



bar

## MPM489

Flexible & Customizable Pressure Transmitter

**MICROSENSOR**

AUTHORIZED DISTRIBUTOR

MPM489 Pressure Transmitter is developed for general industry. The transmitter incorporates a highly stable piezoresistive sensor, specialized circuitry, and a high-strength stainless steel housing, featuring an integrated construction with standardized output. It offers multiple thread ports and electrical connection options, meeting the precise measurement requirements of automation control systems. The transmitter is rugged and durable, suitable for operation in harsh environments. It is available with intrinsically safe and explosion-proof configurations, making it suitable for use in hazardous areas.



### SPECIFICATIONS

|                       |   |
|-----------------------|---|
| Range                 | -100kPa...0kPa - 10kPa...100MPa   |
| Overpressure          | ≤ 2 times FS or 110MPa (min. Value is valid)  |
| Pressure type         | Gauge G, Absolute A, Sealed Gauge S, Positive/Negative N  |
| Accuracy              | Refer to "Measuring Range & Accuracy Table"   |
| Long-term stability   | ±0.3%FS/year  |
| Operating temperature | -30°C~80°C (B1, B4)<br>-20°C~70°C (B2, cable material: PE)<br>-20°C~ 80°C (B2, cable material: PUR)<br>-30°C~ 60°C (Intrinsically safe explosion-proof, B1)<br>-20°C~ 60°C(Intrinsically safe explosion-proof, B2)<br>-20°C~ 60°C(Flameproof) |
| Storage temperature   | -40°C~120°C (B1)<br>-20°C~85°C (B2, B4)   |
| Vibration             | 10g, 55Hz ~ 2000Hz  |
| Shock                 | 100g, 11ms  |
| IP rating             | IP65  |
| Weight                | ≤270g   |

### FEATURES

- Intrinsically safe, Ex ia IIC T6 Ga
- Flameproof, Ex db IIC T6 Gb
- ATEX, II 1 G Ex ia IIC T4 Ga
- CE, EAC, RoHS and CCS approved

### APPLICATION

- Hydrology and water resources
- Petrochemical
- Electric power
- Machinery manufacturing
- Hydraulic and pneumatic control



## MEASURING RANGE & ACCURACY TABLE

| Gauge Pressure G |                 |          |              |      |
|------------------|-----------------|----------|--------------|------|
| Unit             | Measuring Range | Accuracy | Overpressure | Code |
| kPa              | 0 - 7           | ±1%FS    | 15           | K007 |
|                  | 0 - 10          |          | 20           | K010 |
|                  | 0 - 20          |          | 40           | K020 |
|                  | 0 - 25          | ±0.5%FS  | 50           | K025 |
|                  | 0 - 40          |          | 100          | K040 |
|                  | 0 - 50          |          | 100          | K050 |
|                  | 0 - 60          |          | 100          | K060 |
|                  | 0 - 70          |          | 100          | K070 |
|                  | 0 - 80          |          | 200          | K080 |
|                  | 0 - 90          |          | 200          | K090 |
|                  | 0 - 100         |          | 200          | K100 |
|                  | 0 - 160         | ±0.25%FS | 300          | K160 |
|                  | 0 - 200         |          | 400          | K200 |
|                  | 0 - 250         |          | 500          | K250 |
|                  | 0 - 300         |          | 600          | K300 |
|                  | 0 - 400         |          | 1000         | K400 |
|                  | 0 - 500         |          | 1000         | K500 |
|                  | 0 - 600         |          | 1000         | K600 |
|                  | 0 - 700         |          | 1400         | K700 |
|                  | 0 - 800         | 1600     | K800         |      |
|                  | 0 - 900         | 1800     | K900         |      |

| Unit | Measuring Range | Accuracy | Overpressure | Code |
|------|-----------------|----------|--------------|------|
| mbar | 0 - 70          | ±1%FS    | 150          | m070 |
|      | 0 - 100         |          | 200          | m100 |
|      | 0 - 200         |          | 500          | m200 |
|      | 0 - 250         | ±0.5%FS  | 500          | m250 |
|      | 0 - 400         |          | 1000         | m400 |
|      | 0 - 500         |          | 1000         | m500 |
|      | 0 - 600         |          | 1200         | m600 |
|      | 0 - 700         |          | 1400         | m700 |
|      | 0 - 800         |          | 1600         | m800 |
|      | 0 - 900         |          | 1800         | m900 |

