

# "MPF" Modular Pressure Transmitter

## Introduction

The industry's first fully modular sanitary pressure transmitter offers not only best in class performance within harsh process environments, but also the ability to be custom configured on site both for process parameters and enclosure form factor. Diagnostic routines continuously check on the health of the circuitry and visually report any issues that could impact performance.

The illuminated internal display provides a simple user interface to ease start up commissioning and configuration. The optional display interface provides class leading legibility and intuitive configuration functions.

Patent pending dual seals at every enclosure penetration and a fully potted electronic puck assure long life and problem free operation.

The modular design and universal electronics puck significantly lowers cost of ownership as critical spare inventory is reduced to manageable, replaceable components. When accidents do happen, the damaged component is easily and economically replaced saving the cost of full sensor replacement. While the sensor industry trends toward cheaper designs with the inevitable reduction of durability, and longevity, the MPF provides quality and value through innovation.

For more information on this product, or any of our other products, visit [www.anderson-negele.com](http://www.anderson-negele.com) or call our Customer Service Department directly at 1-800-833-0081.

## Authorizations

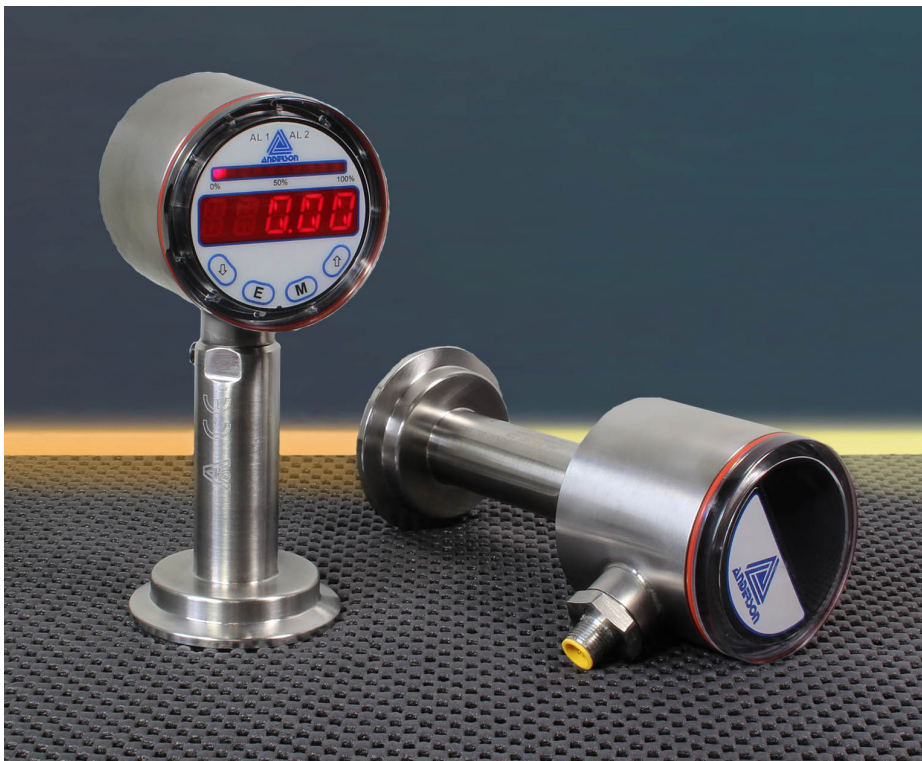


## Features

- State of the art sanitary design delivers class leading performance
- Replaceable components reduce cost of ownership
- Diagnostic routines promote reliability, display verifies problem free operation
- Intuitive menu driven setup simplifies commissioning
- Available HART communications simplifies commissioning and maintenance for HART protocol adapters

## Applications

- Sanitary pressure line direct or remote measurement
- Process sensor control including pressurized fillers, pressurized vessels, filter monitoring, etc
- Aseptic processing, steam injection and other high temperature processes
- Sanitary environment including wash downs, condensing humidity, and wide temperature swings



