Certificate No:
TAE00004EC

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Data transmission cables and systems

with type designation(s)
Connection Module Cat.6A EL and Patch Cord Cat. 6A, S/FTP

Issued to
Reichle & De-Massari AG
Wetzikon ZH, ZH, Switzerland

is found to comply with
DNV 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.

Issued at **Hamburg** on **2021-11-26**
This Certificate is valid until **2026-11-25**.
DNV local station: **Augsburg**

Approval Engineer: **Carsten Hunsalz**

for **DNV**

Arne Schaarmann
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

Connection System RJ45 Cat. 6A consisting of Cat.6A EL Connection Module and Patch Cords Cat. 6A

Type: Connection Module Cat.6A EL
Patch Cord Cat. 6A, S/FTP

Mechanical data:	
Pole count:	8
Operating temperature range:	-10°C to 60°C
Humidity:	95% (non-condensing)
Contact material:	CuSn
Contact surface:	> 0.76 µm gold over > 1.2 µm nickel
Housing material:	Polycarbonate (UL-94-V0) unshielded / die-cast (shielded)
IDC contact material:	CuSn, tin-plated

Electrical data:	
Contacts:	1000 V DC or AC peak
Contact to shield:	1500 V DC
Insulation resistance:	> 500 MΩ (100 V DC)
Contact resistance:	< 20 mΩ
I/O resistance:	< 200 mΩ
I/O resistance unbalance:	< 50 mΩ
Current carrying capacity:	1 Amp@60oC

Patch Cords Cat. 6A: The patch cords are used for connecting the network equipment to patch panels and telecommunications outlets. They are suitable for frequencies of up to 650 MHz.

Types: Cat.6A Patch Cords S/FTP

Lengths: maximum 6m

Patch Cord Characteristics:		S/FTP
	Inner conductor diameter	AWG26/7
	Number of pairs	4
	Screen 1 pair	AL/ Folie
	Outer screen	Cu-braid
	Jacket	LSFRZH
	Outside diameter	max. 6.0 mm

Plug Housing:	UL 94-V0 Polycarbonate
Contacts:	Phosphor bronze (CuSn6)
Contact Plating:	0,7 µm selective gold plate
Shielding:	Tin-plated brass

Application/Limitation

Only shielded patch cords shall be used.

Manufacturer's installation description, instructions and DNV rules to be followed.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
		GL Guidelines for the Performance of Type Approvals Part 2, Edition 2012	
IEC 60603-7-51	2010-03	Connectors for electronic equipment – Part 7-51: Detail specification for 8-way, shielded, free and fixed connectors, for data transmissions with frequencies up to 500 MHz	
ISO/TEC 11801	2002-09	Information technology- Generic cabling for customer premises	
EN 50173-1	2018-07	Information technology Generic cabling systems Part 1: General requirements	
EN 50288-10-1	2012-12	Multi-element metallic cables used in analogue and digital communication and control Part 10-1: Sectional specification for screened cables characterized up to 500 MHz Horizontal floor and building backbone cables	
IEC 60332-1-2	2015-07	Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable –Procedure for 1 kW pre-mixed flame	

Marking of product

Name of manufacturer – type designation

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