

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Pressure Transmitter**with type designation(s)  
**PT-HL**

Issued to

**Müller Industrie-Elektronik GmbH**  
**Neustadt am Rübenberge, Niedersachsen, 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:**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>B</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>C, D</b>

Issued at **Hamburg** on **2019-12-16**for **DNV GL**This Certificate is valid until **2024-12-15**.DNV GL local station: **Essen**Approval Engineer: **Dariusz Lesniewski**

---

**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.



## Product description

Intrinsically Safe Pressure Level Transmitter  
Power supply: 24VDC (min. 16VDC / max. 30VDC)  
Output signal: 4...20mA, 2-wire  
HART® - for configuration and adjustment only  
Pressure ranges: 0...0.1bar up to 0...10 bar  
Accuracy: better than 0.5% of FS  
Electrical connection: vented FEP-cable  
Wetted parts: CrNi-Steel {Hastelloy C4}  
Degree of protection: IP 68 (max. depth 100m)  
Ex-proof protection: see Ex-proof certificate

## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to DNV GL Rules and Ex-Certification / Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

## Type Approval documentation

Test Report: Müller-IE No. 1405.09/09  
Test Report: MessTechnikNord No. 06103.177.09  
Test Report: paconsult No. 09-2637  
Operating Instructions: PT-HL-M version 43-054  
Data Sheet: PT-HL version 43-054  
Cable data sheets; MIE cable reference List (\*.xls)  
Part Lists (issue 26.09.2019); Construction Drawings  
EC-type examination certificate: BVS 12 ATEX E 066 X  
Additional documents as per file 70.70 2080604  
Type approval assessment report issued at Magdeburg on 2019-07-11

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

## 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



Job Id: **262.1-031210-1**  
Certificate No: **TAA00002H1**

- 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