|     |         |          |    |      |
|-----|---------|----------|----|------|
| bar | 0 - 1   | ±0.5%FS  | 2  | B001 |
|     | 0 - 1.6 | ±0.25%FS | 3  | B1D6 |
|     | 0 - 2   |          | 4  | B002 |
|     | 0 - 2.5 |          | 5  | B2D5 |
|     | 0 - 3   |          | 6  | B003 |
|     | 0 - 4   |          | 10 | B004 |
|     | 0 - 5   |          | 10 | B005 |
|     | 0 - 6   |          | 10 | B006 |
|     | 0 - 7   |          | 14 | B007 |
|     | 0 - 8   |          | 16 | B008 |
|     | 0 - 9   |          | 18 | B009 |
|     | 0 - 10  |          | 20 | B010 |
|     | 0 - 16  |          | 30 | B016 |
|     | 0 - 20  |          | 40 | B020 |
|     | 0 - 25  |          | 50 | B025 |
|     | 0 - 30  |          | 60 | B030 |
|     | 0 - 35  |          | 60 | B035 |

|     |         |          |   |      |
|-----|---------|----------|---|------|
| MPa | 0 - 1   | ±0.25%FS | 2 | M1D0 |
|     | 0 - 1.6 |          | 3 | M1D6 |
|     | 0 - 2   |          | 4 | M2D0 |
|     | 0 - 2.5 |          | 5 | M2D5 |
|     | 0 - 3   |          | 6 | M3D0 |
|     | 0 - 3.5 |          | 6 | M3D5 |

|     |         |          |     |      |
|-----|---------|----------|-----|------|
| psi | 0 - 1.5 | ±1%FS    | 3   | P1D5 |
|     | 0 - 3   | ±0.5%FS  | 6   | P003 |
|     | 0 - 5   |          | 10  | P005 |
|     | 0 - 10  |          | 15  | P010 |
|     | 0 - 15  | ±0.25%FS | 20  | P015 |
|     | 0 - 30  |          | 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 |



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 |
|      | 0 - 40          |          | 60           | M040 |      | 0 - 400         |          | 600          | B400 |
|      | 0 - 50          |          | 75           | M050 |      | 0 - 500         |          | 750          | B500 |
|      | 0 - 60          |          | 90           | M060 |      | 0 - 600         |          | 900          | B600 |
|      | 0 - 70          |          | 100          | M070 |      | 0 - 700         |          | 1000         | B700 |
|      | 0 - 80          |          | 100          | M080 |      | 0 - 800         |          | 1000         | B800 |
|      | 0 - 90          |          | 100          | M090 |      | 0 - 900         |          | 1000         | B900 |
|      | 0 - 100         |          | 110          | M100 |      | 0 - 1000        |          | 1100         | B01K |

|     |           |          |       |      |
|-----|-----------|----------|-------|------|
| 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 |
|     | 0 - 6000  |          | 9000  | P06K |
|     | 0 - 7000  |          | 10500 | P07K |
|     | 0 - 8000  |          | 12000 | P08K |
|     | 0 - 9000  |          | 13500 | P09K |
|     | 0 - 10000 |          | 15000 | P10K |



### Absolute Pressure A

| Unit | Measuring Range | Accuracy | Overpressure | Code |
|------|-----------------|----------|--------------|------|
| kPa  | 0 - 40          | ±1%FS    | 100          | K040 |
|      | 0 - 50          |          | 100          | K050 |
|      | 0 - 60          |          | 100          | K060 |
|      | 0 - 70          |          | 100          | K070 |
|      | 0 - 80          |          | 200          | K080 |
|      | 0 - 90          |          | 200          | K090 |
|      | 0 - 100         |          | 200          | K100 |
|      | 0 - 160         | ±0.5%FS  | 300          | K160 |
|      | 0 - 200         |          | 400          | K200 |
|      | 0 - 250         |          | 500          | K250 |
|      | 0 - 300         |          | 600          | K300 |
|      | 0 - 400         |          | 1000         | K400 |
|      | 0 - 500         |          | 1000         | K500 |
|      | 0 - 600         |          | 1000         | K600 |
|      | 0 - 700         |          | 1400         | K700 |
|      | 0 - 800         |          | 1600         | K800 |
|      | 0 - 900         |          | 1800         | K900 |

|     |         |          |      |      |
|-----|---------|----------|------|------|
| MPa | 0 - 1   | ±0.5%FS  | 2    | M1D0 |
|     | 0 - 1.6 | ±0.25%FS | 3    | M1D6 |
|     | 0 - 2   |          | 4    | M2D0 |
|     | 0 - 2.5 |          | 5    | M2D5 |
|     | 0 - 3   |          | 6    | M3D0 |
|     | 0 - 3.5 |          | 6    | M3D5 |
|     | 0 - 4   |          | 6    | M4D0 |
|     | 0 - 5   |          | 10   | M5D0 |
|     | 0 - 6   |          | 10   | M6D0 |
|     | 0 - 7   |          | 14   | M7D0 |
|     | 0 - 8   |          | 16   | M8D0 |
|     | 0 - 9   |          | 18   | M9D0 |
|     | 0 - 10  |          | 20   | M010 |
|     | 0 - 16  |          | 30   | M016 |
|     | 0 - 20  |          | 30   | M020 |
|     | 0 - 25  |          | 37.5 | M025 |
|     | 0 - 30  |          | 45   | M030 |
|     | 0 - 35  |          | 52.5 | M035 |
|     | 0 - 40  |          | 60   | M040 |
|     | 0 - 50  |          | 75   | M050 |
|     | 0 - 60  |          | 90   | M060 |
|     | 0 - 70  |          | 100  | M070 |
|     | 0 - 80  |          | 100  | M080 |
|     | 0 - 90  |          | 100  | M090 |
|     | 0 - 100 |          | 110  | M100 |

|      |         |       |      |      |
|------|---------|-------|------|------|
| mbar | 0 - 400 | ±1%FS | 1000 | m400 |
|      | 0 - 500 |       | 1000 | m500 |
|      | 0 - 600 |       | 1200 | m600 |
|      | 0 - 700 |       | 1400 | m700 |
|      | 0 - 800 |       | 1600 | m800 |
|      | 0 - 900 |       | 1800 | m900 |

| Unit | Measuring Range | Accuracy | Overpressure | Code |
|------|-----------------|----------|--------------|------|
| bar  | 0-1             | ±0.5%FS  | 2            | B001 |
|      | 0-1.6           |          | 3            | B1D6 |
|      | 0-2             |          | 4            | B002 |
|      | 0-2.5           |          | 5            | B2D5 |
|      | 0-3             |          | 6            | B003 |
|      | 0-4             |          | 10           | B004 |
|      | 0-5             |          | 10           | B005 |
|      | 0-6             |          | 10           | B006 |
|      | 0-7             |          | 14           | B007 |
|      | 0-8             |          | 16           | B008 |
|      | 0-9             |          | 18           | B009 |
|      | 0-10            |          | 20           | B010 |
|      | 0-16            | ±0.25%FS | 30           | B016 |
|      | 0-20            |          | 40           | B020 |
|      | 0-25            |          | 50           | B025 |
|      | 0-30            |          | 60           | B030 |
|      | 0-35            |          | 60           | B035 |
|      | 0-40            |          | 100          | B040 |
|      | 0-50            |          | 100          | B050 |
|      | 0-60            |          | 100          | B060 |
|      | 0-70            |          | 140          | B070 |
|      | 0-80            |          | 160          | B080 |
|      | 0-90            |          | 180          | B090 |
|      | 0-100           |          | 200          | B100 |
|      | 0-160           |          | 300          | B160 |
|      | 0-200           |          | 300          | B200 |
|      | 0-250           |          | 375          | B250 |
|      | 0-300           |          | 350          | B300 |
|      | 0-350           |          | 525          | B350 |
|      | 0-400           |          | 600          | B400 |
|      | 0-500           |          | 750          | B500 |
|      | 0-600           |          | 900          | B600 |
|      | 0-700           |          | 1000         | B700 |
|      | 0-800           |          | 1000         | B800 |
|      | 0-900           |          | 1000         | B900 |
|      | 0-1000          |          | 1100         | B01K |

|     |           |          |       |      |
|-----|-----------|----------|-------|------|
| psi | 0 - 5     | ±1%FS    | 10    | P005 |
|     | 0 - 10    |          | 15    | P010 |
|     | 0 - 15    |          | 20    | P015 |
|     | 0 - 30    |          | 45    | P030 |
|     | 0 - 60    | ±0.5%FS  | 150   | P060 |
|     | 0 - 100   |          | 150   | P100 |
|     | 0 - 160   |          | 300   | P160 |
|     | 0 - 200   |          | 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  | ±0.25%FS | 1500  | P01K |
|     | 0 - 2000  |          | 3000  | P02K |
|     | 0 - 3000  |          | 4500  | P03K |
|     | 0 - 4000  |          | 6000  | P04K |
|     | 0 - 5000  |          | 7500  | P05K |
|     | 0 - 6000  |          | 9000  | P06K |
|     | 0 - 7000  |          | 10500 | P07K |
|     | 0 - 8000  |          | 12000 | P08K |
|     | 0 - 9000  |          | 13500 | P09K |
|     | 0 - 10000 |          | 15000 | P10K |



