



Certificate no.:
TAA00003FZ

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Peripheral Equipment**

with type designation(s)
MINI MCR-EX / MINI MCR-2

issued to

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

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:

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 **2024-09-10**

This Certificate is valid until **2029-09-09**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Heinz Scheffler**

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 USD 300 000.



Form code: TA 251

Revision: 2023-09

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Product description

MINI MCR-EX / MINI MCR-2

Solenoid driver

Article Nr	Model
2908811	MINI MCR-EX-SD-21-48-LP-PT
2908810	MINI MCR-EX-SD-21-48-LP
1157870	MINI MCR-EX-SD-16-50-LP-PT
1157869	MINI MCR-EX-SD-16-50-LP
1277114	MINI MCR-EX-SD-23-38-LP-PT
1277111	MINI MCR-EX-SD-23-38-LP
1157868	MINI MCR-EX-SD-20-25-LP-PT
1157867	MINI MCR-EX-SD-20-25-LP
1175884	MINI MCR-EX-SD-21-48-LFD-PT
1175877	MINI MCR-EX-SD-21-48-LFD
1175904	MINI MCR-EX-SD-16-50-LFD-PT
1175902	MINI MCR-EX-SD-16-50-LFD
1277119	MINI MCR-EX-SD-23-38-LFD-PT
1277116	MINI MCR-EX-SD-23-38-LFD
1175897	MINI MCR-EX-SD-20-25-LFD-PT
1175891	MINI MCR-EX-SD-20-25-LFD

Temperature measuring transducer

Article Nr	Model
1472132	MINI MCR-EX-T-I-PT-C
2908814	MINI MCR-EX-T-I-PT
1472072	MINI MCR-EX-T-I-C
2908813	MINI MCR-EX-T-I
1472070	MINI MCR-2-T-I-PT-C
2908829	MINI MCR-2-T-I-PT
1472071	MINI MCR-2-T-I-C
2908828	MINI MCR-2-T-I

NAMUR isolation amplifiers

Article Nr	Model
2908808	MINI MCR-EX-NAM-T-PT
2908807	MINI MCR-EX-NAM-T
1157854	MINI MCR-EX-NAM-2T-PT
1157852	MINI MCR-EX-NAM-2T
1157857	MINI MCR-EX-NAM-RO-PT
1157862	MINI MCR-EX-NAM-RO

Repeater power supply

Article Nr	Model
2908804	MINI MCR-EX-RPSS-I-I-PT
2908803	MINI MCR-EX-RPSS-I-I

Output signal conditioners

Article Nr	Model
2908806	MINI MCR-EX-IDS-I-I-PT
2908805	MINI MCR-EX-IDS-I-I
2905625	MINI MCR-2-IDS-I-I-PT
2905623	MINI MCR-2-IDS-I-I

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

Test Reports and Documents: MINI_MCR-EX Overview_Rev02

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021

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