

## HPM418DZ Level Transmitter



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## Overview

HPM418DZ liquid level transmitter is a fully sealed submersible structure, using a corrosion-resistant, wear-resistant and high-precision ceramic capacitor pressure sensor. The probe put into the measured medium is made of all titanium, and the gas-conducting cable is made of polyurethane cable. It is mainly used for seawater, sewage and other media and all high-demand liquid level measurements.

The product has multiple designs of reliable sealing in the connection of the shell, wires and other links, and the internal full potting process is used to ensure that the product has a good service life. It is widely used in many occasions such as ships, chemicals, water treatment, environmental protection, medicine, industrial process control, etc.

## Application

- ◆ Ballast tanks
- ◆ Urban sewage and industrial wastewater
- ◆ Viscous media
- ◆ Chemical industry
- ◆ Water treatment industry

## Features

- ◆ High-purity ceramic capacitor sensor
- ◆ Quasi-flush membrane structure, anti-clogging
- ◆ Shell is made of GR II (or TA2) all-titanium material
- ◆ Anti-corrosion, wear-resistant
- ◆ Fully potting process, anti-condensation
- ◆ Multiple protection and sealing structure design

## Technical Parameters

|                                   |  |
|-----------------------------------|--|
| <b>Measuring Medium</b>           | Various liquids or gases compatible with contact materials                         |
| <b>Measuring Range</b>            | 0.7~2bar...5bar (Absolute pressure)<br>0~1...200mH <sub>2</sub> O (Gauge pressure) |
| <b>Overload</b>                   | 2~40 times of full range scale   |
| <b>Output Signal/Power Supply</b> | 2-wire 4~20mA / Vs=10~30V  |
| <b>Accuracy</b>                   | ±0.25% FS (typical)  |
| <b>Long term stability</b>        | ±0.2%FS/year   |

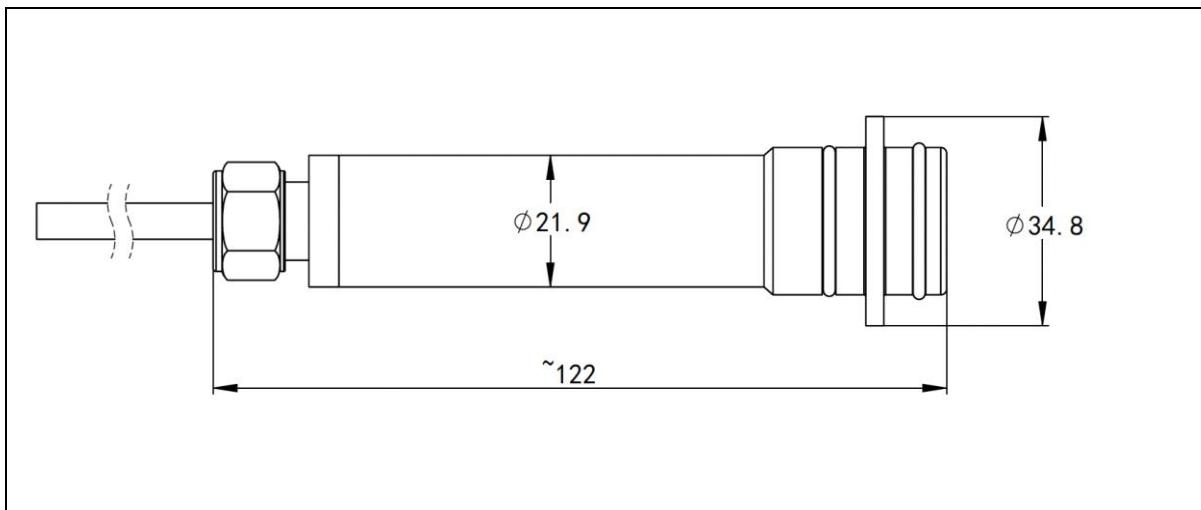
\*Accuracy conforms to IEC 60770 (non-linear error, hysteresis, repeatability)

|  |   |
|--|---|
| <b>Compensation temperature range</b>        | -20~80°C  |
| <b>Temperature Coefficient of Zero</b>       | ±1.0%FS within temperature compensation range                           |
| <b>Temperature Coefficient of Full Scale</b> | ±1.0%FS within temperature compensation range                           |
| <b>Working Temperature</b>                   | -20~80°C  |
| <b>Measuring medium temperature</b>          | -20~80°C  |
| <b>Storage Temperature</b>                   | -20~80°C  |
| <b>Protection level</b>                      | IP68  |
| <b>Short circuit protection</b>              | Permanent   |
| <b>Reverse polarity protection</b>           | No damage, circuit does not work  |
| <b>Electromagnetic Compatibility</b>         | Compliant with EN 61326   |
| <b>Insulation resistance</b>                 | >100MΩ, 500VDC  |
| <b>Dielectric strength</b>                   | Apply 500VAC 50Hz test voltage for 1 minute without breakdown or arcing |