Positive/Negative Pressure N

| Unit | Measuring Range | Accuracy | Overpressure | Code | Unit | Measuring Range | Accuracy | Overpressure | Code |
|------|-----------------|----------|--------------|------|------|-----------------|----------|--------------|------|
| kPa  | - 25 - 0        | ±1%FS    | 50           | V025 | bar  | - 0.25 - 0      | ±1%FS    | 0.5          | VD25 |
|      | - 40 - 0        |          | 100          | V040 |      | - 0.4 - 0       |          | 1            | V0D4 |
|      | - 60 - 0        |          | 100          | V060 |      | - 0.6 - 0       |          | 1            | V0D6 |
|      | - 100 - 0       |          | 150          | V100 |      | - 1 - 0         |          | 1.5          | V1D0 |
|      | - 3 - +3        |          | 10           | C033 |      | - 0.03 - +0.03  |          | 0.1          | C0D3 |
|      | - 5 - +20       |          | 30           | C520 |      | - 0.05 - +0.2   |          | 0.3          | C052 |
|      | - 5 - +25       |          | 30           | C525 |      | - 0.05 - +0.25  |          | 0.3          | C5D5 |
|      | - 15 - +15      |          | 30           | C015 |      | - 0.15 - +0.15  |          | 0.3          | CD15 |
|      | - 20 - +20      |          | 30           | C020 |      | - 0.2 - +0.2    |          | 0.3          | C0D2 |
|      | - 25 - +25      |          | 50           | C025 |      | - 0.25 - +0.25  |          | 0.5          | CD25 |
|      | - 30 - +30      |          | 50           | C030 |      | - 0.3 - +0.3    |          | 0.5          | C003 |
|      | - 50 - +50      |          | 100          | C050 |      | - 0.5 - +0.5    |          | 1            | C005 |
|      | - 100 - +60     |          | 150          | C16B |      | - 1 - +0.6      |          | 1.5          | C0D6 |
|      | - 100 - +100    |          | 300          | C11B |      | - 1 - +1        |          | 2            | C101 |
|      | - 100 - +150    |          | 300          | C1B5 |      | - 1 - +1.5      |          | 3            | C1D5 |
|      | - 100 - +300    | ±0.5%FS  | 500          | C13B |      | - 1 - +3        | ±0.5%FS  | 5            | C103 |
|      | - 100 - +500    |          | 1000         | C15B |      | - 1 - +5        |          | 10           | C105 |
|      | - 100 - +900    |          | 2000         | C19B |      | - 1 - +9        |          | 20           | C109 |
|      | - 100 - +1000   |          | 2500         | C11K |      | - 1 - +10       |          | 25           | C110 |
|      | - 100 - +1500   |          | 3000         | C1K5 |      | - 1 - +15       |          | 30           | C115 |
|      | - 100 - +1600   |          | 3000         | C1K6 |      | - 1 - +16       |          | 30           | C116 |
|      | - 100 - +2000   |          | 3000         | C12K |      | - 1 - +20       |          | 30           | C120 |
|      | - 100 - +2400   |          | 5000         | C24K |      | - 1 - +24       |          | 50           | C124 |
|      | - 100 - +2500   |          | 5000         | C25K |      | - 1 - +25       |          | 50           | C125 |
|      | - 100 - +3000   |          | 6000         | C30K |      | - 1 - +30       |          | 60           | C130 |
|      | - 100 - +3500   |          | 7000         | C35K |      | - 1 - +35       |          | 70           | C135 |

|     |            |         |     |      |
|-----|------------|---------|-----|------|
| psi | -15 - 0    | ±1%FS   | 20  | PF00 |
|     | -15 - +10  |         | 20  | PF10 |
|     | -15 - +15  |         | 45  | PF15 |
|     | -15 - +30  | ±0.5%FS | 150 | PF30 |
|     | -15 - +50  |         | 150 | PF50 |
|     | -15 - +80  |         | 300 | PF80 |
|     | -15 - +100 |         | 300 | PF1B |
|     | -15 - +150 |         | 450 | P1B5 |

