

TYPE APPROVAL CERTIFICATE

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

with type designation(s)

CPS-01, CPS-01CA, CPS-01CA K1000, , CPS-03, CPS-03CA, FPS-01, FPS-01CA, FPS-02, FPS-02CA, HTT-04CA, HTT-06, HTT-06CA

Issued to

**IMES Intelligent Measuring Systems GmbH
Kaufbeuren, Bayern, Germany**

is found to comply with

DNV GL 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 GL.****Location classes:**

Temperature	D
Humidity	B
Vibration	B
EMC	A
Enclosure	B

This Certificate is valid until **2021-08-16**.Issued at **Hamburg** on **2020-09-01**for **DNV GL**DNV GL local station: **Augsburg**Approval Engineer: **Heinz Scheffler**

Joannis Papanuskas
Head of Section

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.

Job Id: **262.1-009051-6**
Certificate No: **TAA00000H0**
Revision No: **2**

Product description

The Cylinder Pressure Transmitters and Cylinder Pressure Sensor CPS-01, CPS-01CA, CPS-01CA K1000, , CPS-03, CPS-03CA, FPS-01, FPS-01CA, FPS-02, FPS-02CA, HTT-04CA, HTT-06, HTT-06CA are intended to be installed on Gas and Diesel Engines and Compressors.

Main Characteristics:

- Pressure Range: 0...300 bar, Other on demand
- Supply Voltage: 24VDC, 5VDC for CPS-01
- Output Signal: 4 - 20mA, 0.5 - 4.5VDC for CPS-01
- Electrical Connection: HTOE10-6P-F42-A34-SPL or M12
- Pressure Connection: M10, M14 for HTT-04CA and FPS-02CA
- Housing Material: Stainless Steel
- Ingress Protection Index: IP 67, IP 65 for HTT-04CA, IP 69 for HTT-06 /CA, CPS-03 /CA, CPS-01

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNVGL, 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 DNVGL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Type Approval documentation

Test report and Documentation: Type Approval Documentation_V1_2020-08-19

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, December 2019

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number

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