



FLOW
LEVEL
PRESSURE
ANALYTICAL
TEMPERATURE
INSTRUMENTATION
PASTEURIZATION CONTROLS



ASME BPE 2012

"MPP" Modular Pressure Transmitter

- *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*

The model MPP modular pressure transmitter has been specifically designed for placement in sanitary process applications in the Life Sciences industry where accurate and repeatable pressure measurements in difficult (vibration, wide temperature swings, humidity) environments are required. A sanitary diaphragm on the process boundary acts on an FDA and USP approved actuating fluid transferring pressure to an internally sealed piezo resistive transducer. The transducer's millivolt output is then converted an analog 4-20 mA DC signal that is proportional to the pressure exerted on the diaphragm. The resulting signal may be interfaced with Anderson Digital Indicators, PLC or other customer

supplied instrumentation. The MPP is sealed from environmental conditions via fully potted electronics, patented double o-ring sealed enclosure and all welded construction. Modular construction allows a high degree of field customization with the benefit of individual component replacement. All product contact surfaces are constructed of 316L stainless steel, (available Hastelloy) and electropolished with a surface finish not exceeding 8 micro inch Ra. Non-product contact surfaces are constructed of both 316L and 304.

For more information on this product, or any of our other products, visit www.andinst.com or call our Customer Service Department directly at 1-800-833-0081.

APPLICATIONS

- Bio-reactor head space pressure monitoring
- Chromatography column pressure measurement
- SIP monitoring
- Pressure measurement of sterile gas lines
- Pressure measurement within sterile transfer lines
- Pressure measurement within filtration processes



MPP Specifications

PERFORMANCE MECHANICAL & ELECTRICAL:

Calibrated Accuracy: $\pm 0.07\%$ of calibrated range up to 5:1 turndown
($\pm 0.10\%$ 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 compound
30,100,500 absolute
Ranges, URL (BAR): 2,7,35,70 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 & IP67
IP69K(when equipped with QDR)

CONSTRUCTION / FINISH:

Product Contact: 316L Electropolished and finished to a Min. Ra <8 microinches. Optional: Hastelloy® diaphragm
Non-Product Contact Metal: 316L & 304 finished to a Min. Ra <32 microinches and polished to a high gloss
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

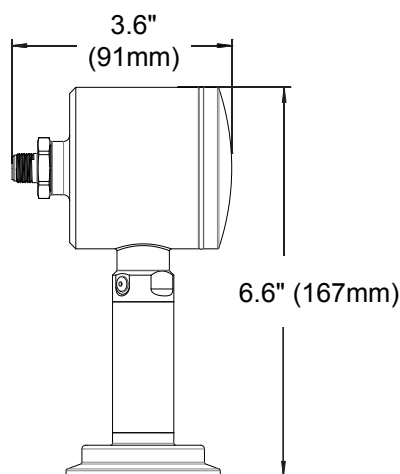
OPERATIONAL:

Internal Fill: ETR (Extended Temperature Range) FDA approved mineral oil
Optional Neobee M-20
Output: 2 wire, HART 7.0 with user selectable 4-20 mA DC or 20-4 ma DC
Internal Display: 4 digit LED nominally displays loop current.
Display Interface: Modular field replaceable. User selectable units - 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: 18-36VDC (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

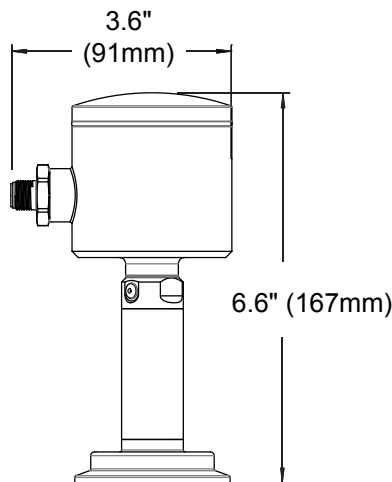
APPROVALS AND DOCUMENTATION

Sanitary: ASME-BPE 2012 compliant
Authorized to display the 3-A Symbol, Third Party Verified, standard 74-05
Compliance: HART 7.0 Compatible
CE compliant
Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC
CSA-B51-03
CRN# CSAOF9754.5R1
Warranty: 2 years