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

Ambient temperature: 20°C ±5°C

Relative humidity :45% ~ 75%

For other measurement ranges, please contact MICROSENSOR



## THERMAL ERROR

|                    |  |
|--------------------|--|
| Zero thermal error | $\pm 0.05\%FS/^{\circ}C$ ( $\leq 100kPa$ ) |
|                    | $\pm 0.03\%FS/^{\circ}C$ ( $> 100kPa$ )    |
| Span thermal error | $\pm 0.05\%FS/^{\circ}C$ ( $\leq 100kPa$ ) |
|                    | $\pm 0.03\%FS/^{\circ}C$ ( $> 100kPa$ )    |

## OUTPUT SIGNALS

| Output Signal | Supply Voltage | Output Type | Load Resistance  |
|---------------|----------------|-------------|------------------|
| 4mA~20mA DC   | 11V~28V DC     | 2-wire      | ≤(U-11)/0.02 (Ω) |
| 1V~5V DC      |                | 3-wire      | ≥10kΩ            |
| 0V~5V DC      |                |             |                  |
| 0.5V~4.5V DC  |                |             |                  |
| 0V~10V DC     | 15V~28V DC     |             |                  |
| 0.5V~4.5V DC  | 5V±0.1V DC     |             |                  |
| 0.5V~2.5V DC  |                |             |                  |
| 0.5V~2.5V DC  | 3.3V±0.1V DC   |             |                  |

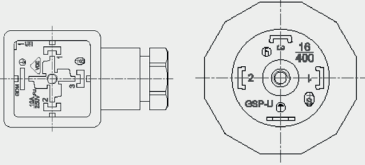
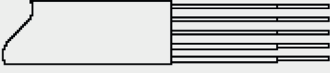
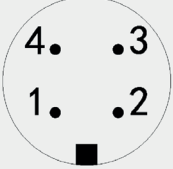
## OUTLINE CONSTRUCTION

Unit: mm

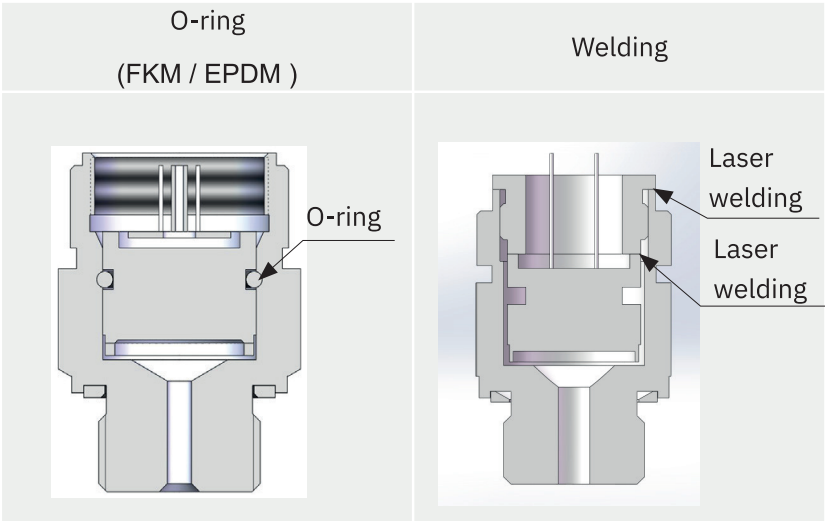
| Flameproof (d) | 4-pin connector (B1) | Cable (B2) | M12×1 4-pin connector (B4) |
|----------------|----------------------|------------|----------------------------|
|                |                      |            |                            |



**ELECTRICAL CONNECTION**

| Definition | 4-pin connector<br>(B1)   |                   | Cable<br>(B2)  |                   | M12×1 4-pin connector<br>(B4)   |                   |
|------------|---|-------------------|--|-------------------|---|-------------------|
|            |  |                   |  |                   |  |                   |
|            | Current<br>2-wire   | Voltage<br>3-wire | Current<br>2-wire  | Voltage<br>3-wire | Current<br>2-wire   | Voltage<br>3-wire |
| +V         | 11  |                   | RedR   | ed                | 11  |                   |
| OUT        | 2   | 3B                | lack   | White             | 33  |                   |
| GND        | Null  | 2                 | Null   | Black             | Null  | 2                 |

