DNV·GL

Certificate No:
TAA00002EW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the DC Power Supply

with type designation(s)
QUINT-DC-UPS, QUINT-BAT, QUINT-BUFFER

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.
Location classes:

Temperature	**A*/C**
Humidity	**B**
Vibration	**C**
EMC	**B**
Enclosure	**Required protection according to the Rules shall be provided upon installation on board.**

*** see Application/Limitation**

Issued at **Hamburg** on **2019-08-02**
This Certificate is valid until **2024-08-01**.
DNV GL local station: **Essen**

for **DNV GL**

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.

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Product description

In normal operation the UPS output voltage corresponds to the supply voltage (rated 24V). If the supply voltage drops, the UPS switches to buffer mode. When the buffer (battery) is discharged at 19.2 V, the UPS shuts down completely. LED indicators and relay contacts are provided for monitoring/alarm.

Ident. No.:	**Type:**
2866226	QUINT-DC-UPS/24DC/10
2866349	QUINT-BAT/24DC/3.4AH
2866352	QUINT-BAT/24DC/7.2AH
2866365	QUINT-BAT/24DC/12AH
2866239	QUINT-DC-UPS/24DC/20
2866242	QUINT-DC-UPS/24DC/40
2866213	QUINT-BUFFER/24DC/20

Application/Limitation

Location class Temperatur A: 2866226, 2866349, 2866352, 2866365

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.

Type Approval documentation

Documents: TAA00002EW_Overview_Documents Rev.00
Test reports: E40082D; E40082E; E40082F; E30998B; S40318,31. March 2004

Tests carried out

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

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