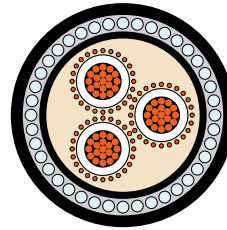


MEDIUM VOLTAGE CABLES
Copper 1.9/3.3 kV - Three core light duty screened armoured

Application

Electricity distribution network 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:
 Plain circular compacted copper

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. The information 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

Copper 1.9/3.3 kV – Three core light duty screened armoured										
Product code: 3CCUX3LDA										
Nominal conductor area mm ²	25	35	50	70	95	120	150	185	240	
Nominal conductor diameter mm	6.1	7.0	8.2	9.8	11.5	12.9	14.3	16.1	18.2	
Nominal insulation thickness mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Approx cable diameter mm	43.0	45.2	49.7	53.4	57.5	61.0	64.2	68.4	73.7	
Approx mass kg/100m	320	365	460	550	660	765	870	1010	1220	
Max pulling tension on conductors kN	5.3	7.4	11	15	20	25	25	25	25	
Max pulling tension on stocking grip kN	5.3	7.2	8.6	10.0	12	13	14	16	19	
Max pulling tension on armour wires kN	7.5	8.3	9.8	11	13	15	17	19	22	
Min bending radius* during installation mm	770	810	890	960	1040	1100	1160	1230	1330	
Min bending radius* set in position mm	520	540	600	640	690	730	770	820	880	
Max conductor resistance, dc @ 20°C Ohm/km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	
Conductor resistance, ac @ 90°C & 50 Hz Ohm/km	0.927	0.668	0.494	0.342	0.247	0.196	0.160	0.128	0.0987	
Inductance mH/km	0.380	0.364	0.348	0.321	0.307	0.295	0.287	0.278	0.270	
Inductive Reactance, @ 50Hz Ohm/km	0.119	0.114	0.109	0.101	0.0964	0.0926	0.0900	0.0874	0.0847	
Zero seq. impedance @ 20°C & 50 Hz Ohm/km	3.46+ j0.0720	3.26+ j0.0671	3.12+ j0.0624	3.00+ j0.0542	2.93+ j0.0499	2.68+ j0.0463	2.47+ j0.0440	2.29+ j0.0415	2.13+ j0.0390	
Capacitance, phase to earth µF/km	0.319	0.352	0.391	0.449	0.509	0.558	0.607	0.668	0.745	
Min insulation resistance @ 20°C MOhm.km	8,200	7,300	6,600	5,700	5,000	4,600	4,200	3,800	3,400	
Electric stress at conductor screen kV/mm	1.19	1.17	1.14	1.11	1.09	1.08	1.07	1.06	1.04	
Charging current @ rated voltage & 50 Hz A/phase/km	0.190	0.210	0.234	0.268	0.304	0.333	0.362	0.399	0.445	
Short circuit rating	Phase conductor kA, 1 sec	3.6	5.0	7.2	10.0	13.6	17.2	21.5	26.5	34.3
	Metallic screen kA, 1 sec	3.0	3.0	3.0	3.0	3.0	3.3	3.5	3.8	4.0
Continuous current rating	In ground, direct buried A	140	165	195	235	285	330	365	410	475
	In ground, in singleway ducts A	120	140	165	205	240	275	310	350	405
	In free air, unenclosed & spaced from wall A	135	160	190	235	280	335	375	430	495

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