



Caledonian

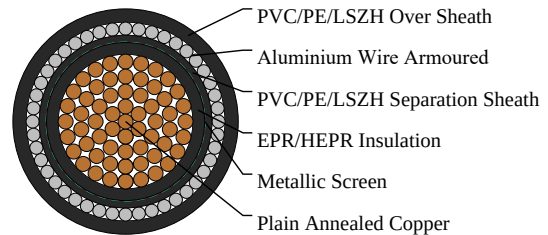
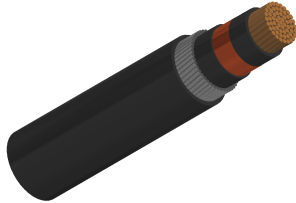
Medium Voltage Cables

www.caledonian-cables.com

marketing@caledonian-cables.com

Single Core Cables to IEC 60502 1C500

Steel Wire Armoured Cables



APPLICATIONS

The single core cables are designed for distribution of electrical power with nominal voltage U_0/U ranging 1.8/3KV 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 Part 1

VOLTAGE RATING

1.8/3KV

CABLE CONSTRUCTION

Conductor: Plain annealed copper with IEC 60228 class 1 or 2.

Insulation: Insulation is of ethylene propylene rubber (EPR/HEPR).

Metallic Layer: The concentric copper screen wire is applied over the insulation, or over the insulation screen or over an inner covering. As an alternative, copper tape(s) with minimum thickness of 0.1mm can be applied with overlap.

Separation Sheath: The separation sheath comprises a layer of extruded PVC, PE or LSZH, applied under the armour. The nominal thickness is calculated by $0.02D_u + 0.6\text{mm}$ where D_u is the fictitious diameter under the sheath in mm. For cables without a lead sheath, the nominal separation sheath thickness shall not be less than 1.2mm. For cables where the separation sheath is applied over the lead sheath, the nominal separation sheath thickness shall not be less than 1.0mm.

Armour: The armour consists of round aluminium wire armour applied helically over an extruded separation sheath.

Over Sheath: Overall sheath comprises a layer of extruded thermoplastic compound (PVC, PE or LSZH can be offered as an option.) or elastomeric compound (polychlorprene CSP or chlorosulfonated PE).

PHYSICAL AND THERMAL PROPERTIES

Operating Temperature: up to 90°C (XLPE or EPR insulation)

Temperature Range: -5°C (PVC or LSZH sheath); -20°C (PE sheath)

Short Circuit Temperature(5 seconds maximum duration): 250°C (XLPE or EPR insulation)



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Bending Radius: 20 x OD

Electrical Properties

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8m

Thermal Resistance of Soil: 1.5K•m/W

DIMENSION AND PARAMETERS

Nominal Cross- sectional Area	Nominal Insulation Thickness	Nominal Bedding Thickness	Nominal Armour Wire Diameter	Nominal Outer Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm ²	mm	mm	mm	mm	mm	kg/km
500	2.2	1.3	2.5	2.5	43	5930