

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Data transmission cables and systems

with type designation(s)

DATABUS 120/100 OHM MARINE, EPD115106, EPD109318, EPD113842 Twisted pair BUS cables

Issued to

**TE Connectivity Ltd.
Swindon, United Kingdom**

is found to comply with

DNV GL rules for classification – Ships and offshore units

Application :

Data communication cable. Twisted pair BUS cables.

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

Issued at **Høvik** on **2017-06-29**

This Certificate is valid until **2022-06-28**.

DNV GL local station: **London**

for **DNV GL**

Approval Engineer: **Ivar Bull**

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Andreas Kristoffersen
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

Type: DATABUS 120/100 OHM MARINE, EPD115106, EPD109318, EPD113842 Twisted pair BUS cables

Rated voltage 300 V

Max. operating temperature: 90C

Conductors: Tinned stranded copper
Core insulation: Rayfoam crosslinked coloured and numbered
Overall Screen: Tinned copper wire braid
Outer sheath: SHF2

Table 113-Fieldbus Cable specifications (IEC 61158-2 ed. 6 2014-07)

Cable parameter	Type A	Type B
Impedance	135 to 165 Ω (f = 3 to 20 MHz)	100 to 130 Ω (f > 100kHz)
Capacity	< 30 pF/m	< 60 pF/m
Resistance	< 110 Ω /km	Not specified
Conductor cross-sectional area	> 0,34 mm ²	> 0,22 mm ²
Colour of sheath non-IS	Violet	Not specified
Colour of inner cable conductor A (RxD/TxD-N)	Green	Not specified
Colour inner cable conductor B (RxD/TxD-P)	Red	Not specified

Cable parameter			
No of pair x Conductor cross-sectional area	1 pair 0,50mm²	1 pair 0,75mm²	2 pair AWG 20
	EPD115106Q	EPD109318Q	EPD113842Q
Impedance	120 $\pm$ 10 Ohms. Method C @ 1Mhz	120 $\pm$ 10 Ohms. Method C @ 1Mhz	100 $\pm$ 10 Ohms. Method C @ 1Mhz
Attenuation	1.10 dB/100m nominal @ 1MHz	0.9 dB/100m nominal @ 1MHz	1.291 dB/100m nominal @ 1MHz
Capacitance	37 pF/meter nominal @ 1MHz	37 pF/meter nominal @ 1MHz	55 pF/meter nominal @ 1MHz
Velocity	77% nominal	77% nominal	77% nominal

Application/Limitation

The requirements of SOLAS Amendments Chapter II-1, Part D, Reg. 45, 5.2 (provision to be taken to limit Fire Propagation along Bunches of Cables or Wires) are fulfilled without any additional measures.

Type Approval documentation

Tests carried out

IEC 60332-3-22, IEC 60754-1/2 and IEC 61034-1/2.

Marking of product

TE Connectivity - EPD115106Q - 2x0,5 mm - 120 Ohm - 300V - YOM - IEC 60332-3-22 - Batch No or
TE Connectivity - EPD109318Q - 2x0,75 mm - 120 Ohm - 300V - YOM - IEC 60332-3-22 - Batch No or
TE Connectivity - EPD113842Q - 2x2xAWG20 - 100 Ohm - 300V - YOM - IEC 60332-3-22 - Batch No

Job Id: **262.1-015897-3**
Certificate No: **TAE00001V4**

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) and selected type tests (ref. to applicable class programs) checked (if not available these tests shall 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