

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[6.35/ 11kV Copper XLPE Single Core PVC Sheathed]

## APPLICATION

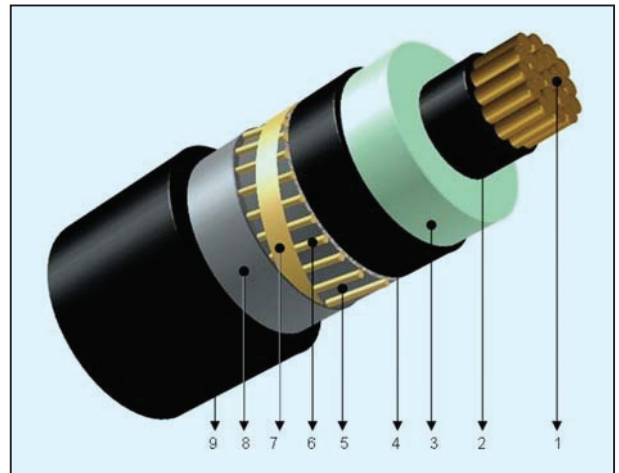
Mostly used as feeder electric cable for power distribution network such as power supply station, substation, switching system etc. They are suitable for installation on medium mechanical stress dry, indoors, outdoors, underground areas.

## STANDARDS

- Australian/New Zealand - AS/NZS 1429.1:2006.
- International - IEC 60228, IEC 60502, IEC 60986.

## CONSTRUCTION

- Phase Conductor: Plain annealed copper Class 2 compact stranded.
- Phase Core: Triple head extrusion - semi-conductive, thermosetting conductor shield, XLPE (cross-linked polyethylene) insulation and bonded semi conductive insulation screen, all dry nitrogen cured.
- Metallic Screen: Solid bare annealed copper wires uniformly spaced around the cable provides high conductivity for faulty current as earth wires. (Plain annealed copper wire has a minimum diameter of 0.85 mm) and a counter helix copper tape (0.1x10mm).
- Sheath: UV resistant heavy duty polyvinyl chloride (V-90).



11000 volts, XLPE insulation, LD/HD screen, extruded overlaying PVC sheath

1. Conductor: Compacted, copper conductor;
2. Conductor Shield: Extruded, semi-conductive, thermosetting compound;
3. Insulation: Extruded XLPE;
4. Insulation Shield: Extruded semi-conductive thermosetting compound;
5. Separated layer: Semi conductive tape;
6. Metallic Screen: Plain copper wires, helically applied;
7. Metallic Screen: Copper tape;
8. Separated layer: Polyester tape.
9. Outer protective sheath: Extruded PVC V-90 black compound.

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[6.35/11kV Copper XLPE Single Core PVC Sheathed]

