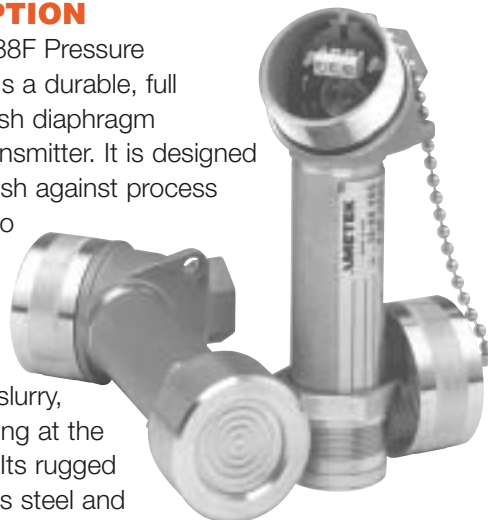


# Electronic Pressure Measurement Products

## Model 88F Flushmount Pressure Transmitters

### DESCRIPTION

The Model 88F Pressure Transmitter is a durable, full featured, flush diaphragm pressure transmitter. It is designed to mount flush against process media and to prevent any media particles, such as from paper slurry, from collecting at the diaphragm. Its rugged 316 stainless steel and HASTELLOY® C construction make it perfect for tough environments and corrosive media conditions.



The compact size and weight of the Model 88F eliminate any complicated mounting hardware and mechanical supports.

The integral junction box permits simple field wiring, too. All of this reduces your installation time substantially. And 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.

A 4 to 20 mA output is standard with a 12 to 40 VDC power supply. Approvals include FM and CSA for both intrinsic safety and explosion-proof ratings; CENELEC approval for intrinsic safety is also available. The Model 88F also meets NACE standards.

### SPECIFICATIONS

**SERVICE:** Liquid, gas, or vapor  
**PRESSURE RANGES:** See ordering information  
**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 RANGE:**  
 Ambient Operating  
 FM Intrinsically safe: -40°F to 104°F (-40°C to 40°C)  
 FM Explosion-proof: -40°F to 140°F (-40°C to 60°C)  
 CSA Intrinsically safe T3C: -40°F to 104°F (-40°C to 40°C)  
 CSA Explosion-proof: -40°F to 140°F (-40°C to 60°C)  
 CENELEC Intrinsically safe T3: -40°F to 1212°F (-40°C to 100°C)  
 Process Interface: -40°F to 212°F (-40°C to 100°C)  
 Storage: -40°F to 212°F (-40°C to 100°C)  
**OVER RANGE:** 300% upper range limit  
**HUMIDITY LIMITS:** 0 to 100% RH  
**ACCURACY:** ±0.25% of calibrated span (BFSL) includes 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°F to 180°F (-29°C to 82°C)  
 Between 30°F and 130°F (-1°C and 54°C): ±1% of URL per 50°F (28°C)  
 Between -20°F and 180°F (-29°C 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 Gs to 200 Hz  
**POSITION EFFECT:** .05%/90° tilt  
**OVERRANGE EFFECT:** ±0.15% full scale per 300% of maximum range  
**MATERIALS OF CONSTRUCTION**  
 Process Wetted Parts: 316 stainless steel  
 Diaphragm: HASTELLOY C  
 Non-Wetted Parts: 316 stainless steel  
 Cast Head: CF-8M (316 cast stainless steel)  
 Cover O-Ring: BUNA-N®  
 Fill Fluid: DC 200 silicone (standard)  
 Process Connection: Refer to dimension drawing  
 Electrical Connection: 1/2 NPT female  
 Weight: 1.67 lbs. (720 grams)  
**APPROVALS/CERTIFICATIONS:** See ordering information

