HES Cabling Systems

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Technical Specification

Cable Type: 2x(4x2x23#) F/FTP FIG-8 (Siamese) Category 7 100 Ohm LS0H Horizontal Data Cable (Red)

HCS P/N: H07-00854-xx6-FA00W0

Revision: 02/24 Date: 27 May 2024



Category 7 F/FTP indoor cable, conforming to ISO/IEC-11801 and IEC 61156-5 Category 7 limits, tested up to 1000MHz. The cable contains 8 individually foil-shielded twisted pairs cabled in two 4-pair cores, each overall shielded with aluminum foil and overall jacketed in a FIG-8 (Siamese) formation with LS0H compound for indoor use. This cable fully supports IEEE 802.3an 10GBASE-T and 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 (UL 444)
Insulation	SFS-PO.
Total number of insulated conductors	16, twisted in two cores of 4 pairs each.
Color code in each core	Blue x White, Orange x White, Green x White, Brown x White.
Individual pair shield	Aluminum foil, providing 100% coverage, foil face out.
Overall shield of each core	Aluminum foil, providing 100% coverage, foil face in.
Drain wire in each core	Solid tin-coated copper wire, laid in close contact with the individual shields.
Outer jacket	Low-smoke, Zero-halogen, Flame-retardant compound for indoor use, FIG-8 (Siamese) formation.
Core identification	The surface printing is always on the same side. One core is jacketed with two longitudinal ribs.
Outer jacket thickness	0.6 mm nom.
Color	**RED RAL 3000.**
Overall Diameter	7.2x14.4 mm nom.
Surface Marking (Blue ink)	HCS H07-00854 2x(4x2x23#) F/FTP CATEGORY 7 DataLink 600 SHIELDED LS0H CABLE Tested to 1000MHz VERIFIED to CAT 7 ISO/IEC-11801 & IEC 61156-5 FR IEC 60332-1 CE 2011/65/EU (RoHS-2) [Meter Mark] METER wwSnnxxx

Note: Batch number wwSnnxxx ww=week number Snn=cabling machine number xxx=master reel number

Mechanical Properties	
Bend Radius	Dynamic: 8xD min. Static: 4xD min.
Storage Temperature	-20 to +75C
Temperature installation range	0 to +50C
Temperature operating range	-20 to +60C
Flame Tests	IEC 60332-1 (flame propagation), IEC 60754 (acid gas) & IEC 61034 (smoke density).
Pulling force	150 N max.
Caloric value	1320 kJ/m
Total Weight	106 kg/km nom.

Electrical Properties	
Mean Impedance	100±5 Ohm @ 1-1000 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).
DC Resistance unbalance	2% max.
Voltage rating	72Vdc max.
Coupling attenuation	IEC 61156-5 Type Ib.
Transfer Impedance	IEC 61156-5 Grade 1.
Phase delay	$534+36/f^{1/2}$ nS/100m max. @ f=1-1000 MHz.
Delay Skew	25 nS/100m max.

Transmission Properties @ 20C - Conforming to IEC 61156-5 Category 7 (extended to 1GHz)

FREQ.	Insertion Loss		NEXT		PS NEXT		ACR-F		PS ACR-F		RL		TCL	EL TCTL	PS ANEXT	PS AFEXT
MHz	dB/100m		dB		dB		dB/100m		dB/100m		dB		dB	dB	dB	dB
	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
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
700	NS	48.0	NS	84	NS	81	NS	48	NS	46	NS	23	NS	NS	64.8	36.3
1000	NS	58.4	NS	82	NS	79	NS	45	NS	43	NS	20	NS	NS	62.5	33.2

Transmission parameters indicated above 600MHz are non-binding nominal values provided for reference only.

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