Certificate no.:
TAA00003RU

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Network and Communication Components

with type designation(s)
MC 1000T Series; MC 1000E Series

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	**B**
Enclosure	**A**

Issued at **Hamburg** on **2026-02-02**
This Certificate is valid until **2031-02-01**.
DNV local unit: **Essen**

for **DNV**

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.

Product description

Ethernet media converters

Ethernet media converters transparently convert Ethernet data to fiber optics.

Electrical data

- Nominal supply voltage: 24 V DC / 48 V DC
- Typical current consumption: 24 V DC 20 mA (max 170mA)
- Connection method: Push-in spring connection

Features

- Automatic switching between store-and-forward and cut through mode
- Short latency times for realtime protocols
- Link Fault Pass Through (LFPT) – activated via DIP switch
- Redundant power supply
- Digital output for reading out alarm messages

MC 1000T – media converters			
Type	**Range**	**Date rate**	**Item no.**
MC 1000T-MM SC	Up to 10 km	10/100 MBit/s	1329827
MC 1000T-MM ST			1330244
MC 1000T-MM LC			1330259
MC 1000T-SM20 SC	Up to 20 km		1330262
MC 1000T-SM40 SC	Up to 40 km		1330276
MC 1000T-SM20 ST	Up to 20 km		1330282
MC 1000T-SM40 WDM A	Up to 40 km		1330293
MC 1000T-SM40 WDM B			1330296
MC 1000T-MM WDM A	Up to 10 km		1330494
MC 1000T-MM WDM B			1330509
MC 1100T-SFP	Depending on module	10/100/1000 MBit/s	1330902
MC 1100T-MM SC	Up to 10 km		1330900
MC 1100T-SM20 SC	Up to 20 km		1330898

MC 1000E – media converters			
Type	**Range**	**Date rate**	**Item no.**
MC 1000E-MM SC	Up to 10 km	10/100 MBit/s	1330507
MC 1000E-MM ST			1330504
MC 1000E-MM LC			1330611
MC 1000E-SM20 SC	Up to 20 km		1330728
MC 1000E-SM40 SC	Up to 40 km		1330725
MC 1000E-SM20 ST	Up to 20 km		1330723
MC 1000E-SM40 LC	Up to 40 km		1330722
MC 1000E-SM40 WDM A			1330885
MC 1000E-SM40 WDM B			1330892
MC 1000E-MM WDM A	Up to 10 km		1330588
MC 1000E-MM WDM B			1330890
MC 1100E-SFP	Depending on module	10/100/1000 MBit/s	1331375
MC 1100E-MM SC	Up to 10 km		1330896
MC 1100E-SM20 SC	Up to 20 km		1331377

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 Report and Documentation: TAA00003RU_Overview_Documents Rev.00

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.

Manufactured by:

See TAA00003RU_Overview_Documents Rev.00

END OF CERTIFICATE