

Submersible Level Transmitters for Fuels and Chemicals

MPM426W Series



Introduction

MPM426W Series Submersible Level Transmitters (MPM426WPC and MPM426WPF) from MICROSENSOR feature a fully welded construction with a high-stability piezoresistive sensor, specialized digital compensation, and rugged stainless steel housing. Key features include integrated construction, standardized outputs, wide temperature operation, and flexible cable options, making it a reliable solution for field automation control systems. The MPM426WPF Level Transmitter is primarily used for monitoring finished fuels (gasoline, diesel, kerosene), while the MPM426WPC Level Transmitter is ideal for chemical monitoring applications, including methanol, ethanol, DEF (diesel exhaust fluid), and diesel engine coolant. Both models offer high corrosion resistance and meet strict protection/explosion-proof standards.

Applications

- Gasoline/Diesel/Methanol/Ethanol storage tanks
- Biodiesel tanks
- Chemical storage tanks
- Ballast tanks
- Groundwater level measurement in mine
- Wastewater level measurement
- Agricultural irrigation equipment
- Fertilizer storage tanks

Features

- Ultra-Low power consumption
- Wide operating temperature range
- Exceptional sealing and medium compatibility
- Multiple output options
- Medium temperature measurement
- Magnetic water inlet head, suitable for use with mobile tanks
- With NPT 1/4 Male, ideal for side mounting at the bottom of tanks
-

Specifications

Range	Level measurement range: 0mH ₂ O~2mH ₂ O...
	200mH ₂ O
	Pressure measurement range: 0bar~0.2bar...350bar
Pressure type	Gauge G, Absolute A, Sealed Gauge S
Overpressure	≤2 times FS
Accuracy	Refer to Measuring Range & Accuracy
Long-term stability	≤ ±0.2% FS/year
Compensation temperature	-10°C ~60°C
Operating temperature	MPM426WPF : -20°C ~80°C (PUR)
	-10°C ~70°C (PE / PVC)
Storage temperature	MPM426WPC : -30°C ~80°C
	MPM426WPF : -30°C ~85°C (PUR)
	-20°C ~85°C (PE/ PVC)
	MPM426WPC : -40°C ~85°C
Vibration	20g, 20Hz~2000Hz
Shock	20g, 11ms
IP rating	IP68
Weight	≤280g (excluding cable)

Measuring Range & Accuracy

Pressure Measurement

Gauge Pressure G									
Unit	Measuring Range	Accuracy	Overpressure	Code	Unit	Measuring Range	Accuracy	Overpressure	Code
kPa	0 - 20	±1%FS	40	K020	mbar	0 - 200	±1%FS	500	m200
	0 - 25		50	K025		0 - 250		500	m250
	0 - 40	±0.5%FS	100	K040		0 - 400	±0.5%FS	1000	m400
	0 - 50		100	K050		0 - 500		1000	m500
	0 - 60		100	K060		0 - 600		1200	m600
	0 - 70		100	K070		0 - 700		1400	m700
	0 - 80		200	K080		0 - 800		1600	m800
	0 - 90		200	K090		0 - 900		1800	m900
	0 - 100		200	K100	bar	0 - 1	±0.5%FS	2	B001
	0 - 160	±0.25%FS	300	K160		0 - 1.6		3	B1D6
	0 - 200		400	K200		0 - 2	±0.25%FS	4	B002
	0 - 250		500	K250		0 - 2.5		5	B2D5
	0 - 300		600	K300		0 - 3		6	B003
	0 - 400		1000	K400		0 - 4		10	B004
	0 - 500		1000	K500		0 - 5		10	B005
	0 - 600		1000	K600		0 - 6		10	B006
	0 - 700		1400	K700		0 - 7		14	B007
	0 - 800		1600	K800		0 - 8		16	B008
	0 - 900		1800	K900		0 - 9		18	B009
MPa	0 - 1	±0.25%FS	2	M1D0		0 - 10		20	B010
	0 - 1.6		3	M1D6		0 - 16		30	B016
	0 - 2		4	M2D0		0 - 20		40	B020
	0 - 2.5		5	M2D5		0 - 25		50	B025
	0 - 3		6	M3D0		0 - 30		60	B030
	0 - 3.5		6	M3D5		0 - 35		60	B035
psi	0 - 1.5	±1%FS	3	P1D5					
	0 - 3		6	P003					
	0 - 5		10	P005					
	0 - 10	±0.5%FS	15	P010					
	0 - 15		20	P015					
	0 - 30	±0.25%FS	45	P030					
	0 - 60		150	P060					
	0 - 100		150	P100					
	0 - 160		300	P160					
	0 - 200		300	P200					
	0 - 300		450	P300					
	0 - 500		750	P500					