## Structure Material

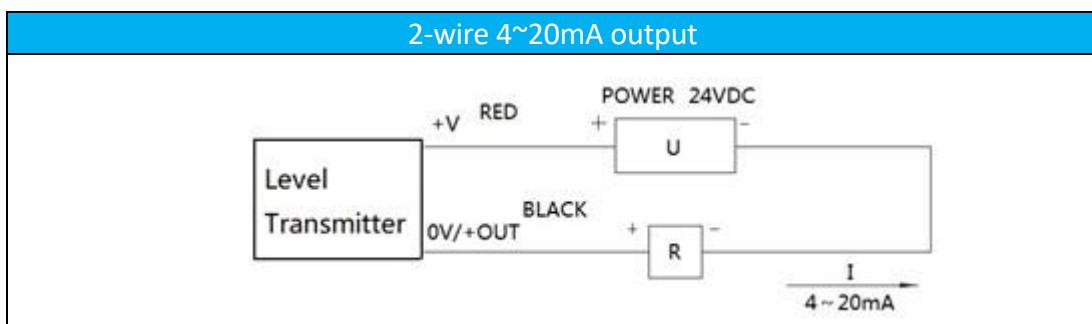
| Code | Part            | Note  |
|------|-----------------|---|
| Ti   | Probe shell     | titanium GR II(or TA2)  |
| M6   | Pressure sensor | Ceramic Al <sub>2</sub> O <sub>3</sub>  |
| FK   | O-ring          | Fluorine rubber FKM (applicable temperature: -20~200°C)                           |
| CR   |                 | Neoprene CR<br>(more corrosion resistant, applicable temperature range -25~300°C) |
| C2U  | Cable           | PU polyurethane cable, external diameter (6.0±0.2) mm                             |

## Structure Drawings (Unit: mm)



## Electrical connections

|            |                         |
|------------|-------------------------|
| Wire color | 2-wire 4~20mA           |
| Red        | Power supply+ (+V)      |
| Black      | Power supply- (0V/+OUT) |



## Ordering Guide

| Item NO.                                | Type                          | Ordering Guide                                    |   |    |    |    |  |  |  |  |
|---|-------------------------------|---|---|----|----|----|--|--|--|--|
| HPM418DZ                                | Level Transmitter             |   |   |    |    |    |  |  |  |  |
|   | Pressure Range                | Measuring Range                                   |   |    |    |    |  |  |  |  |
|   | (0 - X)mH <sub>2</sub> O (Ln) | X is measuring range<br>Ln is the length of cable |   |    |    |    |  |  |  |  |
|   | Code                          | Output Signal                                     |   |    |    |    |  |  |  |  |
|   | B1                            | (4~20)mA  |   |    |    |    |  |  |  |  |
|   | Code                          | Cable Material                                    |   |    |    |    |  |  |  |  |
|   | C2U                           | PUR   |   |    |    |    |  |  |  |  |
|   | Code                          | Mounting method                                   |   |    |    |    |  |  |  |  |
|   | N                             | NA  |   |    |    |    |  |  |  |  |
|   | W1                            | Threaded  |   |    |    |    |  |  |  |  |
|   | W8                            | Clip  |   |    |    |    |  |  |  |  |
|   | Code                          | Pressure sensor                                   |   |    |    |    |  |  |  |  |
|   | M6                            | Ceramic capacitors                                |   |    |    |    |  |  |  |  |
|   | Code                          | Probe shell material                              |   |    |    |    |  |  |  |  |
|   | TI                            | Ti GR II  |   |    |    |    |  |  |  |  |
|   | Code                          | O-ring Material                                   |   |    |    |    |  |  |  |  |
|   | FK                            | FKM   |   |    |    |    |  |  |  |  |
|   | CR                            | CR  |   |    |    |    |  |  |  |  |
|   | Code                          | Others  |   |    |    |    |  |  |  |  |
|   | QF                            | Factory report                                    |   |    |    |    |  |  |  |  |
|   |                               | Other custom requirements                         |   |    |    |    |  |  |  |  |
| eg:HPM418DZ (0~5)mH <sub>2</sub> O (L7) | B1                            | C2U   | N | M6 | TI | CR |  |  |  |  |

## Certification Information

|                            |   |
|----------------------------|---|
| Factory certification      |   |
| Certification organization | CQM   |
| Quality management system  | ISO 9001:2015   |
| Certification scope        | Research, development and manufacture of pressure transmitter and temperature transmitter |
| Certificate No.            | 00223Q21711R1S  |