ZTT GROUP

Established in 1992, ZTT started from optical fiber communications. ZTT was listed on Shanghai Stock Exchange (SSE) in 2002 (Stock Code in SSE: 600522), and issued the shares known as the "First Shares for Special Optical Fiber & Cable". Now ZTT has developed a diversified industries of telecom, power grid, marine system, renewable energy, new materials, etc.

Awarded for national innovative enterprise, Jiangsu province outstanding private enterprise, Top-500 Enterprise in China, China Quality Award, Gold-medal listed company, ZTT Group is now hosting 76 subsidiary companies and over 16,000 employees, with the deployment of Beijing Headquarters, Nantong New Headquarters, and Rudong Headquarters, as well as 54 offices and 10 marketing centers set up overseas, and 6 overseas plants operated in India, Brazil, Indonesia, Morocco, Turkey and Germany. ZTT has exported products to 160 countries and regions and has broken through the US$10.82 billion marks in revenue in 2020.

XLPE Insulated Power Cable

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2021.7

YOUR PARTNER IN CABLE

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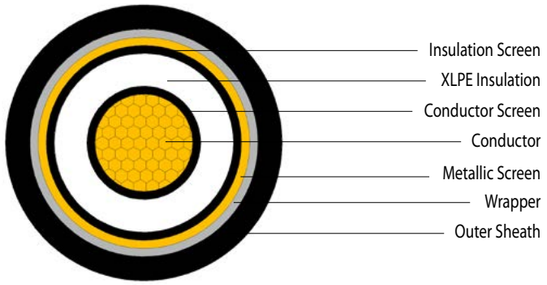
Jiangsu Zhongtian Technology Co. Ltd(ZTT) was established in 1992 and issued stock in 2002, which has cable manufacturing experience for many years. Zhongtian Technology Submarine Cable Co., Ltd(ZTTSC) is a subsidiary of ZTT which has always focused on power cables research and development.

ZTTSC is specialized in producing XLPE insulated power cable including low voltage, medium voltage, high voltage, optical fibre composite low voltage power cable and matching accessories etc. In addition, its annual production capacity is up to 65000km of high-quality power cables.

ZTTSC owns a complete power cable production line from copper/aluminum conductor stranding, three layer crosslinking insulation extruding, copper tape/wire screening, steel tape/steel wire armoring, outer sheath extruding to test and experiment.

ZTTSC introduces a large number of senior experts and engineering technicians with many years of cable manufacturing experience, cultivates a well-trainedworker team and organizes a managing group with perfect management system. Its strong technical background, perfect market service system and advanced financial management system promotes great developing the business.



Design & construction of LV & MV XLPE cable

• The XLPE cable has the construction of a conductor (copper or aluminum) insulated with the cross-linked polyethylene, shielded with metallic screen (metallic tapes or wires) and armored with metal tape/wires according to requirements, finally to be covered by extruded PVC (ST2), PE (ST7) or halogen free (ST8) sheath for anti-corrosion.

Conductor

• The conductor consists of annealed copper or aluminum wires(usually solid conductor of class1, stranded conductor of class 2, including non-compacted and compacted methods as well as flexible conductor of class 5 according to IEC60228). The conductor appearance is smooth without any stain, oxidation or mechanical damage.

Conductor Screen

• The conductor screen consists of an extruded semi-conducting polyethylene to minimize electrical stresses due to the stranded configuration of the conductor. The semi-conducting material used for conductor screen has no deleterious effect on the conductor. Semiconducting tape is sometimes applied as a separator.

Insulation

• The insulation material is extruded cross-linked polyethylene. The conductor screen, the insulation and the insulation screen mentioned to the following clause are extruded simultaneously in one process to ensure that the screen and insulation are intimately bonded together and free from all possibilities of voids between layers. The extrusion process is carried out under strictly controlled atmospheric conditions. The thickness of the insulation layer is the maximum value figured out from the design of the impulse voltage and A.C. voltage.

• The conventional cross-linking process by saturated steam has frequently caused deterioration of the electrical characteristics of the insulation as treeing phenomena arose when put to use for long time. But the new process by N2 gas has enabled to protect the electrical characteristics from being deteriorated and to lessen the thickness of the insulation and accordingly the cable's outer diameter itself.

Insulation Screen

• The insulation screen is provided over the insulation by extruding the semiconducting compound concentrically and circularly to minimize the possibility of ionization on the outer surface of the dielectric.

