



# Caledonian

Medium Voltage Cables

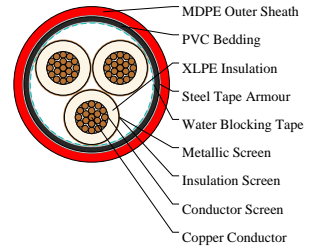
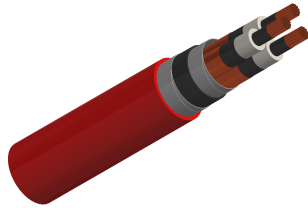
www.caledonian-cables.com

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## 6.35/11kV XLPE Insulated, MDPE Sheathed, Sheathed, Armoured MV Power Cables (Three Cores)

N2XSEYB2Y 3C70 (CU/XLPE/CS/PVC/STA/PE 6.35/11kV Class 2)

Caledonian No.: FGD400 12RVMX-R 3C70



### APPLICATIONS

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 60502-2

### CABLE CONSTRUCTION

**Conductor:** Plain annealed bare copper wire, stranded according to IEC 60228 class 2.

**Conductor Screen:** Extruded layer of semi-conducting cross-linkable compound is applied over the conductor and shall cover the surface completely.

**Insulation:** Extruded cross-linked polyethylene (XLPE) according to IEC 60502-2&IEC 60811.

**Insulation Screen:** Extruded layer of semi-conducting cross-linkable compound is applied over the insulation.

**Inner Covering & Fillers:** Cables shall have an inner covering over the laid-up cores. The inner covering and fillers are made of non hygroscopic material like polypropylene, except if the cable is to be made longitudinally watertight. The inner covering is extruded in general but may be lapped if the interstices between the cores are filled.

**Metallic Screen:** The metallic layer shall be applied over each core or applied as a collective screen. The metallic screen shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires.

**Waterproof:** Water blocking tape.

**Bedding:** Thermoplastic PVC compound.

**Armour:** Steel Tape Armour.

**Outer Sheath:** Thermoplastic MDPE compound Type ST7 according to IEC 60502-2.

### COLOUR CODE

**Insulation Colour:** Natural colouring with coloured stripe (brown, black, grey).

**Sheath Colour:** Red, other colours can be offered upon request.

### PHYSICAL AND THERMAL PROPERTIES



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Rated Voltage  $U_0/U$ : 6.35/11KV

Operating Voltage ( $U_m$ ): 12KV

Testing Voltage (rms): 25.5KV

Operating Temperature: up to 90°C

Temperature Range: -5°C

Short Circuit Temperature( 5 seconds maximum duration ): 250°C

Bending Radius: 15 x OD

## Electrical Properties

Current Rating Conditions:

Ground Temperature: 20°C

Ambient Temperature (air): 30°C

Depth of Soil: 0.8m

Thermal Resistance of Soil: 1.5K•m/W

## TECHNICAL CHARACTERISTICS

Nom. Cross-Section Area	DC Resistance	AC Resistance	Short Circuit Rating of Conductor CU/AL 1s	Capacitance	Charging Current	Short Circuit Rating of Metallic Screen Per Core 1 sec	Reactance	Inductance
mm <sup>2</sup>	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	μΩ/m	nH/m
70	268	343	9.8	298	0.6	2.6	103	330

## DIMENSION AND PARAMETERS

Nominal Cross-sectional Area	Nominal Insulation Thickness	Nominal Bedding Thickness	Metallic Screen Area	Nominal Sheath Thickness	Nominal Armour Steel Tape Thickness	Approx. Overall Diameter	Approx. Weight
mm <sup>2</sup>	mm	mm	mm <sup>2</sup>	mm	mm	mm	kg/km
70	3.4	1.5	16	2.7	0.5	52.8	5185

## Current Rating

Nominal Cross-Section Area	Buried direct in Ground (Trefoil)	Buried direct in Ground (Flat spaced)	Laid in Single Way Duct (Trefoil)	Laid in Single Way Duct (Flat Touching)	Laid in Air (Trefoil)	Laid in Air (Flat Touching)	Laid in Air (Flat Spaced)
mm <sup>2</sup>	A	A	A	A	A	A	A
70	220	220	194	194	253	253	253



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Rated voltage



IEC60502-2