



HES Cabling Systems

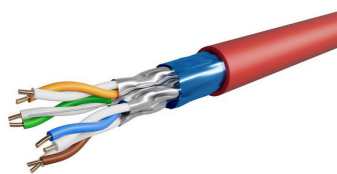
www.hescs.com

Technical Specification

Cable Type: 4x2x23# F/FTP Category 7 100 Ohm Indoor Horizontal LS0H-1 Cable

HCS P/N: H07-00452-xxx-FA00W0

Revision: 01/25 Date: 19 January 2025



Category 7 F/FTP indoor cable, conforming to IEC 61156-5 CAT 7 horizontal cable limits. The cable contains 4 individually foil-shielded twisted pairs cabled together, overall shielded with aluminum foil and overall jacketed with LS0H compound for indoor use. The cable conforms to IEC 60332-1 and it fully supports all IEEE 802.3 PoE applications including Type 1, 2, 3 & 4, CISCO UPoE & UPoE+ and HDBase-T PoH.

Physical Description

Basic Conductor	Solid 23AWG bare annealed copper (UL444).
Insulation	SFS-PO.
Total number of insulated conductors	8, twisted in 4 pairs.
Color code	Blue x White/Blue, Orange x White/Orange, Green x White/Green, Brown x White/Brown.
Individual pair shield	Aluminum foil, providing 100% coverage, foil face out.
Drain wire	Tin-coated copper wire, 0.40±0.01 mm, laid in contact with the foils and the braid shields.
Overall shield	Aluminum foil, providing 100% coverage, foil face in.
Outer jacket	Low-smoke, Zero-halogen, Flame-retardant compound for indoor use.
Outer jacket thickness	0.6 mm.
Optional jacket colors	
P/N H07-00452-xx0-FA00W0	Gray RAL 7035
P/N H07-00452-xx1-FA00W0	Blue RAL 5015
P/N H07-00452-xx2-FA00W0	Orange RAL 2003
P/N H07-00452-xx3-FA00W0	Green RAL 6024
P/N H07-00452-xx5-FA00W0	White RAL 9003
P/N H07-00452-xx6-FA00W0	Red RAL 3000
P/N H07-00452-xx7-FA00W0	Black RAL 9005
P/N H07-00452-xx8-FA00W0	Yellow RAL 1021
P/N H07-00452-xx9-FA00W0	Purple RAL 4005
Overall Diameter	7.3 mm nom.
Surface Marking	HCS H07-00452 4x2x23# F/FTP CATEGORY 7 DataLink 600 SHIELDED LS0H CABLE VERIFIED to IEC 61156-5 & EN 50288 FR IEC 60332-1 CE 2011/65/EU (RoHS-2) [Meter Mark] METER wwwSnnxxx
Note	Batch number wwSnnxxx ww=week number Snn=cabling machine number xxx=master reel number.

Mechanical Properties

Bend Radius	Static: 4xD min. Dynamic: 8xD min.
Storage Temperature	-20 to +75C
Temperature operating range	0 to +60C
Flame Tests	IEC 60332-1 (flame propagation), IEC 60754 (acid gas release) & IEC 61034 (smoke density).
EU Regulation 305/2011 (CPR) conformance	Not defined.
Pulling force	100 N max.
Total Weight	50 kg/km nom.

Electrical Properties @ 20C

Mean Impedance	100±5 Ohm @ 1-600 MHz
Vp	74% nom.
Capacitance	40 pF/m nom @ 1 kHz
Capacitance unbalance to ground	1.6 pF/m max. @ 1 kHz
Insulation Resistance	5.0 GOhm·km min.
DC Resistance	77 Ohm/km max. (2% max. resistance unbalance).
DC Loop Resistance	154 Ohm/km max. (2% max. resistance unbalance).
Voltage rating	72Vdc max.
Transfer impedance	IEC 61156-5 Grade 2.
Coupling attenuation	IEC 61156-5 Type Ib.
Phase delay	534+36/f ^{1/2} nS/100m max. @ f=1-600 MHz.
Delay Skew	25 nS/100m max.

Transmission Properties @ 20C - Conforming to IEC 61156-5-2020 Category 7

FREQ.	Insertion Loss		NEXT		PS NEXT		ACR-F		PS ACR-F		RL		TCL	EL-TCTL	PS ANEXT	PS AFEXT
MHz	Max	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Min	Min	Min
1	NS	1.8	78.0	100	75.0	97	78.0	105	75.0	103	20.0	23	40.0	35.0	67.0	67.0
4	3.74	3.4	78.0	100	75.0	97	78.0	93	75.0	91	23.0	25	40.0	23.0	67.0	67.0
8	5.24	4.8	78.0	100	75.0	97	75.9	87	72.9	85	24.5	30	40.0	16.9	67.0	67.0
10	5.86	5.4	78.0	100	75.0	97	74.0	85	71.0	83	25.0	30	40.0	15.0	67.0	67.0
25	9.29	8.7	78.0	100	75.0	97	66.0	77	63.0	75	24.3	30	36.0	7.0	67.0	65.2
31.25	10.41	9.6	78.0	100	75.0	97	64.1	75	61.1	73	23.6	28	35.1	5.1	67.0	63.3
62.5	14.88	13.7	75.5	100	72.5	97	58.0	69	55.1	67	21.5	28	32.0	NS	67.0	57.3
100	19.02	17.4	72.4	100	69.4	97	54.0	65	51.0	63	20.1	25	30.0	NS	67.0	53.2
250	30.97	28.1	66.4	90	63.4	87	46.0	57	43.0	55	17.3	25	26.0	NS	67.0	45.2
500	45.26	40.0	61.9	86	58.9	83	40.0	50	37.0	48	17.3	23	NS	NS	67.0	39.2
600	50.10	44.8	60.7	85	57.7	82	38.4	49	35.4	47	17.3	23	NS	NS	65.8	37.6

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