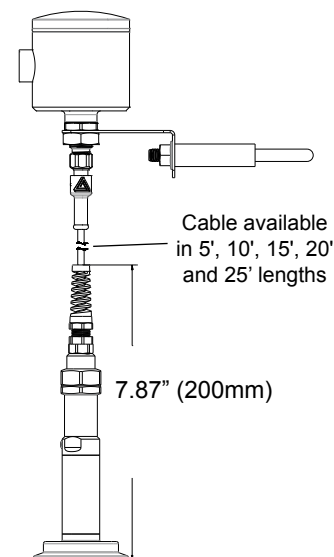
DIMENSIONS



Horizontal Orientation

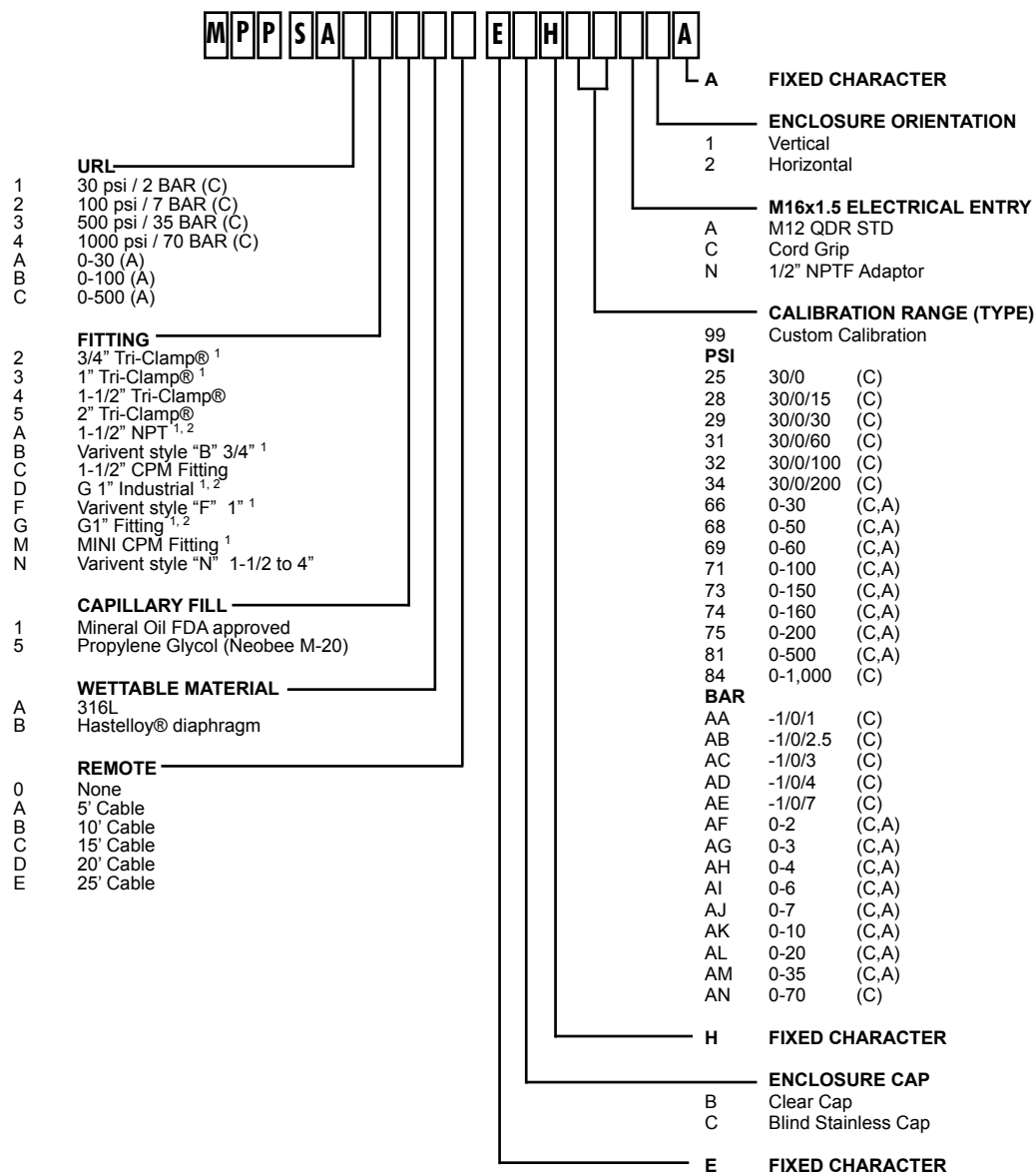


Vertical Orientation



Remote Mounting
(also available in a kit)