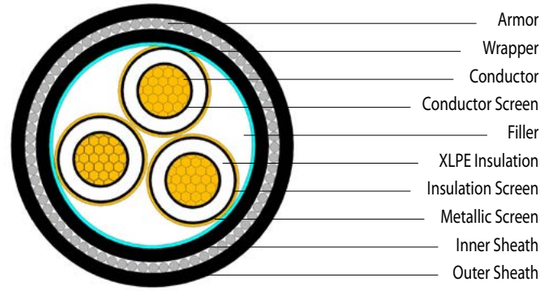
Metallic Screen

• The metallic screen consists of one or more tapes, or a braid, or a concentric layer of wires or a combination of wires and tape(s) applied on the insulated cores. The metallic shielding in multiple conductor cables are in contact with each other and the material is chosen according to different requirements of earth fault current.

Assembly

• The assembly of multiple conductors shall be done by cabling together the required number of conductors with suitable fillers. A suitable binder tape shall be applied over the entire assembly.

Introduction of low and medium voltage XLPE insulated power cable



Metallic Armor

• The armor is a single layer of round wires or double tapes. Material for the armor shall consist of galvanized steel or aluminum. The armor for single core cables for use on AC circuits shall consist of non-magnetic material (eg. aluminum) due to the excessive losses induced by steel armor. When round wire or tape armor is required, in the case of single and multiple conductor cables, it shall be applied on an inner covering, if there is no screening. Where the metal screening and the armor applied over the screening are of different metals, the two shall be separated by an extruded separation sheath. When a tape armor is applied, the thickness of the inner covering shall be reinforced by a bedding tape. If a separating sheath is provided, the additional bedding tape is not necessary.

• The tape armor shall be applied helically in two layers so that the outer tape is approximately centered over the gap of the inner tape. The gap between the adjacent turns of each layer of tape shall not exceed 50% of the width of the tape. The standard color of the inner covering and separation sheath shall be black.

Outer Sheath

• To protect the metallic sheath from electrical or chemical corrosion, it is covered by PVC (ST2), PE (ST7) or halogen free (ST8) sheath. The outer sheath is normally black while the other colors may be provided by agreement between the manufacturer and the purchaser, according to its suitability for the particular condition.

Core Identification

• Multiple conductors shall be identified by color or numbering with a suitable method. The color code may be changed in any contract.

• For 0.6/1kV

• Two core : Red, Blue

• Three core : Yellow, Green, Red

• Four core : Yellow, Green, Red, Blue

• Five core: Yellow, Green, Red, Blue, Black

• For 3.6/6kV ~ 18/30kV

• Three core : Yellow, Green and Red colored tape applied between insulation screen and metallic screen

Cable Marking

• The standard marking for all cables shall be shown on the external surface of the outer sheath with voltage designation, manufacturer's name, year of manufacture and others as required, with a suitable method.

Test

• The finished cable shall meet all the test requirements specified by IEC 60502, as applicable.

Rated voltage of cable and cable code designation

• Cable rated voltage applies to system voltage and operation condition of cable, in sign of $U_0/U(U_m)$:

• U_0- the rated power frequency voltage between conductor and earth or metallic screen for which the cable is designed

• U- the rated power frequency voltage between conductors for which the cable is designed

• U_m- the maximum value of the "highest system voltage" for which the equipment may be used

• The rated voltage of the cable for a given application shall be suitable for the operating conditions in the system in which the cable is used. To facilitate the selection of the cable, systems are divided into three categories:

• Category A: this category comprises those systems in which any phase conductor that comes in contact with earth or an earth conductor is disconnected from the system within 1 min;

• Category B: this category comprises those systems which, under fault conditions, are operated for a short time with one phase earthed. This period, according to IEC 60183, should not exceed 1 h. For cables covered by this standard, a longer period, not exceeding 8 h on any occasion, can be tolerated. The total duration of earth faults in any year should not exceed 125 h;

• Category C: this category comprises all systems which do not fall into category A or B.

The values of U_0 recommended for cables to be used in three-phase systems are listed in Table 1.

Highest system voltage(U_m) kV	Rated voltage(U_0) kV	
	Categories A & B	Category C
1.2	0.6	0.6
7.2	3.6	6.0
12.0	6.0	8.7
17.5	8.7	12.0
24.0	12.0	18.0
36.0	18.0	-

Cable code designation

Item	Code
conductor	
Copper conductor	/(Omit)
Aluminum conductor	L
Insulation	
XLPE insulation	YJ
Inner sheath or inner covering	
PVC inner sheath or inner covering	V
PE inner sheath or inner covering	Y
Armor	
Galvanized steel tape armor	2
Galvanized steel wire armor	3
Outer sheath	
PVC outer sheath	V
PE outer sheath	Y
Flame retardant	ZR

Reference standards

The products meet the international standards of IEC series(as listed on Table-2) and can be manufactured according to customers' requirements of standards such as ICEA, AS, BS, DIN/VDE, etc. The company also can produce XLPE insulated cable with special requirements including flame retardant, fire resistant, waterproofing, termite protection, rat proofing, river crossing and submarine laying etc.