**Specifications**

**PERFORMANCE MECHANICAL & ELECTRICAL:**

Calibrated Accuracy: ± 0.10% of calibrated range up to 5:1 turndown (± 0.15% if over 5:1 turndown)  
 Repeatability: 0.05% as calibrated  
 Long Term Stability: 0.2% URL for 2 years  
 Process Temperature Effect: ± 0.1 psi/10°F (5.5°C) typical  
 Ambient Temperature Effect: ± 0.1 psi/10°F (5.5°C) typical  
 Over-Range Capability: 30/100/500 psi stem:  
 1.5x URL no effect on accuracy  
 2x URL to failure  
 1000 psi stem:  
 1.1x URL no effect on accuracy  
 1.25x URL to failure  
 Response Time: <100 Milliseconds  
 Sampling Rate: <50 Milliseconds  
 Damping: Menu adjustable  
 Range Turndown Capability: 10 to 1 turn down from URL  
 Ranges, URL (PSI): 30,100,500,1K gauge and compound  
 30,100,500 absolute  
 Ranges, URL (BAR): 2,7,35,70 gauge and compound  
 2,7,35 absolute

**ENVIRONMENTAL:**

Process Temperature Limits: 0 to 350°F (-18 to 177°C) with ambient temperatures to 140°F (60°C) and 0 to 330°F (-18 to 165°C) with ambient temperatures to 160°F (71°C)  
 Ambient Temperature Limits: 32 to 160°F (0 to 71°C)  
 Enclosure Protection: NEMA 4X & IP66  
 IP69K(when equipped with QDR)

**CONSTRUCTION / FINISH:**

Product Contact: 316L finished to a Min. Ra =25 microinches. Optional: Hastelloy® diaphragm  
 Non-Product Contact Metal: 304 finished to a Min. Ra =32 microinches  
 Non-Product Contact Plastic: polycarbonate threaded cap. Delrin atmospheric vent

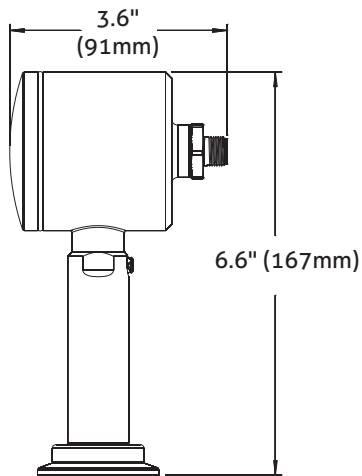
Wiring Connection: M16 x 1.5 threaded housing electrical entry Equipped with: Standard - replaceable M12 5 pin Eurofast QDR Optional - M16 Cord Grip, M16 x 1.5" NPTF adaptor  
 Operational: ETR (Extended Temperature Range) FDA approved mineral oil Optional Neobee M-20  
 Internal Fill:  
 Output: Analog 2-wire user selectable 4-20 mA DC or 20-4 mA Optional - HART 7.0 digital communications protocol  
 Internal Display: 4 digit LED nominally displays loop current. Process variable selectable - PSI or BAR.  
 Display Interface: Optional; modular field replaceable - Millibar, Torr & Kg/cm2, PSI, BAR, kPA, In H2O, In Hg, mm H2O, mA  
 Loop Resistance: 0-300 ohms at 24 VDC  
 Electrical Connection: screw terminals with a conductor cross section range of 14-26 AWG  
 Recommended Cable: Anderson shielded molded cordset, alternatively: 22-24 AWG, foil shielded, 0.17 - 0.26" Cable Sheath OD for use with cord grip or field wiring connector  
 Electrical Protection: Voltage spike and reverse polarity  
 Operating Voltage: 18-36 VDC (24 VDC Nominal regulated or unregulated)  
 Zero Adjustment: one touch  
 Re-Span: With switch through user interface & with or without a reference pressure source  
 Electronics Puck: Modular, Field replaceable  
 Fitting & Sensor Stem: Modular, Field replaceable

