



HES Cabling Systems

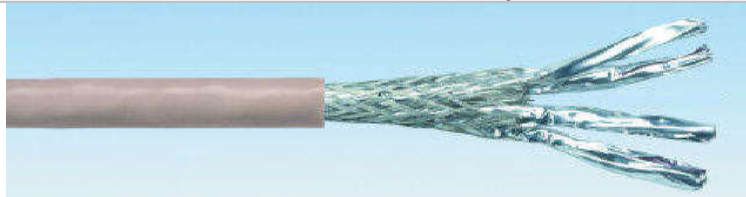
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Technical Specification

Cable Type: 4x2x23# S/FTP Category 7 100 Ohm LS0H-1 Data Cable

HCS P/N H07-00402-xx0-DA1600

Revision: 2/18 Date: 12 February 2018



Category 7 S/FTP indoor cable, conforming to IEC 61156-5-2009, tested up to 600MHz. The cable contains 4 individually foil-shielded twisted pairs cabled together, overall shielded with a tinned-copper braid, overall jacketed with LS0H compound for indoor use, conforming to IEC 60332-1. The cable supports all PoE applications including Types 1, 2, 3 & 4 and Class F permanent links & channels as specified in ISO/IEC 11801 and EN 50173. The cable conforms to EU Regulation 305/2011 (CPR) Class Dca-s1a,d1,a1.

Physical Description

Basic Conductor	Solid 23AWG (UL 444) bare annealed copper.
Insulation	SFS-PO.
Total number of insulated conductors	8, twisted in 4 pairs.
Color code	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	Tin-coated copper wire braid, 16% nom. coverage.
Drain wire	None.
Outer jacket	LS0H compound for indoor use (F211).
Outer jacket thickness	0.55 mm nom.
Color	Grey RAL 7035.
Overall Diameter	7.2 mm.
Surface Marking	HCS H07-00402 4x2x23# S/FTP CATEGORY 7 DataLink 600 SHIELDED CABLE ETL VERIFIED to CAT 7 ISO/IEC-11801 & IEC 61156-5 FR IEC 60332-1 CE CPR Class Dca-s1a,d1,a1 CE 2011/65/EU (RoHS-2) [Meter Mark] METER [Batch Number]
Bend Radius	Dynamic: 8xD mm min. Static: 4xD mm min
Storage Temperature	-20 to +60C
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).
EU Regulation 305/2011 (CPR) conformance	CENELEC EN 13501 Class Dca-s1a,d1,a1. NB 1722.
Pulling force	150 N max.
Total Weight	46 kg/km nom.

Electrical Properties @ 20C

Mean Impedance	100±5 Ohm @ 1-600 MHz
Vp	75-77% nom.
Capacitance	40 pF/m nom @ 1 kHz
Capacitance unbalance to ground	1.6 pF/m max. @ 1 kHz
Insulation Resistance	0.5 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 1.
Coupling attenuation	IEC 61156-5 Type Ib.
Phase delay	534+36/f ^{1/2} nS/100m max. @ f=1-600 MHz.
Delay Skew	15 nS/100m max.

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

FREQ.	Insertion Loss		NEXT		PS NEXT		ELFEXT		PS ELFEXT		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
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
16	7.41	6.8	78.0	100	75.0	97	69.9	81	66.9	79	25.0	30	38.0	10.9	67.0	67.0
20	8.29	7.7	78.0	100	75.0	97	68.0	79	65.0	77	25.0	30	37.0	9.0	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
150	23.56	19.3	69.8	95	66.8	92	50.0	62	47.5	60	18.9	25	28.2	NS	67.0	49.7
200	27.47	25.0	67.9	92	64.9	89	48.0	59	45.0	57	18.0	25	27.0	NS	67.0	47.2
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
300	34.19	30.9	65.2	89	62.2	86	44.5	55	41.5	53	17.3	25	NS	NS	67.0	43.7
400	40.01	35.0	63.4	88	60.4	85	42.0	53	39.0	51	17.3	23	NS	NS	67.0	41.2
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)