



# TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAE00002RF**  
Revision No:  
**2**

## This is to certify:

that the **Data transmission cables and systems**

with type designation(s)

**Aginode S/FTP CAT7 4P 23AWG LSZH,**  
**Aginode S/FTP CAT7 2x4P 23AWG LSZH,**  
**Aginode SxTP™ CAT7 4P 23AWG LSZH,**  
**Aginode SxTP™ CAT7 2x4P 23AWG LSZH**

issued to

**AGINODE France**  
**Courbevoie, France**

is found to comply with

**DNV 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.**

Issued at **Høvik** on **2024-06-06**

for **DNV**

This Certificate is valid until **2028-03-10**.

DNV local unit: **France FIS**

Approval Engineer: **Ivar Bull**

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

Type: Aginode S/FTP CAT7 4P 23AWG LSZH,  
 Aginode S/FTP CAT7 2x4P 23AWG LSZH,  
 Aginode SxTP™ CAT7 4P 23AWG LSZH,  
 Aginode SxTP™ CAT7 2x4P 23AWG LSZH

Conductors: Solid bare copper  
 Core insulation: Polyethylene  
 Individual screen: ALU/PET tape  
 Common screen: Tinned copper wire braid  
 Outer sheath: SHF1

Number of pairs: 4P or 2x4P  
 Cross-section: 23 AWG (0,26 mm²)

#### Electric ratings and measurements

Voltage rating: Max 50V AC or 75V DC  
 DC Resistance at 20°C: 90 Ω/km S/FTP Cat 7 and SxTP CAT 7  
 Impedance characteristic at 100MHz: 100 Ω ± 5 Ω

Transmission characteristics tested up to 800 MHz: Please refer to datasheet.

### Application/Limitation

Fixed installation, Max installation tension 120N  
 Ambient installation temperature, range 0 to 50 °C  
 Working (fixed installation) and storage, range -20 to 70 °C

### Type Approval documentation

**Data sheets:** Nexans Cat. 7 800 MHz S/FTP LSZH Dated 8/31/17  
 Nexans SxTP™ CAT7 4P LSZH D1000 OR Dated 8/31/17  
 Nexans S/FTP CAT7 2x4P LSZH D500 OR dated 2018-03-24  
 Nexans SxTP™CAT7 2x4P SHF1 800MHz dated 2018-03-24

**Test Reports:** Delta test report T734338-01 dated 16 November 2017  
 Delta test report T734338-02 dated 14 November 2017  
 Nexans test report S/FTP 7 2x4PR Dca Sample-ID-No. : 000033S31U dated 25/04/2024

### Tests carried out

Standard	Release	General description	Limitation
DNV-CP-0403	2021-09	Data communication cables - category cables	
IEC 61156-1	2015-06	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	CAT 7 (600MHz)
ISO/IEC 11801	2017-11	Information technology - Generic cabling for customer premises - Part 1: General requirements	
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.	Applicable for outer sheath only.

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	Flame retardant small scale. Distance between the lower edge of the top support and the onset of charring > 50 mm. Charring not to extend downwards > 540 mm from the lower edge of the top support.
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 2: Determination of acidity (by pH measurement) and conductivity	Halogen free: pH > 4,3 Conductivity < 10µS/mm
IEC 61034-2	2019-11	Measurement of smoke density of cables burning under defined conditions – Test procedure and requirements	Low smoke Light transmittance >60%

### Marking of product

Aginode S/FTP CAT7 4P LSZH 23AWG SHF1 - IEC 60332-1-2- Lot No or  
 Aginode S/FTP CAT7 2x4P LSZH 23 AWG SHF1 - IEC 60332-1-2- Lot No or

Aginode SxTP CAT7 4P LSZH 23AWG SHF1 - IEC 60332-1-2- Lot No or  
 Aginode SxTP CAT7 2x4P LSZH 23AWG SHF1 - IEC 60332-1-2- Lot No or

Lanmark Maritime S/FTP by Aginode Category 7 LSZH SHF1 DNV 4 pair AWG23 82% NVP FF WWYY(date) OF - IEC 60332-1-2- (Lot No) (Metrique) or

Aginode S/FTP CAT7 800 SHF1 4P 23 AWG FF WWYY(date) OF - IEC 60332-1-2- (Lot No) (Metrique) or

Lanmark Maritime S/FTP by Aginode Category 7 LSZH SHF1 DNV 2x4 pair AWG23 82% NVP FF WWYY(date) OF - IEC 60332-1-2- (Lot No) ( Metrique) or

Aginode S/FTP CAT7 800 SHF1 2x4P 23 AWG FF WWYY(date) OF - IEC 60332-1-2- (Lot No) (Metrique) or

Aginode SxTP CAT7 SHF1 4P 23AWG FF WWYY(date) OF - IEC 60332-1-2- (Lot No) (Metrique) or  
 Aginode SxTP CAT7 SHF1 2x4P 23AWG FF WWYY(date) OF - IEC 60332-1-2- (Lot No) (Metrique)

### 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