**APPROVALS AND DOCUMENTATION**

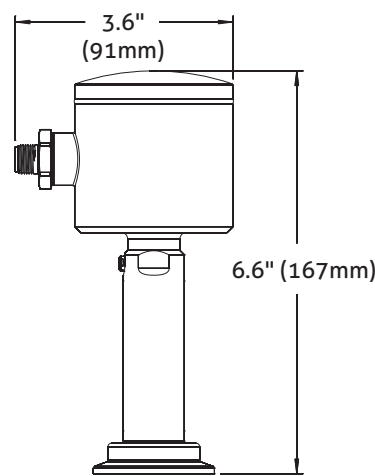
Sanitary: 3-A compliant, Third Party Verified  
 Compliance: Compliant with the Pressure Equipment Directive relative to Sound Engineering Practices(PED); CE compliant  
 CSA-B51-03  
 CRN# CSAOF9754.5R1

Warranty: 2 years

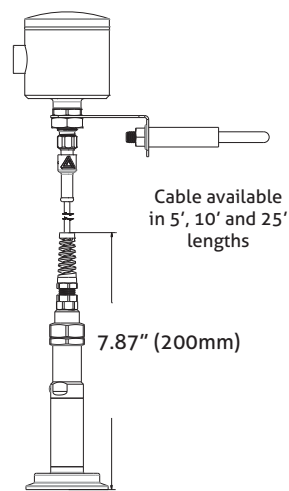
**Dimensions**



**HORIZONTAL ORIENTATION**



**VERTICAL ORIENTATION**



**REMOTE MOUNTING  
(ALSO AVAILABLE IN A KIT)**

HOW TO ORDER (complete unit)



- URL**
- Compound (Vacuum/Pressure)(C)
- 6 30"Hg/0/30 PSI, -1...2 BAR
  - 7 30"Hg/0/100 PSI, -1...7 BAR
  - 8 30"Hg/0/500 PSI, -1...35 BAR
  - 9 30"Hg/0/1000 PSI, -1...70 BAR

- Absolute(A)
- A 0...30 PSI, 0...2 BAR
  - B 0...100 PSI, 0...7 BAR
  - C 0...500 PSI, 0...35 BAR

- FITTING**
- 002 3/4" Tri-Clamp<sup>®</sup> 1
  - 004 1-1/2" Tri-Clamp<sup>®</sup>
  - 005 2" Tri-Clamp<sup>®</sup>
  - 010 1-1/2" APC "K"
  - 011 2" APC "K"
  - 016 1-1/2" Cherry "I" (male)
  - 017 2" Cherry "I" (male)
  - 027 1-1/2" G & H "H" line (male)
  - 028 2" G & H "H" line (male)
  - 044 1-1/2" #14 Bevel Seat (w/nut)
  - 045 2" #14 Bevel Seat (w/nut)
  - 059 1-1/2" NPT 2
  - 123 AIC CPM Flushmount
  - 129 38mm IDF w/Nut 2
  - 131 51mm IDF w/Nut 2
  - 160 G 1" CLEANadapt 1,2

- CAPILLARY FILL**
- 1 Mineral Oil FDA approved (Standard)
  - 5 Propylene Glycol (Neobee M-20)

- WETTABLE MATERIAL**
- A 316L (Standard)
  - B Hastelloy<sup>®</sup> diaphragm

- REMOTE**
- 0 None
  - A 5' Cable
  - B 10' Cable
  - E 25' Cable

- STEM CERTIFICATION**
- A No Certs (Standard)
  - B Compliance and Material
  - C Accuracy and Material

- ENCLOSURE ORIENTATION**
- 1 Vertical
  - 2 Horizontal
- M16x1.5 ELECTRICAL ENTRY**
- A M12 QDR STD
  - C Cord Grip N/C
  - N 1/2" NPTF Adaptor
- DISPLAY**
- 0 Standard Display
  - A Advanced Display Interface
- CALIBRATION RANGE (TYPE)**
- 999 Custom Calibration

