

# HELUKAT 500S CAT.6A SF/FTP PVC CHAIN

highly flame-retardant



## TECHNICAL DATA

Industrial Ethernet cable / Cat. 6A acc. to ISO/IEC 11801, DIN EN 50173, IEC 61156-6, DIN EN 50288-10-2, UL-Std. 444 (CM), CSA-Std. C22.2 No. 214 - CM

|                              |  |
|------------------------------|--|
| Temperature range            | flexible -10°C to +70°C<br>fixed installation -40°C to +80°C<br>UL (CM) to +75°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. 87.6 Ohm/km   |
| Loop resistance at 20°C      | max. 175.2 Ohm/km  |
| Insulation resistance        | min. 5.0 GOhm x km   |
| Mutual capacitance core/core | at 800 Hz, approx. 50 pF/m   |
| Rel. Velocity of Propagation | approx. 75%  |
| Characteristic impedance     | at 1 to 100 MHz, 100 Ohm ± 15 Ohm<br>at 101 to 500 MHz, 100 Ohm ± 20 Ohm         |
| Caloric load                 | approx. 1.69 MJ/m  |
| Minimum bending radius       | flexible 8x Outer-Ø<br>fixed installation 4x Outer-Ø                             |

## CABLE STRUCTURE

- Copper wire tinned, AWG sizes
- Core insulation: Foam PE
- Core identification: colour coded, pairs:
  - No. 1: white / blue
  - No. 2: white / orange
  - No. 3: white / green
  - No. 4: white / brown
- Cores stranded in pairs with optimal lay lengths

- Screening element: pairs, plastic-coated aluminium foil (St)
- Pairs with optimal lay lengths stranded around a central cross-shaped filler
- 1. Screen: metallised conductive fleece
- 2. Screen: braided screen of tinned copper wires
- Outer sheath: PVC
- Sheath colour: green
- Length marking: in metres

## PROPERTIES

- resistant to: oil
- suitable for use in drag chains
- flame-retardant

## TESTS

- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2

## APPLICATION

HELUKAT® 500S CAT.6A SF/FTP PVC CHAIN was designed specially for flexible applications in drag chains in extreme industrial environments. The copper data cable is especially well-suited for Category 6A Ethernet applications. It guarantees excellent transmission characteristics and may be used even under the harshest conditions. The PVC version has UL CM listing.

## NOTES

- Conductor sizes are based on the AWG measurement system, metric conductor sizes (mm<sup>2</sup>) are approximated and are for reference only

## TYPICAL VALUES

| Frequency (MHz)       | 10   | 16   | 62.5 | 100  | 200  | 300  | 500  |
|-----------------------|------|------|------|------|------|------|------|
| Attenuation (dB/100m) | 6.6  | 8.4  | 17.3 | 22.0 | 31.4 | 38.9 | 51.2 |
| NEXT (dB)             | 72.8 | 73.0 | 74.1 | 74.4 | 74.4 | 72.7 | 69.2 |
| ACR (dB/100m)         | 66.2 | 64.6 | 56.8 | 52.4 | 43.0 | 33.8 | 18.0 |

| Part no. | No. cores x AWG-No. | Cross-sec. mm <sup>2</sup> , approx. | Conductor Ø mm, approx. | Core Ø mm, approx. | Outer Ø mm, approx. | Cu-weight kg/km | Weight kg/km, approx. |
|----------|---------------------|--------------------------------------|-------------------------|--------------------|---------------------|-----------------|-----------------------|
| 805704   | 4 x 2 x AWG 24 /7   | 0.22                                 | 0.6                     | 1.3                | 8.7                 | 44.0            | 88.0                  |