



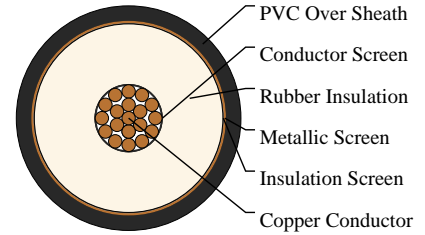
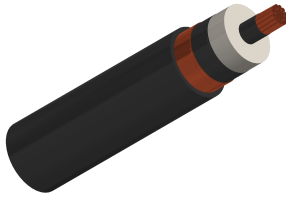
Caledonian

Medium Voltage Cables

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RG7H1R 1C50



APPLICATIONS

The single core cables are designed for distribution of electrical power with nominal voltage U_0/U ranging from 1.8/3KV to 18/30KV and frequency 50Hz. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARDS

IEC 60502 / CEI 20-13

FIRE PERFORMANCE

Flame Retardant	DIN VDE 0482 part 265-2-1/EN 50265-2-1/EN 60332-1-2
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VOLTAGE RATING

18/30KV ($U_m=36KV$)

CABLE CONSTRUCTION

Conductor: Plain annealed copper with IEC 60228 class 2.

Conductor Screen: The conductor screen consists of an extruded layer of non metallic, semi-conducting compound firmly bonded to the insulation to exclude all air voids.

Insulation: Rubber, type G7 .

Insulation Screen: The insulation screen consists of an extruded layer of non metallic, semiconducting compound extruded over the insulation. The extruded semi-conducting layer shall consist of bonded or cold strippable semi-conducting compound capable of removal for jointing or terminating. As an option, a semi-conducting tape may be applied over the extruded semi-conducting layer as a bedding for the metallic layer. The minimum thickness is 0.3 mm and the maximum resistivity is 500 Ohm-m at 90°C. The screen is tightly fitted to the insulation to exclude all air voids and can be easily hand stripped on site.

Outer Sheath: Red(RAL 3000), PVC, type RZ, other dimensions and colours available on request.

PHYSICAL AND THERMAL PROPERTIES

Testing Voltage (rms):45KV

Temperature Range: -15°C / +90°C



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Max Short Circuit Temperature: +250°C

Min Installation Temperature: 0°C

Min Bending Radius: 12 x OD

Max. Tensile Stress: 60 N/mm²

Electrical Properties

Table 2a. Total Cross Section and Max. DC Resistance of Copper Wire Screen:

Total Cross Section: 16mm

Max. DC Resistance at 20°C: 1.075Ω

Table 2a. Total Cross Section and Max. DC Resistance of Copper Tape Screen (0.1mm):

Total Cross Section: 11.2mm

Max. DC Resistance at 20°C: 0.579Ω

TECHNICAL CHARACTERISTICS

Nom. Cross-Section Area	DC Resistance	AC Resistance	Short Circuit Rating of Conductor CU/AL 1s	Capacitance	Charging Current	Reactance (Trefoil)	Reactance (Flat Spaced)	Inductance (Trefoil)	Inductance (Flat Spaced)	Impedance (Trefoil) CU	Impedance (Flat Spaced) CU
mm ²	μΩ/m	μΩ/m	kA	pF/m	mA/m	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m
50	387	494	6.8	281	0.39	116	172	313	514	511	527

DIMENSION AND PARAMETERS

No. of Cores × Cross-sectional Area	AWG Size	Outer Diameter	Approx. Weight
No. × mm ²		mm	kg/km
1x50	1	35.9±10%	1400