- PSI**
- 025 30/0 (C)
  - 028 30/0/15 (C)
  - 029 30/0/30 (C)
  - 031 30/0/60 (C)
  - 032 30/0/100 (C)
  - 314 30/0/200 (C)
  - 066 0-30 (C,A)
  - 068 0-50 (C,A)
  - 069 0-60 (C,A)
  - 071 0-100 (C,A)
  - 073 0-150 (C,A)
  - 074 0-160 (C,A)
  - 075 0-200 (C,A)
  - 077 0-300 (C,A)
  - 081 0-500 (C,A)
  - 084 0-1,000 (C)
- BAR**
- 251 -1/0/1 (C)
  - 286 -1/0/2.5 (C)
  - 217 -1/0/3 (C)
  - 056 -1/0/4 (C)
  - 304 -1/0/7 (C)
  - 057 0-2 (C,A)
  - 235 0-3 (C,A)
  - 192 0-4 (C,A)
  - 060 0-6 (C,A)
  - 309 0-7 (C,A)
  - 061 0-10 (C,A)
  - 065 0-20 (C,A)
  - 224 0-35 (C,A)
  - 206 0-70 (C)

- ENGINEERING UNITS**
- P PSI
  - B BAR

- OUTPUT**
- A Analog
  - H HART and Analog

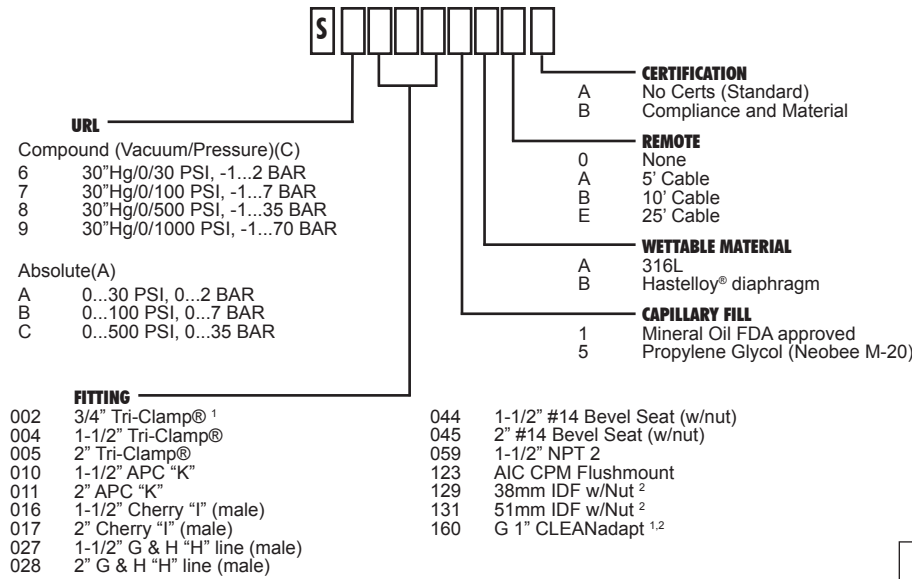
- ENCLOSURE**
- 2 Clear Cap (Standard)
  - 3 Stainless Steel Cap

