



# Caledonian

## Railway Cables

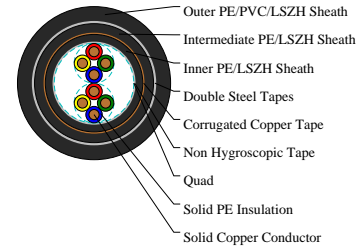
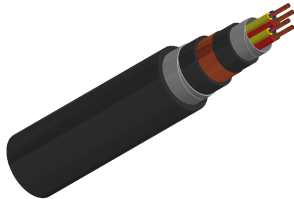
www.caledonian-cables.com

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### ZCO3 Main Signalling Cables (AC Electrified High Speed Lines)

1.13mm Conductor, 2.33 Insulated Wire

RS/ZCO3-2Y2Y(K)2YB2Y-2Q1S



### 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 ( $R.F=0.21$  at inductive voltage 100V/km) and are suitable for installation in high speed railway lines electrified at 25KV ac.

### STANDARDS

SNCF CT 445

NF F 55-698

### VOLTAGE RATING

750V DC/450V AC

### CABLE CONSTRUCTION

Conductors: Solid annealed copper, 1.0 mm sq nominal cross section area.

Insulation: Solid polyethylene.

Cabling Element: Four conductors are twisted to form a quad.

Stranding: Quads are helically stranded to get the cable core.

Core Wrapping: Plastic tape(s) with overlapping.

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

Electrostatic Shield: Corrugated copper tape.

Intermediate Sheath: Low density polyethylene. LSZH FR option can be offered upon request to NF C 32 070.2.2 (C1).

Electromagnetic Shield: Two helically applied steel tapes (0.5mm).

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

Remarks: ZCO3: PE/PVC Sheath; ZCO3-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



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Railway Cables

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## Electrical Characteristics at 20°C:

Nominal Conductor Diameter:1.13 mm

Nominal Cross Section Area:1 mm sq

Maximum Conductor Resistance (DC):18.1  $\Omega$ /km

Minimum Insulation Resistance @500 V DC (3mins):5000M $\Omega$ .km

Maximum Mutual Capacitance @1000Hz (AC) :40 nF/km

Maximum Capacitance Unbalance @800Hz:400 pF/500 m

Dielectric Strength, conductor to conductor (DC voltage 3mins):4500V

Operating Voltage AC/DC:450/750V

## DIMENSION AND PARAMETERS

No. of Quad	Conductor Diameter	Nominal Diameter over Insulation	Nominal Inner Sheath Thickness	Nominal Outer Sheath Thickness	Nom. Overall Diameter	Approx. Weight
	mm	mm	mm	mm	mm	kg/km
2	1.13	2.33	0.8	1.6	27	1295



Anti Induction



Buried in Ground



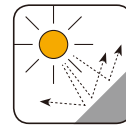
Laid In Ducts



Mineral Oil Resistant



Rated voltage



UV Resistant