

Micro-Pressure Transmitter

MPM430



Applications

- Petrochemical
- Power plant
- Mine
- Urban water supply
- Hydrological exploration

Features

- Available in two port options: standard and chamberless, with a large diaphragm surface in contact with the medium
- Ceramic diaphragm for excellent corrosion resistance
- Overload capacity up to 10 times FS, resistant to strong pressure shocks
- Intrinsically safe, Ex ia IIC T6 Ga

Introduction

MPM430 Micro-Pressure Transmitter is designed for low-pressure measurement applications. It incorporates a ceramic sensor and an integral, fully sealed stainless steel housing, offering a compact size, high overload resistance, excellent stability, and superior corrosion resistance for reliable performance.

Specifications

Range	
Overpressure	Refer to Measuring Range & Accuracy
Accuracy	
Pressure type	Gauge G, Positive/Negative N
Long-term stability	±0.5%FS/year
Thermal error	≤±0.15%FS/10°C (-20 ~ 80°C)
	≤±0.2%FS/10°C (-30°C ~ -20°C)
Operating temperature	-30°C ~ 80°C (Connector)
	-20°C ~ 70°C (Cable, cable material: PE)
	-20°C ~ 80°C (Cable, cable material: PUR)
	-20°C ~ 60°C (Intrinsically safe explosion-proof)
Storage temperature	-40°C ~ 120°C
	20°C ~ 85°C (Cable)
IP rating	IP65
Weight	≤150g

Measuring Range & Accuracy

Positive/Negative Pressure N				
Unit	Measuring Range	Accuracy	Overpressure	Code
kPa	-1 - 0	±1%FS	180	V001
	-2 - 0		180	V002
	-4 - 0		180	V004
	-5 - 0		180	V005
	-6 - 0		180	V006
	-10 - 0		180	V010
	-0.5 - +0.5		180	C0D5
	-1 - +1		180	C011
	-2 - +2		180	C022
	-3 - +3		180	C033
	-3.5 - +3.5		180	C3D5
	-5 - +5		180	C055
	-10 - +10		180	C010
	-0.5 - +1		180	C051
	-0.5 - +2.5		180	C2D5
	-0.5 - +5		180	C550
	-1 - +3		180	C013
	-1 - +5		180	C150
	-1 - +10		180	C100
	-2.5 - +5		180	C255
	-5 - +10		180	C510

Positive/Negative Pressure N				
Unit	Measuring Range	Accuracy	Overpressure	Code
mbar	-10 - 0	±1%FS	1800	n010
	-20 - 0		1800	n020
	-40 - 0		1800	n004
	-50 - 0		1800	n005
	-60 - 0		1800	n006
	-100 - 0		1800	n055
	-5 - +5		1800	n505
	-10 - +10		1800	n101
	-20 - +20		1800	n202
	-30 - +30		1800	n303
	-35 - +35		1800	n353
	-50 - +50		1800	n500
	-100 - +100		1800	n100
	-5 - +10		1800	n510
	-5 - +25		1800	n525
	-5 - +50		1800	n550
	-10 - +30		1800	n103
	-10 - +50		1800	n150
	-10 - +100		1800	n110
	-25 - +50		1800	n255
	-50 - +100		1800	n501

Gauge Pressure G				
Unit	Measuring Range	Accuracy	Overpressure	Code
kPa	0 - 1	±1%FS	300	K001
	0 - 1.5		300	K1D5
	0 - 2		600	K002
	0 - 3		600	K003
	0 - 4		600	K004
	0 - 5	±0.5%FS	600	K005
	0 - 6		600	K006
	0 - 7		600	K007
	0 - 8		600	K008
	0 - 9		600	K009
	0 - 10		600	K010
	0 - 15		600	K015
	0 - 20		600	K020
	0 - 30		600	K030
	0 - 40		600	K040

Gauge Pressure G				
Unit	Measuring Range	Accuracy	Overpressure	Code
mbar	0 - 10	±1%FS	3000	m010
	0 - 15		3000	m015
	0 - 20		6000	m020
	0 - 30		6000	m030
	0 - 40		6000	m040
	0 - 50	±0.5%FS	6000	m050
	0 - 60		6000	m060
	0 - 70		6000	m070
	0 - 80		6000	m080
	0 - 90		6000	m090
	0 - 100		6000	m100
	0 - 150		6000	m150
	0 - 200		6000	m200
	0 - 300		6000	m300
	0 - 400		6000	m400

