

# FieldLink®

## Industrial Ethernet Cat 5e ES



**Design**

**Wire**

Stranded tinned copper wire (22 AWG)  
Insulation of Polyethylene (PE)

∅ 0.75 mm (0.030 in dia)  
∅ 1.5 mm (0.059 in dia)

**Core**

Filler as central element  
4 wires WH-YE-BU-OG  
Plastic tape overlapped  
Inner-Jacket Thermoplastic copolymer (FRNC)  
Alulaminare foil overlapped  
Shield braiding of tinned copper wires  
Coverage about 85%

∅ 3.9 mm (0.154 in dia)  
∅ 4.7 mm (0.185 in dia)

**Jacket**

Polyurethane (PUR) GN

∅ (6.5 ±0.2) mm (0.256 ±0.008 in dia)

Printing: "sequential length in metres" BizLink Special Cables Germany INDUSTRIAL ETHERNET TRAILING CABLE \*  
GREEN PROFINET Type C ES CAT5 PLUS \* 22AWG (SHIELDED) \* "internal lot number"

**Electrical data at 20°C**

Loop resistance		≤	120	Ohm/km
Signal run time		≤	5.3	ns/m
Insulation resistance		≥	500	MOhm*km
Characteristic impedance	1 – 100 MHz		(100 ±5)	Ohm
Capacitance (1 kHz)		nom.	52	nF/km
Surface transfer impedance	10 MHz	≤	20	mOhm/m
Test voltage (wire/wire/screen rms 50Hz 1min)		=	2000	V

**Near-end crosstalk attenuation**

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100
typ. value (dB - 100m)	80	76	70	65	63	60	55	50

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## Attenuation

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100
typ. value (dB/100m) (dB/100ft)	2.1 (0.6)	4 (1.2)	6.3 (1.9)	8 (2.4)	9 (2.7)	11.4 (3.5)	16.5 (5.0)	21.3 (6.5)

The electrical requirements similar to EN 50288-2-1

## Mechanical and thermal characteristics

Insulating material acc. to DIN EN 50290-2-23 (VDE 0819), table L/MD (HD 624.3)

Jacket material acc. F45052-F5100 (similar to DIN VDE 0282)

Oil resistant acc. to DIN EN 60811-404 (7x24h/90°C)

Flame retardant acc. to IEC 60332-1-2

Flame retardant acc. to UL 2556, Sec. 9.4 (old UL 1581, Sec. 1080) VW-1

## Other characteristics

RoHS compliant (Directive 2011/65/EU & 2015/863/EU RoHS 3)

Sunlight resistant acc. to UL 2556 Sec. 4.2.8.5 (720h)

Flame retardant acc. to ECE-R 118 Amendment 02, Para. 6.2.6 with the ISO 6722-1:2012 Para. 12

Halogen free acc. to IEC 60754-1

Smoke-density acc. to IEC 61034

Tensile strength  $\leq$  150N

Trailing cable for following requirements

- 3 million bending cycles
- diameter 200 mm
- at a speed of 4 m/s
- acceleration 4 m/s<sup>2</sup>

Permissible temperature range : -40°C up to +70°C

During laying : -20°C up to +60°C

Transport temperature range : -50°C up to +70°C

Min. bending radius allowed : repeated 8X  $\varnothing$ , single 4X  $\varnothing$

Weight about : 62 kg/km (41 lb/1000ft)

## Designation

L45467-J17-B518

241644

2YH(ST)C11Y 2X2X0.75/1.5-100 LI VZN GN

2000 m (6562 ft) on non-returnable reel

Product has not been tested and classified according to the CPR (EU/305/2011).

The product shall not be permanently installed in buildings in the EU.