



Certificate No:
TAE00004AN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the **Category cables**

with type designation(s)
HABIA Cat5 SF/UTP Quad 4x0,5 mm2

Issued to

Habia Cable AB
Söderfors, Sweden

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Data communication cable, installation/horizontal cable. Unarmoured.

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

Issued at **Høvik** on **2021-07-07**

This Certificate is valid until **2026-07-06**.

DNV local station: **Sweden CMC**

for **DNV**

Approval Engineer: **Ivar Bull**

Marta Alonso Pontes
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.



Form code: TA 251

Revision: 2021-03

www.dnv.com

Page 1 of 4

Product description

HABIA Cat5 SF/UTP Quad 4x0,5 mm²

Construction	
Conductor	0,5 mm ² Bare, tinned or silver-plated copper conductor. Solid or stranded. Class 1, 2 or 5.
Insulation	XLPE
Common Screen	Metal laminated tape and/or overall bare/plated copper braid
Binder	Tape
Outer sheath	SHF2 or SHF2 Mud

Electrical data and transmission properties:

Conductor resistance	Max 41,7 [Ω /km]
Voltage Rating	300 V AC
Capacitance	Max 65 nF/km
Characteristic impedance @100MHz	100 $\pm$ 5 Ω
Attenuation @1 MHz	3,2 dB / 100m

For further details, please refer to cable data sheet.

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 Bundles of Cables or Wires) are fulfilled without any additional measures.

Cable design with 0,5 mm² conductors may require special terminations. Recommended installation according to IEC/ISO 11801.

Touch hazard is normally not expected when working with data communication cables. For safety reasons extra caution must be shown and cable ends be clearly marked if Category cables are operated at voltages over 100V.

Type Approval documentation

Tests carried out

Standard	Release	General description	Limitation
DNVGL-CP-0403	2019-07	Data communication cables - category cables	Cold bend: -50°C
IEC 61156-1	2007+AMD1:2009	Multicore and symmetrical pair/quad cables for digital communications - Part 1: Generic specification	
IEC 61156-5	2020-04	Multicore and symmetrical pair/quad cables for digital communications – Part 5: Symmetrical pair/quad cables with transmission characteristics up to 1 000 MHz – Horizontal floor wiring – Sectional specification	Reference to requirement for category cable: 5e (100MHz),
IEC 61156-6	2020-04	Multicore and symmetrical pair/quad cables for digital communications – Part 6: Symmetrical pair/quad cables with transmission characteristics up to 1000MHz – Work area wiring – Sectional specification	
EN 50289-1-2	2001	Communication cables - Specifications for test methods -- Part 1-2: Electrical test methods - DC resistance	
EN 50289-1-3	2001	- Part 1-3: Electrical test methods - Dielectric strength	

Standard	Release	General description	Limitation
DNVGL-CP-0403	2019-07	Data communication cables - category cables	Cold bend: -50°C
IEC 61156-1	2007+AMD1:2009	Multicore and symmetrical pair/quad cables for digital communications - Part 1: Generic specification	
EN 50289-1-4	2001	- Part 1-4: Electrical test methods - Insulation resistance	
EN 50289-1-5	2001	Communication cables - Specifications for test methods -- Part 1-5: Electrical test methods - Capacitance	
EN 50289-1-6	2001	Part 1-6: Electrical test methods - Electromagnetic performance	
EN 50289-1-7	2001	Part 1-7: Electrical test methods - Velocity of propagation	
EN 50289-1-8	2001	Part 1-8: Electrical test methods - Attenuation	
EN 50289-1-9	2001	Part 1-9: Electrical test methods - Unbalance attenuation (transverse conversion loss TCL transverse conversion transfer loss TCTL)	
EN 50289-1-10	2001	Part 1-10: Electrical test methods - Crosstalk	
EN 50289-1-11	2016	Part 1-11: Electrical test methods - Characteristic impedance, input impedance, return loss	
IEC 60092-360	2021-01	Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables	SHF1 or SHF2 outer sheath
IEC 60332-1-2	2004-07	Tests on electric and optical fibre cables under fire conditions – Part 1-1: Test for vertical flame propagation for a single insulated wire or cable – Apparatus	Flame retardant small scale
IEC 60332-3-22	2018-07	Tests on electric and optical fibre cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically mounted bunched wires or cables - Category A	Charred portion of sample does not exceed 2,5m above bottom edge of burner.
IEC 60754-1	2019-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Low Halogen: <0,5% Halogen
IEC 60754-2	2019-11	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2019-11	Measurement of smoke density of cables burning under defined conditions – Part 1: Test apparatus Part 2: Test procedure and requirements	Low smoke Light transmittance >60%
IEC 60092-350	2020-01	General construction and test methods of power, control and instrumentation cables for shipboard and offshore applications	

Marking of product

[Meter marking] –Habia Cable - Cat.5e - 4x0,5mm² - 300V - 700087928 - YYYY-Www – SE010 -batchcode - IEC 60332-3-22

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