

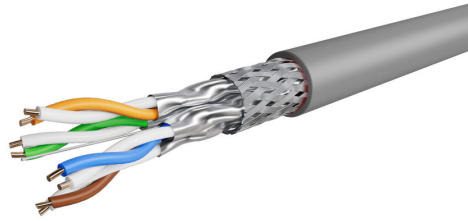


## Technical Specification

Cable Type: 4x2x23# S/FTP Category 7A 100 Ohm LS0H-3 Indoor Horizontal Cable

HCS P/N: H7A-C040K-xx0-FA55W1

Revision: 16/25 Date: 02 March 2025



Category 7A S/FTP indoor cable, conforming to IEC 61156-5, tested up to 1500MHz. The cable contains 4 individually foil-shielded twisted pairs cabled together, overall shielded with a tinned-copper braid overall jacketed with LS0H compound for indoor use, conforming to IEC 60332-3-24. This cable fully supports IEEE 802.3an 10GBASE-T and all IEEE 802.3 PoE applications including Type 1, 2, 3 & 4 and CISCO UPoE & UPoE+ and HDBase-T PoH.

### Physical Description

|                                      |                                                                                                                                                                                                      |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Basic Conductor                      | Solid 23AWG, bare annealed copper (UL444).                                                                                                                                                           |
| 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, providing 55% coverage.                                                                                                                                                |
| Drain wire                           | Tin-coated copper conductor, 0.40±0.01 mm, laid under the copper braid.                                                                                                                              |
| Outer jacket                         | Low-smoke, Zero-halogen, Flame-retardant compound for indoor use.                                                                                                                                    |
| Outer jacket thickness               | 0.70±0.1 mm.                                                                                                                                                                                         |
| Color                                | Gray RAL 9002.                                                                                                                                                                                       |
| Overall Diameter                     | 7.7 mm nom.                                                                                                                                                                                          |
| Surface Marking                      | HCS H7A-C040K 4x2x23# S/FTP CATEGORY 7A DataLink 1000 SHIELDED LS0H CABLE VERIFIED to CAT 7A ISO/IEC-11801 & IEC 61156-5 FR IEC 60332-3-24 CE 2011/65/EU (RoHS-2) [Meter Mark] METER <b>wwSnnxxx</b> |
| Note                                 | Batch number <b>wwSnnxxx</b> ww=week number Snn=cabing machine number xxx=master reel number.                                                                                                        |

### Mechanical Properties

|                                |                                                                                               |
|--------------------------------|-----------------------------------------------------------------------------------------------|
| Bend Radius                    | Dynamic: 8xD min. Static: 4xD min.                                                            |
| Storage Temperature            | -20 to +75C                                                                                   |
| Temperature installation range | 0 to +50C                                                                                     |
| Temperature operating range    | -20 to +60C                                                                                   |
| Flame Tests                    | IEC 60332-3-24 (flame propagation), IEC 60754 (acid gas release) & IEC 61034 (smoke density). |
| Pulling force                  | 150 N max.                                                                                    |
| Total Weight                   | 66 kg/km nom.                                                                                 |

### Electrical Properties @ 20C

|                                 |                                                      |
|---------------------------------|------------------------------------------------------|
| Characteristic Impedance        | 100±5 Ohm @ 100 MHz                                  |
| Vp                              | 74% nom.                                             |
| 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 I                                   |
| Transfer Impedance              | IEC 61156-5 Grade 1                                  |
| Phase delay                     | 534+36/f <sup>1/2</sup> nS/100m max. @ f=1-1000 MHz. |
| Delay Skew                      | 25 nS/100m max. @ 4-1000MHz                          |

### Transmission Properties @ 20C CAT 7A IEC 61156-5

| Freq.<br>MHz | IL<br>dB/100m | NEXT<br>dB | PS-NEXT<br>dB | ACR-F<br>dB/100m | PS ACR-F<br>dB/100m | RL<br>dB | TCL<br>dB | EL-TCTL<br>dB | PS ANEXT<br>dB | PS AACR-F<br>dB |
|--------------|---------------|------------|---------------|------------------|---------------------|----------|-----------|---------------|----------------|-----------------|
|              | Max           | Min.       | Min.          | Min.             | Min.                | Min.     | Min.      | Min.          | Min.           | Min.            |
| 1            | 2.1           | 78.0       | 75.0          | 78.0             | 75.0                | 20.0     | 40.0      | 35.0          | 67.0           | 67.0            |
| 10           | 5.8           | 78.0       | 75.0          | 75.3             | 72.3                | 25.0     | 40.0      | 15.0          | 67.0           | 67.0            |
| 25           | 9.2           | 78.0       | 75.0          | 67.3             | 64.3                | 24.3     | 36.0      | 7.0           | 67.0           | 65.2            |
| 30           | 10.1          | 78.0       | 75.0          | 65.8             | 62.8                | 23.8     | 35.2      | 5.5           | 67.0           | 63.7            |
| 62.5         | 14.6          | 78.0       | 75.0          | 59.4             | 56.4                | 21.5     | 32.0      | NS            | 67.0           | 57.3            |
| 100          | 18.5          | 75.4       | 72.4          | 55.3             | 52.3                | 20.1     | 30.0      | NS            | 67.0           | 53.2            |
| 250          | 29.7          | 69.4       | 66.4          | 47.3             | 44.3                | 17.3     | 26.0      | NS            | 67.0           | 45.2            |
| 500          | 42.8          | 64.9       | 61.9          | 41.3             | 38.3                | 17.3     | NS        | NS            | 67.0           | 39.2            |
| 600          | 47.1          | 63.7       | 60.7          | 39.7             | 36.7                | 17.3     | NS        | NS            | 65.8           | 37.6            |
| 1000         | 61.9          | 60.4       | 57.4          | 35.3             | 32.3                | 15.1     | NS        | NS            | 62.5           | 33.2            |
| 1200         | 68.4          | 59.2       | 56.2          | 33.7             | 30.7                | 14.3     | NS        | NS            | 61.3           | 31.6            |
| 1400         | 74.4          | 58.2       | 55.2          | 32.2             | 29.2                | 13.6     | NS        | NS            | 60.3           | 30.3            |
| 1500         | 77.2          | 57.8       | 54.8          | 31.6             | 28.6                | 13.3     | NS        | NS            | 59.9           | 29.7            |

Transmission parameters indicated above 1000MHz are nominal non-binding values provided for reference only.

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