



Cu(Al) 12.7/22 kV – Three Core Heavy Duty Screened Unarmoured 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)

Outer sheath:

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

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)

CERTIFICATES:

We hold SAA certifications for our product categories.

Additionally, we possess authoritative certifications recognized in other countries and regions.





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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	Overall Diameter	Approx. weight	Maximum pulling tension	Minimum Bending Radius During installation	Minimum Bending Radius Installed
mm ²	mm	mm	nb x mm ∅	mm	kg/km	kN	mm	mm
3 × 50	5.5	20.5	19/0.85	58.8	2650	7.5	1030	680
3 × 70	5.5	22	27/0.85	62.2	3200	11	1100	730
3 × 95	5.5	23.6	36/0.85	66.1	3800	14	1170	780
3 × 120	5.5	25.2	40/0.85	69.8	4200	18	1220	815
3 × 150	5.5	26.5	40/0.85	72.8	4700	23	1290	860
3 × 185	5.5	28.3	40/0.85	77.1	5300	25	1370	910
3 × 240	5.5	30.5	40/0.85	82.1	6000	25	1450	960
3 × 300	5.5	32.7	40/0.85	87.3	6900	25	1550	1030
3 × 400	5.5	35.8	40/0.85	94.4	8050	25	1670	1110
3 × 500	5.5	39	40/0.85	101.7	10300	25	1920	1280

Electrical Data Sheet (AL Conductor)

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 × 50	0.641	0.821	0.130	14000	151	153
3 × 70	0.443	0.568	0.118	12500	192	191
3 × 95	0.320	0.411	0.115	11000	231	233
3 × 120	0.253	0.325	0.110	10000	263	265
3 × 150	0.206	0.265	0.107	9200	295	305
3 × 185	0.164	0.211	0.103	8500	330	350
3 × 240	0.125	0.161	0.099	7800	387	410
3 × 300	0.100	0.130	0.096	7210	432	470
3 × 400	0.0778	0.102	0.0919	6400	500	547
3 × 500	0.0617	0.0818	0.0900	5700	555	610



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mm ²	mm	mm	nb x mm ∅	mm	kg/km	kN	mm	mm
3 × 35	5.5	19.2	20/0.85	55.8	3100	7.4	980	650
3 × 50	5.5	20.5	29/0.85	58.8	3700	11	1030	690
3 × 70	5.5	22.01	40/0.85	62.5	4700	15	1100	730
3 × 95	5.5	23.6	40/0.85	66.1	5600	20	1170	780
3 × 120	5.5	25.2	40/0.85	69.8	6500	25	1230	820
3 × 150	5.5	26.5	40/0.85	72.8	7460	25	1280	860
3 × 185	5.5	28.3	40/0.85	77.1	8700	25	1370	905
3 × 240	5.5	30.5	40/0.85	82.1	10700	25	1450	970
3 × 300	5.5	32.7	40/0.85	87.3	12500	25	1550	1030
3 × 400	5.5	35.8	40/0.85	94.4	15500	25	1670	1110
3 × 500	5.5	39.0	40/0.85	101.7	19600	25	1920	1280

Electrical Data Sheet (Cu Conductor)

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	0.136	15000	172	167
3 × 50	0.387	0.494	0.131	14000	204	200
3 × 70	0.268	0.342	0.120	12000	250	250
3 × 95	0.193	0.247	0.114	11000	298	301
3 × 120	0.153	0.197	0.11	10000	336	346
3 × 150	0.124	0.160	0.107	9300	380	391
3 × 185	0.0991	0.128	0.102	8500	429	447
3 × 240	0.0754	0.0981	0.0991	7800	496	527
3 × 300	0.0601	0.0791	0.0961	7100	541	590
3 × 400	0.047	0.0631	0.0914	6400	634	694
3 × 500	0.0373	0.0518	0.0900	5700	697	766