

# HELUKAT® PROFINet R+ CAT.5e SF/UTP PUR ROBOTIC



PROFINet Type R, flame-retardant



## TECHNICAL DATA

Industrial Ethernet cable / Cat. 5e acc. to ISO/IEC 11801, DIN EN 50173, IEC 61156-6, UL-Std. 758 (AWM) Style 21209

<b>Temperature range</b>	flexible -30°C to +90°C fixed installation -40°C to +90°C UL (AWM) to +90°C
<b>Peak operating voltage</b>	125 V (not for high power current installation purposes)
<b>Test voltage core/core</b>	2000 V
<b>Conductor resistance at 20°C</b>	max. 60.0 Ohm/km
<b>Loop resistance at 20°C</b>	max. 120.0 Ohm/km
<b>Insulation resistance</b>	min. 0.5 GOhm x km
<b>Mutual capacitance core/core</b>	at 800 Hz, approx. 50 pF/m
<b>Rel. Velocity of Propagation</b>	approx. 66%
<b>Characteristic impedance</b>	at 1 to 100 MHz, 100 Ohm ± 15 Ohm
<b>Caloric load</b>	approx. 0.55 MJ/m
<b>Minimum bending radius</b>	flexible 10x Outer-Ø fixed installation 5x Outer-Ø

## ■ CABLE STRUCTURE

- Copper wire tinned, AWG sizes
- Core insulation: Polyolefin
- Core identification: white, yellow, blue, orange
- Cores twisted into a star quad with optimal lay lengths
- Foil 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
- halogen-free
- flame-retardant

## ■ TESTS

- halogen-free acc. to DIN VDE 0482-754-1 / DIN EN 60754-1 / IEC 60754-1
- flame-retardant acc. to DIN VDE 0482-332-1-2 / DIN EN 60332-1-2 / IEC 60332-1-2, CSA FT1

## ■ APPLICATION

HELUKAT® PROFINet R+ CAT.5e SF/UTP PUR ROBOTIC offers excellent transmission characteristics with double shielding and is designed for applications with torsion loads, e.g. in robots. The cable listed here corresponds to the classification for continuous movement.

## ■ NOTES

- Conductor sizes are based on the AWG measurement system, metric conductor sizes (mm<sup>2</sup>) are approximated and are for reference only
- UL Voltage Rating: 1000 V

## ■ TYPICAL VALUES

Frequency (MHz)	1	10	16	20	62.5	100
Attenuation (dB/100m)	2.1	6.0	7.6	9.0	16.0	21.0
NEXT (dB)	80.0	70.0	65.0	63.0	55.0	50.0

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.
11007800	2 x 2 x AWG 22/19	0.38	0.8	1.5	7.2	33.0	63.0