



Data and communication cable

Cat.7 S/FTP Marine Approved

Article number: 24021

02-10-2026

Description

4 x 2 x AWG 23/1 LSHF Grey

Application:

Backbone connections between servers within a data center, to provide a high-speed interconnect used for data transfer within the network

Characteristics (properties):

- Available in stranded (AWG 22/7 CAT7) and solid (AWG 23/1 Cat 7) conductors
- Halogen free and low smoke, flame retardant
- DNV certified
- Different colour outer sheaths, other than grey , available on request



* This image may differ from the actual product.

Core identification:

- White/Blue, White/Orange, White/Green, White/Brown

Trading information

Product group	Data and communication cable
Type	Cat.7 S/FTP Marine Approved
Net. Weight	0,078 kg/m
Sheath marking	TKF - InduData - Category 7 S/FTP - 4x2x0.259 mm² AWG 23/1 solid - HFFR-LS - MARINE APPROVED {Batch} {Length}

Trade lengths

Minimal order

Ring à 305	(24021R X 305 / 8713182311513)	1 PCE
Reel à 1000	(24021H X 1000 / 8713182311506)	1 PCE



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Construction characteristics

Standardization	BS EN 50288-4, IEC 61156-5, UL Subject 444
Number of cores	8
Nominal cross section conductor	0,26 mm ²
Conductor material	Copper
Conductor category	Class 1 = solid
Number of stranding elements	4
Number of conductors per group	2
Screen over stranding element	Al/Polyester foil
Material core insulation	Polyethylene, foamed (foam PE)
Core identification	Colour
Colour insulated wires	White/Blue - White/Orange - White/Green - White/Brown
Screen over stranding	Tinned copper braiding
Material outer sheath	LSZH
Colour outer sheath	Grey



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Properties

Flame retardant	IEC 60332-3-24 Cat. C
Flame retardant according to IEC 60332-3-24 (Cat C)	Yes
Halogen free	IEC 60754-1 / IEC 60754-2
Low smoke	IEC 61034-1 & IEC 61034-2
UV protection	None
Oil resistant	IEC 60811-2-1 IRM 902/ASTM No.2 (70°C for 4 Hrs)
Diameter conductor	0,57 mm
Insulation thickness	0,4 mm
Diameter over armouring (nom.)	6,4 mm
Outer sheath thickness	0,7 mm
Outer diameter approx.	7,8 mm

Technical characteristics

Min. bending radius during installation	78 mm
Min. bending radius after installation	62 mm
Tensile load	100 N
Permitted cable outer temperature during assembling/handling	-15 / 50 °C
Permitted cable outer temperature after assembling without vibration	-40 / 85 °C
Transportation and storage temperature	-40 / 85 °C

Electrical characteristics

Conductor DC resistance @ 20°C	95 Ohm/km
Propagation delay change	5,7 µs/km
Return loss @ 4 MHz	23 dB/100mtr



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Electrical characteristics

Return loss @ 10 MHz	25 dB/100mtr
Return loss @ 16 MHz	25 dB/100mtr
Return loss @ 20 MHz	25 dB/100mtr
Return loss @ 31.2 MHz	23,6 dB/100mtr
Return loss @ 62.5 MHz	21,5 dB/100mtr
Return loss @ 100 MHz	20,1 dB/100mtr
Return loss @ 200 MHz	18 dB/100mtr
Return loss @ 250 MHz	17,3 dB/100mtr
Return loss @ 300 MHz	17,3 dB/100mtr
Return loss @ 600 MHz	17,3 dB/100mtr
NEXT @ 4 MHz	78 dB
NEXT @ 10 MHz	78 dB
NEXT @ 16 MHz	78 dB
NEXT @ 20 MHz	78 dB
NEXT @ 31.2 MHz	78 dB
NEXT @ 62.5 MHz	75,5 dB
NEXT @ 100 MHz	72,4 dB
NEXT @ 200 MHz	67,9 dB
NEXT @ 250 MHz	66,4 dB
NEXT @ 300 MHz	65,2 dB
NEXT @ 600 MHz	60,7 dB
PS NEXT @ 4 MHz	75 dB
PS NEXT @ 10 MHz	75 dB
PS NEXT @ 16 MHz	75 dB
PS NEXT @ 20 MHz	75 dB
PS NEXT @ 31.2 MHz	75 dB
PS NEXT @ 62.5 MHz	72,5 dB