**FIXED CHARACTER**

1 Not available in Hastelloy<sup>®</sup>  
 2 Not 3-A Compliant

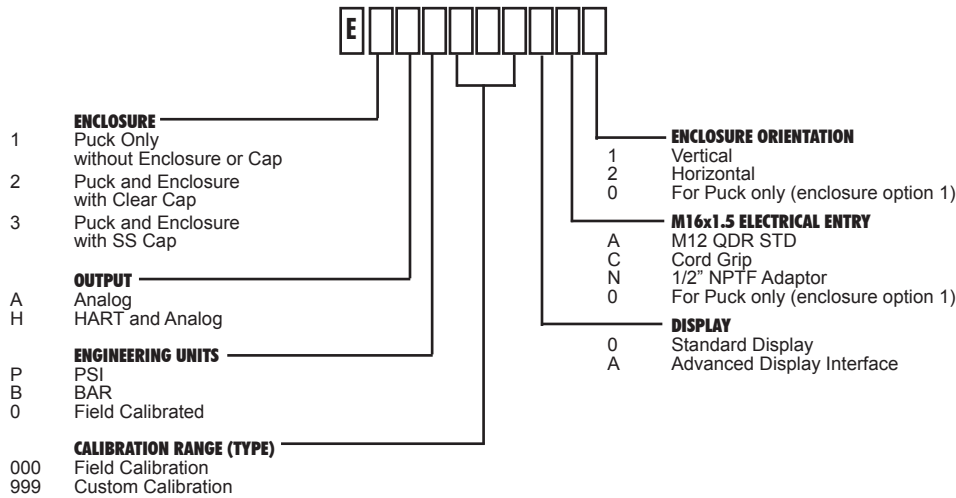
HOW TO ORDER (modular components)

Stem



<sup>1</sup> Not available in Hastelloy®  
<sup>2</sup> Not 3-A Compliant

Puck/Enclosure



| PSI              | BAR              | PSI            | BAR            |
|------------------|------------------|----------------|----------------|
| 025 30/0 (C)     | 251 -1/0/1 (C)   | 057 0-2 (C,A)  | 235 0-3 (C,A)  |
| 028 30/0/15 (C)  | 286 -1/0/2.5 (C) | 060 0-6 (C,A)  | 192 0-4 (C,A)  |
| 029 30/0/30 (C)  | 217 -1/0/3 (C)   | 061 0-10 (C,A) | 309 0-7 (C,A)  |
| 031 30/0/60 (C)  | 056 -1/0/4 (C)   | 065 0-20 (C,A) | 061 0-10 (C,A) |
| 032 30/0/100 (C) | 304 -1/0/7 (C)   | 224 0-35 (C,A) | 065 0-20 (C,A) |
| 034 30/0/200 (C) | 057 0-2 (C,A)    | 206 0-70 (C)   | 065 0-20 (C,A) |
| 066 0-30 (C,A)   | 235 0-3 (C,A)    |                |                |
| 068 0-50 (C,A)   | 192 0-4 (C,A)    |                |                |
| 069 0-60 (C,A)   | 060 0-6 (C,A)    |                |                |
| 071 0-100 (C,A)  | 309 0-7 (C,A)    |                |                |
| 073 0-150 (C,A)  | 061 0-10 (C,A)   |                |                |
| 074 0-160 (C,A)  | 065 0-20 (C,A)   |                |                |
| 075 0-200 (C,A)  | 224 0-35 (C,A)   |                |                |
| 077 0-300 (C,A)  | 206 0-70 (C)     |                |                |
| 081 0-500 (C,A)  |                  |                |                |
| 084 0-1,000 (C)  |                  |                |                |

ACCESSORIES

**Cord Sets**

|                              |            |
|------------------------------|------------|
| Shielded Molded w/25' cable  | 42117K0025 |
| Shielded Molded w/50' cable  | 42117K0050 |
| Shielded Molded w/100' cable | 42117K0100 |

Clear Cap w/gaskets 5632800001  
Stainless Steel Cap w/gaskets 5632900001  
Enclosure w/Clear cap w/gaskets SP5632700001  
Enclosure w/SS cap w/gaskets SP56327A0001  
M12 Quick Disconnect Receptacle SP56726A0002  
Cord Grip SP5633100000  
1/2" NPTF adaptor SP5633200000  
Seal Kit (6) gaskets 5633000001  
Field Wireable Connector-Straight 42119B0000  
Field Wireable Connector-90° 42119A0000  
Display Kit SP56741A0001  
5' Remote Kit SP73228A0005  
10' Remote Kit SP73228A0010  
25' Remote Kit SP73228A0025  
Coverplate SP56741B0001