

## Cat. 7 24x2x23/1 AWG S/FTP FR-LSZH

**Part Number:** 9928012101

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**Applications:** Data-Centers/SANs, Fixed or portable installations, Data processing and information systems, High data rates, Indoor use, fixed installations, Trunk Cable for Local Area Networks, Indoor Backbone, High bandwidth digital applications with low BER

**General Construction:** 24 individually shielded twisted pairs are cabled together, overall braid shielded and jacketed. The cable design and structure makes it suitable for Cat. 7 and Cat. 6<sub>A</sub> applications.

**Detailed Schematic:**

**Outer Jacket Material:** FR-LSZH

**Outer Diameter:** 18 mm nom.

**Weight:** 335 kg/km



## Design & Materials

<b>Conductor Material:</b>	Annealed Bare Copper			
<b>Conductor Size:</b>	23 AWG			
<b>Conductor Construction:</b>	Solid			
<b>Insulation Material:</b>	Cellular PO			
<b>Insulation O.D.:</b>	1.38 mm nom.			
<b>Conductor unit identification:</b>	Solid Color			
<b>Conductor Color Code:</b>	<b><u>No.</u></b>	<b><u>Color Code</u></b>	<b><u>No.</u></b>	<b><u>Color Code</u></b>
	1	White x Blue	13	Yellow x Blue
	2	White x Orange	14	Yellow x Orange
	3	White x Green	15	Yellow x Green
	4	White x Brown	16	Yellow x Brown
	5	Red x Blue	17	Purple x Blue
	6	Red x Orange	18	Purple x Orange
	7	Red x Green	19	Purple x Green
	8	Red x Brown	20	Purple x Brown
	9	Pink x Blue	21	Grey x Blue
	10	Pink x Orange	22	Grey x Orange
	11	Pink x Green	23	Grey x Green
	12	Pinc x Brown	24	Grey x Brown
<b>Ind. Shield Material:</b>	Aluminum/Polyester Foil			
<b>Ind. Shield Design:</b>	100% Coverage			
<b>Conductor unit lay-up:</b>	Pairs			
<b>Overall Shield Design:</b>	Braid			
<b>Overall Braid Shield:</b>	Yes			
<b>Overall Braid Material:</b>	Annealed Tinned Copper			
<b>Braid Coverage:</b>	85 % nom.			
<b>Total number of conductors:</b>	48			
<b>Outer Jacket Color:</b>	Black			
<b>Marking:</b>	Per request, Teldor Standard			

## Standards

<b>Applicable Standards:</b>	IEC 61156, ISO/IEC 11801-1, RoHS 3 2015/863/EU
<b>Flammability Rating:</b>	IEC 60332-1, IEC 60332-3

## Electrical Properties:

### Cat. 7 Horizontal Cables\*

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

\*Supplied cables meet the minimum Cat. 7 transmission requirements as per **IEC 61156-5 Ed. 2**

## Performance

<b>Frequency Range:</b>	1 - 600 MHz
<b>Impedance:</b>	100 Ω
<b>Coupling Attenuation:</b>	Type I
<b>Max. DC Resistance :</b>	73 Ω/km@20°C
<b>Max. Resistance Unbalance:</b>	2 %
<b>Capacitance Unbalance:</b>	1.2 pF/m max.
<b>Velocity of Propagation:</b>	78 % nom.
<b>Propagation Delay Skew:</b>	25 ns/100m max.
<b>Dielectric Strength:</b>	700 V/minute
<b>Dielectric Strength to Shield:</b>	700 V/minute
<b>Min. Insulation Resistance :</b>	5 GΩ•km
<b>Min. Bend Radius:</b>	180 mm
<b>Max. Operating Temperature:</b>	+65 °C
<b>Min. Operating Temperature:</b>	-40 °C

Prepared By	Revised By	Version Num	Modified on
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