

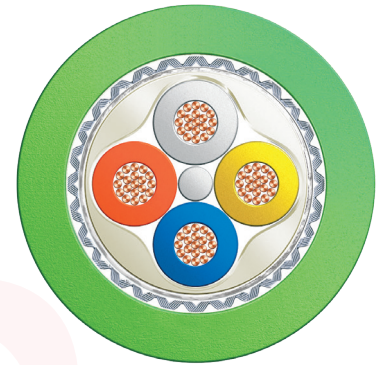
PROFINET

Type C High Flex/Chain PUR Cat.5e



Cable Design

Conductor	Stranded bare copper wire (22awg 19 strands) 0,38mm ²
Insulation	Polyethylene (PE). Ø 1,55 mm approx.
1° Layer	4 cores twisted together to a quad
Core Identification	Circuit 1: white-blue. Circuit 2: yellow-orange
Inner Jacket	Halogen free thermoplastic compound.
Wrapping	Special conductive non-woven plastic tape
Braid Shield	Tinned copper wire braid. 85 ± 5 % coverage
Outer Jacket	Polyurethane (PUR), halogen free, flame retardant. Ø 6,5 ± 0,2 mm
Outer Jacket Colour	Green RAL6018



Mechanical & Thermal Characteristics

VW-1 vertical flame test	
Vertical Flame test	acc. to IEC 60332-1-2
Temperature Range - installation	-20 °C to +60 °C
Temperature Range - fixed laying	-40 °C to +80 °C
Temperature Range - flexible laying	-30 °C to +70 °C
Temperature Range - flexible laying with forced guidance	-20 °C to +60 °C
Min. Bending Radius - fixed laying	~ 4 x Ø
Min. Bending Radius - flexible laying	~ 8 x Ø
Min. Bending Radius - flexible laying with forced guidance	~ 15 x Ø
Tensile Strength - fixed laying	max. 135 N
Tensile Strength - flexible laying	max. 40 N
Bending Cycles	min. 3,000,000
Chain-Length	4.5 m
Velocity	5 m/s
Acceleration	10 m/s ²

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Electrical Data @ 20°C

Operation Voltage (peak value)	max. 125 V (not for connection to public mains)
Rated Voltage (peak value)	max. 300 V (not for connection to public mains)
Test Voltage 50 Hz, 1 min, (core/core and core/screen)	2,000 V
Loop Resistance	max. 115.2 Ω/km
Insulation Resistance	min. 5 GΩ .km
Capacitance	nom. 50 nF/km
RF-Characteristics - delivery	similar to Cat. 5e acc. to IEC 61156-5
RF-Characteristics - continuous motion application	similar to Cat. 5e acc. to IEC 61156-5
Rel. Propagation Speed	nom. 62 % of the speed of light at 100 MHz
Delay Skew	max. 20 ns/100m
Characteristic Impedance	100 ± 5 Ω at 100 MHz

Frequency (MHz)	Attenuation (dB/100m)		NEXT (dB)		Return Loss (dB)	
	Typical	Max.	Typical	Min.	Typical	Min.
4	3,9	4,5	72,0	56,3	35,6	23,0
10	6,4	7,2	69,5	50,3	39,9	25,0
16	8,2	9,1	62,6	47,2	42,3	25,0
20	9,2	10,2	61,0	45,8	44,0	25,0
31,25	11,7	12,9	60,5	42,9	38,9	23,6
62,5	17,0	18,7	54,9	38,4	33,2	21,5
100	22,2	24,2	52,5	35,3	31,0	20,1

Specification

Part Number	Type
PNC222-UAR	PROFINET Type C Industrial Ethernet Cat.5e cable for High Flex/Chain applications. 22/19AWG. PUR. c(UL)us Listing Type CMX 75 °C. CE, RoHS and UKCA compliant.

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