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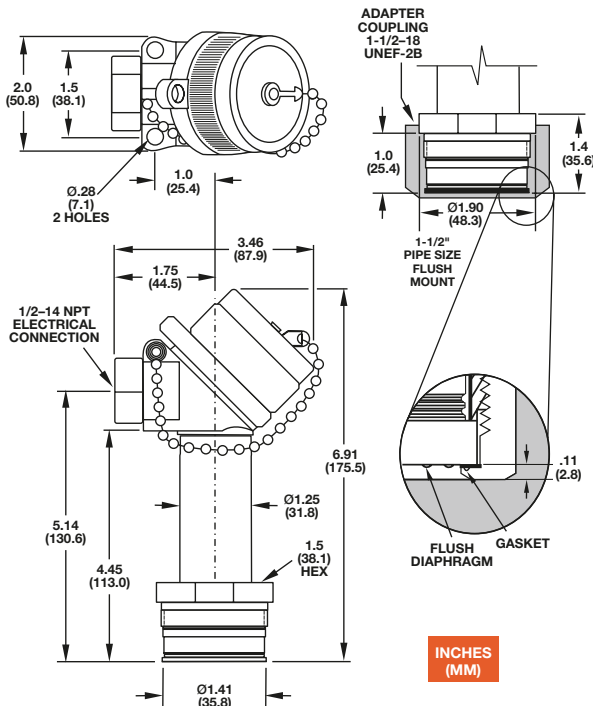


# Electronic Pressure Measurement Products

## Model 88F Flushmount Pressure Transmitters

### ORDERING INFORMATION

MODEL _____	88F
88F = Model 88F Flushmount Pressure Transmitter	
PRESSURE RANGE _____	-004
002 = 0-3 to 0-15 psi (0-0.2 to 0-1.0 bar)	
003 = 0-6 to 0-30 psi (0-4.0 to 0 to 2.0 bar)	
004 = 0-20 to 0-100 psi (0-1.4 to 0-7.0 bar)	
005 = 0-60 to 0-300 psi (0-4.0 to 0-20 bar)	
MATERIAL = BASE / DIAPHRAGM / FILL FLUID _____	-A
A = 316L stainless steel/HASTELLOY® C276/silicone oil	
B = 316L stainless steel/HASTELLOY C276/mineral oil	
OUTPUT _____	-2
2 = 4 to 20 mADC	
AGENCY APPROVALS <sup>1</sup> _____	-CS
FM = FM and CSA intrinsically safe and explosion proof	
CS = CSA and FM intrinsically safe and explosion proof	
CL = CENELEC intrinsically safe	
COUPLING <sup>2</sup> _____	-PC
SC = 316 stainless steel coupling, TEFLON® gasket	
PC = 316 stainless steel coupling, plug, TEFLON gasket	
NC = No coupling, TEFLON gasket	
CALIBRATION RANGE = Specify range or transmitter will be calibrated at maximum range in psi	



### Example Shown Above: 88F-004-A-2-CS-PC (0 to 75 psi)

Model 88F, 0-20 to 0-100 psi (0-1.4 to 0-7.0 bar) pressure range, 316L stainless steel base, HASTELLOY C276 diaphragm, silicone fill fluid, 4-20 mADC output, CSA and FM intrinsically safe and explosion proof, 316 stainless steel coupling with plug and TEFLON gasket (calibrated range of 0 to 75 psi)

<sup>1</sup> FACTORY MUTUAL: Intrinsically safe for Class I, II, III, Division 1, Groups A, B, C, D, E, F, G for hazardous locations per AMETEK Dwg. BK750407. Entity Requirement:  $I_{max} = 225\text{mA}$ ,  $V_{max} = 36\text{B}$ ,  $C_I = 0.126\ \mu\text{f}$ ,  $L_I = 0\text{mH}$ . 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 & 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).

CENELEC: Intrinsically safe: EExialICT3

<sup>2</sup> The adaptor coupling must be welded to the process pipe or vessel.

\* For additional options and codes, please contact your nearest AMETEK PMT Products Representative or our Customer Service Department at (215) 355-6900.

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