



Cu(Al) 12.7/22 kV – Three Core Heavy Duty Screened Armoured MV CABLE

APPLICATION:

Distribution network cables serve as primary power supply for commercial, industrial and urban residential networks, suitable for high fault level systems (up to 10kA/1sec); higher fault current rated versions are available on request.

CABLE STRUCTURE:

Conductor:

Stranded compacted conductor(copper or aluminum)

Semi-conductive conductor screen:

Extruded cross-linked compound

Insulation: XLPE

Semi-conductive insulation screen:

Extruded hand strippable semi-conductive cross-linked compound

Metallic screen:

Copper wire screen

(nominal 10kA for 1 second)

Inner sheath: Black PVC

Amour: Galvanised steel wires

Outer sheath:

PVC. Optional: HDPE, halogen-free, flame-retardant, plus termite protection (nylon, double brass tape or chemical additive).

CERTIFICATES:

We hold SAA certifications for our product categories. Additionally, we possess authoritative certifications recognized in other countries and regions.

STANDARDS:

Product:

AS/NZS 1429.1

Electric cables - Polymeric insulated

For working voltages 1.9/3.3 (3.6) kV up to and including 19/33 (36) kV

Conductor:

AS/NZS 1125

Conductors in insulated electric cables and flexible cords

Insulation & Sheath:

AS/NZS 3808

Insulating and sheathing materials for electric cables

TECHNICAL DATA:

Rated volatge:

12.7/22 kV

Temperature range:

Minimum installation temperature: 0°C

Maximum operating temperature: +90°C

Minimum operating temperature: -25°C

Fault level:

Up to 10kA for 1 sec

Bending radius:

Installed cables:

12D (PVC) 15D (HDPE)

During installation:

18D (PVC) 25D (HDPE)





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Physical Character Sheet (AL Conductor)

Nominal conductor area	Nominal insulation thickness	Diameter over insulation	Number of screen wires and diameter of screen wires	Diameter of steel wire	Approx. overall diameter	Approx. weight	Maximum pulling tension	Minimum Bending Radius During installation	Minimum Bending Radius Installed
mm ²	mm	mm	nb x mm ∅	mm	mm	kg/km	kN	mm	mm
3 × 50	5.5	20.5	19/0.85	2.5	66.8	6000	7.5	1190	790
3 × 70	5.5	22.0	27/0.85	2.5	70.4	6650	11	1270	850
3 × 95	5.5	23.6	36/0.85	2.5	74.3	7400	14	1330	890
3 × 120	5.5	25.2	40/0.85	3.15	79.5	9200	18	1430	950
3 × 150	5.5	26.5	40/0.85	3.15	82.7	9900	23	1490	990
3 × 185	5.5	28.3	40/0.85	3.15	87.0	10500	25	1560	1040
3 × 240	5.5	30.5	40/0.85	3.15	92.2	12000	25	1660	1110
3 × 300	5.5	32.7	40/0.85	3.15	97.6	13200	25	1750	1170

Electrical Data Sheet (AL Conductor)

Conductor area	Max. conductor DC resistance at 20°C	Conductor AC resistance at 50Hz and 90°C	Inductive reactance at 50Hz and 90°C	Min insulation resistance at 20°C	Current rating at core temp. 90°C in ground	Current rating at core temp. 90° C in air
mm ²	Ohm/km	Ohm/km	Ohm/km	MOhm/km	A	A
3 × 50	0.641	0.822	0.132	14000	156	155
3 × 70	0.443	0.568	0.120	12500	190	192
3 × 95	0.320	0.411	0.115	11000	226	230
3 × 120	0.253	0.325	0.111	10000	257	265
3 × 150	0.206	0.265	0.108	9500	286	300
3 × 185	0.164	0.211	0.103	8600	324	340
3 × 240	0.125	0.161	0.0991	7700	370	396
3 × 300	0.100	0.130	0.0961	7100	413	448



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mm ²	mm	mm	nb x mm ø	mm	mm	kg/km	kN	mm	mm
3 × 35	5.5	19.2	20/0.85	2.5	63.6	6200	7.4	1140	760
3 × 50	5.5	20.5	29/0.85	2.5	66.8	6800	11	1200	790
3 × 70	5.5	22.0	40/0.85	2.5	70.7	8050	15	1260	850
3 × 95	5.5	23.6	40/0.85	2.5	74.3	9150	20	1330	890
3 × 120	5.5	25.2	40/0.85	3.15	79.5	11100	25	1420	950
3 × 150	5.5	26.5	40/0.85	3.15	82.7	12300	25	1490	990
3 × 185	5.5	28.3	40/0.85	3.15	87	13800	25	1570	1040
3 × 240	5.5	30.5	40/0.85	3.15	92.2	16500	25	1660	1110
3 × 300	5.5	32.7	40/0.85	3.15	97.6	18800	25	1750	1170

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Nominal conductor area	Max. conductor DC resistance at 20°C	Conductor AC resistance at 50Hz and 90°C	Inductive reactance at 50Hz and 90°C	Min insulation resistance at 20°C	Current rating at core temp. 90°C in ground	Current rating at core temp. 90°C in air
mm ²	Ohm/km	Ohm/km	Ohm/km	MOhm/km	A	A
3 × 35	0.524	0.668	0.138	15000	170	169
3 × 50	0.387	0.494	0.131	14000	201	200
3 × 70	0.268	0.342	0.121	13000	242	250
3 × 95	0.193	0.247	0.115	11000	290	296
3 × 120	0.153	0.196	0.110	10000	328	339
3 × 150	0.124	0.159	0.107	9200	365	381
3 × 185	0.0991	0.128	0.103	8600	409	430
3 × 240	0.0754	0.0981	0.0991	7700	465	499
3 × 300	0.0601	0.0792	0.0961	7100	516	560