



Certificate no.:
TAA00003M0

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Network and Communication Components**

with type designation(s)
EXTENDER 1010 ETH COAX-G

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

* see Application/Limitation

Issued at **Hamburg** on **2025-04-11**

This Certificate is valid until **2030-04-10**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Heinz Scheffler**

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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

EXTENDER 1010 ETH COAX-G (1319319)

Gigabit Ethernet extender, network extension with coaxial cable up to 1 kilometer and bandwidth up to 1 Gbps, Power over Link function (PoL) for the power supply of additional devices via the coaxial cable.

Technical Data:

- Connection method: Push-in spring connection (0.2 mm² ... 2.5 mm²)
- Supply voltage range 18 V DC ... 57 V DC
- Nominal supply voltage 24 V DC (without PoL); 48 V DC (with PoL)
- Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3
 - Number of ports: 1 port
 - Connection method RJ45 jack, shielded
 - Note on the connection method: CAT6 (Autonegotiation)
 - Serial transmission speed 10/100/1000 Mbps
 - Transmission length < 100 m (shielded twisted pair)
 - Protocols supported: Protocol-transparent for TCP/IP, IPv4, and IPv6
 - Interface: Ethernet
- G.hn interface in accordance with ITU G.9960
 - Connection method: BNC female connector for coaxial cables
 - Note on the connection method: Short-circuit-proof
 - Output voltage: ≤ 57 V DC
 - Output power: ≤ 91 W (with PoL)
- Gigabit Ethernet extender in accordance with ITU G.9960
 - Transmission speed: ≤ 1000 Mbps (depending on the quality of the data line)
 - Transmission length: ≤ 1000 m (depending on the quality of the data line)
 - Transmission method: QAM (quadrature amplitude modulation) carrier frequency method
 - Management: Plug and Play, diagnostics via LEDs, PoL switch on the device
 - Encryption methods: AES path encryption, Advanced Encryption Standard
 - Redundancy: Ring segment redundancy (All devices at a ring segment)
 - Number of supported devices: ≤ 15 (per G.hn segment, without PoL)

Application/Limitation

Location classes EMC B: For bridge and deck zone the line filter Phoenix Contact (ME-MAX/NEF/QUINT20A) is to be used.

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

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021
IEC 60945:2002/COR1:2008; Section 11.2

Marking of product

The products to be marked with:

- Model name
- Manufacturer name
- Serial number
- power consumption and/or supply voltage.

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