

Fieldbus Foundation H1 100 Ω - Eco

90 °C / 300 V

Flame Retardant

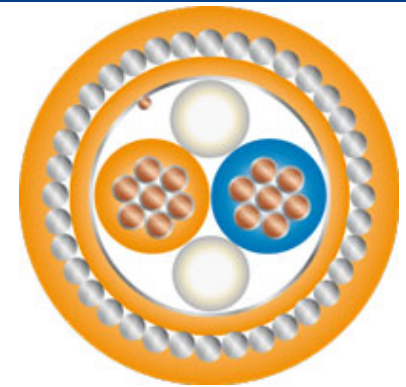
FB-v2X(St)YSWAY-fi

Application

Fieldbus cable, Type A, for bus-systems Fieldbus Foundation acc. to IEC 61158-2. Suitable for use in hazardous classified locations class I and class II division 2 acc. to NEC 501.10(B) and NEC 502.10(B) or zone 1 and zone 2, group II, acc. to IEC 60079-14, resp. Recommended for indoor and outdoor installation, on racks, trays, in conduits, in dry and wet locations; for direct burial. (Please note the relevant legal / local installation requirements)

Construction

Conductor.....	tinned annealed copper wire, stranded, size:
Insulation.....	cross-linked polyethylene XLPE
Colour code.....	(+)-core: orange, (-)-core: blue
Collective screen.....	aluminium polyester foil in contact with tinned copper drain wire
Inner sheath.....	polyvinyl chloride PVC, orange
Armour.....	galvanised round steel wires
Outer sheath.....	polyvinyl chloride PVC, orange, blue for intrinsically safe systems
Cable marking.....	LEONI KERPEN ICON FIELDBUS CABLE IEC 61158-2 TYPE A 100Ω FF-844 SIZE STP 300V 90 °C SUN RES PRODUCTION LOT CODE LENGTH MARKING



Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200

Temperature range
-30°C up to +90°C (during operation)
-5°C up to +50°C (during installation)
Minimum bending radius
10 x cable diameter

Abbreviations

FB-	Fieldbus Cable
v	tinned
2X	XLPE insulation
(St)	collective screen
Y	PVC inner sheath
SWA	steel wire armour
Y	PVC outer sheath
-fi	reduced flame propagation

Electrical Properties at 20 °C

Property	Max.	Unit	Value
Conductor cross-section			AWG 18
Conductor resistance (loop)	max.	Ω/km	47
Screen resistance	nom.	Ω/km	30
Mutual capacitance	max.	nF/km	80
Inductance	nom.	mH/km	0.7
Capacitance unbalance to earth	max.	nF/km	4
Impedance at f = 31.25 kHz			100 Ω ± 20 Ω
Attenuation at f = 39 kHz	max.	dB/km	3.0
Propagation delay change (f = 7.9 kHz - 39 kHz)	max.	µs/km	1.7
Test voltage U _{rms} (core : core)		V	1500
Test voltage U _{rms} (core : screen)		V	1500
Operating voltage		V	300

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Geometrical data							
No. of elements	Dia. of core	Dia. over inner sheath	Dia. of armour wire	RT of outer sheath	Outer dia.	Weight	Part No.
	approx. (mm)	approx. (mm)	nom. (mm)	nom. (mm)	approx. (mm)	approx. (kg/km)	Colour orange
mm²/7							
1	2.9	8.1	0.9	1.4	12.7	280	LKX713600150000

RT = Radial Thickness