



HES Cabling Systems

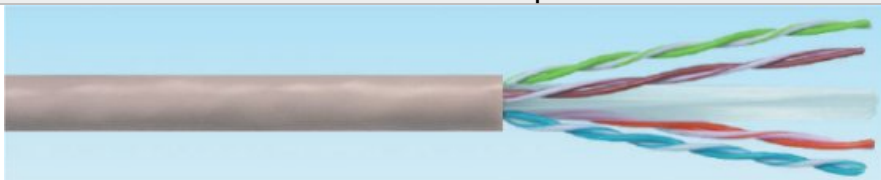
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Technical Specification

Cable Type: 4x2x23# U/UTP Category 6 100 Ohm LS0H Indoor Horizontal Cable

HCS P/N: H06-00402-xxx-DV0000

Revision: 1/23 Date: 13 April 2023



Category 6 U/UTP indoor cable, conforming to ANSI/TIA-568.2-D, ISO/IEC-11801, IEC 61156-5, EN 50288-6-1 and EN 50173. The cable contains 4 twisted pairs cabled together around a cross-shaped separator and overall jacketed with LS0H compound for indoor use. The cable conforms to EU Regulation 305/2011 (CPR) Class Dca-s2,d2,a1. The cable 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 bare annealed copper, 23AWG (UL 444)
Insulation	Polyolefin.
Total number of insulated conductors	8, twisted in 4 pairs.
Color code - longitudinal stripes	Blue x White/Blue, Orange x White/Orange, Green x White/Green, Brown x White/Brown.
Center element	Cross-shaped dielectric separator.
Tape warp	None.
Rip-cord	None.
Outer jacket	Halogen-free Flame-retardant LS0H compound for indoor use.
Jacket Color	
P/N H06-00402-xx0-DV0000	Gray RAL 7032
P/N H06-00402-xx1-DV0000	Blue RAL 5015
P/N H06-00402-xx2-DV0000	Orange RAL 2003
P/N H06-00402-xx3-DV0000	Green RAL 6024
Outer jacket thickness	0.50 mm nom.
Outer diameter	5.8±0.2 mm nom.
Surface Marking	HCS H06-00402 4x2x23# U/UTP CATEGORY 6 DataLink 250 LS0H CABLE ETL VERIFIED ANSI/TIA-568.2-D & IEC 61156-5 ISO/IEC-11801 EN 50173 EN 50288-6-1 CAT 6 FR IEC 60332-1 CE CPR Class Dca-s2,d2,a1 CE 2011/65/EU (RoHS-2) [Meter Mark] METER [Batch Number] [Production Date] ---<TSE>---

Mechanical Properties

Bend Radius	Permanent: 4xD min. During installation: 8xD min.
Cold Bend Radius	Mandrel: 4xD. Temp: -20C Method: ASTM D4565
Operating temperature range	-20 to +60C
Storage temperature range	-40 to +60C
Installation temperature range	0 to +50C
Pulling force	100 N max.
Breaking strength	400 N min. according to ASTM D4565
Flame tests	IEC 60332-1 (flame propagation), IEC 60754 (acid gas release) & IEC 61034 (smoke density).
EU Regulation 305/2011 (CPR) conformance	CENELEC EN 13501 Class Dca-s2,d2,a1. NB 1722
Total Weight	38 kg/km nom.

Electrical @ Transmission Properties @ 20C

Input Impedance	100±15 Ohm @1-100 MHz 100±20 Ohm @100-160 MHz 100±22 Ohm @160-250 MHz
DC Resistance	80 Ohm/km max.
Resistance unbalance	2% max.
Capacitance	50 pF/m nom. @ 1 kHz
Cap. Unbalance (wire to ground)	1500 pF/km max. @ 1 kHz.
TCL	30-10Log(f/100) dB min. @ 1-250 MHz, 40dB min.
EL-TCTL	35-20Log(f) dB min. @ 1-30 MHz
Voltage rating	75 Vac max
Dielectric strength	1700 Volts ac for 2 seconds.
Velocity of Propagation (NVP)	67% nom @ 100MHz.
Insulation Resistance	500 MegaOhm•km min. @ 500 Vdc
Propagation Delay	534 + 36/f ^{1/2} nS/100m max.
Propagation Delay Skew	45 nS/100m max.
Coupling attenuation	IEC 61156-5 Type III
Transfer impedance & Screening attenuation	N/A

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

FREQ.	Insertion Loss		NEXT		PS NEXT		ACR-F		PS ACR-F		RL		TCL	EL-TCTL
MHz	dB/100m		dB		dB		dB/100m		dB/100m		dB		dB	dB
	Nom	Max	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Nom	Min	Min	Min
1.00	1.65	2.0	84.3	74.3	82.3	72.3	80	67.8	77	64.8	25	20.0	40	35
10.00	5.6	6.0	69.3	59.3	67.3	57.3	65	47.8	62	44.8	30	25.0	40	15
25.00	9.0	9.5	63.3	53.3	61.3	51.3	57	39.8	54	36.8	30	24.3	36	7.0
31.25	10.2	10.7	61.9	51.9	59.9	49.9	53	37.9	50	34.9	28	23.6	35.1	5.5
62.50	14.9	15.4	57.4	47.4	55.4	45.4	45	31.9	43	28.9	27	21.5	32	NS
100.00	19.2	19.8	54.3	44.3	52.3	42.3	43	27.8	40	24.8	26	20.1	30	NS
200.00	27.5	29.0	49.8	39.8	47.8	37.8	40	21.8	37	18.8	25	18.0	27	NS
250.00	31.0	32.8	48.3	38.3	46.3	36.3	37	19.8	34	16.8	25	17.3	26	NS

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