

Single Core Power Cable 6.35/11kV

STANDARD: AS/NZS 1429.1

RATED VOLTAGE: 6.35/11(12) kV

FAULT LEVEL: Up to 10kA for 1sec or to customer requirements

IMPULSE VOLTAGE: 95kV

TEMPERATURE RANGE:

In continuous operation Max. conductor temp 90°C.

Lowest cable temperature during installation: -10°C and below 0°C special precaution must be taken.

BENDING RADIUS:

During installation: 18 x D. When installed: 12 x D (PVC sheathed cables)

D = Overall diameter of cable

DESIGN

CONDUCTOR:

Stranded, round and compacted copper complying with AS/NZS 1125

SEMI-CONDUCTIVE CONDUCTOR SCREEN:

Extruded crosslinked compound

INSULATION:

XLPE complying with AS/NZS 3808

SEMI-CONDUCTIVE INSULATION SCREEN:

Extruded hand strippable cross-linked compound

METALLIC SCREEN:

Circular copper wires

OUTER SHEATH:

Black PVC. PE, halogen free, flame retardant, termite protection in the form of nylon, double brass tape and chemical additive also available.

Other colours available on request



6.35/11kV Single Core Copper Conductor

Product code	Conductor size	Nominal thickness of insulation	Diameter over insulation	Number & Nominal Diameter of Screen Wires	Overall diameter (approx.)	Mass (approx.)	Maximum pulling tension	Minimum bending radius	
								During installation	Installed
	mm ²	mm	mm	no./mm	mm	kg/km	kN	mm	mm
1MV035C11HP	35	3.4	14.9	24/1.35	22.7	968.8	2.5	410	270
1MV050C11HP	50	3.4	16.1	34/1.35	24.0	1243.0	3.5	430	290
1MV070C11HP	70	3.4	17.9	38/1.52	26.8	1670.6	4.9	480	320
1MV095C11HP	95	3.4	19.5	48/1.35	28.1	1938.6	6.7	510	340
1MV120C11HP	120	3.4	21.0	48/1.35	29.7	1295.1	8.4	530	360
1MV150C11HP	150	3.4	22.5	48/1.35	31.3	2479.9	11	560	380
1MV185C11HP	185	3.4	24.3	48/1.35	32.8	2844.3	13	590	390
1MV240C11HP	240	3.4	26.5	48/1.35	35.1	3412.1	17	630	420
1MV300C11HP	300	3.4	28.6	48/1.35	37.4	4011.3	21	670	450
1MV400C11HP	400	3.4	31.5	48/1.35	40.5	4836.3	25	730	490
1MV500C11HP	500	3.4	35.3	48/1.35	44.6	6166.3	25	800	540
1MV630C11HP	630	3.4	38.7	48/1.35	48.2	7759.0	25	870	580
1MV800C11HP	800	3.4	43.9	48/1.35	53.8	9775.2	25	970	650
1MV10MC11HP	1000	3.4	48.2	48/1.35	58.5	11124	25	1050	700

Electrical Data

Conductor size	Maximum conductor DC resistance at 20°C	Conductor AC resistance at 50Hz and 90°C	Inductive reactance at 50Hz and 90°C	Insulation resistance at 20°C	Charging current per phase	Dielectric loss per phase	Zero sequence resistance at 20°C	Zero sequence reactance at 50Hz
mm ²	Ω/km	Ω/km	Ω/km	MΩ.km	A/km	W/km	Ω/km	Ω/km
35	0.524	0.668	0.139	11000	0.455	11.5	1.04	0.0792
50	0.387	0.494	0.132	9500	0.505	12.8	0.756	0.0732
70	0.268	0.342	0.123	8300	0.580	14.7	0.530	0.0648
95	0.193	0.247	0.117	7400	0.646	16.4	0.456	0.0595
120	0.153	0.196	0.113	6800	0.708	18.0	0.417	0.0558
150	0.124	0.159	0.109	6300	0.770	19.6	0.388	0.0528
185	0.0991	0.128	0.105	5700	0.844	21.4	0.364	0.0492
240	0.0754	0.0980	0.101	5200	0.934	23.7	0.341	0.0462
300	0.0601	0.0791	0.0984	4700	1.02	25.9	0.326	0.0438
400	0.0470	0.0632	0.0943	4200	1.14	28.9	0.313	0.0403
500	0.0366	0.0508	0.0925	3700	1.30	32.9	0.303	0.0391
630	0.0283	0.0414	0.0899	3400	1.43	36.4	0.295	0.0370
800	0.0221	0.0348	0.0867	2900	1.65	41.8	0.290	0.0343
1000	0.0176	0.0255	0.0846	2600	1.82	46.3	0.286	0.0324

Current Ratings

Conductor size	Current rating at core temp. 90°C in ground	Current rating at core temp. 90°C in air	Current rating at core temp. 90°C in underground ducts	Max. short-circuit current on the conductor during 1sec at initial temp. 90°C	Short circuit current rating of the screen 1sec
mm ²	A	A	A	kA	kA
35	177	181	161	5.00	5.2
50	207	216	187	7.1	7.3
70	251	269	223	10.0	10.2
95	296	323	261	13.6	10.2
120	332	370	292	17.1	10.2
150	369	417	322	21.4	10.2
185	410	472	356	26.4	10.2
240	465	546	400	34.3	10.2
300	513	615	439	42.9	10.2
400	568	698	481	57.2	10.2
500	625	788	529	71.5	10.2
630	680	880	567	90.0	10.2
800	735	982	618	114.0	10.2
1000	817	1120	649	143.0	10.2