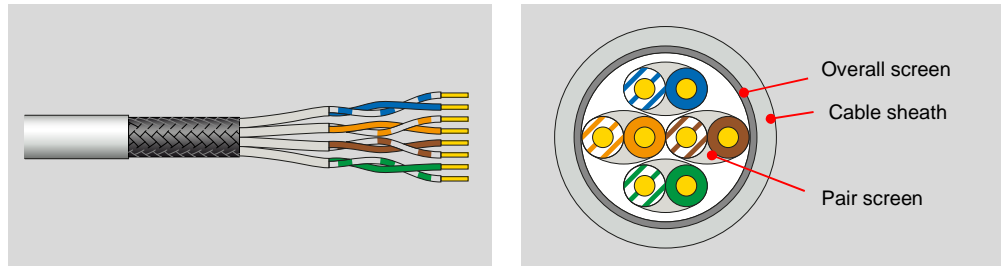


Installation Cable Cat.6 S/FTP Outdoor WR-LSZH

27.01.2016 / V2.0 / Mng

R&MfreenetReal10 S/FTP Cat.6A 650MHz 4PxAWG23LSFRZH NVP=76% ISO/IEC 11801 ANSI/TIA-568-C.2 U<batch no.><dd/mm/yy><meter> m

Cable reference	Part number	R795892
Cable construction	Conductor	Bare solid copper wire AWG23 ($\geq \varnothing 0.56 \pm 0.01 \text{mm}$)
	Insulation	Skin-Foam PE-Skin $1.33 \pm 0.10 \times 2 \text{C}$ Twist
	Twisting	2 wires to the pair
	Cable lay up	4 paires to the core
	Pair screen	3. Al-Pet Shield ($\geq 115\%$)
	Overall screen	Tin plated copper braid ($\geq 25\%$ coverage)
	Sheath	WR-LSZH, black



Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal) IEEE 802.3an: 10Base-T; 100Base-TX; 1000Base-T; 10GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM IEEE 802.3af-2002: POE; IEEE 802.3at: POE+
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Standards	ISO/IEC 11801 2 nd ed.; EN 50173-1 IEC 61156-5 2 nd ed.; EN 50288-10; ANSI/TIA 568C.2
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Fire rating (LSZH)	WR-LSZH IEC 60332-1; IEC 60754; IEC 61034 WR-LSZH is an all-weather resistant low smoke and halogen free compound; It combines the features of UV resistance, water resistance and flame resistance. Suitable for indoor and outdoor usage, and is ideal for IP CCTV application
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Technical Data	Cable designation	Installation Cable Cat.6 S/FTP Outdoor WR-LSZH
	Packaging	Drum 500 m
	Outer diameter	Nominal $7.6 \pm 0.20 \text{ mm}$
	Weight	41 kg / km
	Thermal load	425 MJ / km
	Tensile force	80 N

Mechanical Properties	Bending radius	$\geq 35 \text{ mm}$ during operation (without load)
		$\geq 60 \text{ mm}$ during installation (with load)
	Temperature range	During operation $-20^\circ\text{C} \dots +60^\circ\text{C}$
During installation $0^\circ\text{C} \dots +50^\circ\text{C}$		




Electrical Properties (at 20°C ± 5°C)	DC loopresistance		≤ 16.5 Ω / 100 m
	Resistance unbalance		≤ 2 %
	Test voltage	DC, 1 min, core/core	1000 V
	Insulation resistance	500 V	≥ 5000 MΩ * km
	Capacitance		43 pF / m max.
	Capacitance unbalance		≤ 1500 pF / km
	Mean characteristic impedance		100 ± 25 Ω
	Nominal velocity of propagation		Approx. 76 %
	Propagation delay	At 1 MHz	≤ 420 ns / 100 m
	Delay skew		≤ 19 ns / 100 m
	Coupling attenuation		≥ 75 dB

Typical transmission characteristics (at 20°C)

f (MHz)	Attenuation (dB/100 m)		NEXT (dB)		PS-NEXT (dB)		ACR-F ¹⁾ (dB/100 m)		PS-ACR-F ¹⁾ (dB/100 m)		Return loss (dB)	
	Max	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ
4	3.8	3.7	66.3	92	63.3	89	56	74	53	68	23	30
10	5.9	5.8	60.3	89	57.3	86	48	72	45	67	25	27
20	8.4	8.3	55.8	79	52.8	76	42	68	39	63	25	27
62.5	15	14.8	48.4	77	45.4	74	32.1	56	29.1	51	21.5	25
100	19.1	18.7	45.3	74	42.3	71	28	52	25	47	20.1	23
250	31.1	30.6	39.3	68	36.3	65	20	44	17	39	17.3	21
500	45.3	44.7	34.8	65	31.8	62	14	32	11	30	17.3	20
600	-	48.6	-	63	-	60	-	25	-	22	-	19
650	-	51.5	-	58	-	55	-	18	-	15	-	18

¹⁾ ACR-F was formerly known as ELFEXT.

Recommended connection technique

Module		Perm. Link Class D	Perm. Link Class E	Channel Class E _A	Perm. Link Class E _A	Short Link Class E _A
	Cat.5e/s	✓	-	-	-	-
	Cat.6 Real10/s	✓	✓	✓	-	-
	Cat.6 _A /s	✓	✓	✓	✓	✓

Third party certificate 3P Third Party Testing