

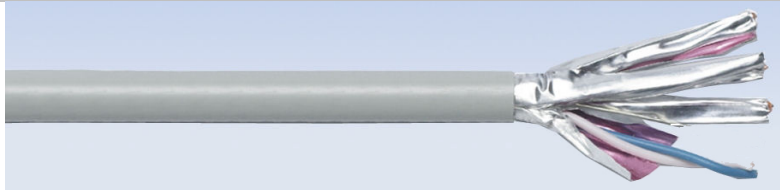


## Technical Specification

Cable Type: 4x2x23# Unshielded Category 6A 100 Ohm LS0H-1 Data Cable

HCS P/N: H6A-00406-xxx-DA0000

Revision: 05/21 Date: 24 February 2021



Category 6A unshielded indoor cable, conforming to ANSI/TIA-568.2-D & IEC 61156-5 CAT 6A horizontal cable limits. The cable contains 4 individually foil-covered twisted pairs cabled together, overall jacketed with a 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. The cable conforms to EU Regulation 305/2011 (CPR) Class Dca-s1a,d1,a1.

### Physical Description

|  |   |
|--|---|
| Basic Conductor                          | Solid 23AWG (UL444) bare annealed copper.   |
| Insulation                               | SFS-PO. OD: 1.285 mm.   |
| 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 cover                    | Special tape.   |
| Overall shield                           | None.   |
| Drain wire                               | None.   |
| Outer jacket                             | Low-smoke, Zero-halogen, Flame-retardant compound for indoor use.   |
| Outer jacket thickness                   | 0.60 mm nom.  |
| Jacket color options                     |   |
| <b>P/N H6A-00406-xx0-DA0000</b>          | <b>Grey RAL 7035</b>  |
| <b>P/N H6A-00406-xx1-DA0000</b>          | <b>Blue RAL 5015</b>  |
| <b>P/N H6A-00406-xx2-DA0000</b>          | <b>Orange RAL 2003</b>  |
| <b>P/N H6A-00406-xx3-DA0000</b>          | <b>Green RAL 6024</b>   |
| <b>P/N H6A-00406-xx6-DA0000</b>          | <b>Red RAL 3000</b>   |
| <b>P/N H6A-00406-xx8-DA0000</b>          | <b>Yellow RAL 1021</b>  |
| <b>P/N H6A-00406-xx9-DA0000</b>          | <b>Purple RAL 4005</b>  |
| Overall Diameter                         | 7.0±0.2 mm.   |
| Surface Marking                          | HCS H6A-00406 4x2x23# UNSHIELDED CATEGORY 6A DataLink 500A UNSHIELDED LS0H CABLE ETL VERIFIED to CAT 6A IEC 61156-5 ANSI/TIA-568.2-D 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 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) & 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                             | 48 kg/km nom.   |

### Electrical Properties @ 20C

|                                 |  |
|---------------------------------|--|
| Mean Impedance                  | 100±5 Ohm @ 1-500 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.   |
| Coupling attenuation            | IEC 61156-5 Type III                                 |
| Transfer Impedance              | NA   |
| Phase delay                     | 534+36/f <sup>1/2</sup> 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)