Catalog No.	Size	Nominal conductor diameter	Minimum average insulation thickness	Diameter over insulation screen	Nominal cable diameter, 20°C	Max. DC resistance of conductor at 20°C	Screen		1 sec. fault rating, kA(1)		Minimum bending radius, mm		Approx. Weight,
							Nominal area, mm²	Number & diameter of wires per core	3 phase symmetrical	Screen	Installed	During installation	
LIGHT DUTY SCREEN													
35MM1C11KVLD	35	7.0	3.4	16.9/17.4	23.0	0.52	17.6	31x0.85	5.0	2.6	280	420	840
50MM1C11KVLD	50	8.2	3.4	18.1/18.6	24.2	0.39	17.6	31x0.85	7.2	2.6	290	440	980
70MM1C11KVLD	70	9.9	3.4	19.8/20.3	25.9	0.27	17.6	31x0.85	10.0	2.6	310	470	1200
95MM1C11KVLD	95	11.6	3.4	21.5/22.0	27.6	0.19	17.6	31x0.85	13.6	2.6	330	500	1480
120MM1C11KVLD	120	13.2	3.4	23.3/23.8	29.4	0.15	17.6	31x0.85	17.2	2.6	360	530	1750
150MM1C11KVLD	150	14.5	3.4	24.6/25.1	30.9	0.12	17.6	31x0.85	21.5	2.6	370	560	2030
185MM1C11KVLD	185	16.3	3.4	26.4/26.9	32.7	0.10	17.6	31x0.85	26.5	2.6	390	590	2410
240MM1C11KVLD	240	18.5	3.4	28.6/29.1	35.1	0.08	17.6	31x0.85	34.3	2.6	420	640	2980
300MM1C11KVLD	300	20.9	3.4	31.0/31.5	37.7	0.06	17.6	31x0.85	42.9	2.6	450	680	3600
400MM1C11KVLD	400	24.0	3.4	34.4/34.9	41.3	0.05	17.6	31x0.85	57.2	2.6	500	750	4480
500MM1C11KVLD	500	26.8	3.4	37.2/37.7	44.3	0.04	17.6	31x0.85	71.5	2.6	530	800	5500
630MM1C11KVLD	630	31.0	3.4	41.4/41.9	48.7	0.03	17.6	31x0.85	90.1	2.6	590	880	6940
HEAVY DUTY SCREEN													
35MM1C11KV	35	7.0	3.4	16.9/17.4	24.0	0.52	34.3	24x1.35	5	5.1	290	440	1000
50MM1C11KV	50	8.2	3.4	18.1/18.6	25.6	0.39	49.1	26x1.55	7.2	7.3	310	460	1280
70MM1C11KV	70	9.9	3.4	19.8/20.3	28.0	0.27	68	24x1.9	10	10.1	340	510	1680
95MM1C11KV	95	11.6	3.4	21.5/22.0	30.1	0.19	88.2	25x2.12	13.6	13.1	360	540	2160
120MM1C11KV	120	13.2	3.4	23.3/23.8	32.1	0.15	88.2	25x2.12	17.2	13.1	390	580	2430
150MM1C11KV	150	14.5	3.4	24.6/25.1	33.4	0.12	88.2	25x2.12	21.5	13.1	400	600	2700
185MM1C11KV	185	16.3	3.4	26.4/26.9	35.4	0.1	88.2	25x2.12	26.5	13.1	430	640	3100
240MM1C11KV	240	18.5	3.4	28.6/29.1	37.6	0.08	88.2	25x2.12	34.3	13.1	450	680	3660
300MM1C11KV	300	20.9	3.4	31.0/31.5	40.2	0.06	88.2	25x2.12	42.9	13.1	480	730	4280
400MM1C11KV	400	24.0	3.4	34.4/34.9	43.8	0.05	88.2	25x2.12	57.2	13.1	530	790	5160
500MM1C11KV	500	26.8	3.4	37.2/37.7	46.8	0.04	88.2	25x2.12	71.5	13.1	560	850	6180
630MM1C11KV	630	31.0	3.4	41.4/41.9	51.2	0.03	88.2	25x2.12	90.1	13.1	620	930	7630

For fault durations other than one second, divide the appropriate given value by the square root of the required time (in seconds)

Screen fault ratings are based on an initial temperature of 80°C and a final temperature of 250°C.

Conductor fault ratings are based on an initial temperature of 90°C and a final temperature of 250°C.

LIGHT DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 2.7kA for 1 second

HEAVY DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 13.1kA for 1 sec and not exceeding the conductor rating..

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[12.7/22kV Copper XLPE Single Core PVC Sheathed]

## APPLICATION

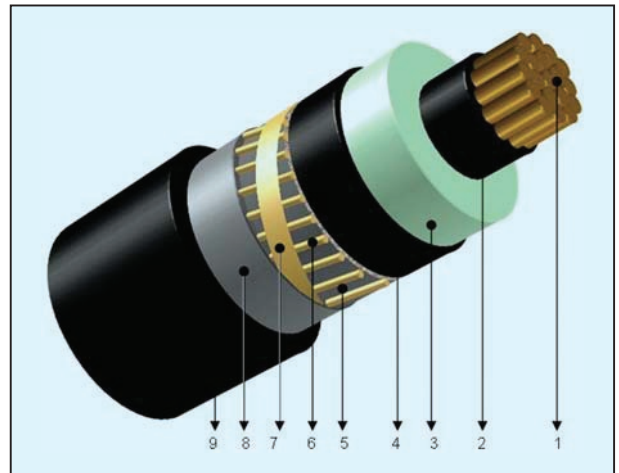
Mostly used as feeder electric cable for power distribution network such as power supply station, substation, switching system etc. They are suitable for installation on medium mechanical stress dry, indoors, outdoors, underground areas.

