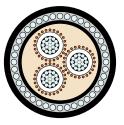




MEDIUM VOLTAGE CABLES

Aluminium 19/33 kV - Three core light duty screened armoured





Application

Electricity distribution or sub-transmission networks cable typically used as primary supply to Commercial, Industrial and urban residential networks. Suitable for low fault level or fast fault clearing cable systems.

Approvals

Approved by all major power Utilities and industrial customers in Australia.

Behaviour in flame and fire:

PVC or LSOH outer sheath exceeds the requirements of IEC 60332-1.

Temperature range

Minimum installation temperature: 0 °C Maximum operating temperature: +90 °C Minimum operating temperature: -25 °C

Minimum bending radius

Installed cables:	12D (PVC only)
	15D (HDPE)
During installation:	18D (PVC only)
	25D (HDPE)

Resistance to

Chemical exposure:	Accidental
Mechanical impact:	Heavy (Armoured)
Water exposure:	XLPE – Spray EPR – Immersion/Temporary coverage
Solar radiation and	
weather exposure:	Suitable for direct exposure.

Cable design

Conductor:

Circular compacted aluminium

Conductor screen:

Extruded semi-conductive compound, bonded to the insulation and applied in the same operations as the insulation.

Insulation:

Cross Linked Polyethylene (XLPE) – standard

Ethylene Propylene Rubber (EPR) - alternative

Insulation screen: Extruded, semi-conductive compound

Metallic screen:

Plain annealed copper wire: nominal 3kA for 1 second. See table next page.

Armouring:

Galvanised steel wires

Sheath:

Black 5V-90 polyvinyl chloride (PVC) – standard Orange 5V-90 PVC inner plus black high density polyethylene (HDPE) outer – alternative

Low smoke zero halogen (LSOH) - alternative

Installation conditions

In free air In duct In trench In ground



All sizes and values without tolerances are reference values. Specifications are for product as supplied by Prysmian Group: any modification or alteration afterwards of product may give different result. The information contained within this document must not be copied, reprinted or reproduced in any form, either wholly or in part, without the written consent of Prysmian Group: reinformation is believed to be correct at the time of issue. Prysmian Group reserves the right to amend this specification without prior notice. This specification is not contractually valid unless specifically authorised by Prysmian Group.

MEDIUM VOLTAGE CABLES

Physical & Electrical Characteristics

Product code: 3 CALX33UU So 70 95 120 150 Nominal conductor lameter rmm 8.1 9.8 11.5 12.9 14.2	
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resistance, dc @ 20°C 0.641 0.443 0.320 0.253 0.206 Conductor resistance, ac @ 90°C & 50 Hz 0.822 0.568 0.411 0.325 0.265 0.265 Inductance mH/km 0.457 0.422 0.401 0.387 0.375 Inductive reactance, @ 50Hz Ohm/km 0.144 0.133 0.126 0.121 0.118 Zero seq. impedance 2.57+ 2.27+ 2.05+ 1.89+ 1.77+ 0.0724 Ohm/km 0.139 0.155 0.171 0.183 0.196 Image: Context in the second in the	
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resistance @ 20°C 18,000 16,000 15,000 14,000 13,000	
Electric stress at conductor screen4.083.853.673.563.46kV/mm	
Charging current @ rated voltage & 50 Hz 0.831 0.927 1.02 1.09 1.17 A/phase/km 1.09 1.17 1.09 1.17	
Short kA, 1 sec 4.7 6.6 9.0 11.3 14.2	
circuit rating Metallic screen 4.3 4.6 4.8 5.1 5.3 kA, 1 sec	
In ground, direct buried A 150 180 220 250 280	
Contin- uous current A	
rating In free air, unenclosed 6 spaced 155 190 230 270 300 from wall A	

The cables described are designed to be used for the supply of electrical energy in fixed applications up to the rated voltages at a nominal power frequency between 49Hz and 61Hz. All values are for XLPE cables only. *Increased radius required for HDPE and nylon incorporating designs.