

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Miscellaneous Transmitter

with type designation(s)
MINI MCR-2 Series

Issued to

Phoenix Contact GmbH & Co. KG
Blomberg, Nordrhein-Westfalen, 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.

Temperature B

Humidity B

Vibration A

EMC A

Enclosure Required protection according to the Rules shall be provided upon installation on board.

Issued at **Hamburg** on **2020-07-21**

This Certificate is valid until **2025-07-20**.

for **DNV GL**

DNV GL local station: **Hamburg CMC**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-033263-1**
Certificate No: **TAA00002UA**

Product description

3 way isolating amplifier	
Article number	Article description
2901998	MINI MCR-2-I-I
2901999	MINI MCR-2-I-I-PT
2902000	MINI MCR-2-I0-U
2902001	MINI MCR-2-I0-U-PT
2902002	MINI MCR-2-I4-U
2902003	MINI MCR-2-I4-U-PT
2902022	MINI MCR-2-U-I0
2902023	MINI MCR-2-U-I0-PT
2902029	MINI MCR-2-U-I4
2902030	MINI MCR-2-U-I4-PT
2902042	MINI MCR-2-U-U
2902043	MINI MCR-2-U-U
2902037	MINI MCR-2-UI-UI
2902036	MINI MCR-2-UI-UI-C
2902040	MINI MCR-2-UI-UI-PT
2902039	MINI MCR-2-UI-UI-PT-C
2902019	MINI MCR-2-U-UI
2902018	MINI MCR-2-U-UI-C
2902021	MINI MCR-2-U-UI-PT
2902020	MINI MCR-2-U-UI-PT-C
Repeater power supply with HART® protocol	
Article number	Article description
2902014	MINI MCR-2-RPSS-I-I
2902015	MINI MCR-2-RPSS-I-I-PT
Potiposition transducer	
Article number	Article description
2902016	MINI MCR-2-POT-UI
2905005	MINI MCR-2-POT-UI-C
2902017	MINI MCR-2-POT-UI-PT
2905006	MINI MCR-2-POT-UI-PT-C

Temperature transducer for thermocouples	
Article number	Article description
2902055	MINI MCR-2-TC-UI
2902053	MINI MCR-2-TC-UI-C
2905249	MINI MCR-2-TC-UI-PT
2905248	MINI MCR-2-TC-UI-PT-C
Temperature transducers for resistance thermometers and remote resistance-type sensors:	
Article number	Article description
2902049	MINI MCR-2-RTD-UI
2902048	MINI MCR-2-RTD-UI-C
2902052	MINI MCR-2-RTD-UI-PT
2902051	MINI MCR-2-RTD-UI-PT-C
Power terminal block	
Article number	Article description
2902066	MINI MCR-2-PTB
2902067	MINI MCR-2-PTB-PT
Feed-through terminal block	
Article number	Article description
2902068	MINI MCR-2-TB
Fault monitoring module	
Article number	Article description
2904504	MINI MCR-2-FM-RC
2904508	MINI MCR-2-FM-RC-PT

-PT = mit Zugfederklemme

-C = konfiguriert

Application/Limitation

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

Job Id: **262.1-033263-1**
Certificate No: **TAA00002UA**

Type Approval documentation

Test Report: NB EMC 13-115889; U135555E1; U135555E2; E200712E1; 135151 E11; 135151 E12; E200712E2; 135151 E21; 135151 E22; 135151 E31; 135151 E32; 135151 E51; 135151 E52; 135151 E41; 135151 E42; E135151E61

Documents and Drawings: Data Sheets, Installation Instructions, BoM's, Layout-Schematics according to Document List 2020-07-16_MINI-MCR-2_related_docs.xlsx, dated 16.07.2020.

Tests carried out

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

Marking of product

- 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