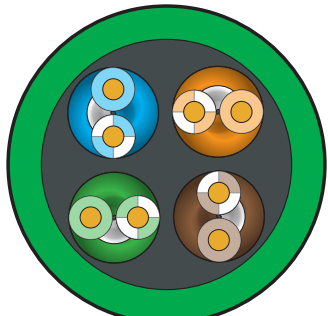


## Cat7a Industrial Ethernet



## H805680-1 Cable Specifications

|  |        | Part Number                                                                                                                                                                 | Wire/Cable Type           | Flexibility                                                | Minimum Cut Length (ft)* | Approximate Weight (lb/ft)                                                                                                                                                | Price Per Foot |
|-----------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
|                                                                                   |        | H805680-1                                                                                                                                                                   | Cat7a industrial Ethernet | Semi-flexible                                              | 20                       | 0.03                                                                                                                                                                      | \$1.89         |
| Physical Properties                                                               |        |                                                                                                                                                                             |                           |                                                            |                          |                                                                                                                                                                           |                |
| Conductor Gauge                                                                   |        | 23 AWG                                                                                                                                                                      |                           | Conductor Stranding                                        |                          | Solid bare copper                                                                                                                                                         |                |
| Conductor Material                                                                |        | Bare copper                                                                                                                                                                 |                           | Conductor Insulation Wall Thickness                        |                          | 0.016 in, nominal                                                                                                                                                         |                |
| Conductor Assembly                                                                |        | 4 twisted pairs                                                                                                                                                             |                           | Bare Conductor Diameter                                    |                          | 0.023 in, nominal                                                                                                                                                         |                |
| Color Code                                                                        | Pair 1 | Blue, White                                                                                                                                                                 |                           | Insulated Conductor Diameter                               |                          | 0.055 in, nominal                                                                                                                                                         |                |
|                                                                                   | Pair 2 | Orange, White                                                                                                                                                               |                           | Twisted Conductor Diameter                                 |                          | N/A                                                                                                                                                                       |                |
|                                                                                   | Pair 3 | Green, White                                                                                                                                                                |                           | Overall Cable Diameter                                     |                          | 0.307 in, nominal                                                                                                                                                         |                |
|                                                                                   | Pair 4 | Brown, White                                                                                                                                                                |                           | Jacket Color                                               |                          | Green                                                                                                                                                                     |                |
| Voltage Rating                                                                    |        | 300V                                                                                                                                                                        |                           | Jacket Thickness                                           |                          | 0.028 in, nominal                                                                                                                                                         |                |
| Temperature Rating                                                                |        | -40 to 80 °C (-40 to 176 °F)                                                                                                                                                |                           | Jacket Material                                            |                          | polyurethane (PUR)                                                                                                                                                        |                |
| Plenum                                                                            |        | No                                                                                                                                                                          |                           | Sunlight Resistant                                         |                          | No                                                                                                                                                                        |                |
| Shield                                                                            |        | Individual aluminum foil and overall aluminum-lined copper braid                                                                                                            |                           | Oil Resistance                                             |                          | Yes                                                                                                                                                                       |                |
| Drain                                                                             |        | No                                                                                                                                                                          |                           | Flame Retardant                                            |                          | Yes                                                                                                                                                                       |                |
| Conductor Insulation Material                                                     |        | Foam Polyethylene                                                                                                                                                           |                           | Sample Print Legend                                        |                          | <Metermarkierung> HELUKAT® 1200IND<br>4x2xAWG23 S/FTP PUR 1200 MHz ART.NR.805680<br>E170315 cULus AWM STYLE 20549 AWM I A/B 300V<br>FT2 <Fertigungslos> <Monat/Jahr> RoHS |                |
| Minimum Bend Radius                                                               |        | Moving: 2.46in<br>Fixed: 1.54in                                                                                                                                             |                           |                                                            |                          |                                                                                                                                                                           |                |
| Electrical Characteristics (for 100 meters of cable)                              |        |                                                                                                                                                                             |                           |                                                            |                          |                                                                                                                                                                           |                |
| Impedance                                                                         |        | 100 Ω ± 15 Ω 1 to 100 MHz<br>100 Ω ± 20 Ω 101 to 1200 MHz                                                                                                                   |                           | UL Classification                                          |                          | AWM Style 20549                                                                                                                                                           |                |
| Capacitance                                                                       |        | 13.1 pF/ft                                                                                                                                                                  |                           | Approvals**                                                |                          | cULus, CE, RoHS, Halogen-free                                                                                                                                             |                |
| Resistance, Max.                                                                  |        | 22.7 Ω DC per 1000ft                                                                                                                                                        |                           | Attenuation Crosstalk Ratio, Far End (ACRF)                |                          | 1 ≤ f ≤ 1000 MHz: 95,3 - 20 LOG10 (f/100) dB MIN                                                                                                                          |                |
| Dielectric Withstanding, Min.                                                     |        | 700V RMS                                                                                                                                                                    |                           | Insertion Loss                                             |                          | 1 ≤ f ≤ 1000 MHz: 1,8 x √f + 0.01 x (f) + 0.2/√f dB MAX                                                                                                                   |                |
| Return Loss                                                                       |        | 1 ≤ f < 10 MHz: 20 + 5 LOG10 (f) dB MIN<br>10 ≤ f < 20 MHz: 25 dB MIN<br>20 ≤ f ≤ 600 MHz: 25 - 7 LOG10 (f/20) dB MIN<br>600 ≤ f ≤ 1000 MHz: 17,3 - 10 LOG10 (f/600) dB MIN |                           | Power Sum Attenuation to Crosstalk Ratio, Far End (PSACRF) |                          | 1 ≤ f ≤ 1000 MHz: 92,3 - 20 LOG10 (f/100) dB MIN                                                                                                                          |                |
| Near End Crosstalk (NEXT)                                                         |        | 1 ≤ f ≤ 1000 MHz: 105,4 - 15 LOG10 (f/100) dB MIN                                                                                                                           |                           | Cross Section                                              |                          |                                                                                      |                |
| Power Sum Near End Crosstalk (PSNEXT)                                             |        | 1 ≤ f ≤ 1000 MHz: 102,4 - 15 LOG10 (f/100) dB MIN                                                                                                                           |                           |                                                            |                          |                                                                                                                                                                           |                |
| TCL                                                                               |        | N/A                                                                                                                                                                         |                           |                                                            |                          |                                                                                                                                                                           |                |
| ELTCTL                                                                            |        | N/A                                                                                                                                                                         |                           |                                                            |                          |                                                                                                                                                                           |                |
| Velocity of Propagation                                                           |        | 0.76                                                                                                                                                                        |                           |                                                            |                          |                                                                                                                                                                           |                |
| Delay                                                                             |        | 4 ≤ f ≤ 1000 MHz: 534 + 36/√f ns Max                                                                                                                                        |                           |                                                            |                          |                                                                                                                                                                           |                |
| Delay Skew                                                                        |        | 4 ≤ f ≤ 1000 MHz: Max 25ns                                                                                                                                                  |                           |                                                            |                          |                                                                                                                                                                           |                |

\* See web store [www.AutomationDirect.com](http://www.AutomationDirect.com) for maximum cut lengths\*\* To obtain the most current agency approval information, see the Agency Approval Checklist section on the part number's web page at [www.AutomationDirect.com](http://www.AutomationDirect.com)

Please Note: Our prices on Ethernet Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.