**SENSOR SEALING**



**CONSTRUCTION MATERIALS**

Wetted parts

Isolated diaphragm SS 316L/Tantalum/Titanium alloy

Pressure port: SS 304/SS 316L/Hastelloy C/Titanium alloy

Non-wetted parts

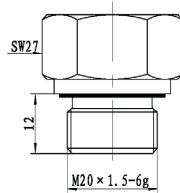
Housing: SS 304/ SS 316L/Titanium alloy

Cable: PE/PUR

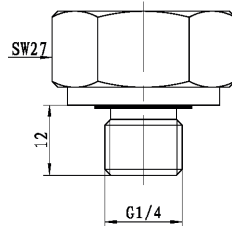
## PROCESS CONNECTION

Unit: mm

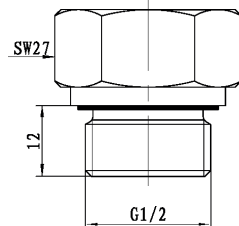
M20× 1.5 Male, face seal (C1)



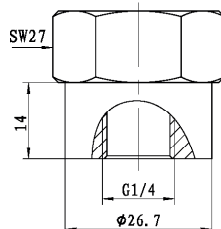
G1/ 4 Male, face seal (C2)



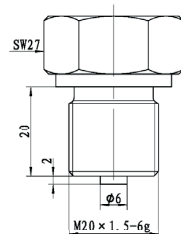
G1/ 2 Male, face seal (C3)



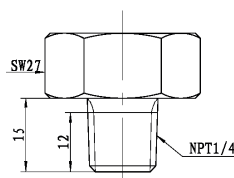
G1/ 4 Female, waterline seal (C4)



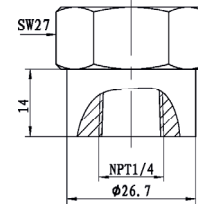
M20×1.5 Male, Waterline (C5)



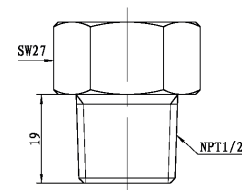
NPT1/4 Male (C6)



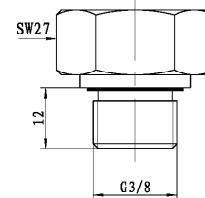
NPT1/ 4 Female (C8)



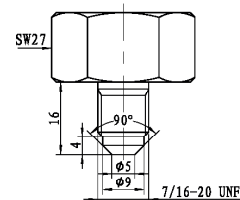
NPT1/2 Male (C10)



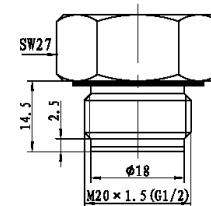
G3/ 8 Male, face seal (C16)



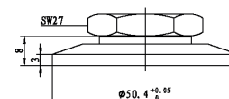
7/16- 20 UNF Male, 90° cone seal (C26)



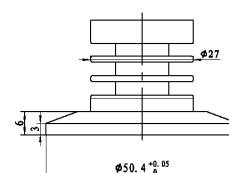
M20×1.5 or G1/2 flush diaphragm (PC1/PC3)



DN25 Clamp (PD1)



DN25 Clamp connection with heat sink (PD1s)