## STANDARDS

- Australian/New Zealand - AS/NZS 1429.1:2006.
- International - IEC 60228, IEC 60502, IEC 60986.

## CONSTRUCTION

- Phase Conductor: Plain annealed copper Class 2 compact stranded.
- Phase Core: Triple head extrusion - semiconductive, thermosetting conductor shield, XLPE (cross-linked polyethylene) insulation and bonded semi conductive insulation screen, all dry nitrogen cured.
- Metallic Screen: Solid bare annealed copper wires uniformly spaced around the cable provides high conductivity for faulty current as earth wires. (Plain annealed copper wire has a minimum diameter of 0.85 mm) and a counter helix copper tape (0.1x10mm).
- Sheath: UV resistant heavy duty polyvinyl chloride (V-90).



22000 volts, XLPE insulation, LD/HD screen, extruded overlaying PVC sheath

1. Conductor: Compacted, copper conductor;
2. Conductor Shield: Extruded, semi-conductive, thermosetting compound;
3. Insulation: Extruded XLPE;
4. Insulation Shield: Extruded semi-conductive thermosetting compound;
5. Separated layer: Semi conductive tape;
6. Metallic Screen: Plain copper wires, helically applied;
7. Metallic Screen: Copper tape;
8. Separated layer: Polyester tape.
9. Outer protective sheath: Extruded PVC V-90 black compound.

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[12.7/22kV Copper XLPE Single Core PVC Sheathed]

Catalog No.	Size	Nominal conductor diameter	Minimum average insulation thickness	Diameter over insulation screen	Nominal cable diameter, 20°C	Max. DC resistance of conductor at 20°C	Screen		1 sec. fault rating, kA(1)		Minimum bending radius, mm		Approx. Weight, kg/km
							Nominal area, mm <sup>2</sup>	Number & diameter of wires per core	3 phase symmetrical	Screen	Installed	During installation	
	mm <sup>2</sup>	mm	mm	min/max mm	mm	Ohm/km							
LIGHT DUTY SCREEN													
35MM1C22KVLD	35	7.0	5.5	21.1/21.7	27.2	0.52	17.6	31x0.85	5	2.6	330	490	1000
50MM1C22KVLD	50	8.2	5.5	22.3/22.9	28.4	0.39	17.6	31x0.85	7.2	2.6	340	510	1140
70MM1C22KVLD	70	9.9	5.5	24.0/24.6	30.3	0.27	17.6	31x0.85	10	2.6	370	550	1380
95MM1C22KVLD	95	11.6	5.5	25.7/26.3	32.0	0.19	17.6	31x0.85	13.6	2.6	390	580	1680
120MM1C22KVLD	120	13.2	5.5	27.5/28.1	34.0	0.15	17.6	31x0.85	17.2	2.6	410	610	1970
150MM1C22KVLD	150	14.5	5.5	28.8/29.4	35.3	0.12	17.6	31x0.85	21.5	2.6	430	640	2250
185MM1C22KVLD	185	16.3	5.5	30.6/31.2	37.3	0.10	17.6	31x0.85	26.5	2.6	450	670	2660
240MM1C22KVLD	240	18.5	5.5	32.8/33.4	39.7	0.08	17.6	31x0.85	34.3	2.6	480	720	3250
300MM1C22KVLD	300	20.9	5.5	35.2/35.8	42.1	0.06	17.6	31x0.85	42.9	2.6	510	760	3870
400MM1C22KVLD	400	24.0	5.5	38.6/39.2	45.7	0.05	17.6	31x0.85	57.2	2.6	550	820	4780
500MM1C22KVLD	500	26.8	5.5	41.4/42.0	48.7	0.04	17.6	31x0.85	71.5	2.6	590	880	5820
630MM1C22KVLD	630	31.0	5.5	45.6/46.2	53.1	0.03	17.6	31x0.85	90.1	2.6	640	960	7300

