

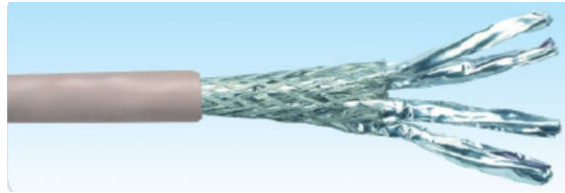


Technical Specification

Cable Type: 4x2x23# S/FTP 35% Category 7a 100 Ohm LS0H-1 Indoor Horizontal Cable

Part Number: H7A-HG704R9L-35-LL

Revision: 05/24 Date: 29 Februar 2024



Category 7a S/FTP indoor cable, conforming to ISO/IEC-11801, IEC 61156-5, tested up to 1200 MHz. 4 individually foil shielded twisted pairs are cabled together, overall TC braid shielded and jacketed with LS0H compound for indoor use. The cable conforms to IEC 60332-1 & EU Regulation 305/2011 (CPR) Class Dca-s1a,d1,a1.

Physical Description

Basic conductor	Solid 23AWG, bare annealed copper
Insulation	SFS-PO
Total number of insulated conductors	8, twisted in 4 pairs: Blue x White, Orange x White, Green x White, Brown x White
Individual pair shield	Polyester-aluminum foil, providing 100% coverage with 25% overlap, aluminum face out
Drain wire	Solid tin-coated copper wire, 0.40±0.01 mm
Overall shield	Tinned copper braid, providing 35±5% coverage
Outer jacket	Flame retardant, Low smoke, halogen-free (FR-LS0H) compound for indoor use
Color	Light Gray, RAL 9002
Jacket thickness	0.50±0.05 mm
Cable OD.	7.4±0.3 mm
Surface marking	WESTERN WIRE H7A-HG704R9L 4x2x23 AWG S/FTP CATEGORY 7A LS0H LAN CABLE ISO/IEC-11801 & IEC 61156-5 TESTED TO 1200MHz FR IEC 60332-1 CPR Class Dca-s1a,d1,a1 CE 2011/65/EU (RoHS-2) [Batch Number] [Sequential Meter Mark] METER

Mechanical Properties

Bend radius	Dynamic: 8xD Static: 4xD
Operating temperature	-20 to +75°C
Storage temperature	-20 to +70°C
Installation temperature	0 to +50°C
Jacket properties - before aging	
Tensile strength	10.0 Mpa min.
Elongation	125% min
Jacket properties - After aging (100°Cx24hx7d)	
Tensile strength	8.0 Mpa min.
Elongation	100% min
Pulling force	110N max.
Cold bend	8xD @ -20°C x 4h - No visible cracks
Flame test	IEC 60332-1 (Flame propagation), IEC 60754 (Acid gas) & IEC 61034 (smoke density)
EU Regulation 305/2011 (CPR) Conformance	Class Dca-s1a,d1,a1
Total weight	54 kg/km nom.

Electrical Properties

Mean Impedance	100±5 Ohm @100MHz
DC Resistance	9.38 Ohm/100m max.
Shield DC Resistance	15 Ohm/km max.
Resistance unbalance - core to core	2% max.
Resistance unbalance - pair to pair	4% max.
Mutal capapcitance	56 nF/km max. @ 1 kHz
Cap. unbalance (wire to ground)	160 pF/100m max. @ 1 kHz
Delay skew	25 ns/100m max.
Nominal Velocity of Propagation (NVP)	78±3%
Coupling attenuation	IEC 61156-5 Type I, B
Transfer Impedance	IEC 61156-5 Grade 1
TCL	IEC 61156-5 Level 1
Voltage rating	72 Vdc max.

Transmission Properties @ 20C CAT 7A IEC 61156-5-2020 (extended to 1.2GHz)

Freq.	IL	NEXT	PS-NEXT	ELFEXT	PS-ELFEXT	RL	TCL	ACR-F	PS-ACR-F	PS-AACR-F
MHz	dB/100m	dB	dB	dB/100m	dB/100m	dB	dB	dB	dB	dB
	Max	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.	Min.
1	2.1	78.0	75.0	78.0	75.0	20.0	40.0	35.0	67.0	67.0
10	5.8	78.0	75.0	75.3	72.3	25.0	40.0	15.0	67.0	67.0
20	8.2	78.0	75.0	69.3	66.3	25.0	37.0	9.0	67.0	67.0
25	9.2	78.0	75.0	67.3	64.3	24.3	36.0	7.0	67.0	65.2
30	10.1	78.0	75.0	65.8	62.8	23.8	35.2	5.5	67.0	63.7
62.5	14.6	78.0	75.0	59.4	56.4	21.5	32.0	NS	67.0	57.3
100	18.5	75.4	72.4	55.3	52.3	20.1	30.0	NS	67.0	53.2
200	26.5	70.9	67.9	49.3	46.3	18.0	27.0	NS	67.0	47.2
250	29.7	69.4	66.4	47.3	44.3	17.3	26.0	NS	67.0	45.2
300	32.7	68.2	65.2	45.8	42.8	17.3	NS	NS	67.0	43.7
400	38.0	66.4	63.4	43.3	40.3	17.3	NS	NS	67.0	41.2
500	42.8	64.9	61.9	41.3	38.3	17.3	NS	NS	67.0	39.2
600	47.1	63.7	60.7	39.7	36.7	17.3	NS	NS	65.8	37.6
800	54.9	61.9	58.9	37.2	34.2	16.1	NS	NS	64.0	35.1
1000	61.9	60.4	57.4	35.3	32.3	15.1	NS	NS	62.5	33.2
1200	68.4	59.2	56.2	33.7	30.7	14.3	NS	NS	61.3	31.6

*Transmission parameters indicated above 1000MHz are non-binding nominal values provided for reference only.

Ordering information

Cable PN	Cable length	Packaging
H7A-HG704R9L-35-100	100 meter	Coil
H7A-HG704R9L-35-200	200 meter	Coil
H7A-HG704R9L-35-300	300 meter	Wooden drum
H7A-HG704R9L-35-500	500 meter	Wooden drum

This cable fully conforms to EU Directive 2011/65/EU (RoHS-2)