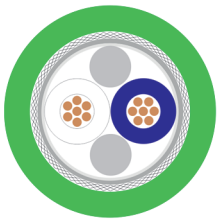
# HELUKAT® SPE Type C 1000BASE-T1 THIN SF/UTP PUR CHAIN

**Single Pair Ethernet Type C**




## TECHNICAL DATA

**Industrial Ethernet cable acc. to UL-Std. 758 (AWM) Style 21223**

| | |
|---|---|
| **Temperature range** | flexible -30°C to +80°C<br>fixed -40°C to +80°C<br>UL (AWM) to +80°C |
| **Peak operating voltage** | 125 V (not for high power current installation purposes) |
| **Test voltage core/core** | 3000 V |
| **Conductor resistance at 20°C** | max. 125.0 Ohm/km |
| **Loop resistance at 20°C** | max. 250.0 Ohm/km |
| **Insulation resistance** | min. 1.0 GOhm x km |
| **Mutual capacitance core/core** | at 800 Hz, approx. 50 pF/m |
| **Rel. Velocity of Propagation** | approx. 75% |
| **Characteristic impedance** | at 100 MHz, 100 Ohm ± 5 Ohm |
| **Caloric load** | approx. 0.50 MJ/m |
| **Minimum bending radius** | flexible 12x Outer-Ø<br>fixed 5x Outer-Ø |

## CABLE STRUCTURE

- Copper wire bare, AWG sizes
- Core insulation: Foam PE
- Core identification: white, blue
- Fleece wrapping
- 1. Screen: plastic-coated aluminium foil (St)
  2. Screen: braided screen of tinned copper wires
- Outer sheath: PUR
- Sheath colour: green
- Length marking: in metres

## PROPERTIES

- resistant to: oil, UV radiation, hydrolysis, microbes, coolants, greases
- abrasion-resistant, notch-resistant, tear-resistant, cut-resistant, wear-resistant, low adhesion
- suitable for use in drag chains
- halogen-free
- flame-retardant

## TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2, CSA FT1
- oil-resistant acc. to DIN VDE 0473-811-404 / DIN EN 60811-404 / IEC 60811-404

## APPLICATION

The 1 Gbit Standard SPE 1000BASE-T1 is suitable for use in drag chains in machine and plant construction applications in Ethernet networks with transmission distances up to 40 metres. Single Pair Ethernet meets the requirements of many different industries and is able to simultaneously supply power to devices via Power over Data Line (PoDL).

## NOTES

- Conductor sizes are based on the AWG measurement system, metric conductor sizes (mm²) are approximated and are for reference only
- UL Voltage Rating: 600 V

## TYPICAL VALUES

| Frequency (MHz) | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | 155 | 200 | 250 | 300 | 400 | 600 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Attenuation (dB/100m) | 3.8 | 5.62 | 8.73 | 11.01 | 12.31 | 15.39 | 21.86 | 27.79 | 34.81 | 39.71 | 44.59 | 49.04 | 57.02 | 70.65 |

| Part no. | No. cores x AWG-No. | Cross-sec. mm², approx. | Conductor Ø mm, approx. | Core Ø mm, approx. | Outer-Ø min - max mm | Cu factor per km | Weight kg/km, approx. |
|---|---|---|---|---|---|---|---|
| 11018067 | 1 x 2 x AWG 26 /19 | 0.15 | 0.51 | 1.2 | 4.6 - 5.2 | 16.0 | 29.0 |