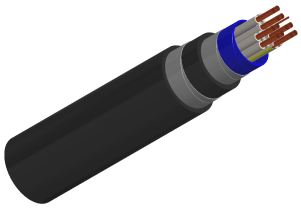
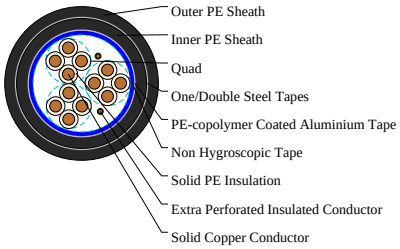
Caledonian
Railway Cables
www.caledonian-cables.com marketing@caledonian-cables.com

A-2Y(L)2YB2Y S(H45)

1.4mm conductor, 2.8mm Insulated wire
RS109y-2Y(L)2YB2Y-3Q1.4-S(H45)





APPLICATIONS

The cables are designed for transmission of low frequent signals up to 90 KHz through symmetric circuits in railway networks, and are suitable for laying directly into the ground or in ducts.

STANDARDS

Dlk 1.013.109y
Dlk 1.013.110y

VOLTAGE RATING

600V DC/420V AC

CABLE CONSTRUCTION

Conductors: Solid Annealed copper.
Insulation: Solid polyethylene.
Cabling Element: Four insulated conductors are twisted together to form a quad.
Stranding: Quads are helically stranded in concentric layers. Cables from 7 quads on, have two extra conductors of 0.5mm with perforated insulation (surveillance conductors).
Core Wrapping: Plastic tape(s) with overlapping.
Core Colour：Basi natural color+ring marking as below table,counter quad in each layers with open blue tape.
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.
Inner Sheath: Low density polyethylene.
Electromagnetic Shield: One helically applied steel tape (0.2-0.3mm) or two helically applied steel tapes (0.1mm).
Outer Sheath: Low density polyethylene

PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 10xOD
Temperature Range: -40℃ to +60℃ (during operation); -10℃ +60℃ (during installation)

Electrical Properties

Electrical Characteristics at 20°C:

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Nominal Conductor Diameter:1.4 mm
Maximum Conductor Resistance:23.4 Ω/km
Minimum Insulation Resistance @500 V DC (1min) :10000 MΩ.km
Maximum Mutual Capacitance @800Hz (AC): 45 nF/km
Maximum Capacitance Unbalance @800Hz:
K1 (100% / 50% all values):650 pF/km
K9-12 neighboured quads:500 pF/km
K9-12 over-neighboured quads:150 pF/km
Ea1/2:1300 pF/km
Miniumum Far-end Crosstalk Attenuation @90KHz:
100% / 80% all values:33 dB/km
Maximum Attenuation @90KHz:2.6 dB/km
Dielectric Strength, conductor to conductor (DC voltage 1min) : 3535 V
Surveillance Conductors:
Loop resistance, maximum: 190Ω/km
Insulation resistance:
- dry cable core, minimum:1000 MΩ.km
- wet cable core, maximum:30 MΩ.km
Operating Voltage AC/DC:420/600 V
Test Voltage 50 Hz 1 min:
Core to Core:2500 Veff
Core to Screen:2500 Veff

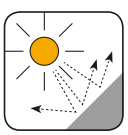
DIMENSION AND PARAMETERS

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
3	1.4	2.8	1.3	1.2	21	490


Buried in Ground


Laid In Ducts


Rated voltage


UV Resistant


Water Resistant

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