## ORDER GUIDE

|        |                      |   |  |    |                 |                         |              |    |                    |  |
|--------|----------------------|---|--|----|-----------------|-------------------------|--------------|----|--------------------|--|
| MPM489 | Pressure Transmitter |   |  |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Pressure type  |    |                 |                         |              |    |                    |  |
|        | G                    |   | Gauge/Sealed gauge pressure                                    |    |                 |                         |              |    |                    |  |
|        | S                    |   |  |    |                 |                         |              |    |                    |  |
|        | A                    |   | Absolute pressure  |    |                 |                         |              |    |                    |  |
|        | N                    |   | Negative pressure  |    |                 |                         |              |    |                    |  |
|        | Range                |   | Measuring range -100kPa...0kPa - 10kPa...100MPa                |    |                 |                         |              |    |                    |  |
|        | XXXX                 |   | Range-specific code  |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Output signal  |    |                 |                         |              |    |                    |  |
|        | E                    |   | 4mA~20mA DC  |    |                 |                         |              |    |                    |  |
|        | F                    |   | 1V~5V DC   |    |                 |                         |              |    |                    |  |
|        | J                    |   | 0V~5V DC   |    |                 |                         |              |    |                    |  |
|        | V                    |   | 0V~10V DC  |    |                 |                         |              |    |                    |  |
|        | K                    |   | 0.5V~4.5V DC   |    |                 |                         |              |    |                    |  |
|        | W                    |   | 0.5V~2.5V DC   |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Power supply   |    |                 |                         |              |    |                    |  |
|        | V5                   |   | 11V~28V DC   |    |                 |                         |              |    |                    |  |
|        | V6                   |   | 5V±0.1V DC   |    |                 |                         |              |    |                    |  |
|        | V7                   |   | 3.3V±0.1V DC   |    |                 |                         |              |    |                    |  |
|        | V13                  |   | 15V~28V DC   |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Accuracy   |    |                 |                         |              |    |                    |  |
|        | A1                   |   | ±0.25%FS   |    |                 |                         |              |    |                    |  |
|        | A2                   |   | ±0.5%FS  |    |                 |                         |              |    |                    |  |
|        | A3                   |   | ±1%FS  |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Construction material  |    |                 |                         |              |    |                    |  |
|        |                      |   | Isolated diaphragm   |    | Pressure port   |                         | Housing      |    |                    |  |
|        | 22                   |   | SS 316L  |    | SS 304          |                         | SS 304       |    |                    |  |
|        | 23                   |   | SS 316L  |    | SS 316L         |                         | SS 304       |    |                    |  |
|        | 24                   |   | SS 316L  |    | SS 316L         |                         | SS 316L      |    |                    |  |
|        | 25                   |   | Tantalum Ta1   |    | SS 316L         |                         | SS 304       |    |                    |  |
|        | 35                   |   | Tantalum Ta1   |    | Hastelloy C-276 |                         | SS 304       |    |                    |  |
|        | 40                   |   | Titanium TA1   |    | Titanium TC4    |                         | Titanium TC4 |    |                    |  |
|        | Code                 |   | Sensor sealing   |    |                 |                         |              |    |                    |  |
|        | 00                   |   | FKM (standard)   |    |                 |                         |              |    |                    |  |
|        | 01                   |   | EPDM (optional for special media based on compatibility)       |    |                 |                         |              |    |                    |  |
|        | 02                   |   | Welding (optional for special media based on compatibility)    |    |                 |                         |              |    |                    |  |
|        | 03                   |   | Integral sintering (optional only for PC1, PC3, PD1, and PD1s) |    |                 |                         |              |    |                    |  |
|        | Code                 |   | Process connection   |    |                 |                         |              |    |                    |  |
|        | C1                   |   | M20× 1.5 Male, face seal                                       |    |                 |                         |              |    |                    |  |
|        | C2                   |   | G1/4 Male, face seal   |    |                 |                         |              |    |                    |  |
| C3     |                      | G1/2 Male, face seal                          |  |    |                 |                         |              |    |                    |  |
| C4     |                      | G1/4 Female                                   |  |    |                 |                         |              |    |                    |  |
| C5     |                      | M20×1.5 Male, waterline seal                  |  |    |                 |                         |              |    |                    |  |
| C6     |                      | NPT1/4 Male                                   |  |    |                 |                         |              |    |                    |  |
| C8     |                      | NPT1/ 4 Female                                |  |    |                 |                         |              |    |                    |  |
| C10    |                      | NPT1/2 Male                                   |  |    |                 |                         |              |    |                    |  |
| C16    |                      | G3/8 Male, face seal                          |  |    |                 |                         |              |    |                    |  |
| C26    |                      | 7/16-20 UNF Male, 90° cone seal               |  |    |                 |                         |              |    |                    |  |
| PC1    |                      | Flush diaphragm M20× 1.5 Male                 |  |    |                 | 0kPa ~ 20kPa...35MPa    |              |    |                    |  |
| PC3    |                      | Flush diaphragm G1/ 2 Male                    |  |    |                 |                         |              |    |                    |  |
| PD1    |                      | Hygienic DN25 clamp connection                |  |    |                 | 0 k P a ~ 3 5 k P a ... |              |    |                    |  |
| PD1s   |                      | Hygienic DN25 clamp connection with heat sink |  |    |                 | 3.5MPa                  |              |    |                    |  |
| MPM489 | G                    | M1D6  | E  | V5 | A1              | 22                      | 00           | C1 | The complete spec. |  |