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PS NEXT @ 100 MHz	69,4 dB
PS NEXT @ 200 MHz	64,9 dB
PS NEXT @ 250 MHz	63,4 dB
PS NEXT @ 300 MHz	62,2 dB
PS NEXT @ 600 MHz	57,7 dB
Attenuation @ 4 MHz	37 dB/km
Attenuation @ 8 MHz	52 dB/km
Attenuation @ 10 MHz	59 dB/km
Attenuation @ 16 MHz	74 dB/km
Attenuation @ 20 MHz	83 dB/km
Attenuation @ 31.2 MHz	104 dB/km
Attenuation @ 62.5 MHz	149 dB/km
Attenuation @ 100 MHz	190 dB/km
Attenuation @ 200 MHz	275 dB/km
Attenuation @ 250 MHz	310 dB/km
Attenuation @ 300 MHz	342 dB/km
Attenuation @ 600 MHz	501 dB/km
EL FEXT @ 4 MHz	78 dB/100mtr
EL FEXT @ 10 MHz	75,3 dB/100mtr
EL FEXT @ 16 MHz	71,2 dB/100mtr
EL FEXT @ 20 MHz	69,3 dB/100mtr
EL FEXT @ 31.2 MHz	65,4 dB/100mtr
EL FEXT @ 62.5 MHz	59,4 dB/100mtr
EL FEXT @ 100 MHz	55,3 dB/100mtr
EL FEXT @ 200 MHz	49,3 dB/100mtr
EL FEXT @ 250 MHz	47,3 dB/100mtr
EL FEXT @ 300 MHz	45,8 dB/100mtr



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Electrical characteristics

EL FEXT @ 600 MHz	39,7 dB/100mtr
PS EL FEXT @ 4 MHz	75 dB/100mtr
PS EL FEXT @ 10 MHz	72,3 dB/100mtr
PS EL FEXT @ 16 MHz	68,2 dB/100mtr
PS EL FEXT @ 20 MHz	66,3 dB/100mtr
PS EL FEXT @ 31.2 MHz	62,4 dB/100mtr
PS EL FEXT @ 62.5 MHz	56,4 dB/100mtr
PS EL FEXT @ 100 MHz	52,3 dB/100mtr
PS EL FEXT @ 200 MHz	46,3 dB/100mtr
PS EL FEXT @ 250 MHz	44,3 dB/100mtr
PS EL FEXT @ 300 MHz	42,8 dB/100mtr
PS EL FEXT @ 600 MHz	36,7 dB/100mtr



Product information

Electrical performance

Article nr.:24020/24021/24022 Cat.7 S/FTP Marine Approved 4 x 2 x AWG 23/1 HFFR-LS Black/Grey/Purple Version : 70J56-008 SHF1

Standard : IEC 61156-5 & ISO/IEC 11801

Application : Generic cabling systems. Including 10/100/1000 BaseT, 20G, ATM & Token Ring. This range of screened cables is designed to support Cat 7 Link and Channel performance. With internationally defined Physical and Electrical performance up to 600 MHz.

Transmission performances

Frequency range

Frequency Unit	kHz			MHz																		
Transmission Frequency	1	10	100	4	8	10	16	20	25	31,25	62,5	100	200	250	300	500	600	-	-	-	-	-
Attenuation (dB/100m)	-	-	-	3.7	5.2	5.9	7.4	8.3	9.3	10.4	14.9	19	27.5	31	34.2	45.3	50.1	-	-	-	-	-
Characteristic Impedance (ohm)	-	-	-	100±15									100±22			100±25		-	-	-	-	-
Return Loss (dB)	-	-	-	23	24.5	25	25	24.3	23.6	21.5	20.1	18	17.3	17.3	17.3	17.3	17.3	-	-	-	-	-
Skew(ns/100m)	-	-	-	≤ 25														-	-	-	-	-
Propagation Delay (ns/100m)	-	-	-	552	547	545	543	542	541	540	539	538	537	536	536	536	535	-	-	-	-	-
NEXT (dB)	-	-	-	78	78	78	78	78	78	78	75.5	72.4	67.9	66.4	65.2	61.9	60.7	-	-	-	-	-
PS NEXT (dB)	-	-	-	75	75	75	75	75	75	75	72.5	69.4	64.9	63.4	62.2	58.9	57.7	-	-	-	-	-
EL FEXT (dB/100m)	-	-	-	78	77.2	75.3	71.2	69.3	67.3	65.4	59.4	55.3	49.3	47.3	45.8	41.3	39.7	-	-	-	-	-
PS EL FEXT (dB/100m)	-	-	-	75	74.2	72.3	68.2	66.3	64.3	62.4	56.4	52.3	46.3	44.3	42.8	38.3	36.7	-	-	-	-	-