



HES Cabling Systems

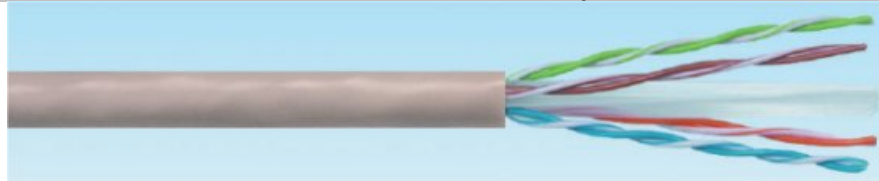
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Technical Specification

Cable Type: 4x2x24AWG U/UTP Category 6 100 Ohm LS0H-1 Indoor Horizontal Cable

HCS P/N: HS6-00402-xxx-DA0000

Revision: 21/21 Date: 25 February 2021



4-Pair 24AWG Category 6 U/UTP indoor cable, conforming to ANSI/TIA-568.2-D, ISO/IEC-11801 and IEC 61156-5. The cable contains 4 twisted pairs cabled together around a central spacer and overall jacketed with LS0H compound for indoor use, conforming to IEC 60332-1. The cable conforms to EU Regulation 305/2011 (CPR) Class Dca-s2,d2,a1. The cable fully supports all ISO/IEC 11801 and TIA-568.2-D applications up to IEEE 1GBASE-T and 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, 24 AWG (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	Star-shaped spacer..
Tape warp	None.
Rip-cord	None.
Outer jacket	Halogen-free Flame-retardant LS0H compound for indoor use.
Color	See below
Outer jacket thickness	0.55 mm nom.
Outer diameter	5.5±0.2 mm.
Surface Marking	HCS HS6-00402 4x2x24# U/UTP CATEGORY 6 DataLink 250 LS0H CABLE ETL VERIFIED to ANSI/TIA-568.2-D & IEC 61156-5 ISO/IEC-11801 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	70 N max.
Flame test	IEC 60332-1 (Flame propagation), IEC 60754 (Acid gas) & IEC 61034 (Smoke density)
EU Regulation 305/2011 (CPR) conformance	CENELEC EN 13501 Class Dca-s2,d2,a1. NB 1722.
Total Weight	31 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	93.0 Ohm/km max.
Resistance unbalance	2% max.
Capacitance	56 pF/m max. @ 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	514 + 36/f ^{1/2} nS/100m max.
Propagation Delay Skew	45 nS/100m max.
Coupling attenuation	IEC 61156-5 Type III
Transfer impedance	N/A

Optional Jacket Colors

Jacket Color	RAL	HCS P/N
Grey	7035	HS6-00402-XX0-DA0000
Blue	5015	HS6-00402-XX1-DA0000
Orange	2003	HS6-00402-XX2-DA0000
Black	9005	HS6-00402-XX7-DA0000

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
	Max	Min	Min	Min	Min	Min	Min	Min
1.00	2.0	74.3	72.3	67.8	64.8	20.0	40	35
10.00	6.0	59.3	57.3	47.8	44.8	25.0	40	15
25.00	9.5	53.3	51.3	39.8	36.8	24.3	36	7.0
31.25	10.7	51.9	49.9	37.9	34.9	23.6	35.1	5.5
62.50	15.4	47.4	45.4	31.9	28.9	21.5	32	NS
100.00	19.8	44.3	42.3	27.8	24.8	20.1	30	NS
200.00	29.0	39.8	37.8	21.8	18.8	18.0	27	NS
250.00	32.8	38.3	36.3	19.8	16.8	17.3	26	NS

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