## ORDER GUIDE

|      |   |  |      |   |                             |                    |
|------|---|--|------|---|-----------------------------|--------------------|
| Code | Process connection sealing                            |  |      |   |                             |                    |
| N    | None (not optional for C6, C8, C10, PD1, PD1s)        |  |      |   |                             |                    |
| 1    | NBR   |  |      |   |                             |                    |
| 2    | FKM (standard, except for C5, C6, C8, C10, PD1, PD1s) |  |      |   |                             |                    |
| 3    | EPDM  |  |      |   |                             |                    |
| 4    | Copper (C5 required)                                  |  |      |   |                             |                    |
|      | Code  | Electrical connection <sup>①</sup>   |      |   |                             |                    |
|      | B1  | 4-pin connector  |      |   |                             |                    |
|      | B11   | 4-pin connector with 1.5 m PVC cable   |      |   |                             |                    |
|      | B2  | Cable  |      |   |                             |                    |
|      | B21   | Cable connection with M20×1.5 fixed thread   |      |   |                             |                    |
|      | B22   | Cable connection with NPT1/ 2 fixed thread   |      |   | Flameproof only, select one |                    |
|      | B23   | Cable connection with G1/ 2 fixed thread   |      |   |                             |                    |
|      | B4  | M12×1 4-pin connector  |      |   |                             |                    |
|      | B41   | M12× 1 4-pin connector with 2m PVC straight cable  |      |   |                             |                    |
|      | B42   | M12×1 4-pin connector with 2m PVC angled cable   |      |   |                             |                    |
|      | Code  | Cable material (optional only for B2 cable)  |      |   |                             |                    |
|      | N   | None (non-cable connection option)   |      |   |                             |                    |
|      | P1  | PE (Standard)  |      |   |                             |                    |
|      | P2  | PUR  |      |   |                             |                    |
|      | Code  | Cable length (Unit: m) (optional only for B2 cable)  |      |   |                             |                    |
|      | N   | None (non-cable connection option)   |      |   |                             |                    |
|      | L001  | 1  |      |   |                             |                    |
|      | L1D5  | 1.5  |      |   |                             |                    |
|      | L002  | 2  |      |   |                             |                    |
|      | L003  | 3  |      |   |                             |                    |
|      | L004  | 4  |      |   |                             |                    |
|      | L005  | 5  |      |   |                             |                    |
|      | L006  | 6  |      |   |                             |                    |
|      | L007  | 7  |      |   |                             |                    |
|      | L008  | 8  |      |   |                             |                    |
|      | L009  | 9  |      |   |                             |                    |
|      | L010  | 10   |      |   |                             |                    |
|      | Code  | Certification requirement <sup>②</sup>   |      |   |                             |                    |
|      | N   | None   |      |   |                             |                    |
|      | i   | Intrinsically safe Ex ia IIC T6 Ga   |      |   |                             |                    |
|      | T   | Ship-use Ex ia IIC T6 Ga 、 Ex d IIC T6 Gb  |      |   |                             |                    |
|      | y   | ATEX Ex ia IIC T4 Ga   |      |   |                             |                    |
|      | d   | Flameproof Ex db IIC T6 Gb   |      |   |                             |                    |
|      | Code  | Accessory  |      |   |                             |                    |
|      | N   | No accessory   |      |   |                             |                    |
|      | M6  | 4-digit LED indicator (only for 4mA~20mA DC output non-explosion proof or non-ship-use products with B1 electrical connection) |      |   |                             |                    |
|      | M7  | 4-digit LCD indicator (only for 4mA~20mA DC output non-explosion proof or non-ship-use products with B1 electrical connection) |      |   |                             |                    |
|      | Yb3   | Yb junction box (3-core terminals)   |      |   |                             |                    |
|      | Yc3   | MS200 (3-core terminals)   |      |   | Polymer plug (default)      |                    |
|      | Yd  | PD140  |      |   |                             |                    |
|      | YeM6  | Ye (M6)  |      |   |                             |                    |
|      | YeM7  | Ye (M7)  |      |   |                             |                    |
|      | Ye  | Ye (Without indicator)   |      |   |                             |                    |
|      | MS01  | Polymer plug (except for Yb3, Yc3, Yd)   |      |   |                             |                    |
|      | D01   | Damping gasket   |      |   |                             |                    |
| 1    | B2  | P1   | L001 | y | M6                          | The complete spec. |



## ■ NOTES

- 1、 "②", refers to certification requirements.  
For the intrinsically safety type, current output is available only.  
The product can be intrinsically safe explosion-proof/flameproof and suitable for ship-use simultaneously.
- 2、 Refer to the "Measuring Range" on page 2 for product accuracy.
- 3、 The minimum operating temperature of FKM O-ring is -20°C, while EPDM O-ring is -40°C.
- 4、 Please note that for 5V DC/3.3V DC powered products, the cable length must be less than 10m if connected.
- 5、 The 4mA ~ 20mA transmitter can use the M6 or M7 indicator, with a power supply  $\geq 16V$  DC.
- 6、 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.
- 7、 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.