Construction Materials

Wetted Parts

Isolated diaphragm: 96% Alumina ceramic

Pressure port: SS 304

Non-Wetted Parts

Housing: SS 304

Cable: PE/PUR

Test standard: GB/T 17614.1-2015/IEC60770-1:2010

Ambient temperature: 20°C ± 5°C

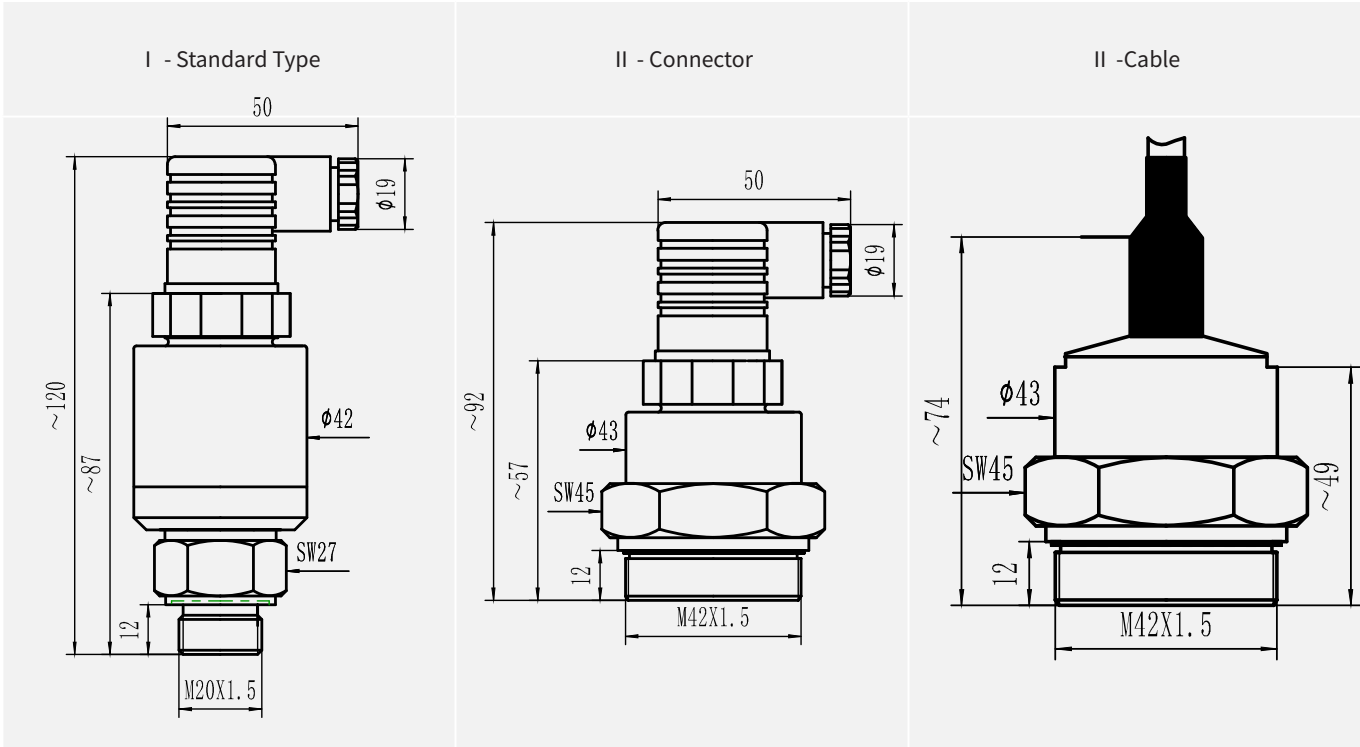
Relative humidity: 45%~75%

Output Signals

Output signal	Supply voltage	Output type	Load resistance
4mA~20mA DC(E)	12V~28V DC (Intrinsically safe powered by safety barrier)	2-wire	$\leq(U-12)/0.02(\Omega)$

Outline Construction

Unit: mm



Electrical Connection

	4-pin connector	Cable
Definition		
	Current 2-wire	Current 2-wire
(+V)	1	Red
(+OUT)	2	Black

Order Guide

MPM430	Micro-Pressure Transmitter										
	Code	Pressure type									
	G	Gauge									
	N	Positive/Negative pressure									
		Range -100mbar...-5mbar ~ 5mbar...400mbar									
	XXXX	Range-specific code									
		Code	Output signal								
		E	4mA~20mA DC								
			Code	Power supply							
			V11	12V~28V DC							
				Code	Accuracy						
				A2	±0.5%FS						
				A3	±1%FS						
					Code	Construction Material					
						Isolated diaphragm	Pressure port			Housing	
					29	Ceramic	SS 304			SS 304	
						Code	Electrical connection				
						I	Standard Type (M20×1.5 Male)				
						II	Connector Type (M42×1.5 Male)				
						III	Cable Type (M42×1.5 Male)				
							Code	Process connection sealing			
							1	NBR			
							2	FKM (standard)			
							3	EPDM			
								Code	Cable material (only for III)		
								N	None (optional for non-cable connection)		
								P1	PE (standard)		
								P2	PUR		
									Code	Cable length (unit: m)	
									N	None (optional for non-cable connection)	
									L001	1	
									L1D5	1.5	
									L002	2	
									L003	3	
									L004	4	
									L005	5	
									L006	6	
									L007	7	
									L008	8	
									L009	9	
									L010	10	
MPM430	G	K005	E	V11	A2	29	III	2	P1	L001	The complete spec.

Order Guide

Code	Certification	
N	None	
i	Intrinsically safe explosion-proof Ex ia IIC T6 Ga	
	Code	Accessory
	N	None
	M6	M6 digital indicator
	M7	M7 digital indicator
	Yb3	Yb junction box (3-core terminals)
	Yc3	MS200 ((3-core terminals))
	Yd3	PD140
	YeM6	Ye (M6)
	YeM7	Ye (M7)
	Ye	Ye (without indicator)
	MS01	Polymer plug
N	N	The complete spec.

Notes

1. When ordering the transmitter with M6 or M7 indicator, power supply should be ≥17V DC.
2. The ambient temperature of transmitter should be -20°C~ 70°C with M6 indicator, while -10°C~ 60°C with M7 indicator. Indicator settings refer to its order guide, which can be obtained from the MICROSENSOR website.
3. If a metrology verification certificate is required, or there are any other special requirements, please consult with the MICROSENSOR and specify them in the order.