

MP SENSOR

MP Sensor Inline Series Pressure Transmitters



MP Sensor Inline sensors provide a slim design for ease of use in any process system. The inline sensors have compact built-in push-in tubing connections (5/32in to 3/8in), IP68 sealing, PBT/PC housing, any-orientation mounting, and a common M8 4-pin connector footprint. Pressure ranges are -14.5 to +14.5 psig and 0 to 145 psig.

Inline Sensors meet EMC standards (EN61000-6-2/6-4), carry UL listing E511277, and offer $\pm 0.5\%$ accuracy at 23 °C with $\pm 0.2\%$ repeatability and $\leq 0.1\%$ /year long-term drift. Provides a plug-compatible upgrade path between analog and IO-Link variants as application requirements evolve.



Features

Process Operating Pressure Range

Sensing ranges include -14.5 to +14.5 psi [-1 to +1 bar] and 0 to 145 psi [0 to 10 bar].

High Accuracy & Stability

Delivers $\pm 0.5\%$ or better accuracy at 23 °C with $\pm 0.2\%$ repeatability and $\leq 0.1\%$ /year long-term drift – ideal for precise, reliable control.

Compact & Rugged

Slim design fits tight spaces. Rugged plastic PC/PBT housing construction with IP68 rating, ensures durability in harsh environments.

Versatile Outputs

Supports analog (4–20 mA), switch (PNP, NPN, push-pull), and digital (IO-Link) outputs for broad compatibility with PLCs and Industry 4.0 systems.

Customizable Settings

Adjustable pressure range, units, output behavior, and switch points.

Applications

- Process control & automation
- Pump & compressor control
- Pneumatic systems
- Engine monitoring
- Refrigeration equipment
- Presses
- Machine tools



Caution: Not cleaned for oxygen service.

General Specifications

Parameter	Description
Media Type	Air, non-corrosive/non-flammable gasses only
Housing Material	Plastic PBT/PC
Materials (wetted parts)	Silicone, PBT, polycarbonate
Operating Temperature	-13 to +185 °F (-25 to +85 °C)
Max Overpressure	-14.5 to +14.5 psi: 29 psi 0 to 145 psi: 217.6 psi
Burst Pressure	-14.5 to +14.5 psi: 43.5 psi 0 to 145 psi: 290.1 psi
Current Consumption	< 25 mA
Output Voltage	Approx. $U_b - 1.5V$
Output Current	Max. 150 mA per output
Protection**	IP68
Accuracy*	$\pm 0.5\%$ FS
Repeatability	$\pm 0.2\%$ FS
Max. Temperature Error	$\pm 1.5\%$ (-25 to +85 °C)
Reverse Polarity and Short Circuit	Yes
MTTF (40 °C)	2,176 years
Long Term Drift	$\leq 0.1\%$ / year
Weight	20–30g
Agency Approvals	UL, CE, RoHS

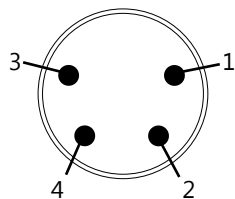
*Note - Includes non-linearity, hysteresis & non-repeatability.

**Protection rating is dependent on the protection rating of the M8 cable used.

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Part Number	Price	Output 1	Output 2	Pressure Range	Process Connection	Electrical Connection	Operating Voltage	Drawing Link
1-18-0781-033200	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	-14.5 to +14.5 psig	6mm push-to-connect	4-pin M8 quick-disconnect	9–30 VDC	PDF
1-18-0781-033400	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	0–145 psig	6mm push-to-connect			PDF
1-18-0781-070200	\$85.00	4–20 mA	NA	-14.5 to +14.5 psig	6mm push-to-connect			PDF
1-18-0781-070400	\$85.00	4–20 mA	NA	0–145 psig	6mm push-to-connect			PDF
1-18-1481-033200	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	-14.5 to +14.5 psig	5/32in (4mm) push-to-connect			PDF
1-18-1481-033400	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	0–145 psig	5/32in (4mm) push-to-connect			PDF
1-18-1481-070200	\$85.00	4–20 mA	NA	-14.5 to +14.5 psig	5/32in (4mm) push-to-connect			PDF
1-18-1481-070400	\$85.00	4–20 mA	NA	0–145 psig	5/32in (4mm) push-to-connect			PDF
1-18-1581-033200	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	-14.5 to +14.5 psig	5/16in (8mm) push-to-connect			PDF
1-18-1581-033400	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	0–145 psig	5/16in (8mm) push-to-connect			PDF
1-18-1581-070200	\$85.00	4–20 mA	NA	-14.5 to +14.5 psig	5/16in (8mm) push-to-connect			PDF
1-18-1581-070400	\$85.00	4–20 mA	NA	0–145 psig	5/16in (8mm) push-to-connect			PDF
1-18-1881-033200	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	-14.5 to +14.5 psig	1/4in push-to-connect			PDF
1-18-1881-033400	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	0–145 psig	1/4in push-to-connect			PDF
1-18-1881-070200	\$85.00	4–20 mA	NA	-14.5 to +14.5 psig	1/4in push-to-connect			PDF
1-18-1881-070400	\$85.00	4–20 mA	NA	0–145 psig	1/4in push-to-connect			PDF
1-18-1981-033200	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	-14.5 to +14.5 psig	3/8in push-to-connect			PDF
1-18-1981-033400	\$98.00	switch PNP, N.O./N.C. selectable or IO-Link	switch PNP, N.O./N.C. selectable	0–145 psig	3/8in push-to-connect			PDF
1-18-1981-070200	\$85.00	4–20 mA	NA	-14.5 to +14.5 psig	3/8in push-to-connect			PDF
1-18-1981-070400	\$85.00	4–20 mA	NA	0–145 psig	3/8in push-to-connect			PDF

Communication Connection



M8 4-Pin (male)

Pin Designation	
Pin No.	Assignment
1	Ub+
3	0V
4	Output 1 / IO-Link
2	Out 2

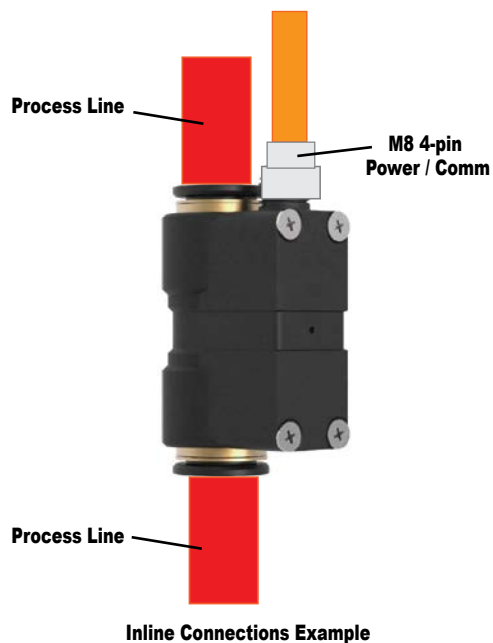


For a variety of cable options see our website www.AutomationDirect.com

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Process Connections

Process connection is non-directional with integral push-to-connect fittings. Sensor can be mounted in any position.



Pressure Range vs Output Value		
Sensor Pressure Range		Output (4–20 mA)
-14.5 to +14.5 psi	0 to 145 psi	
-14.5	0	4
-11.6	14.5	5.6
-8.7	29	7.2
-5.8	43.5	8.8
-2.9	58	10.4
0	72.5	12
2.9	87	13.6
5.8	104.5	15.2
8.7	116	16.8
11.6	130.5	18.4
14.5	145	20