

TYPE APPROVAL CERTIFICATE**This is to certify:****That the UPS Eaton 9PX**

with type designation(s)

9PX1500IRTM with Marine Filter Unit Type 9PXM3KI**9PX3000IRTM with Marine Filter Unit Type 9PXM3KI**

Issued to

Eaton Industries France**Lianzheng Eelctronic (Shenzhen) Co., Ltd****Shenzhen, China**

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.**Issued at **Hamburg** on **2017-05-16**for **DNV GL**This Certificate is valid until **2022-05-15**.DNV GL local station: **China South NB**Approval Engineer: **Andreas Andrecht****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 Unit Type 9PX1500IRTM
 with Marine Filter Unit Type 9PXM3KI

UPS Unit type 9PX3000IRTM
 with Marine Filter Unit Type 9PXM3KI

Technical Specification	1500VA	3000VA			
Rating(VA/W)	1500VA/1500W	3000VA/3000W			
Format	RT2U (tower/rack 2U)	RT3U (tower/rack 3U)			
Electrical characteristics					
Nominal voltage	200/208/220/230/240V				
Input voltage range	176-276V without derating (up to 100-276V with derating)				
Input frequency range	40-70Hz, 50/60Hz auto selection, frequency converter mode				
Efficiency	Up to 91% in online mode	Up to 94% in online mode			
Connections					
Input	C14	C20			
Outputs	C13(8)	C13(8), C19(2)			
Switched outlet group	2 output groups				
Batteries					
Battery voltage	48V	72V			
Battery capacity	9Ah max				
Battery backup Time (minutes)	9PX1500IRTM	338W	675W	1013W	1350W
	UPS	29,4	42,2	7,7	5,5
	UPS+1EBM	115	61,6	32,1	24,6
	UPS+2EBM	374	221	126	89,8
Battery backup Time (minutes)	9PX3000IRTM	675W	1350W	2025W	2700W
	UPS	26,5	9,1	5,0	3,5
	UPS+1EBM	102	45,0	29,0	18,5
	UPS+4EBM	344	165	102	69,0
Communication					
Communication ports	1 USB port / 1 RS232 / 1 mini-terminal block for remote On/Off 1 mini-terminal block for remote power off 1 mini-terminal block for output relay				
Communication Slot	1 slot for Network-MS card, ModBus-MS or relay-MS card				

Location classes

Temperature Class A
 Humidity Class A
 Vibration Class A
 EMC Class B
 Enclosure IP20

Application/Limitation

Operation for longer periods in 40-55°C ambient requires de-rating of the products nominal load to 60%.
End user is responsible for correct enclosure protection (IP) with respect to location.
This type approval does not replace the requirement for a product certificates in accordance with the DNVGL Rule paragraph Pt.4, Ch.8, Sec. 1, item 2.3 equipment certification
To be installed in climatically controlled areas.

Type Approval documentation

Technical info/drawings:

[Electrical data sheet semiconductor assemblies.docx.pdf](#)
[Electrical assembly layout.docx.pdf](#)
[Electrical data sheet general.docx.pdf](#)
[Electrical assembly functional description.docx.pdf](#)
[DPD-9PX0-3K1301 Antares_9PX_HV_Technical_specification_V13_2016_3_4.doc](#)
[Antares 9PX Test Plan OPEX-TE-0001](#)
[Antares DNV testing Procedure_20160713.pdf](#)

Test reports:

[Nemko AS TEST REPORT 323256 EN](#)
[\(IEC 60945:2001 for the Compass Safe Distance requirements\)](#)
[CTI test report EED32I00323001](#)
[CTI test report EED32I00322901](#)
[CTI test report A2170005964101001](#)
[CTI test report A2170005964101002](#)
[CTI test report A216000438510102](#)
[CTI test report A216000438510101](#)
[Sound Power Level Test report DH1_17_0020](#)
[Environmental test specification for instrumentation and automation equipment](#)

Tests carried out

Type tests in accordance with type approval class programme DNVGL-CP0395.

Visual inspection;
Electrical Power Supply Failure Test CG 0339 Sec.3 [4];
Power supply Variation Test CG 0339 Sec.3 [5];
Vibration test IEC 60068-2-6 Class A;
Dry Heat Test IEC publication 60068-2-2 Class A;
Damp heat test IEC publication 60068-2-78 Class A;
Temperature rise IEC 60146-1-1 Sec.7.4.2;
Functional test (switching of load) IEC 62040-3 Sec.6.2.3;
Short time overload IEC 62040-3 Sec.6.7.7...;
Short circuit capability IEC 62040-3 Sec.6.7.8;
Checking of electrical circuits IEC 62040-3 Sec.6.2.4;
Checking of electrical circuits IEC 62040-3 Sec.6.2.4;
EMC immunity IEC 62040-2 Sec.3 & CG 0339 Sec.3 [14] Class B;
EMC emission CISPR 16-2-1, 16-2-3;
Compass safe distance CG 0339 Sec.3 [15.1];
Acoustic noise and alarm signal levels for equipment installed on the bridge CG 0339 Sec.3 [15.2]

Job Id: **262.1-023044-1**
Certificate No: **TAE00001WX**

Manufacturer

Lianzheng Electronics(Shenzhen) Co., Ltd.
No. 4,Liufang Road,67 Block,Xin'an street Office
Baoan District,Shenzhen,Guangdong Province,China

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.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to 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.

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