

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Constant Voltage Charger

with type designation(s)
JOVYTEC

Issued to

Wärtsilä JOVYATLAS EUROATLAS GmbH
Jemgum Niedersachsen, Germany

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Voltage output	230 V AC
Power	up to 2000 VA
Temperature class	A
Vibration class	A
Humidity class	B
Enclosure class	A

This Certificate is valid until **2021-06-30**.

Issued at **Hamburg** on **2016-08-24**

for **DNV GL**

DNV GL local station: **Leer**

Approval Engineer: **Harald Amberger**

Duy Nam Le
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.

Product description

UPS for computer and navigation equipment. Including batteries of 36 V (1000 VA / 1500 VA) 72 V (2000 VA) vented lead acid type. Equiped with manual by-pass.

Type	Input Voltage	Input Current	Output	Enclosure
1000-NT	1 ph 168 - 276 V AC, 50/60 Hz, ± 10 %	3.6 A at 230 V AC	1000 VA	IP 21
1500-NT	1 ph 187 - 264 V AC, 50/60 Hz, ± 10 %	5.7 A at 230 V AC	1500 VA	IP 21
2000-NT	1 ph 187 - 264 V AC, 50/60 Hz, ± 10 %	7.7 A at 230 V AC	2000 VA	IP 21

Application/Limitation

The output current will be decreased if operating at 45 °C for longer period or with restricted ventilation. Derating with 2.5 % / °C > 40 °C.

Applicable for bridge installation in accordance with Class requirements. Use together with equipment that requires MED certificate /wheelmark is not reviewed and may require additional tests.

Mounting on shock-absorber at the bottom.

Battery: VRLA 7.5 Ah/ 36 V in an intergrated battery box. Backup times according to manufacturer's datasheet.

End user responsible for correct enclosure protection (IP) wrt. to location.

Type Approval documentation

Tests carried out

Type tests in accordance with IEC /EN 62040-3, Low temperature, Dry heat & Vibration tests in accordance with CN No. 2.4 Class A, Humidity/ Damp heat and EMC tests in accordance with CN No. 2.4 Class B, Compass Safe Distance.

Marking of product

JOVYTEC P – UPS model no. – UPS input – UPS output.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.



Job Id: **262.1-023076-1**
Certificate No: **TAE0000194**

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable).
- Results from Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and RT to be carried out).
- Review of type approval documentation.
- Review of possible change in design, materials and performance.
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.
- Assessment to be performed at least every 2 year.

END OF CERTIFICATE