

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Network and Communication Components

with type designation(s)
Lynx and Lynx DSS

Issued to
Westermo Network Technologies AB
STORA SUNDBY, Södermanlands län, Sweden

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	A / IP40

Issued at **Høvik** on **2019-05-24**

for **DNV GL**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **Sweden CMC**

Approval Engineer: **Ståle Sneen**

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Trond Sjøvåg
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.



Job Id: **262.1-011281-5**
Certificate No: **TAA000000R**
Revision No: **1**

Product description

Lynx Industrial Ethernet 10-port Switch and Lynx DSS Industrial Ethernet Device Server Switch for DIN-rail mounting, comprising the following models:

	Model key ¹	Rated voltage	Rated current @ 24/48 VDC	Compass safe distance	
				Standard	Steering
Lynx	Lx10-F2G-y	24-48 VDC	240/120 mA	10 cm	5 cm
Lynx	Lx06-F2G-y	24-48 VDC	180/90 mA	15 cm	10 cm
Lynx DSS	Lx08-F2G-S2-y	24-48 VDC	250/120 mA	15 cm	10 cm
Lynx DSS	Lx06-S2-y	24-48 VDC	150/80 mA	15 cm	10 cm
Lynx DSS	Lx05-S1-y	24-48 VDC	140/70 mA	15 cm	10 cm

1) Model key:

x = 1 or 2 and indicates software version,

y = optional and may indicate customer specific models.

Approval conditions

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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Documentation for Lynx models

User Guide Lynx Lx10-F2G: 6643-2213 Rev. I, dated 2015-05
Schematics: 2010-5053-C Rev. 03, 2010-5251-C Rev. 01
Test report: DELTA REC-E702792, dated 2011-04-08

User Guide Lynx Lx06-F2G: 6643-2250 Rev. D, dated 2015-01
Schematics: 2010-5234-C Rev. 03, 2010-5251-C Rev. 01
Test report: DELTA REC-E702793, dated 2011-04-28

Documentation for Lynx DSS models

User Guide Lynx DSS Lx08-F2G-S2: 6643-2220 Rev. G, dated 2015-01
User Guide Lynx DSS Lx05-S1: 6643-2230 Rev. D, dated 2015-01
User Guide Lynx DSS Lx06-S2: 6643-2240 Rev. D, dated 2015-01
User Guide Lynx DSS Lx08-F2G-S2 EX: 6643-22701 Rev. B, dated 2015-01
Schematics: 2010-5234-C Rev. 03, 2010-5251-C Rev. 01
Test report: DELTA REC-E702793, dated 2011-04-28

Type approval periodical assessment report, DNV GL Örebro 2019-05-17.

Tests carried out

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

Low temperature test performed down to -40°C for 16h.

For the bridge mounted components the 'Compass safe distance' was measured according to section 11.2 of IEC 60945 4th edition (2002).

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Marking of product

Manufacturer: Westermo
Model key as listed under Product description
Unique 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