Absolute Pressure A

Unit	Measuring Range	Accuracy	Overpressure	Code	Unit	Measuring Range	Accuracy	Overpressure	Code
kPa	0 - 70	±1%FS	100	K070	bar	0 - 1	±1%FS	2	B001
	0 - 80		200	K080		0-1.6	±0.5%FS	3	B1D6
	0 - 90		200	K090		0-2		4	B002
	0 - 100		200	K100		0-2.5		5	B2D5
	0 - 160	±0.5%FS	300	K160		0-3		6	B003
	0 - 200		400	K200		0-4		10	B004
	0 - 250		500	K250		0-5		10	B005
	0 - 300		600	K300		0-6		10	B006
	0 - 400		1000	K400		0-7		14	B007
	0 - 500		1000	K500		0-8		16	B008
	0 - 600		1000	K600		0-9		18	B009
	0 - 700		1400	K700		0-10		20	B010
	0 - 800		1600	K800		0-16	±0.25%FS	30	B016
	0 - 900		1800	K900		0-20		40	B020
MPa	0 - 1	±0.5%FS	2	M1D0		0-25		50	B025
	0 - 1.6	±0.25%FS	3	M1D6		0-30		60	B030
	0 - 2		4	M2D0		0-35		60	B035
	0 - 2.5		5	M2D5		0-40		100	B040
	0 - 3		6	M3D0		0-50		100	B050
	0 - 3.5		6	M3D5		0-60		100	B060
	0 - 4		6	M4D0		0-70		140	B070
	0 - 5		10	M5D0		0-80		160	B080
	0 - 6		10	M6D0		0-90		180	B090
	0 - 7		14	M7D0		0-100		200	B100
	0 - 8		16	M8D0		0-160		300	B160
	0 - 9		18	M9D0		0-200		300	B200
	0 - 10		20	M010		0-250		375	B250
	0 - 16		30	M016		0-300		350	B300
	0 - 20		30	M020		0-350		525	B350
	0 - 25		37.5	M025	psi	0 - 10	±1%FS	15	P010
mbar	0 - 700	±1%FS	1400	m700		0 - 15	±1%FS	20	P015
	0 - 800		1600	m800		0 - 30		45	P030
	0 - 900		1800	m900		0 - 60	±0.5%FS	150	P060
psi						0 - 100		150	P100
						0 - 160		300	P160
						0 - 200	±0.25%FS	300	P200
						0 - 300		450	P300
						0 - 400		750	P400
						0 - 500		750	P500
						0 - 600		1500	P600
						0 - 700		1500	P700
						0 - 800		1500	P800
						0 - 900		1500	P900
						0 - 1000		1500	P01K
						0 - 2000		3000	P02K
						0 - 3000		4500	P03K
						0 - 4000		6000	P04K
						0 - 5000		7500	P05K

Sealed Gauge Pressure S

Unit	Measuring Range	Accuracy	Overpressure	Code	Unit	Measuring Range	Accuracy	Overpressure	Code
MPa	0 - 3.5	±0.25%FS	7	M3D5	bar	0 - 35	±0.25%FS	70	B035
	0 - 4		10	M4D0		0 - 40		100	B040
	0 - 5		10	M5D0		0 - 50		100	B050
	0 - 6		10	M6D0		0 - 60		100	B060
	0 - 7		10	M7D0		0 - 70		100	B070
	0 - 8		15	M8D0		0 - 80		150	B080
	0 - 9		15	M9D0		0 - 90		150	B090
	0 - 10		15	M010		0 - 100		150	B100
	0 - 16		30	M016		0 - 160		300	B160
	0 - 20		30	M020		0 - 200		300	B200
	0 - 25		37.5	M025		0 - 250		450	B250
	0 - 30		45	M030		0 - 300		525	B300
	0 - 35		52.5	M035		0 - 350		375	B350

psi	0 - 500	±0.25%FS	750	P500
	0 - 600		1500	P600
	0 - 700		1500	P700
	0 - 800		1500	P800
	0 - 900		1500	P900
	0 - 1000		1500	P01K
	0 - 2000		3000	P02K
	0 - 3000		4500	P03K
	0 - 4000		6000	P04K
	0 - 5000		7500	P05K

