HES Cabling Systems

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Technical Specification
Cable Type: 4x2x23# U/FTP Category 6A 100 Ohm LS0H-1 Data Cable
HCS P/N: H6A-00432-xxx-FA00W0
Revision: 06/24 Date: 31 October 2024

Category 6A U/FTP indoor cable, conforming to ANSI/TIA-568.2-D & IEC 61156-5 CAT 6A horizontal cable limits. The cable contains 4 individually foil-shielded twisted pairs cabled together, 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 and Class EA permanent links & channels as specified in ISO/IEC 11801 and EN 50173.

Physical Description	
Basic Conductor	Solid 23AWG (UL444) 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	None.
Drain wire	Solid, tin-coated copper wire laid in close contact to the aluminum foils.
Outer jacket	Low-smoke, Zero-halogen, Flame-retardant compound for indoor use.
Outer jacket thickness	0.6 mm nom.
Optional Jacket Colors	
P/N H6A-00432-xx0-FA00W0	**Gray RAL 7035**
P/N H6A-00432-xx1-FA00W0	**Blue RAL 5015**
P/N H6A-00432-xx2-FA00W0	**Orange RAL 2003**
P/N H6A-00432-xx3-FA00W0	**Green RAL 6024**
P/N H6A-00432-xx6-FA00W0	**Red RAL 3000**
P/N H6A-00432-xx7-FA00W0	**Black RAL 9005**
P/N H6A-00432-xx8-FA00W0	**Yellow RAL 1021**
P/N H6A-00432-xx9-FA00W0	**Purple RAL 4005**
Overall Diameter	7.0±0.2 mm.
Surface Marking	HCS H6A-00432 4x2x23# U/FTP CATEGORY 6A DataLink 500A SHIELDED LS0H CABLE VERIFIED to CAT 6A IEC 61156-5 ANSI/TIA-568.2-D 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

Bend Radius	Dynamic: 8xD min. Static: 4xD 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 release) & IEC 61034 (smoke density).
Pulling force	150 N max.
Total Weight	48.6 kg/km nom.

Electrical Properties @ 20C	
Mean Impedance	100±5 Ohm @ 1-500 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.
Coupling attenuation	IEC 61156-5 Type Ib
Transfer Impedance	IEC 61156-5 Grade 2
Phase delay	$534+36/f^{½}$ nS/100m max. @ f=1-1000 MHz.
Delay Skew	25 nS/100m max.

Transmission Properties - Conforming to Category 6A ANSI/TIA-568.2-D

FREQ.	Insertion Loss	NEXT	PS NEXT	ACRF	PS ACRF	RL	Delay	TCL	EL-TCTL	PS ANEXT	PS AACRF
MHz	dB/100m	dB	dB	dB/100m	dB/100m	dB	nS/100m	dB	dB	dB	dB
	max.	min.	min.	min.	min.	min.	max.	min.	min.	min.	min.
1	2.0	74.3	72.3	67.8	64.8	20.0	570	40.0	35.0	67.0	67.0
10	5.9	59.3	57.3	47.8	44.8	25.0	545	40.0	15.0	67.0	58.2
20	8.3	54.8	52.8	41.8	38.8	25.0	542	37.0	9.0	67.0	52.2
25	9.3	53.3	51.3	39.8	36.8	24.3	541	36.0	7.0	67.0	50.2
30	10.2	52.1	50.1	38.3	35.3	23.8	541	35.2	5.5	67.0	48.7
62.5	14.9	47.4	45.4	31.9	28.9	21.5	539	32.0	NS	65.6	42.3
100	19.0	44.3	42.3	27.8	24.8	20.1	538	30.0	NS	62.5	38.2
200	27.5	39.8	37.8	21.8	18.8	18.0	537	27.0	NS	58.0	32.2
250	31.0	38.3	36.3	19.8	16.8	17.3	536	26.0	NS	56.5	30.2
300	34.2	37.1	35.1	18.3	15.3	16.8	536	25.2	NS	55.3	28.7
400	40.0	35.3	33.3	15.8	12.8	15.9	536	24.0	NS	53.5	26.2
500	45.3	33.8	31.8	13.8	10.8	15.2	536	23.0	NS	52.0	24.2

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