

## Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

|                           |   |
|---------------------------|---|
| <b>Manufacturer</b>       | <b>IMES GmbH</b>  |
| <b>Address</b>            | Dr.-Herbert-Kittel-Straße 2, Kaufbeuren, 87600, Germany   |
| <b>Type</b>               | Transmitters/Transducers  |
| <b>Description</b>        | Cylinder Pressure Sensor with integrated temperature compensation for continuous monitoring on Internal Combustion Engines.   |
| <b>Trade Name</b>         | CPS-01, CPS-01CA, CPS-01CA K1000, CPS-03, CPS-03CA, FPS-01, FPS-01CA, FPS-02, FPS-02CA, HTT-04, HTT-04 CA, HTT-06, HTT-06CA, TCS-01CA   |
| <b>Application</b>        | Marine and offshore applications for use in environmental categories ENV1, ENV2 and ENV4 as defined in Lloyd's Register's Type Approval System Test Specification No. 1 - 2015. |
| <b>Specified Standard</b> | Manufacturer's Specification<br>IACS unified requirements E10 (Rev.8 Feb 2021)  |
| <b>Ratings</b>            | Power Supply: 24VDC / 5VDC for CPS-01<br>Measuring Range: 0...300bar<br>Overload Pressure: 400...1200bar<br>Output Signal: 4...20mA / 0.5...4.5VDC for CPS-01                   |
| <b>Additional Tests</b>   | Dry Heat (70°C/2hrs)  |

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Low Temperature (- 40°C/2hrs)  
Ingress Protection: IP67 (IP69 for CPS-01, CPS-03, CPS-03CA, HTT-06 and  
HTT-06CA)

### Other Conditions

Screened connection cable to be used.  
Final functional arrangements are to comply with the appropriate Lloyd's  
Register Rules and Regulations.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

**Previous Version:** 11-20041(E1)-03

The Design Appraisal Document HPC1762084-22/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.