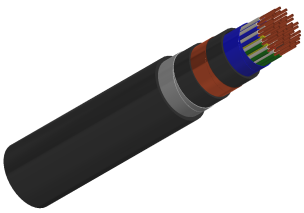
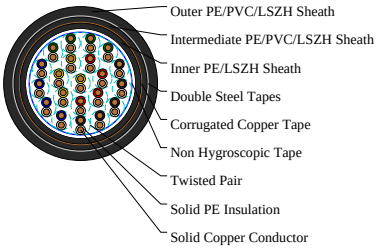
Caledonian
Railway Cables
www.caledonian-cables.com marketing@caledonian-cables.com

ZPAU & ZPAU-SH Main Signalling Cables (AC Electrified Lines)

1.13mm conductor, 2.3mm Insulated Wire
RS/ZPAU-2Y2Y(K)2YB2Y-21P1S





APPLICATIONS

The cables are designed for connection between traffic control centers and equipment shelters along the trackside. The cables are specially designed to give good induction protection (R.F= 0.26 at inductive voltage 100V/km) and are suitable for installation in intercity railways electrified at 25KV ac.

STANDARDS

SNCF CT 445 / SNCT ST 698G
NF F 55-698

VOLTAGE RATING

750V DC/450V AC

CABLE CONSTRUCTION

Conductors:Solid annealed copper.
Insulation:Solid polyethylene.
Cabling Element:Each two conductors are twisted together to form a pair.
Stranding:Pairs are helically stranded in layers to form the cable core.
Core Wrapping:Plastic tape(s) with overlapping.
Inner Sheath:PE sheath. LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).
Electrostatic Shield:One corrugated copper tape.
Intermediate Sheath:PE/PVC sheath. LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).
Electromagnetic Shield:Two helically applied steel tapes of 0.5mm.
Outer Sheath:PE/PVC compound. LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).
Remarks: ZPAU:PE/PVC Sheath; ZPAU-SH: LSZH Sheath.

PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 8xOD (static); 16xOD (dynamic)
Temperature Range: -40℃ to +70℃ (during operation); -20℃ to +50℃ (during installation)

Electrical Properties

Electrical Characteristics at 20°C:

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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
Maximum Mutual Capacitance @1000Hz (AC): 55 nF/km
Maximum Capacitance Unbalance (pair to pair) @800Hz:
100% cases:400 pF/500m
99% cases:200 pF/500m
Attenuation @45KHz:2.5 dB/km
Characteristic Impedance @45KHz:120Ω
Dielectric Strength, conductor to conductor (DC voltage 3secs):4500V
Operating Voltage (AC/DC):450/750V
peak value (AC):900V

DIMENSION AND PARAMETERS

No. of Pairs	Nominal Cross-sectional Area	Conductor Diameter	Nominal Diameter over Insulation	Nominal Inner Sheath Thickness	Nominal Interm. Sheath Thickness	Nominal Outer Sheath Thickness	Nom. Overall Diameter	Approx. Weight
	mm²	mm	mm	mm	mm	mm	mm	kg/km
21	1	1.13	2.3	1.2	1.1	2	37.2	1990

Anti Induction


Buried in Ground


Laid In Ducts


Mineral Oil Resistant


Rated voltage


UV Resistant