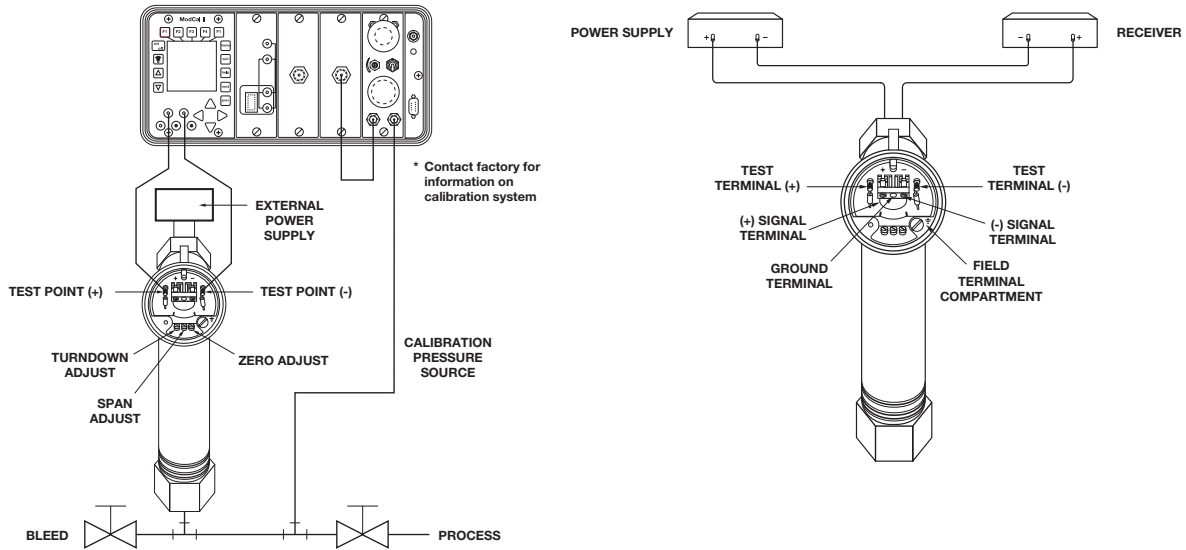
Explosion-proof for Class I, Division 1, Groups B, C, D; Class II, Groups E, F, G; Class III for hazardous locations. Enclosure 4, temperature Code T3C (160° C)





ELECTRONIC PRESSURE MEASUREMENT PRODUCTS

Model 88 Pressure Transmitter



Model Numbering:

●	88 Pressure Transmitter				
88	Pressure transmitter				
●	Approvals				
C	FM certified for explosion-proof and CSA certified for explosion-proof and intrinsic safety				
●	Pressure ranges				
001	3 to 15 psi (21 to 104 kPa)				
002	0/6 to 0/15 psi (0/0.4 to 0/1 bar)				
003	0/15 to 0/30 psi (0/1 to 0/2 bar)				
004	0/20 to 0/100 psi (0/1.4 to 0/7 bar)				
005	0/60 to 0/300 psi (0/4 to 0/20 bar)				
006	0/200 to 0/1000 psi (0/14 to 0/70 bar)				
007	0/600 to 0/3000 psi (0/40 to 0/200 bar)				
008	0/1000 to 0/5000 psi (0/70 to 0/350 bar)				
Non-std.	0/3 to 0/6 psi (0.2 to 0/0.4 bar) Consult factory				
●	Material				
A	316 SS (base), 316 SS (diaphragm), silicone (liquid fill)				
Other	Consult factory				
●	Output				
2	4 to 20 mADC				
●	Calibration ranges				
	Will be calibrated at maximum range in psi if not specified				
88	C	004	A	2	0-50 psi

* Consult factory for additional options