



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAA00000Y1**  
Revision No:  
**4**

**This is to certify:**  
**that the Pressure Transmitter**

with type designation(s)  
**MPM489W Level Transmitter, MPM4700 Level Transmitter, MPM483 Pressure Transmitter, MPM489 Pressure Transmitter, MPM4730 Pressure Transmitter, MPM426WPF/WPC Level Transmitter, MDM7000 Pressure Transmitter**

issued to  
**Micro Sensor Co., Ltd.**  
**Baoji, Shaanxi Province, China**

is found to comply with  
**DNV rules for classification – Ships, offshore units, and high speed and light craft**

## Application:

**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.**

## Location classes:

Type	Temperature	Humidity	Vibration	EMC	Enclosure
MPM489W Level Transmitter	C	B	A	A	*
MPM4700 Level Transmitter	C	B	A	A	*
MPM483 Pressure Transmitter	C	B	A	A	*
MPM489 Pressure Transmitter	C	B	A	A	*
MPM4730 Pressure Transmitter	C	B	A	A	*
MPM426WPF/WPC Level Transmitter	D	B	A	A	D
MDM7000 Pressure Transmitter	D	B	A	B	D

\* Required protection according to DNV Rules shall be provided upon installation on board

Issued at **Hamburg** on **2024-07-05**

for **DNV**

This Certificate is valid until **2027-01-13**.

DNV local unit: **Wuhan NB & CMC**

Approval Engineer: **Dariusz Lesniewski**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

Pressure transmitter: MPM4700, MPM483, MPM489, MPM4730  
 Pressure transmitter: MDM7000  
 Level transmitter: MPM426WPF/WPC, MPM4700, MPM489W

## Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

## Type Approval documentation

Hidden

checklist_90.02a_initial.pdf	2016-11-14
General test report no. MSJY2016008_Micro Sensor Co.,ltd.pdf	2016-11-04
non-asbestos declaration.pdf	2016-11-14
Report no. E201608045254-2_By GRG.pdf	2016-11-04
Report no. EM201500398-1_MPM4700_By GRG_ccs.pdf	2016-11-04
Report no. H201608010766-01EN_By GRG.pdf	2016-11-04
test report for cable.pdf	2016-11-14
test carried out before request for MPM4700.pdf	2016-06-07
MPM489 operation manual.pdf	2016-07-04
MPM489 drawing.pdf	2016-07-04
MPM489 datasheet.pdf	2016-07-04
MPM483 operation manual.pdf	2016-07-04
MPM483 drawing.pdf	2016-07-04
MPM483 datasheet .pdf	2016-07-04
MPM4730 drawing.pdf	2016-06-07
MPM4700 drawing.pdf	2016-06-07
MPM4730 manual.pdf	2016-06-07
MPM4730 datasheet.pdf	2016-06-07
MPM489W drawing.pdf	2016-06-07
MPM4700 manual.pdf	2016-06-07
MPM4700 datasheet.pdf	2016-06-07
MPM489W drawing.pdf	2016-06-07
MPM489W manual.pdf	2016-06-07
MPM489W datasheet.pdf	2016-06-07
EMC IACS E10 rev. 07/08:	
E202103295308-MPM4700	2021-06-22
E202103295308-MPM4730	2021-06-22

### 1<sup>st</sup> Extension 2024:

Type approval assessment report issued at Wuhan NB & CMC on 2024-04-03  
 Test report: Micro Sensor no. 202401002, dated 2024-01-19  
 Test report: GRGTEST no. H202401222356-01EN, dated 2024-04-24  
 Test report: SITIIAS no. J24-001-ZC, dated 2024-03-01  
 Drawings: MS2.803.274DL, MS2.803.276DL, MS2.803.277DL, MS2.580.440, MS2.580.441  
 Data sheet: MPM426W series, V1.1 10/2022  
 MPM426W Series Operation Manual, V1.0

### 2<sup>nd</sup> Extension 2024:

Test Report: MEERL no. S088A-2024, dated 2024-06-20  
 Test Report: SMAEEPETC no. S088A-DC-2024, dated 2024-06-12  
 Type Approval – Product Technical Specifications  
 MDM7000 Operation Manual. V2.1  
 Technical Drawings (32 pages): MDM7000 Smart Pressure transmitter V1.0

## Tests carried out

Applicable tests according to the Class Guideline DNV-CG-0339, August 2021.

## Marking of product

MPMxxx Pressure/Level Transmitter or  
 MDM7000xxx Pressure Transmitter  
 5 lines of technical details



Job ID: **262.1-022882-6**  
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MICRO SENSOR CO., LTD.

### **Periodical assessment**

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE