MP SENSOR

ELECTRONIC PRESSURE & VACUUM SWITCH *Product category*

F08-M1 *Type*

STANDARD *Version*

DATA SHEET | *ENGLISH*

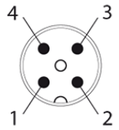


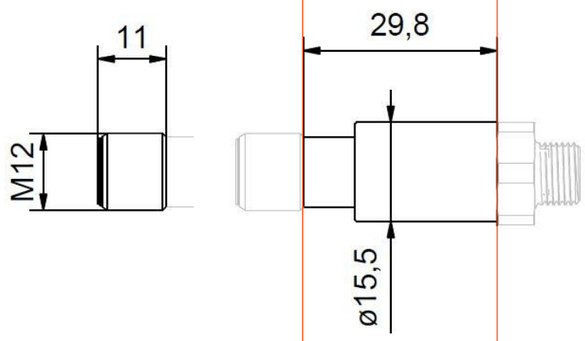
UK CA

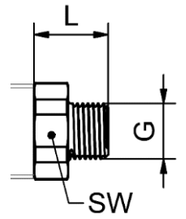
c UL US LISTED E511277 · IO-Link · LABS free · CE · Ex

ELECTRICAL CONNECTION | **BODY** | **PROCESS CONNECTION**

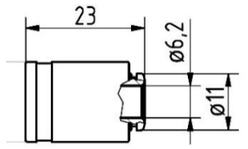
Pin	Assignment
1	Ub+
3	0 V
4	OUT 1 / IO-Link
2	PROG







G	L	SW
G1/8“	13	16
G1/4“	18	17
G3/8“	16	19
NPT1/8“	13	16



Push-in (6 mm)

General data

Setting options	Switch points; NO/NC; Hysteresis / window mode; On/Off Delay; Programming lock ex works
Operating medium	Filtered, dry or oiled air and non-corrosive gases
Protection class	IP65
MTTF (40°C)	820 years

Electrical data

Electrical connection	M12x1, 4-pole
Operating voltage	9…30 VDC (UL: class 2 source only)
Current consumption	< 20 mA
Short-circuit / reverse polarity protection	yes / yes

Ordering information

1 - 03 - XX 02 - XX 3 X XX

Process connection

G1/8“	02
G1/4“	03
NPT1/8“	04
Push-in 6 mm	07
G3/8“	09

Output signal

1x PNP	01
1x NPN	on request

Firmware

Standard	00
Customized	>00

Pressure range

bar	psi	
-1…0	-14.5…0	1
-1…1	-14.5…14.5	2
-1…10	-14.5…145	3
0…10	0…145	4
0…12	0…174	5
-1…3	-14.5…43.5	6
0…0.25	0…3.62	7

Output

Output signal	1x PNP (IO-Link is optionally available); 1x NPN (only without IO-Link)
Output voltage	approx. Ub -1.5 V
Max. output current	max. 200 mA each output
Output function	NO / NC (programmable)
Operating frequency	200 Hz
Capacitive load	200 nF
Response time	< 2.5 ms
Accuracy (23°C)	± 0.5% FS
max. temperature error	± 1.5% FS (-10°C…60°C)
Repeatability	± 0.2% FS
Long term drift	≤ 0.1% / a

IO-Link

IO-Link specification	Version 1.1
Transmission rate	COM 2 / 38.4 Kbit/s
Process data width	24 bit
Measurement information	16 bit
Switch point information	1 bit
Max. cycle time	5 msec

ATEX Conditions

The pressure sensors may only be connected to suitably approved intrinsically safe equipment that provides device protection according to “ic” (EPL Gc/Dc).

Maximum intrinsically safe voltage: U_i = 30 V

The specified maximum output current of 200 mA per channel must never be exceeded.

Mechanical data

Material housing	Stainless steel
Process connection	G1/8“; G1/4“; G3/8“; NPT1/8“; Push-in 6 mm
Material process connection	Brass nickel-plated
Mounting position	Any (port downwards when using oiled air)
Weight	28 g

Pressure range

Measuring range							
(bar)	0…0.25	-1…0	-1…1	-1…3	-1…10	0…10	0…12
(psi)	0…3.62	-14.5…0	-14.5…14.5	-14.5…43.5	-14.5…145	0…145	0…174
max.overpressure							
(bar)	0.5	2		6	15		
(psi)	7.25	29		87	217.6		

Operating conditions

Operating temperature	Operation: -25°…+85°C (UL: 0°…+60°C)
EMC / interference immunity	EN61000-6-2
EMC / interference emission	EN61000-6-4
LABS conformity	VDMA 24364-B1/B2/C1-L/W
UL approval	E511277
ATEX approval	Ex ic IIC T4 Gc Ex icD IIC T4 Dc

MP-Sensor GmbH · Albstr. 13 · 73765 Neuhausen · Phone +49 (0)7158 9878490 · info@mp-sensor.de · www.mp-sensor.com · Errors and omissions excepted