Cat. 7 4x2x23/7 AWG S/FTP SBA LSZH-SHF2 Fire Resistant

Part Number: **9MGF021xxx**

Applications:	Offshore installations, Maritime Environment, Data-Centers/SANs, High data rates, Optimized for IEEE 802.3at PoE+ , Indoor/Outdoor use, fixed installations, High bandwidth digital applications with low BER, Outdoor and direct burial installations, Ships, High speed & Light craft, Data transmission during fire
General Construction:	Four individually screened twisted pairs with stranded conductors, cabled together, overall copper braid shielded, inner jacket, galvanized steel braid armor and Outer jacket. The cable design and structure comply with the circuit integrity performance during a fire of the relevant requirements of IEC 60331-23 and allows data transmission during the fire. The cable is certified by DNV / DNV-GL FILE NO. E-TAE00000U4.
Outer Jacket Material:	XL-HFFR
Outer Diameter:	13.0 mm nom.
Weight:	240 kg/km

Design & Materials

Detailed Construction:
Each conductor is wrapped with a special fire-resistant tape that serves as a flame barrier.

Conductor Material:	Annealed Tinned Copper
Conductor Size:	23 AWG
Conductor Construction:	Stranded
Insulation Material:	PO + Fire Resistant Tape
Insulation O.D.:	1.35 mm nom.
Conductor unit identification:	Solid Color
Conductor Color Code:	White/Blue, White/Orange, White.Green, White/Brown
Ind. Shield Material:	Aluminum/Polyester Foil
Ind. Shield Design:	Helically applied Aluminum foil, 100% coverage
Conductor unit lay-up:	Pairs
Overall Shield Design:	Braid
Overall Braid Shield:	Yes
Overall Braid Material:	Annealed Tinned Copper
Braid Coverage:	65 % nom.
Overall Drain-wire Material:	Annealed Tinned Copper
Overall Drain-wire size:	0.41 mm
Overall Drain-wire Construction:	Solid
Inner Jacket Material:	FR-LSZH
Inner Jacket Diameter nom.:	9.0 mm nom
Inner Jacket Color:	Red
Armoring:	Braided Galvanized Steel
Outer Jacket Color:	
Marking:	Per request

Standards

Applicable Standards:	DNV-GL certified, IEC 60092-359, IEC 60092-350, IEC 60811-2-1, IEC 61156-5, ISO/IEC 11801, TIA/EIA-568, ASTM G154, RoHS-2 2011/65/EU
Flamability Rating:	IEC 60331-23, IEC 60332-1, IEC 60332-3 , IEC 60754-1/2, IEC 61034-1/2, UL 1581 VW-1

Electrical Properties:

Freq. MHz	Attenuation dB/ 100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7
1	2.0	2.0	105.0	75.0	108.0	78.0	22.0	20.0	68.0	N/A	95.0	75.0	98.0	78.0
4	3.6	3.7	98.0	75.0	101.0	78.0	25.0	23.0	68.0	N/A	90.0	75.0	93.0	78.0
10	5.6	5.8	95.0	75.0	98.0	78.0	28.0	25.0	68.0	N/A	86.0	71.0	89.0	74.0
20	7.9	8.3	90.0	75.0	93.0	78.0	28.0	25.0	68.0	N/A	80.0	65.0	83.0	68.0
30	9.7	10.2	85.0	75.0	88.0	78.0	27.0	23.8	68.0	N/A	76.0	61.5	79.0	64.5
100	18.0	19.0	80.0	69.4	83.0	72.4	24.0	21.1	68.0	N/A	66.0	51.0	69.0	54.0
150	22.4	23.6	78.0	66.7	81.0	69.7	22.0	18.8	65.0	N/A	63.0	47.5	66.0	50.5
200	26.0	27.5	78.0	65.0	81.0	68.0	21.0	18.0	65.0	N/A	60.0	45.0	63.0	48.0
250	29.4	31.0	75.0	63.4	78.0	66.4	20.0	17.3	62.0	N/A	58.0	43.0	61.0	46.0
300	32.5	34.2	75.0	62.2	78.0	65.2	19.0	17.3	62.0	N/A	52.0	41.5	55.0	44.5
400	38.0	40.0	70.0	60.4	73.0	63.4	19.0	17.3	62.0	N/A	49.0	38.9	52.0	41.9
500	43.0	45.2	70.0	58.9	73.0	61.9	19.0	17.3	62.0	N/A	47.0	37.0	50.0	40.0
600	47.6	50.1	70.0	57.7	73.0	60.7	19.0	17.3	62.0	N/A	45.0	35.4	48.0	38.4

Transmission data during fire - 100 Base-T

Performance

Frequency Range:	1 - 600 MHz
Impedance:	100
Transfer Impedance:	Grade 1
Coupling Attenuation:	Type I
Max. DC Resistance :	78 /km@20°C
Max. Resistance Unbalance:	2 %
Capacitance:	47 pF/m
Capacitance Unbalance:	1.6 pF/m max.
Velocity of Propagation:	65 % nom.
Dielectric Strength:	700 V/minute
Dielectric Strength to Shield:	700 V/minute
Min. Insulation Resistance :	4 G •km
Max. Operating Temperature:	+65 °C
Min. Operating Temperature:	-30 °C
UV resistance:	Yes
Rodent Resistance:	Yes

Prepared By	Revised By	Version Num	Modified on
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