Level Measurement (Gauge Pressure)

Unit	Measuring Range	Overpressure	Code	Accuracy
mH ₂ O	0 ~ 2	4	H002	±1%FS
	0 ~ 3	7	H003	
	0 ~ 4	14	H004	
	0 ~ 5	20	H005	±0.5%FS
	0 ~ 6	20	H006	
	0 ~ 7	20	H007	
	0 ~ 8	20	H008	
	0 ~ 9	20	H009	
	0 ~ 10	20	H010	
	0 ~ 15	40	H015	±0.25%FS
	0 ~ 20	40	H020	
	0 ~ 25	70	H025	
	0 ~ 30	70	H030	
	0 ~ 35	70	H035	
	0 ~ 40	140	H040	
	0 ~ 45	140	H045	
	0 ~ 50	140	H050	
	0 ~ 60	140	H060	
	0 ~ 70	140	H070	
	0 ~ 80	200	H080	
	0 ~ 90	200	H090	
	0 ~ 100	200	H100	
	0 ~ 110	400	H110	
	0 ~ 120	400	H120	
	0 ~ 150	400	H150	
	0 ~ 200	400	H200	

Note: The specified accuracy applies within the compensation temperature range of -10°C to 60°C.

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

Output Signals

Output signal	Supply voltage	Output type	load capacity	Insulation resistance
4mA~20mA DC(E)	12V~28V DC	2-wire	$\leq (U-12) / 0.02 \quad (\Omega)$	20MΩ@500V DC
1V~5V DC(F)	15V~28V DC	3-wire	$\geq 10k\Omega$	
0V~5V DC(J)				
0V~10V DC(V)				
0.5V~4.5V DC (K)				
0.5V~4.5V DC(K)				
0.5V~2.5V DC(W)	5V~10V DC			
	3.2V~5V DC			
RS485, ASCII communication protocol, with temperature output (R4)	3.6V~28V DC	4-wire	The RS485 bus allows up to 99 devices to be connected.	
RS485, MODBUS RTU communication protocol, with temperature output (R8)				

Certifications

Mark	Description	Applicable Regions
	EU Declaration of Conformity EMC Directive, Electromagnetic Emission and Immunity Standards Pressure Equipment Directive	European Union
	RoHS Compliance	European Union
	Technical Requirements for Equipment Intended for Use in Potentially Explosive Atmospheres	European Union
	International Certification System for Electrical Equipment for Explosive Atmospheres	International
	Safety Certification Required for Electronic Products Sold in the North American Market	North America

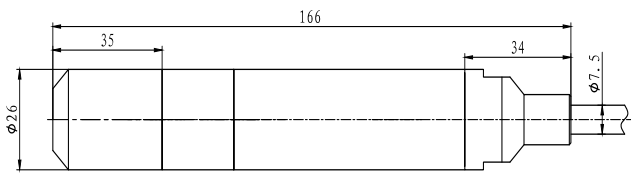
Intrinsically Safe Parameters

Output signal	Intrinsically Safe Parameters (Power supply)	Ui	Ii	Li	Ci	Pi
4mA~20mA (E)	12V~28V DC	28V DC	100mA DC	1.44 μ H	0 μ F	0.7W
1V~5V (F)	15V~28V DC	28V DC	150mA DC	1.44 μ H	66nF	0.9W
0V~5V (J)						
0V~10V (V)						
0.5V~4.5V (K)						
0.5V~4.5V (K)	5V~10V DC	10V DC	200mA DC	1.44 μ H	0.428 μ F	0.56W
0.5V~2.5V (W)	3.2V~5V DC	6V DC	100mA DC	1.44 μ H	0.318 μ F	0.2W
RS485, ASCII communication protocol, with temperature output (R4) RS485, MODBUS_RTU communication protocol, with temperature output (R8)	3.6V~28V DC	25.4V DC	90mA DC	1.44 μ H	13.2nF	0.56W

