

TYPE APPROVAL CERTIFICATE

This is to certify:**That the UPS**

with type designation(s)

9X55 5-15kVA

Issued to

**Eaton Power Quality Oy
ESPOO, Finland**

is found to comply with

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :**UPS for use in ships and offshore units**This Certificate is valid until **2019-06-30**.Issued at **Høvik** on **2015-05-11**DNV GL local station: **Helsinki**Approval Engineer: **Andreas Kristoffersen**for **DNV GL**

**Marit Laumann
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.

Certificate No: **E-14238**
File No: **822.60**
Job Id: **262.1-010496-3**

Place of manufacturer

Eaton Power Quality Oy
Koskelontie 13
Espoo Finland

Product description

Online UPS 's ,1 or 3 phase, with or without integrated batteries. External battery cabinets also available.

Type designation	Input Voltage	Output	Output voltage
9x55-xx-xxx-M... TA	1 ph / 3ph 100V - 690V	5 - 15kVA	100V - 690V

x is number of output phases (x=1, x=3)

xx is output power, kVA (xx=5, xx=8, xx=10, xx=12, xx=15)

xxx is additional info (S : single phase input, N: three phase input, T: internal transformer, L : Long life batteries)

Battery cabinets

Type designation	Number of batteries	Capacity of batteries
9X55-BAT*-M-nxcAh	32, 64 or 96	7Ah or 9Ah

n is number of batteries

c is capacity of the batteries

* is battery design life (*=empty, *=5 or *=10)

Classification according to DNV Sfc 2.4	
Temperatur class	A
Vibration class	A
Humidity class	A
Enclosure class	A
EMC class	B

Application/Limitation

The output current will be decreased if operating at 45 °C for longer period or with restricted ventilation. Derating with 2,0 % / °C > 40 °C.

Protection degree: IP22. End user responsible for correct IP protection according to location and use.

Type Approval documentation

Technical info:

-Technical Specification 9155-8kVA, dated 2007-03-16

-Technical Specification 9155-10kVA, dated 2007-03-16

-Technical Specification 9155-12kVA, dated 2007-03-16

-Technical Specification 9155-15kVA, dated 2007-03-16

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- Technical Specification 9355-8kVA, dated 2007-03-16
- Technical Specification 9355-10kVA, dated 2007-03-16
- Technical Specification 9355-12kVA, dated 2007-03-16
- Technical Specification 9355-15kVA, dated 2007-03-16

Test reports:

- Vibration and condition, Centria Report no. 23092010.21 v1.01, dated 2010-10-07
- EMC (IEC 60945), Nemko Test Report no. 158646, dated 2010-10-27
- EMC (IEC62040-2), Nemko Test Report no. 111912A, dated 2008-08-25
- Environmental Type Test Report, PW9355 5-15kVA, internal report (test done 2010-12-03).
- SGS FIMKO Ltd Test report No.235169, dated 2004-12--23

Test certificate:

- CB Test Certificate FI 3079 Conformity with IEC 62040-1-1:2002, dated 2004-12-27

Tests carried out

Vibration tests (SfC 2.4 class A), EMC tests (IEC 60945 / IEC 62040), functional tests (DNV SfC 2.4, environmental tests (DNV SfC 2.4) and electrical tests (IEC 62040)

Marking of product

Eaton - Type designation – UPS input voltage– UPS output voltage

Periodical assessment

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

The main elements of the periodical 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.

Periodical assessment to be performed at least every second year.

END OF CERTIFICATE