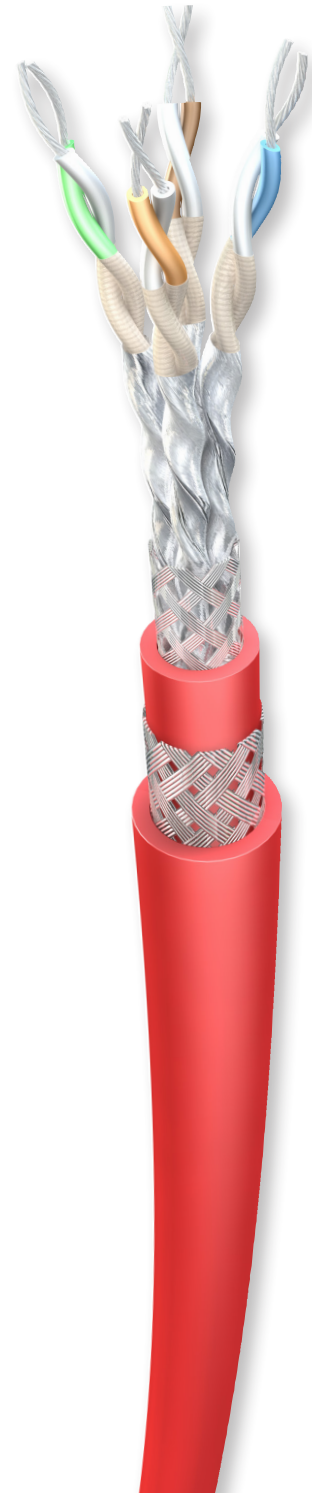


*Armoured (GSWB) Cat.6a 23/7awg S/FTP
Fire Resistant Work Area Cable SHF1*



Application

Offshore installations, Maritime Environment, Optimized for IEEE 802.3at PoE+, High bandwidth digital applications with low BER, Ships, High speed & Light craft, Data transmission during fire. The cable design and structure complies with transmission performance under IEC 60331 fire conditions.

Cable Design

Conductor	Solid annealed bare copper wire (23/7awg)
Insulation	PO
Fire Barrier	FFCi™ Fire resistant tape wrapped
Diameter	Ø 1,25 ± 0,05 mm
Screened Pair	2 cores twisted to a pair + Aluminium/polyester foil, 100% coverage
Formation	4 screened pairs (4x2x23/1awg)
Pair Identification	White X Blue, White X Orange, White X Green, White X Brown
Braid	Tinned copper wire braid
Coverage	55% nom.

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Drain Wire	Solid tinned copper wire 0,41 mm
Inner Jacket	FR-LSZH SHF-1
Colour	Red
Diameter	Ø 9,0 mm
Armour	Galvanised Steel Wire Braid (GSWB)
Outer Jacket	FR-LSZH SHF-1
Colour	Red
Diameter	Ø 12,90 mm nom.

Performance

Frequency Range	1-500	MHz
Impedance	100	Ohm
Transfer Impedance	Grade 1	
Coupling Attenuation	Type I	
Max. DC Resistance	78	Ohm/km @ 20 °C
Max. Resistance Unbalance	2	%
Capacitance	47	pF/m
Capacitance Unbalance	1,2	pF/m max.
Velocity of Propagation	65	% nom.
Dielectric Strength	700	V/minute
Dielectric Strength to Shield	700	V/minute
Min. Insulation Resistance	4	GOhm • km
Max. Operating Temperature	+65	°C
Min. Operating Temperature	-30	°C
UV resistance	Yes	
Fire resistance	Yes	

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Transmission Properties

Frequency (MHz)	Attenuation (dB/100m) 20 °C		PS NEXT Loss (dB)		NEXT Loss (dB)		RL (dB)		PS ANEXT (dB)		PS ELFEXT (dB)	
	Typ.	Cat.6A	Typ.	Cat.6A	Typ.	Cat.6A	Typ.	Cat.6A	Typ.	Cat.6A	Typ.	Cat.6A
1	2,0	2,0	95	72,3	98	75,3	22	20	70	67	85	65
4	3,7	3,8	95	63,3	98	66,3	25	23	70	67	73	53
10	5,6	5,9	95	57,3	98	60,3	28	25	70	67	65	45
20	7,9	8,4	90	52,8	93	55,8	28	25	70	67	59	39
30	9,7	10,3	85	50,1	88	53,1	27	23,8	70	67	55,4	35,4
100	18,0	19,1	80	42,3	83	45,3	24	21,1	67	62,5	45	25
150	22,4	23,6	78	39,7	81	42,7	22	18,8	66	59,8	41,5	21,5
200	26,0	27,6	78	37,8	81	40,8	21	18,0	65	58	49	19
250	29,4	31,0	75	36,3	78	39,3	20	17,3	63	56,5	37	17
300	32,5	34,3	75	35,1	78	38,1	19	17,3	62	55,3	35,5	15,5
400	38,0	40,0	70	33,3	73	36,3	19	17,3	61	53,4	33	13
500	43,0	45,2	70	31,8	73	34,8	19	17,3	59	52	31	11

Guaranteed Transmission data during fire - 100 Base-T

Standards

Applicable Standards	DNV-GL certified, IEC 60092-359, IEC 60092-350, IEC 61156-5, IEEE 802.3at (PoE+), ISO/IEC 11801, RoHS-2 2011/65/EU
Flammability Rating	IEC 60332-1, IEC 60332-3-22, IEC 60332-3-24 , IEC 60754-2, IEC 61034-1/2, UL 1581 VW-1

Specification

Part Number	Construction	Shield Type	Armour	Outer Jacket
AMS6A-SFS23-DGF1	4x2x23/7 awg	S/FTP	GSWB	SHF1