DNV·GL

Certificate No:
TAE000029N

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Data transmission cables and systems

with type designation(s)
UC300 HS24 Cat.5e (J-2Y(St)CH 4x2xo,51)

Issued to
Draka Comteq Germany GmbH & Co. KG
Köln, Germany

is found to comply with
DNV GL 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 GL.

Issued at **Hamburg** on **2017-09-29**

This Certificate is valid until **2022-09-28**.
DNV GL local station: **Essen**

Approval Engineer: **Carsten Hunsalz**

for **DNV GL**
Digitally Signed By: Schaarmann, Arne
Location: DNV GL Hamburg, Germany
Signing Date: 11.10.2017 , on behalf of

Duy Nam Le
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: **262.1-010044-4**
Certificate No: **TAE000029N**

Product description

Halogen free PE insulated and FRNC sheathed twisted pairs data transmission Cable

Type: UC300 HS24 Cat.5e (J-2Y(St)CH 4x2xo,51)

Conductor: Bare copper wire, diameter 0,51 mm (AWG 24)
Insulation: PE, diameter 1,1 mm
Twisting: 2 cores to the pair
Cable lay up: 4 pairs to the core
Screen: Al-laminated plastic foil and copper braid, tinned
Sheath: FRNC, Thermoplastic copolymer (SHF1)

Electrical properties: DC-loop resistance: ≤190 Ω /km
Mutal capacitance: Nom. 48 nF/km
Character. impedance: 100 Ω
More propertiees according to Draka data sheet

Application / Limitation

Data communication cable
Installation / Horizontal cable
Halogen free, Low smoke

Temperature range operation: - 20°C to +60°C
Min.bending radius: ≥25 mm (without load)

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.

In order to achieve a transmission link compliant with Category 5, cables shall be installed with suitable termination equipment according to manufacturer's recommendations.

Type Approval documentation

Test report : Draka Comteq reference 2006035_DA_summery, dated of 19.09.2006;
UC300 HS24 4P Cat5e, dated 14.01.2009
Data sheet: da15e Version 1.3 dated 08.07.2016

Tests carried out

Standard	Release	General description	Limitation
	2015-12	DNV GL Type Approval Programme DNVGL-CP-0403	
IEC 61156-5	2009-05	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: Cat 5e (100MHz),
ISO/IEC 11801	2010-04	Information technology – Generic cabling for customer premises, inc Amd 1 and 2.	Reference to requirement for category cable: Cat 5e (100MHz),

Standard	Release	General description	Limitation
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	
IEC 60332-3-24	2009-11	Tests on electric and optical fibre cables under fire conditions – Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category C	Bunch test Category C
IEC 60754-1	2011-11	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	2011-11	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-1/2	2013-07 2013-09	Measurement of smoke density of cables burning under defined conditions – Test apparatus, procedure and requirements	Low smoke Light transmittance >60%

Marking of product

Example:

DRAKA UC300 HS24 C5e SF/UTP 4P LSHF batch no. + meter marking + IEC 60332-3-24
DRAKA OceanLine – 300 HS24 C5e SF/UTP 4P LSHF batch no. + meter marking + IEC 60332-3-24

Place of Production

Draka Comteq Germany GmbH & Co. KG, Wohlauer Str. 15, D-90457 Nürnberg

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