



# Caledonian

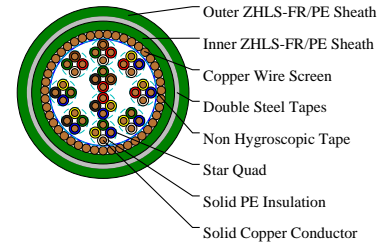
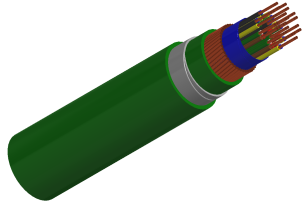
## Railway Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

CCTSST-FR0.1 nx4x1.4

RS/CCTSST-FR0.1-2YDHBH-10Q1.4



## APPLICATIONS

The cables are used as railway cables and can be installed directly into the ground or in ducts.

## STANDARDS

RENFE E.T. 03.365.051.6

## VOLTAGE RATING

300/500V

## CABLE CONSTRUCTION

Conductors: Soft annealed solid copper

Insulation: PE Insulation.

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

Stranding: Quads are helically stranded in concentric layers.

Core Wrapping: Two or more layers of plastic tape(s) with overlapping.

Screen: 1.4mm copper wires wrapping with one plastic tape (protection against interference).

Inner Sheath: LSZH-FR-PE sheath, coloured green. PE sheath can be offered as an option.

Armour: Two layers steel tape (0.8mm thick).

Outer Sheath: LSZH-FR-PE sheath, coloured green. (LSZH-FR= Low smoke, zero halogen, fire retardant). PE sheath can be offered as an option.

## PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 10xOD

Temperature Range: -40°C to +60°C (during operation); -10°C to +60°C (during installation)

## Electrical Properties

Electrical Characteristics at 20°C:

Nominal Conductor Diameter: 1.4 mm

Maximum Conductor Resistance: 11.7Ω/km

Minimum Insulation Resistance @500 V DC: 35000 MΩ.km

Mutual Capacitance @800Hz: 45 nF/km

Capacitance Unbalance@800Hz:



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Railway Cables

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K1 maximum individual value:250 pF/460m

K9-12 maximum individual value:250 pF/460m

ea1/2 maximum individual value:1200 pF/460m

Attenuation:

@1KHz:0.46 dB/km

@10KHz:0.85 dB/km

@30KHz:1.3 dB/km

Test Voltage @50Hz 1min:

Core to core:2100 Veff

Core to screen:2500 Veff

Core to armouring:2000 Veff

### 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
10	1.4	2.7	1.6	1.8	39.2	3140



Anti Induction



Buried in Ground



Fire Retardant  
NF C32-6070-2-2(C1)  
IEC60332-3-24/EN50266-2-4



Flame Retardant  
NF C32-6070-2-1(C2)  
IEC60332-1-2/EN50265-2-1



Laid In Ducts



Low Corrosivity  
IEC60754-2/EN50267-2-2-3  
NF C32-074/NF C20-453



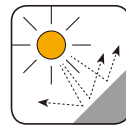
Low Smoke Emission  
IEC 61034-2 / EN 50288-2  
NF C32-073/NF C 20-962



Low Toxicity



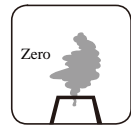
Rated voltage



UV Resistant



Water Resistant



Zero Halogen  
IEC 60754-1/EN 50267-2-1  
NF C20-454