

## ZPFU-SH. ARMoured RAILWAY SIGNALING PAIR CABLES WITH LSOH SHEATH



Signaling cable



Fire retardant



Low smoke emission



UV resistant



Rodents resistant



Zero halogen



Chemicals resistant



ROHS Compliant

### STANDARDS

Construction: SNCF CT-445

Complementary: EN 50266-2-4, cat. C, EN 50267-2-2, EN 50268-2 y NF-C 20454

### DESCRIPTION AND APPLICATION

Railway signalling cables from 1 to 28 pairs. Copper conductor of 1 mm<sup>2</sup>, insulated with solid coloured polyethylene. Stranded in pairs. Armoured with two steel tapes applied helically. Brown UV and chemicals resistant LSZH sheath. Used to connect the control centre to the centres of satellite equipment. Installed in conduit or buried along electrified or non-electrified routes to 1500 volts DC. It can also be installed in short lengths along routes electrified at 25 kV AC.

### CONSTRUCTION

- **Conductors:** Annealed copper, section: 1 mm<sup>2</sup>.
- **Insulation:** Solid HDPE.
- **Cabling elements:** Pairs.
- **Lay-up.** Up to 28 pairs in layers. Colour code according to SNCF CT-445.
- **Core wrapping.** Overlapping longitudinal non-hygroscopic tape.
- **Waterproof inner sheath:** Flame retardant LSZH thermoplastic material.
- **Armour.** Two steel tapes applied helically.
- **Sheath:** Brown flame retardant and UV resistant LSZH thermoplastic material.
- **Sheath marking :** The outer sheath shall be marked at regular intervals with the following information:
  - Name of Manufacturer / year / Length markings
  - Other type of markings is also possible according to the customer



### ELECTRICAL CHARACTERISTICS (20°C)

	1 mm <sup>2</sup>
Maximum conductor Resistance (Ω/km)	18,1
Resistance unbalance (%) $100 \times (R_{max} - R_{min}) / (R_{min} + R_{max})$	< 2.5 %
Minimum insulation resistance (MΩxkm, 20°C, 500 V)	5000
Maximum mutual capacitance (nF/km, 1000 Hz)	55
Capacitance unbalance (pF/500m, 1000 Hz)	
2 pair cables	300
Cable > 2 pairs	200
Dielectric strength (Vdc, 3 s)	
conductor – conductor	4500
conductor - screen	4500

All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and must not be considered contractual.

page 1/2

## ZPFU-SH. ARMoured RAILWAY SIGNALING PAIR CABLES WITH LSOH SHEATH

TRANSMISSION CHARACTERISTICS (20°C)		1 mm <sup>2</sup>
<i>Maximum attenuation (dB/km)</i>		
25-45 KHz		2.5
45-80 KHz		3.0
<i>Characteristic impedance (Ω)</i>		
2 pair cable		
25-45 KHz		140±10
45-80 KHz		130±10
Cables > 2 pairs		
25-45 KHz		120±10
45-80 KHz		115±10

### MECHANICAL CHARACTERISTICS

Temperature range: from -25° C to +75° C

Minimum bending radius: 15 x R<sub>cable</sub>

### SIZE, DIMENSIONS AND WEIGHTS

Section : 1 mm <sup>2</sup>						
Code	# Pairs	Diam. cable (mm)	Weight approx. (kg/km)	Length (m)	Drum	
EA2M0HUA1000102N	1	14.4	280	2000	A2	
EA2M0HUA1000302N	3	16.5	400	2000	A4	
EA2M0HUA1000402N	4	18.5	490	2000	A6	
EA2M0HUA1000702N	7	22.5	815	2000	A8	
EA2M0HUA1001402N	14	26.0	1140	2000	B0	
EA2M0HUA1002102N	21	31.0	1460	1500	B0	
EA2M0HUA1002802N	28	35.2	1730	1000	B0	

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page 2/2