



# Caledonian

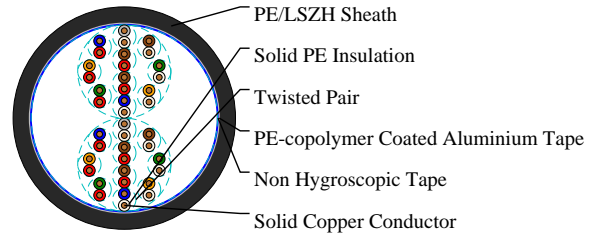
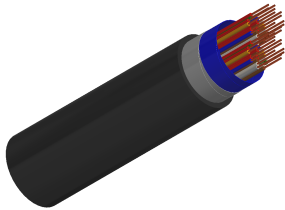
## Railway Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### RT/ZHLS, A-2Y(L)2Y External Telephone Cables to NR/PS/TEL/00015

RS/RT/ZHLS-2Y(L)2Y-20P0.63



### APPLICATIONS

The cables are designed primarily for trackside railway installation in non electrified area. For direct burial application, brass tape armoured or Zetabon type corrugated steel tape armoured can be offered against rodent attack.

### STANDARDS

NR/PS/TEL/00015 (formerly RT/E/PS/00015 or GK/RT 0315)

TS0886/BR1822

BR892

### VOLTAGE RATING

600V DC/420V AC

### CABLE CONSTRUCTION

Conductors: Solid plain copper conductor.

Insulation: Solid polyethylene to BS6234.

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

Stranding: Pairs are helically stranded in 10 pair units.

Core Wrapping: Plastic tape(s) with overlapping.

Moisture Barrier: One laminated sheath made of aluminium tape (0.15mm) coated with PE-Copolymer on at least one side is applied with longitudinally overlap.

Outer Sheath: Polyethylene to BS6234. LSZH compound option can be offered upon request.

### COLOUR CODE

Colour scheme, unit binder colour and cable make-up according to NR/PS/TEL/00015

1P:WHITE+BLUE

2P:WHITE+ORANGE

3P:WHITE+GREEN

4P:WHITE+BROWN

5P:WHITE+GREY

6P:RED+BLUE

7P:RED+ORANGE



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8P:RED+GREEN

9P:RED+BROWN

10P:RED+GREY

Binder Colour:

Unit 1-BLUE

Unit 2-ORANGE

### PHYSICAL AND THERMAL PROPERTIES

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

Temperature Range: -40°C to +70°C (during operation); -10°C +60°C (during installation)

### Electrical Properties

Electrical Characteristics at 20°C:

Nominal Conductor Diameter:0.63 mm

Maximum Conductor Resistance:60 Ω/km

Minimum Insulation Resistance @500 V DC (1min):1500 MΩ.km

Nominal Conductor Capacitance @800Hz/1000Hz (AC):

Maximum Average Value :

For 20 pairs or less:70 nF/km

More than 20 pairs:67 nF/km

Maximum Individual Value 99% of pairs:

Up to 20 pairs:79.0 nF/km

More than 20 pairs:75.0 nF/km

Maximum Capacitance Unbalance @1000Hz pair to pair (99% of pairs):

For 2 pairs (1 quad):800 pF/500m

All other sizes:275 pF/500m

Dielectric Strength, conductor to screen (DC voltage 2mins):2000 V

Maximum Average Attenuation:

@1.0KHz:1.4 dB/km

@2.4KHz:2.15 dB/km

@1.024MHz:18.7 dB/km

Minimum Average Near-end Crosstalk:

@1.0KHz:70 dB/km

@2.4KHz:65 dB/km

@40KHz:50 dB/km

@1.024MHz:

Within Units:40 dB/km

Between Units:47 dB/km

High Voltage Breakdown Test:

DC for 2mins:2000 V

AC for 2mins:1333 V



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### DIMENSION AND PARAMETERS

| No. of Pairs | Conductor Diameter | Nominal Diameter over Insulation | Nominal Outer Sheath Thickness | Nom. Overall Diameter | Approx. Weight |
|--------------|--------------------|----------------------------------|--------------------------------|-----------------------|----------------|
|              | mm                 | mm                               | mm                             | mm                    | kg/km          |
| 20           | 0.63               | 1.15                             | 2.7                            | 18.1                  | 309            |



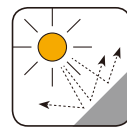
Buried in Ground



Laid In Ducts



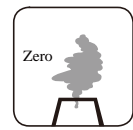
Rated voltage



UV Resistant



Water Resistant



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