



# Caledonian

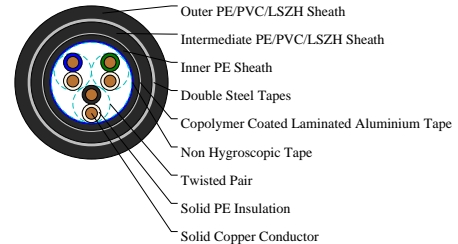
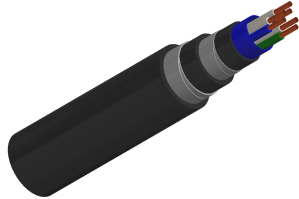
## Railway Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### Digicode 30KHz Indoor Signalling Cables

RS/DIG-2Y2Y(L)HBH-3P1.4



### APPLICATIONS

The cables are designed for transmission of track circuit digicode signals up to 30 kHz in electrified lines.

### STANDARDS

EN 50266-2-4 & IEC 60332-3(Fire performance)

EN 50268-2(Smoke density)

EN 50267-2-1(Halogen content)

EN 50267-2-2(Gases acidity)

EN 50265-2-1, IEC 60332-1, NFC 32070 Cat C2 compliant (for PVC sheathed cables)

### CABLE CONSTRUCTION

Conductors: Solid Annealed copper, 1.4 mm nominal diameter (0.6 mm for the auxiliary pair).

Insulation: Polyethylene.

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

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

Core wrapping: Plastic tape(s) with overlapping

Inner sheath: Low density polyethylene.

Moisture barrier: Copolymer coated laminated aluminium tape.

Intermediate sheath: LSZH fire retardant compound. PE or PVC option can be offered upon request.

Mechanical protection: Two helically applied steel tapes.

Outer sheath: LSZH fire retardant compound. PE or PVC option can be offered upon request.

### PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 8xOD (static); 16xOD (dynamic)

Temperature Range: -40°C to +60°C (during operation); -20°C to +50°C (during installation)

### Electrical Properties

Electrical Characteristics at 20°C:

Nominal Conductor Diameter:1.4 mm

Maximum DC Conductor Resistance:12.1  $\Omega$ /km

Maximum Resistance Unbalance:3%



# Caledonian

Railway Cables

[www.caledonian-cables.com](http://www.caledonian-cables.com)

[marketing@caledonian-cables.com](mailto:marketing@caledonian-cables.com)

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

Dielectric strength (DC voltage 1 min):

Conductor to Conductor:1000V

Conductor to Screen:3000V

Minimum Spark Test On Outer Sheath (AC voltage):500V

Maximum Mutual capacitance (Data pairs):45 nF/km

Nominal Mutual capacitance (Auxiliary pair):50 nF/km

Maximum Capacitance Unbalance:

Pair to Pair:400 nF/500m

Pair to Ground:1500 nF/500m

Maximum Characteristic Pair Attenuation:

@2.1KHz:0.64 dB/km

@4.1KHz:0.76 dB/km

@9.5KHz:1.05 dB/km

@20.7KHz:1.28 dB/km

Minimum Near End Crosstalk Attenuation (NEXT):

@4.1KHz:54 dB/km

@20.7KHz:42 dB/km

Minimum Far End Crosstalk Attenuation (FEXT):

@4.1KHz:59 dB/km

@20.7KHz:48 dB/km

Minimum Unbalance Attenuation:40 dB

Maximum Rated Voltage, between pair conductors:220 V rms

Maximum Rated Current:1 A rms

## DIMENSION AND PARAMETERS

No. of Pairs	Conductor Diameter	Nominal Inner Sheath Thickness	Nominal Interm. Sheath Thickness	Nominal Outer Sheath Thickness	Nom. Overall Diameter	Approx. Weight
	mm	mm	mm	mm	mm	kg/km
3	1.4	0.7	1.3	1.5	20.2	562



# Caledonian

## Railway Cables

[www.caledonian-cables.com](http://www.caledonian-cables.com)

[marketing@caledonian-cables.com](mailto:marketing@caledonian-cables.com)



Acid & Alkaline Resistant



Fire Retardant  
NF C32-070-2, 2(C1)  
IEC 60332-3-24/EN 50266-2-4



Flame Retardant  
NF C32-070-2, 1(C2)  
IEC 60332-1-2/EN 50265-2-1



Laid In conduit



Low Corrosivity  
IEC 60754-2/EN 50267-2-2, 3  
NF C32-074/NF C20-453



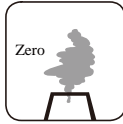
Low Smoke Emission  
IEC 61034-2 / EN 50268-2  
NF C32-073/NF C 20-962



Low Toxicity



Mineral Oil Resistant



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