



# Caledonian

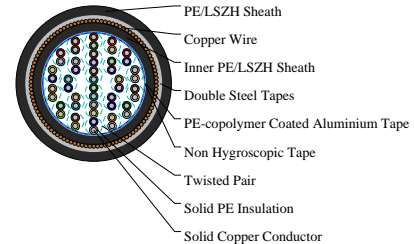
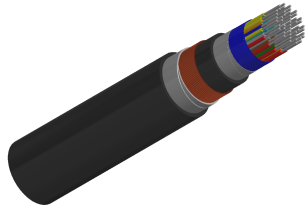
## Railway Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### RT/F3 E1/E2/E3 Type Axle Counter Cable

RS/RT/F3-S/E3-2Y(F)(L)2YDB2Y-24P1.4



### APPLICATIONS

The cables are designed for transmission of signals up to 90 kHz in axle counter train detection systems.

### STANDARDS

RT/E/PS/00031

### VOLTAGE RATING

750V DC/450V AC

### CABLE CONSTRUCTION

Conductors: Tinned solid copper wire.

Insulation: Solid polyethylene.

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

Stranding: Pairs are helically stranded in concentric layers.

Filling: Cable core interstices are filled with a low-permittivity compound. Unfilled cables option can be offered upon request.

Core wrapping: Plastic tape(s) with overlapping

Moisture barrier: One laminated sheath made of aluminium tape coated with PE-Copolymer on at least one side is applied with longitudinally overlap.

Inner Sheath: Polyethylene or LSZH fire retardant compound.

Electrostatic shield: One layer of helically applied copper wires.

Electromagnetic shield: Two helically applied steel tapes.

Outer Sheath: Polyethylene or LSZH fire retardant compound. Ruggedised PE sheath compound can be offered upon request.

### COLOUR CODE

1P: WHITE+BLUE

2P: WHITE+ORANGE

3P: WHITE+GREEN

4P: WHITE+BROWN

5P: WHITE+GREY

6P: RED+BLUE



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7P:RED+ORANGE

8P:RED+GREEN

9P:RED+BROWN

10P:RED+GREY

11P:YELLOW+BLUE

12P:YELLOW+ORANGE

13P:YELLOW+GREEN

14P:YELLOW+BROWN

15P:YELLOW+GREY

16P:VIOLET+BLUE

17P:VIOLET+ORANGE

18P:VIOLET+GREEN

19P:VIOLET+BROWN

20P:VIOLET+GREY

21P:TURQUOISE+BLUE

22P:TURQUOISE+ORANGE

23P:TURQUOISE+GREEN

24P:TURQUOISE+BROWN

## PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 7.5xOD (unarmoured); 10xOD (armoured)

Temperature Range: -30°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

Nominal Conductor Cross Section:1.5 mm<sup>2</sup>

Maximum Conductor Resistance:12.5 Ω/km

Minimum Insulation Resistance @500 V DC (1min):5000 MΩ.km

Nominal Conductor Capacitance @800Hz/1000Hz (AC):47+3 nF/km

Dielectric Strength, conductor to screen (DC voltage 2mins):3000V

Maximum Average Attenuation:

@1.0KHz:0.46 dB/km

@2.4KHz:0.62 dB/km

@40KHz:1.77 dB/km

@90KHz:2.41 dB/km

@1.024MHz:7.45 dB/km

Minimum Average Near-end Crosstalk:

@1.0KHz:60 dB/km

@2.4KHz:60 dB/km

@40KHz:50 dB/km

@90KHz:50 dB/km



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@1.024MHz:35 dB/km

Maximum Reduction factor @100V/km,50Hz

EMI RF 1 (modest level): 0.65

EMI RF 2 (medium level): 0.45

EMI RF 3 (high level): 0.20

## DIMENSION AND PARAMETERS

No. of Pairs	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
24	1.4	2.7	2.2	2.4	52.5	3150



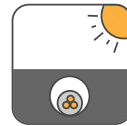
Anti Induction



Buried in Ground



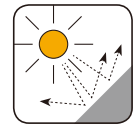
Impact Resistant



Laid In Ducts



Rated voltage



UV Resistant



Water Resistant