



HES Cabling Systems

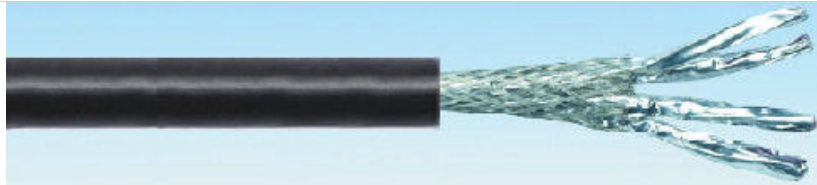
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Technical Specification

Cable Type: 4x2x23# S/FTP Category 7+ 100 Ohm Outdoor Data Cable

HCS P/N H07-00472

Revision: 04/13 Date: 22 July 2013



Category 7+ S/FTP indoor cable, conforming to ISO/IEC-11801 and IEC 61156-5, tested up to 1000MHz. The cable contains 4 individually foil-shielded twisted pairs cabled together, overall shielded with a tinned-copper braid and overall jacketed with UV-resistant PE jacket for outdoor use.

Physical Description

Basic Conductor	Solid 23AWG, 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.
Drain wire	None.
Outer jacket	UV resistant PE compound for outdoor use.
Outer jacket thickness	1.7 mm nom.
Color	Black RAL 9005.
Overall Diameter	9.5 mm nom.
Surface Marking	HCS H07-00472 4x2x23# S/FTP CATEGORY 7+ DataLink 600 OUTDOOR CABLE TESTED to 1000MHz VERIFIED to EC 61156-5 CAT 7 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
Pulling force	150 N max.
Caloric value	1100 KJ/m
Total Weight	75 Kg/Km nom.

Electrical Properties @ 20C

Mean Impedance	100±5 Ohm @ 1-1000 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	80 Ohm/Km max. (2% max. resistance unbalance).
DC Loop Resistance	147 Ohm/Km max. (2% max. resistance unbalance).
Voltage rating	72Vdc max.
Coupling attenuation	85dB min @ 30-100 MHz. 85-20Log(f/100) dB min. @ 100-1000 MHz.
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 1000MHz

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
700	NS	48.0	NS	84	NS	81	NS	48	NS	46	NS	23	NS	NS	64.8	36.3
800	NS	51.0	NS	83	NS	80	NS	47	NS	45	NS	23	NS	NS	64.0	35.1
1000	NS	58.4	NS	82	NS	79	NS	45	NS	43	NS	20	NS	NS	62.5	33.2

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