



# Caledonian

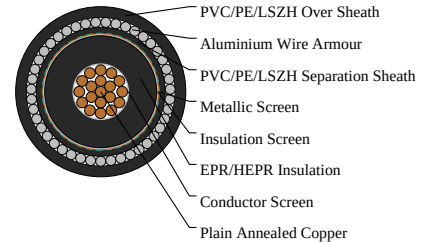
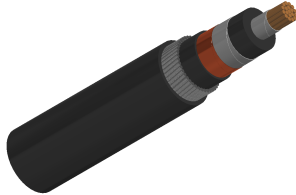
## Medium Voltage Cables

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

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

### Single Core Cables to IEC 60502 1C70

#### Aluminium Wire Armoured Cables



### APPLICATIONS

The single core cables are designed for distribution of electrical power with nominal voltage  $U_0/U$  ranging 12/20KV 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 2

### VOLTAGE RATING

12/20KV

### CABLE CONSTRUCTION

**Conductor:** Plain annealed copper with IEC 60228 class 1 or 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:** Insulation is of ethylene propylene rubber (EPR/HEPR).

**Insulation Screen:** The insulation screen consists of an extruded layer of non metallic, semiconducting compound extruded over the insulation.

**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.

**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 (polychloroprene 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 )



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

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<br>Cross-<br>sectional Area | Nominal<br>Insulation<br>Thickness | Nominal<br>Bedding<br>Thickness | Nominal<br>Armour Wire<br>Diameter | Nominal<br>Outer Sheath<br>Thickness | Approx.<br>Overall<br>Diameter | Approx.<br>Weight |
|-------------------------------------|------------------------------------|---------------------------------|------------------------------------|--------------------------------------|--------------------------------|-------------------|
| mm <sup>2</sup>                     | mm                                 | mm                              | mm                                 | mm                                   | mm                             | kg/km             |
| 70                                  | 5.5                                | 1.2                             | 2.0                                | 2.1                                  | 35                             | 1840              |