



# Caledonian

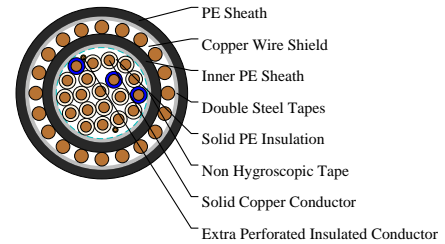
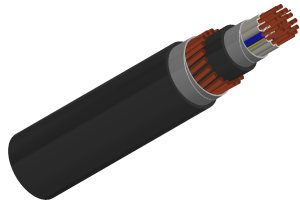
## Railway Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

### AJ-2Y2YDB2Y S(H145)

1.8mm conductor, 2.7mm Insulated wire rk 501 Series  
RS107y-2Y2YDB2Y-20C1.8-S(H145)-R5



### APPLICATIONS

The cables are designed for transmission of service tensions up to 600 VDC / 420 Veff AC100Hz in railway signalling networks, and are suitable for installation in ducts or laying directly into the ground.

### STANDARDS

DIK 1.013.107y

DIK 1.013.110y

### VOLTAGE RATING

600V DC/420V AC

### CABLE CONSTRUCTION

Conductors: Solid annealed copper.

Insulation: Solid polyethylene.

Stranding: Single conductors are helically stranded in concentric layers.

Cables from 14 conductors on have two extra conductors of 0.5mm with perforated insulation (surveillance conductors).

Core Colour: Natural, with one blue directional core in each layer.

Core Wrapping: Plastic tape(s) with overlapping.

Inner Sheath: Low density polyethylene.

Electrostatic Shield: One layer of helically applied copper wires (1.8mm).

Electromagnetic Shield: Two helically applied steel tapes (0.5 or 0.8mm thick, depending on required reduction factor)

Outer Sheath: Low density polyethylene.

### PHYSICAL AND THERMAL PROPERTIES

Minimum Bending Radius: 10xOD

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

### Electrical Properties

Electrical Characteristics at 20°C:



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Nominal Conductor Diameter:1.8 mm

Maximum Conductor Resistance:7.2 Ω/km

Minimum Insulation Resistance @500 V DC (1min) :10000 MΩ.km

Maximum Mutual Capacitance @800Hz (AC): 115 nF/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

Nominal Reduction Factor @ 100 V/km, 16 2/3 Hz:rk 501 series: 0.35

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 Conductor	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
20	1.8	2.7	1.3	1.2	27	1410



Anti Induction



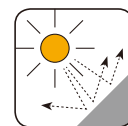
Buried in Ground



Laid In Ducts



Rated voltage



UV Resistant



Water Resistant



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