



Cu(Al) 19/33 kV – Single Core Heavy Duty Screened Unarmoured MV CABLE

APPLICATION:

Cables for electricity distribution networks are commonly employed as the main power supply for commercial, industrial, and urban residential grids. They are suitable for high fault-level systems with a rating of up to 10kA/1sec.

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:

19/33 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 only) 15D (HDPE)

During installation:

18D (PVC only) 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 ø	mm	kg/km	kN	mm	mm
1 × 50	8.0	25.5	23/1.35	34.3	1250	2.5	620	410
1 × 70	8.0	27.0	32/1.35	36.0	1500	3.5	650	430
1 × 95	8.0	28.6	43/1.35	37.6	1800	4.8	680	460
1 × 120	8.0	30.2	48/1.35	39.4	2000	6.0	710	470
1 × 150	8.0	31.5	48/1.35	40.7	2100	7.5	730	490
1 × 185	8.0	33.3	48/1.35	42.8	2000	9.3	770	510
1 × 240	8.0	35.5	48/1.35	45.2	2550	12	810	540
1 × 300	8.0	37.7	48/1.35	47.6	2800	15	850	570
1 × 400	8.0	40.8	48/1.35	50.9	3150	20	910	600
1 × 500	8.0	44.0	48/1.35	54.3	3700	25	780	650
1 × 630	8.0	47.9	48/1.35	58.4	4250	25	1050	700

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
1 × 50	0.641	0.821	0.162	18000	160	175
1 × 70	0.443	0.568	0.15	16000	195	215
1 × 95	0.320	0.410	0.143	15000	230	260
1 × 120	0.253	0.325	0.138	14000	260	295
1 × 150	0.206	0.265	0.134	13000	290	335
1 × 185	0.164	0.211	0.128	12000	330	385
1 × 240	0.125	0.161	0.123	11000	380	450
1 × 300	0.100	0.129	0.119	9900	425	515
1 × 400	0.0778	0.101	0.115	8800	485	600
1 × 500	0.0605	0.080	0.111	8000	550	690
1 × 630	0.0469	0.063	0.107	7200	620	800



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Physical Character Sheet (CU 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
1 × 50	8	25.5	34/1.35	34.3	1700	3.5	620	410
1 × 70	8	27	48/1.35	36	2100	4.9	650	430
1 × 95	8.0	28.6	48/1.35	37.6	2400	6.7	680	460
1 × 120	8	30.2	48/1.35	39.4	2700	8.4	710	470
1 × 150	8.0	31.5	48/1.35	40.7	3000	11	740	490
1 × 185	8	33.3	48/1.35	42.8	3400	13	770	510
1 × 240	8.0	35.5	48/1.35	45.2	4000	17	810	540
1 × 300	8.0	37.7	48/1.35	47.6	4650	21	850	570
1 × 400	8.0	40.8	48/1.35	50.9	5500	25	910	600
1 × 500	8	44	48/1.35	54.3	6793	25	980	650
1 × 630	8	47.9	48/1.35	58.4	8223	25	1050	700

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
1 × 50	0.387	0.4940	0.162	18000	205	220
1 × 70	0.268	0.3420	0.15	16000	250	275
1 × 95	0.193	0.2470	0.143	15000	295	335
1 × 120	0.153	0.1950	0.137	14000	335	380
1 × 150	0.124	0.1590	0.133	13000	370	430
1 × 185	0.0991	0.1270	0.128	12000	420	490
1 × 240	0.0754	0.0980	0.123	11000	480	575
1 × 300	0.0601	0.0790	0.119	9900	535	655
1 × 400	0.0470	0.0625	0.115	8800	605	750
1 × 500	0.0366	0.0500	0.11	8000	675	855
1 × 630	0.0283	0.0400	0.107	7200	750	970