HEAVY DUTY SCREEN													
35MM1C22KV	35	7.0	5.5	21.1/21.7	28.2	0.52	34.3	24x1.35	5.0	5.1	340	510	1160
50MM1C22KV	50	8.2	5.5	22.3/22.9	29.8	0.39	49.1	26x1.55	7.2	7.3	360	540	1450
70MM1C22KV	70	9.9	5.5	24.0/24.6	32.4	0.27	68	24x1.9	10.0	10.1	390	590	1870
95MM1C22KV	95	11.6	5.5	25.7/26.3	34.7	0.19	88.2	25x2.12	13.6	13.1	420	630	2380
120MM1C22KV	120	13.2	5.5	27.5/28.1	36.5	0.15	88.2	25x2.12	17.2	13.1	440	660	2650
150MM1C22KV	150	14.5	5.5	28.8/29.4	38.0	0.12	88.2	25x2.12	21.5	13.1	460	690	2950
185MM1C22KV	185	16.3	5.5	30.6/31.2	39.8	0.10	88.2	25x2.12	26.5	13.1	480	720	3340
240MM1C22KV	240	18.5	5.5	32.8/33.4	42.4	0.08	88.2	25x2.12	34.3	13.1	510	760	3930
300MM1C22KV	300	20.9	5.5	35.2/35.8	44.8	0.06	88.2	25x2.12	42.9	13.1	540	810	4570
400MM1C22KV	400	24.0	5.5	38.6/39.2	48.4	0.05	88.2	25x2.12	57.2	13.1	580	870	5490
500MM1C22KV	500	26.8	5.5	41.4/42.0	51.4	0.04	88.2	25x2.12	71.5	13.1	620	930	6530
630MM1C22KV	630	31.0	5.5	45.6/46.2	55.8	0.03	88.2	25x2.12	90.1	13.1	670	1010	8010

For fault durations other than one second, divide the appropriate given value by the square root of the required time [in seconds]

Screen fault ratings are based on an initial temperature of 80°C and a final temperature of 250°C.

Conductor fault ratings are based on an initial temperature of 90°C and a final temperature of 250°C.

LIGHT DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 2.7kA for 1 second.

HEAVY DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 13.1kA for 1 second and not exceeding the conductor rating..

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[19/33kV Copper XLPE Single Core PVC Sheathed]

## APPLICATION

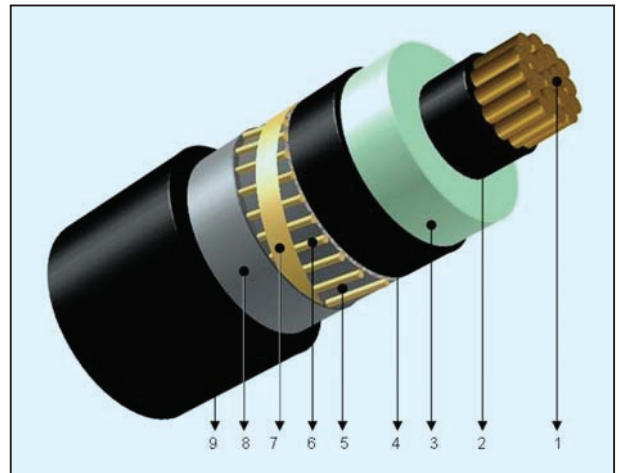
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## CONSTRUCTION

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- Metallic Screen: Solid bare annealed copper wires uniformly spaced around the cable provides high conductivity for faulty current as earth wires. (Plain annealed copper wire has a minimum diameter of 0.85 mm) and a counter helix copper tape (0.1x10mm).
- Sheath: UV resistant heavy duty polyvinyl chloride (V-90).



33000 volts, XLPE insulation, LD/HD screen, extruded overlaying PVC sheath

1. Conductor: Compacted, copper conductor;
2. Conductor Shield: Extruded, semi-conductive, thermosetting compound;
3. Insulation: Extruded XLPE;
4. Insulation Shield: Extruded semi-conductive thermosetting compound;
5. Separated layer: Semi conductive tape;
6. Metallic Screen: Plain copper wires, helically applied;
7. Metallic Screen: Copper tape;
8. Separated layer: Polyester tape.
9. Outer protective sheath: Extruded PVC V-90 black compound.

# MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

[19/33kV Copper XLPE Single Core PVC Sheathed]

Catalog No.	Size	Nominal conductor diameter	Minimum average insulation thickness	Diameter over insulation screen	Nominal cable diameter, 20°C	Max. DC resistance of conductor at 20°C	Screen		1 sec. fault rating, kA(1)		Minimum bending radius, mm		Approx. Weight, kg/km
							Nominal area, mm²	Number & diameter of wires per core	3 phase symmetrical	Screen	Installed	During installation	
	mm²	mm	mm	min/max mm	mm	Ohm/km							
LIGHT DUTY SCREEN													
50MM1C33KVLD	50	8.2	8.0	27.3/28.0	33.8	0.39	18.2	32x0.85	7.2	2.7	410	610	1410
70MM1C33KVLD	70	9.9	8.0	29.0/29.7	35.5	0.27	18.2	32x0.85	10.0	2.7	430	640	1650
95MM1C33KVLD	95	11.6	8.0	30.7/31.4	37.4	0.19	18.2	32x0.85	13.6	2.7	450	670	1980
120MM1C33KVLD	120	13.2	8.0	32.5/33.2	39.2	0.15	18.2	32x0.85	17.2	2.7	470	710	2270
150MM1C33KVLD	150	14.5	8.0	33.8/34.5	40.7	0.12	18.2	32x0.85	21.5	2.7	490	730	2580
185MM1C33KVLD	185	16.3	8.0	35.6/36.3	42.7	0.1	18.2	32x0.85	26.5	2.7	510	770	3010
240MM1C33KVLD	240	18.5	8.0	37.8/38.5	44.9	0.08	18.2	32x0.85	34.3	2.7	540	810	3600
300MM1C33KVLD	300	20.9	8.0	40.2/40.9	47.5	0.06	18.2	32x0.85	42.9	2.7	570	860	4250
400MM1C33KVLD	400	24.0	8.0	43.6/44.3	51.1	0.05	18.2	32x0.85	57.2	2.7	610	920	5200
500MM1C33KVLD	500	26.8	8.0	46.4/47.1	54.1	0.04	18.2	32x0.85	71.5	2.7	650	980	6260
630MM1C33KVLD	630	31.0	8.0	50.6/51.3	58.5	0.03	18.2	32x0.85	90.1	2.7	700	1050	7770

HEAVY DUTY SCREEN													
50MM1C33KV	50	8.2	8.0	27.3/28.0	35.2	0.39	49.1	26x1.55	7.2	7.3	420	640	1710
70MM1C33KV	70	9.9	8.0	29.0/29.7	37.8	0.27	68	24x1.90	10.0	10.1	460	680	2150
95MM1C33KV	95	11.6	8.0	30.7/31.4	39.9	0.19	88.2	25x2.12	13.6	13.1	480	720	2650
120MM1C33KV	120	13.2	8.0	32.5/33.2	41.9	0.15	88.2	25x2.12	17.2	13.1	500	760	2960
150MM1C33KV	150	14.5	8.0	33.8/34.5	43.2	0.12	88.2	25x2.12	21.5	13.1	520	780	3250
185MM1C33KV	185	16.3	8.0	35.6/36.3	45.2	0.1	88.2	25x2.12	26.5	13.1	540	820	3680
240MM1C33KV	240	18.5	8.0	37.8/38.5	47.6	0.08	88.2	25x2.12	34.3	13.1	570	860	4300
300MM1C33KV	300	20.9	8.0	40.2/40.9	50	0.06	88.2	25x2.12	42.9	13.1	600	900	4930
400MM1C33KV	400	24.0	8.0	43.6/44.3	53.6	0.05	88.2	25x2.12	57.2	13.1	640	970	5880
500MM1C33KV	500	26.8	8.0	46.4/47.1	56.6	0.04	88.2	25x2.12	71.5	13.1	680	1020	6940
630MM1C33KV	630	31.0	8.0	50.6/51.3	61	0.03	88.2	25x2.12	90.1	13.1	730	1100	8450

For fault durations other than one second, divide the appropriate given value by the square root of the required time [in seconds]

Screen fault ratings are based on an initial temperature of 80°C and a final temperature of 250°C.

Conductor fault ratings are based on an initial temperature of 90°C and a final temperature of 250°C.

LIGHT DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 2.7kA for 1 second.

HEAVY DUTY SCREEN DESIGN - It corresponds to a fault rating equal to the conductor fault rating, but not higher than 13.1kA for 1 second and not exceeding the conductor rating..