

PROFINET Hybrid Cable, 4-wire + 4x1.5, Cat. 5, FRNC

Advantages

- Suitable for PROFINET cabling Category 5 / Class D according to ISO/IEC 11801 respectively EN 50173-1 and ISO/IEC 24702 respectively EN 50173-3
- Capable for flexible cords
- Applicable for industrial premises
- RoHS conform, UL recognized, flame retardant FRNC

General

This data cable is suitable for PROFINET Hybrid cabling according to type B in industrial premises and areas. It is useable for flexible cords and installation also. The core is fitted with 4 data wires twisted to star quad that allows the transmission of Fast Ethernet 10/100Mbit/s and 4 power wires each of 1.5 mm² cross section.

It is designed for fast assembling in benefit for the customer. The PROFINET Hybrid cable is best capable for termination with Han 3 A RJ45 Hybrid connector set.

Description

PROFINET Hybrid Cable,
4-wire + 4x1.5, Cat. 5, FRNC

10	m ring
20	m ring
50	m ring
100	m ring
500	m reel

Order number

09 45 600 0310
09 45 600 0330
09 45 600 0340
09 45 600 0300
09 45 600 0320



Quad

- Wire: Stranded tinned copper AWG 22/7
- Insulation: PE Ø 1.55 mm
- Colour: wh, ye, bu, og
- Screen: Aluminate foil overlapped, tinned copper wire braid, braid coverage about 85%

Power


- Wire: Stranded bare copper 84 x 0.15mm (AWG 16)
- Insulation: FRNC Ø 2.4 mm
- Colour: bk, number printed

Core

- Plastic tape overlaped
- Outer sheath: Thermoplastic Copolymer (FRNC), flame retardant

Color of outer sheath: green, RAL 6018
Overall diameter: 9.7 mm – 10.3 mm

Technical Characteristics

Performance	Category 5 according to EN 50288-2-1:2003, IEC 61156-5:2002
Mechanical Characteristics	
Minimal bending radius	During installation: 10 x diameter After installation: 5 x diameter
Tensile strength	max. 200 N
Electrical Characteristics at 20°C	
Quad	
Surface transfer impedance at 1 MHz	50 mOhm/m
Surface transfer impedance at 10 - 100 MHz	10 mOhm/m
Loop resistance	max. 120 Ohm/km
Insulation resistance	min. 500 MOhm x km
Signal runtime	5.3 ns/m
Characteristic impedance at 100 MHz	100 Ohm +/- 5 Ohm
Test voltage (wire/wire/screen rms 50Hz 1min)	1500 V
Operating voltage	150 V
Power	
Conductor resistance	max. 14 Ohm/km
Insulation resistance	min. 20 MOhm*km
Test voltage (wire/wire/screen rms 50Hz 1min)	1500 V
Operating voltage	150 V
Chemical Characteristics	
Flame retardant	IEC 60332-1-2
Free of hazardous substances	RoHS 2002/95/EG
Halogen free	
Thermal Characteristics	
Permissible temperature range	- 20° C to + 80° C
Printing	HARTING PROFINET HYBRID CABLE CAT 5 FRNC * 4xAWG22/7 + 4x1.5 (SHIELDED) E130266  AWM 21282 * 09456000300200 "internal lot number" "sequential length in meters"
Weight about	154 kg/km

Technical Characteristics

Frequency MHz	Attenuation dB/100m		NEXT dB		PS NEXT dB		EL FEXT dB		PS EL FEXT dB		Return Loss dB	
	typ.	Cat 5 max*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*	typ.	Cat 5 min*
1	2.1	2.1	65.3	65.3	62.3	62.3	63.8	63.8	60.8	60.8	-	-
4	4	4	56.3	56.3	53.3	53.3	51.8	51.8	48.8	48.8	23.0	23
10	6.3	6.3	50.3	50.3	47.3	47.3	43.8	43.8	40.8	40.8	25	25
16	8	8	47.2	47.2	44.2	44.2	39.7	39.7	36.7	36.7	25	25
20	9	9	45.8	45.8	42.8	42.8	37.8	37.8	34.8	34.8	25	25
31.25	11.4	11.4	42.9	42.9	39.9	39.9	33.9	33.9	30.9	30.9	23.6	23.6
62.5	16.5	16.5	38.4	38.4	35.4	35.4	27.9	27.9	24.9	24.9	21.5	21.5
100	21.3	21.3	35.3	35.3	32.3	32.3	23.8	23.8	20.8	20.8	20.1	20.1

* EN 50288-2-1:2003

All data given are in line with the actual state of art and therefore not binding.
HARTING reserves the right to modify designs without giving the relevant reasons.