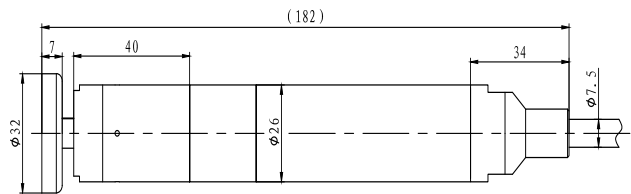
Outline Construction

Unit: mm

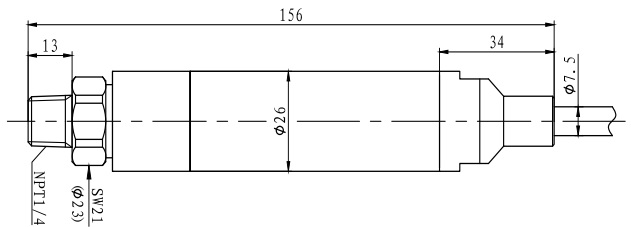
Standard Water Inlet Head (LD1/LD2)



Magnetic Water Inlet Head (LD3)



NPT1/4 Male (C6)



Electrical Connection

Color	2-wire	3-wire	4-wire
Red	+V	+V	+V
White	None	+OUT	RS485B
Black	+OUT	GND	GND
Yellow / Green	None	None	RS485A

Construction Materials

Isolated diaphragm: SS 316L

Pressure port: SS 316L

Housing: SS 316L

Cable:

MPM426WPF: PE / PUR /PVC

MPM426WPC: PFA

Sealing:

MPM426WPF: HNBR

MPM426WPC: FFKM

Order Guide

MPM426W Series Submersible Level Transmitter											
Code		Product type									
PF		For oil measurement									
PC		For chemical measurement									
Code		Pressure type									
G		Gauge pressure									
A		Absolute pressure									
S		Sealed gauge pressure									
Range		Level measurement: 0mH ₂ O~2mH ₂ O...200mH ₂ O Pressure measurement: 0bar~0.2bar...350bar									
XXXX		Range-specific code									
Code		Output type									
E		4mA~20mA DC									
J		0V~5V DC									
F		1V~5V DC									
V		0V~10V DC									
K		0.5V~4.5V DC									
W		0.5V~2.5V DC									
R4		RS485, ASCII									
R8		RS485, MODBUS_RTU									
Code		Power supply									
V11		12V~28V DC									
V13		15~28V DC									
V14		3.2V~5V DC									
V15		3.6~28V DC									
V16		5V~10V DC									
Code		Accuracy ^①									
A1		±0.25%FS									
A2		±0.5%FS									
A3		±1%FS									
Code		Construction material									
24		Isolated diaphragm			Pressure port			Housing			
		SS 316L			SS 316L			SS 316L			
Code		Sensor sealing									
02		Welded									
Code		Process connection									
LD1		Water inlet head, SS 316L									
LD2		Water inlet head, POM (Polyoxymethylene)									
LD3		Water inlet head, magnetic, SS 316L									
C6		NPT1/4 Male									
Code		Cable material									
P1		PE			Only optional for MPM426WPF						
P2		PUR									
P3		PVC									
P4		PFA			Only optional for MPM426WPC						
MPM426W	PF	G	M1D0	E	V11	A2	24	00	LD1	P1	The complete spec.

Table continued	Code	Cable length (Unit: m)
	L001	1
	L1D5	1.5
	L002	2
	L003	3
	L004	4
	L005	5
	L006	6
	L007	7
	L008	8
	L009	9
	L010	10
	L015	15
	L020	20
	L025	25
	L030	30
	L035	35
	L040	40
	L045	45
	L050	50
	L060	60
	L070	70
	L080	80
	L090	90
	L100	100
	L110	110
	L120	120
	L150	150
	L200	200
	Code	Accessory
	N	None
	Yb5	Yb junction box (5-core terminals)
	Yc5	MS200 (5-core terminals)
	Yd	PD140
	Ye	Ye (without indicator)
	MS01	Polymer plug
L001	Yc3	The complete spec.

Notes

1. "①" refers to accuracy, see "Measuring Range & Accuracy" for details.
2. The transmitter is intrinsically safe, while its accessories are non-intrinsically safe.
3. The measured medium shall be compatible with the wetted parts materials, and the medium's density (excluding water) under measurement conditions must be specified.
4. In areas prone to thunderstorms, it is advisable to install lightning protection devices and ensure proper grounding of the product and power supply to minimize the risk of lightning damage to the transmitter.
5. 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.