HOW TO ORDER (complete unit)



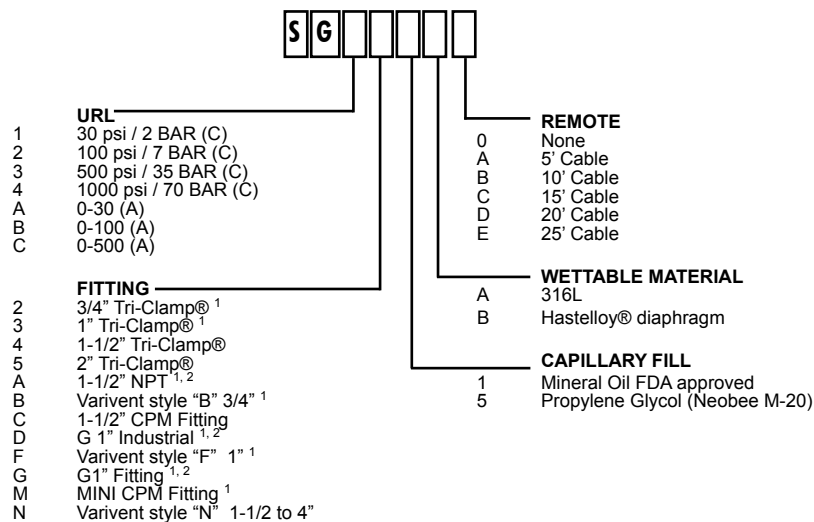
¹ Not available in Hastelloy®

² Not 3-A Compliant

All added cost fittings are non-cancellable/non-returnable and have additional lead times

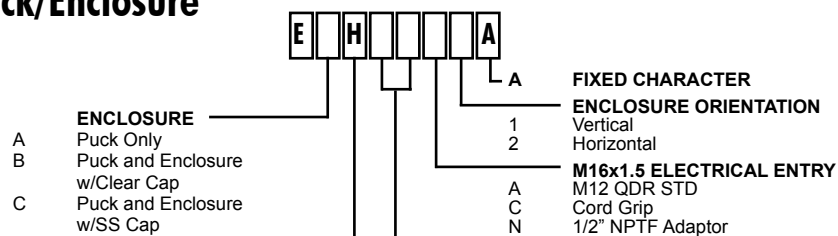
HOW TO ORDER (modular components)

Stem



All added cost fittings are non-cancellable/non-returnable and have additional lead times

Puck/Enclosure



(TYPE)
99 Custom Calibration
00 Field Calibration

PSI

25	30/0	(C)
28	30/0/15	(C)
29	30/0/30	(C)
31	30/0/60	(C)
32	30/0/100	(C)
34	30/0/200	(C)
66	0-30	(C,A)
68	0-50	(C,A)
69	0-60	(C,A)
71	0-100	(C,A)
73	0-150	(C,A)
74	0-160	(C,A)
75	0-200	(C,A)
81	0-500	(C,A)
84	0-1,000	(C)

BAR

AA	-1/0/1	(C)
AB	-1/0/2.5	(C)
AC	-1/0/3	(C)
AD	-1/0/4	(C)
AE	-1/0/7	(C)
AF	0-2	(C,A)
AG	0-3	(C,A)
AH	0-4	(C,A)
AI	0-6	(C,A)
AJ	0-7	(C,A)
AK	0-10	(C,A)
AL	0-20	(C,A)
AM	0-35	(C,A)
AN	0-70	(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	56328P0001
Stainless Steel Cap w/gaskets	56329P0001
Enclosure w/Clear cap w/gaskets	SP5632700066
Enclosure w/SS cap w/gaskets	SP56327A0066
M12 Quick Disconnect Receptacle	SP56726AN002
Cord Grip	SP5633100000
1/2" NPTF adaptor	SP5633200000
Seal Kit (6) gaskets	563300001
Field Wireable Connector-Straight	42119B0000
Field Wireable Connector-90°	42119A0000
Display Kit	SP56741P0066
5' Remote Kit	SP73228A0005
10' Remote Kit	SP73228A0010
15' Remote Kit	SP73228A0015
20' Remote Kit	SP73228A0020
25' Remote Kit	SP73228A0025