

# FieldLink<sup>®</sup>

Industrial Ethernet Cat 5e ES



## Design

### Wire:

Stranded tinned wire 7 X 0.25  
Insulation of Polyethylene (PE)

ø 0.75 mm  
ø 1.5 mm

### Core:

Filler as central element  
1. layer: 4 wires 2Y 0.75/1.5 LI  
Sequence of colors: WH-YE-BU-OG  
Plastic tape, overlapped  
Inner jacket: Thermoplastic copolymer (FRNC)  
Alulaminat foil overlapped  
Shield braiding of tinned copper wires 0.13 mm dia  
Coverage about 85%

ø 3.9 mm  
ø 4.7 mm

### Jacket:

Polyurethane (PUR) GN  
Wall thickness about 0.9 mm

ø (6.5 ±0.2) mm

Printing: "sequential length in metres" LEONI LA INDUSTRIAL ETHERNET TRAILING CABLE \* PROFINET  
Type C ES CAT5 PLUS \* 22AWG (SHIELDED) \* E130266-LA cULus AWM STYLE 20233 \*  
AWM I/II A/B 80°C 300V FT1 \* "year/internal order number"

Textintervals about 1000 mm

## 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 ±15)	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

### 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

Conductor/Screen material acc. to DIN EN 13602 Cu-ETP-A...-B  
 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)  
 Flame retardant acc. to IEC 60332-1-2  
 Oil resistant acc. to DIN EN 60811-2-1

### Other characteristics:

RoHS compliant (DirectiRoHS compliant (Directive 2011/65/EC)ve 2011/65/EC)  
 UV-resistant, Halogen free

Tensile strength  $\leq 150\text{N}$

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 7,5X  $\varnothing$  , single 5X  $\varnothing$

Weight about : 61 Kg/km (40,9 lb/1000ft)

### Application:

Trailing cable