

# Cat.6A

## Fire Resistant S/FTP LSZH Horizontal Cable

### Application

A fire resistant Cat6a ethernet cable suitable for IEEE802.3 POE+ High Bandwidth Digital Applications. The cable benefits from a Flame Retardant Low Smoke Zero Halogen sheath and is designed to continue to work under fire conditions for up to 90 minutes.

### Cable Design

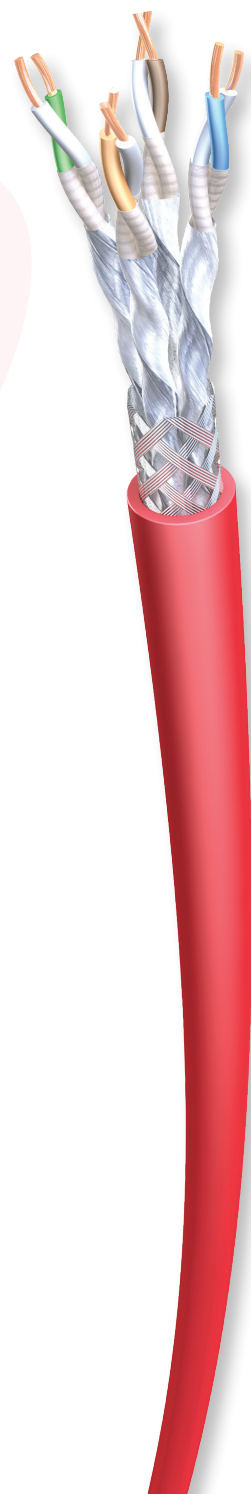
Conductor	Solid bare copper wire (23awg)
Insulation	PO + FFCi™ Fire resistant tape
Screened Pair	2 cores twisted to a pair + Aluminium/polyester foil, 100% coverage
Cable lay up	4 shielded pairs cabled together
Overall Screen	Tinned copper wire braid. 55% nom. coverage
Outer Jacket	FR-LSZH : Ø 9,0 ± 0,6 mm (Red)
Pair Identification	1.Blue/White 2.Orange/White 3.Green/White 4.Brown/White

### Standards

Applicable standards	IEC 61156-5, IEC 60332-1-2, IEC 60331-23, IEC 60332-3-22, IEC 60754-1, IEC 60754-2, IEC 61034-1/2
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### Specification

Part Number	Type
FRC6A-SF23-UAZH	Fire Resistant S/FTP Cat6a 4x2xAWG23/1 <500 MHz> FR-LSZH



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### Mechanical Properties

Bend radius	<i>With Load</i>	$\geq 16 \times \text{O.D}$
Bend radius	<i>No Load</i>	$\geq 8 \times \text{O.D}$
Cold Bend Test Rating		UL444
Cold Impact Test Rating		UL444
Water Resistant Properties		AD 1~4
Temperature range	<i>During operation</i>	-20°C to +70°C
Temperature range	<i>During installation</i>	0°C to +50°C
Maximum Pulling Force	<i>During installation</i>	100 N
Weight		98 kg/km nom.

### Electrical properties (at 20°C)

Characteristic Impedance	<i>1-100 MHz</i>	$100 \pm 15 \Omega$
Characteristic Impedance	<i>100-250 MHz</i>	$100 \pm 22$
Characteristic Impedance	<i>250-500 MHz</i>	$100 \pm 25 \Omega$
DC Loop Resistance		$\leq 187.6 \Omega/\text{km}$
DC Resistance Unbalance		$\leq 4 \%$
Mutual Capacitance (@1 kHz)		$\leq 5.6 \text{ nF}/100\text{m}$
Capacitance unbalance	<i>Pair to ground</i>	$\leq 330 \text{ pF}/100\text{m}$
Velocity of Propagation		Nom.68%
Propagation Delay (@500 MHz)		$\leq 536.0 \text{ ns}/100\text{m}$

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### Transmission Properties

Frequency (MHz)	Attenuation dB/100m	NEXT dB/100	RL dB/100	PS NEXT dB/100m	PS ELFEXT dB/100m	ELFEXT dB/100m	Delay ns/100m	Skew ns/100m
4	3,8	66,3	23,0	63,3	53,0	56,0	552	≤ 45
8	5,3	61,8	24,5	58,8	46,9	49,9	547	
10	5,9	60,3	25,0	57,3	45,0	48,0	545	
16	7,5	57,2	25,0	54,2	40,9	43,9	543	
20	8,4	55,8	25,0	52,8	39,0	42,0	542	
25	9,4	54,3	24,3	51,3	37,0	40,0	541	
31,25	10,5	52,9	23,6	49,9	35,1	38,1	540	
62,5	15,0	48,4	21,5	45,4	29,1	32,1	539	
100	19,1	45,3	20,1	42,3	25,0	28,0	538	
150	23,7	42,7	18,9	39,7	21,5	24,5	537	
200	27,6	40,8	18,0	37,8	19,0	22,0	537	
250	31,1	39,3	17,3	36,3	17,0	20,0	536	
300	34,3	38,1	17,3	35,1	15,5	18,5	536	
400	40,1	36,3	17,3	33,3	13,0	16,0	536	
500	45,3	34,8	17,3	31,8	11,0	14,0	536	