



Caledonian

Railway Cables

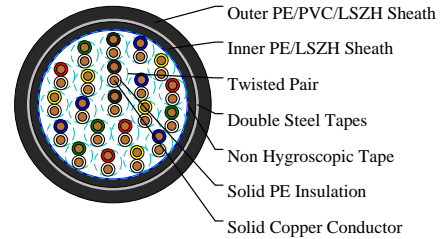
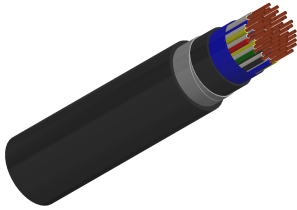
www.caledonian-cables.com

marketing@caledonian-cables.com

ZPFU & ZPFU-SH Main & Local Signalling Cables (Ordinary Non-Electrified or DC Electrified Lines)

1.13mm Conductor, 2.3 Insulated Wire

RS/ZPFU-2Y2YB2Y-21P1S



APPLICATIONS

The cables are designed for the main signalling circuits of 1500V DC electrified lines.

STANDARDS

SNCF CT 445

NF F 55-698

VOLTAGE RATING

750V DC/450V AC

CABLE CONSTRUCTION

Conductors: Solid annealed copper

Insulation: Solid polyethylene.

Cabling Element: Two conductors are twisted to form a pair.

Stranding: Pairs are helically stranded to form the cable core.

Core Wrapping: Plastic tape(s) with overlapping.

Inner Sheath: PE/LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).

Mechanical Protection: Two helically applied steel tapes (0.5mm, depending on pair count).

Outer Sheath: PE/PVC/LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).

Remark: ZPFU: PE/PVC Sheath; ZPFU-SH: LSZH Sheath.

PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 8xOD (static); 16xOD (dynamic)

Temperature Range: -40°C to +70°C (during operation); -20°C to +50°C (during installation)

Electrical Properties

Electrical Characteristics at 20°C:

Nominal Conductor Diameter: 1.13 mm

Nominal Cross Section Area: 1 mm sq

Maximum Conductor Resistance (DC): 18.1 Ω/km

Minimum Insulation Resistance @500 V DC (3min) : 5000 MΩ.km



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Maximum Mutual Capacitance (AC) @1000Hz:55 nF/km
Maximum Capacitance Unbalance @1000Hz:400 pF/500m
Attenuation @45KHz:2.5 dB/km
Characteristic Impedance @45KHz:120Ω
Dielectric Strength, conductor to conductor (DC voltage 3mins):4500V
Operating Voltage (AC/DC):450/750V

DIMENSION AND PARAMETERS

No. of Pairs	Nominal Cross-sectional Area	Conductor Diameter	Nominal Diameter over Insulation	Nominal Inner Sheath Thickness	Nominal Outer Sheath Thickness	Nom. Armour Thickness	Nom. Overall Diameter	Approx. Weight
	mm ²	mm	mm	mm	mm	mm	mm	kg/km
21	1	1.13	2.3	1.2	2	0.5	27.8	1304



Buried in Ground



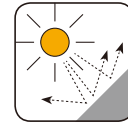
Laid In Ducts



Mineral Oil Resistant



Rated voltage



UV Resistant