РусАвтоматизация®

MICROSENSOR

# Temperature and Level Dual-Output Submersible Level Transmitter

# MPM4811

## Applications

- Petroleum
- Chemical
- Power plant
- Urban water supply and drainage
- Hydrological exploration
- Temperature measurement and control

## Features

- Dual output standard signals for level and temperature measurement
- Reversed-polarity protection
- Suitable for level and temperature measurements
- Quality assurance of automated production, ensuring stability and reliability

## Introduction

MPM4811 Level Transmitter is a fully sealed, submersible diffused silicon instrument for level and temperature measurement. It integrates a piezoresistive OEM pressure sensor, a PT1000 temperature sensor, and high-precision circuitry, all enclosed in a stainless steel housing. Advanced manufacturing techniques and automated production ensure consistent product quality, while its robust adaptability allows for reliable operation in demanding environments.

## Specifications

| | |
|---|---|
| Range | 0m$H_2O$ ~ 1m$H_2O$…200m$H_2O$ |
| | -20°C …0°C ~ 10°C …70°C |
| overload | ≤2 times FS |
| Pressure type | Gauge G |
| Accuracy | Refer to Measuring Range & Accuracy |
| Temperature accuracy | ±2°C |
| Zero thermal error | ≤±0.02% FS/°C |
| Span thermal error | ≤±0.05% FS/°C |
| Long-term stability | ≤ ±0.2% FS/year |
| Power supply | 12V~30V DC |
| Operating temperature | -20°C ~ 80°C (PUR) |
| -20°C~ 70°C (PE, PVC) | -20°C ~ 85°C |
| Storage temperature | -20°C ~ 85°C |
| Vibration | 10g, 55Hz ~ 2000Hz |
| Shock | 100g, 11ms |
| IP rating | IP68 |
| Weight | ≤ 240g |

## Measuring Range & Accuracy

| Gauge Pressure G | | | | |
|---|---|---|---|---|
| Unit | Measuring Range | Accuracy | Overpressure | Code |
| $mH_2O$ | 0 ~ 1 | ±1%FS | 4 | H001 |
| | 0 ~ 2 | ±0.5%FS | 4 | H002 |
| | 0 ~ 2.5 | | 4 | H2D5 |
| | 0 ~ 3 | | 7 | H003 |
| | 0 ~ 3.5 | | 14 | H3D5 |
| | 0 ~ 4 | | 14 | H004 |
| | 0 ~ 5 | | 20 | H005 |
| | 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 ~ 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 |

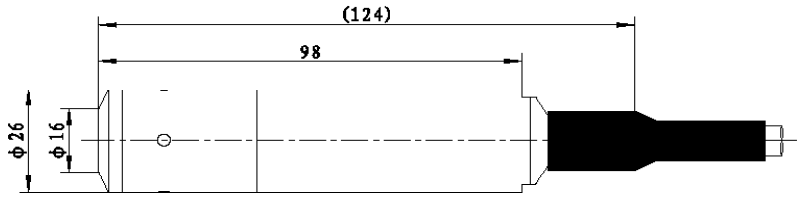
Test standard: GB/ T17614.1 -2015 -2015/IEC60770-1:2010

Ambient temperature: 20℃ ± 5℃

Relative humidity: 45%~75%

## Outline Construction

Unit: mm




## Electrical Connection

| Color | 2-wire |
|---|---|
| Red | +V |
| Black | +OUT |
| Blue | Temperature output |

## Construction Materials

Isolated diaphragm: SS 316L/Titanium

Housing: SS 304/ SS 316L/Titanium

Cable: PE/PUR/PVC

## Order Guide

| | |
|---|---|
| MPM4811 | Level Transmitter |
| Range | Measuring range: 0m$H_2O$ ～ 1m$H_2O$…200m$H_2O$ |
| | Measuring range: -20°C …0°C ~ 10°C …70°C |
| HXXX | Range-specific code |
| [X ～ X°C ] | Operating temperature range |

| Code | Output signal |
|---|---|
| E | 4mA~20mA DC |

| Code | Power supply |
|---|---|
| V10 | 12V~30V DC |

| Code | Accuracy |
|---|---|
| A2 | ±0.5%FS |
| A3 | ±1%FS |

| Code | Sensor sealing |
|---|---|
| 00 | FKM (standard) |
| 01 | EPDM (optional for special media based on compatibility) |

| Code | Construction material | | |
|---|---|---|---|
| | Isolated diaphragm | Pressure port | Housing |
| 22 | SS 316L | SS 304 | SS 304 |
| 24 | SS 316L | SS 316L | SS 316L |
| 40 | Titanium Ta1 | Titanium TC4 | Titanium TC4 |

| Code | Cable material |
|---|---|
| P1 | PE (standard) |
| P2 | PUR (optional for special media based on compatibility) |
| P3 | PVC (optional for special media based on compatibility) |

| Code | Cable length (unit: m) |
|---|---|
| L001 | 1 |
| L002 | 2 |
| L003 | 3 |
| L004 | 4 |
| L005 | 5 |
| L006 | 6 |
| L007 | 7 |
| L008 | 8 |
| L009 | 9 |
| L010 | 10 |
| L012 | 12 |
| L015 | 15 |
| L017 | 17 |
| L020 | 20 |
| L025 | 25 |
| L030 | 30 |
| L035 | 35 |
| L040 | 40 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| MPM4811 | H005[0 ～ 60°C ] | E | V10 | A2 | 00 | 22 | P1 | L015 | The complete spec. |

## Order Guide

| | |
|---|---|
| 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 |
| Yb3 | Yb junction box (3-core terminals) |
| Yc3 | MS200 (3-core terminals) |
| Yd | PD140 |
| YeM6 | Ye (M6) |
| YeM7 | Ye (M7) |
| Ye | Ye (without indicator) |
| MS01 | Polymer plug |
| LJ8 | Locking cable connector (flange optional) |

| | |
|---|---|
| N | The complete spec. |

## Notes

1. The recommended IP rating for the junction box is IP65.
2. The measured medium shall be compatible with the wetted parts materials, and the medium's density (excluding water) under measurement conditions must be specified.
3. 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.
4. When selecting the YeM6 or YeM7, only 4mA~20mA DC output is available, and requiring a power supply of ≥15VDC.
5. The ambient temperature of transmitter should be -20°C~ 70°C with YeM6 option, while -10°C~ 60°C with YeM7 option. Indicator settings refer to its order guide, which can be obtained from the MICROSENSOR website.
6. 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.