

Cat.6 F/UTP <400 MHz>

DataGuard® Armoured (SWA) LSZH

Application

DataGuard® Armoured (SWA) 400 MHz overall screened data transmission cable for high quality requirements, backward compatible with current data-services as well as Gigabit-Ethernet. For applications where mechanical protection is required. Usable for: 10Base-T; 100Base-T; 1000Base-T; CDDI/TPDDI; ISDN; ATM 155 Mbit/s, TP-PMD 125 Mbit/s, Token Ring 4/16 Mbit/s, analogue telephony.



Cable Design

Conductor	Solid Bare copper wire (23/1awg)
Insulation	Polyethylene (PE)
Twisting	2 cores to the pair
Cable lay up	4 pairs cabled with cross separator (spline)
Shield	Overall Aluminium/polyester tape + TC drain wire
Inner Sheath	LSZH FireFighter® : Ø 7,00 ± 0,50 mm
Armour	DataGuard® Steel Wire Armour (SWA) 0,8 mm x 29
Outer Jacket	LSZH FireFighter® : Ø 12,0 ± 0,40 mm

Standards

Applicable Standards	ISO/IEC 110801 2nd.ed., EN 50173-1, TIA/EIA 568-B.2, EN 50288-5-1, IEC 61156-5.
Flammability Rating	IEC 60332-3-24, IEC 60754-1/2, IEC 61034



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Colour Code Chart

Pair	Colour
1	Blue + White/Blue
2	Orange + White/Orange
3	Green + White/Green
4	Brown + White/Brown

Electrical Data @ 20°C

Conductor Loop resistance	$\leq 19 \Omega/100m$
Insulation Resistance	$\geq 5 G\Omega \times km$
Operating Capacitance (nom.)	50 pF/m
Capacitance unbalance (nom.)	$\leq 160 pF/100m$
Rel. Velocity of Propagation	67 %
Transfer Impedance at 10 MHz (nom.)	$\leq 10 m\Omega/m$
Characteristic Impedance at 1-100 MHz	$100 \pm 15 \Omega$
Characteristic Impedance at 100-250 MHz	$100 \pm 22 \Omega$
Test Voltage	1000 V - AC
Delay Skew	45 ns/100m

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Electrical Characteristics

Frequency (MHz)	Attenuation (dB/100m)		NEXT (dB)		ACR (dB/100m)	Return Loss (dB)	
	Nom.	Max. Cat 6	Nom.	Min. Cat 6	Nom.	Nom.	Min. Cat 6
1	2.0	[2.1]	83	66	93.2	24	[20.0]
4	3.6	3.8	73	65	86.6	27	23.1
10	6.0	6.0	73	60	79.6	30	25.0
100	19.5	19.9	-	44	46.5	28	20.1
200	28.5	29.2	55	40	32.1	25	18.0
250	32.0	33.0	50	38	27.5	24	17.3
300	33.0	-	45	-	23.5	23	-
400	39.0	-	40	-	7.0	20	-

The performance data given are typical measured values

Specification

Part Number	Type	Colour	Calorific Potential [MJ/km]
145007	DataGuard® (SWA)	Black	445
145007-02	DataGuard® (SWA)	Blue	445
145007-03	DataGuard® (SWA)	Green	445
145007-05	DataGuard® (SWA)	Grey	445

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