Table 2-Main IEC Standards for LV&MV Cables

Standard code	Standard name
IEC 60502-1	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV)- Part 1: Cables for rated voltages of 1 kV (U_m = 1,2 kV) and 3 kV (U_m = 3,6 kV);
IEC 60502-2	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (U_m = 1,2 kV) up to 30 kV (U_m = 36 kV): Part 2: Cables for rated voltages from 6 kV (U_m = 7,2 kV) up to 30 kV (U_m = 36 kV);
IEC 60228	Conductors of insulated cables
IEC 60811	Common test methods for insulating and sheathing materials of electric cables
IEC 60754	Test on gases evolved during combustion of materials from cables
IEC 61034	Measurement of smoke density of cables burning under defined conditions
IEC 60332-3	Tests on electric cables under fire conditions
IEC 60331-21	Tests for electric cables under fire conditions :Circuit integrity –Part 21:Procedures and requirements –Cables of rated voltage up to and including 0,6/1,0 kV

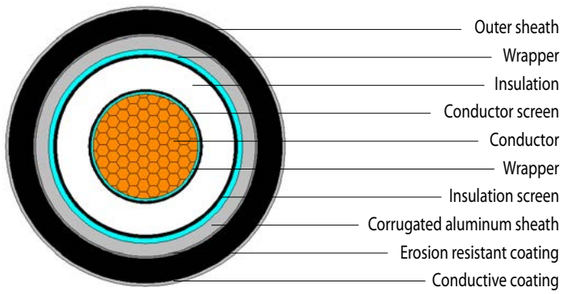
Note:

• Only the halogen free cables shall be generally complied with IEC 61034 and IEC 60754.

• Only the fire resistant cables shall be generally complied with IEC 60331-21.

• Only the fire retardant cables shall be generally complied with IEC 60332-3.

Introduction of High Voltage XLPE insulated power cable



Design & construction of High Voltage XLPE cable

• The High Voltage XLPE cable has the construction of a conductor (copper or aluminum) insulated with the cross-linked polyethylene, shielded with metallic sheath according to requirements, finally to be covered by extruded PVC (ST2), PE (ST7) or halogen free(ST8) sheath for anti-corrosion, with a layer of semi-conductive on the outer sheath.

Conductor

• The conductor consists of annealed copper or aluminum wires (usually stranded conductor of class 2, including non-compacted and compacted methods according to IEC60228). The conductor appearance is smooth without any stain, oxidation or mechanical damage.

Conductor Screen

• The conductor screen consists of an extruded semi-conducting polyethylene to minimize electrical stresses due to the stranded configuration of the conductor. The semi-conducting material used for conductor screen has no deleterious effect on the conductor. Semiconducting tape is sometimes applied as a separator.

Insulation

• The insulation material is extruded cross-linked polyethylene. The conductor screen, the insulation and the insulation screen mentioned to the following clause are extruded simultaneously in one process to ensure that the screen and insulation are intimately bonded together and free from all possibilities of voids between layers. The extrusion process is carried out under strictly controlled atmospheric conditions. The thickness of the insulation layer is the maximum value figured out from the design of the impulse voltage and A.C. voltage.

• The conventional cross-linking process by saturated steam has frequently caused deterioration of the electrical characteristics of the insulation as treeing phenomena arose when put to use for long time. But the new process by N2gas has enabled to protect the electrical characteristics from being deteriorated and to lessen the thickness of the insulation and accordingly the cable's outer diameter itself.

Insulation Screen

• The insulation screen is provided over the insulation by extruding the semiconducting compound concentrically and circularly to minimize the possibility of ionization on the outer surface of the dielectric.

Metallic Sheath

• The metallic sheath may be corrugated aluminum, which have good bending and bear fault current performance.

Outer Sheath

• To protect the metallic sheath from electrical or chemical corrosion, it is covered by PVC (ST2), PE (ST7) or halogen free (ST8) sheath. The outer sheath is normally black while the other colors may be provided by agreement between the manufacturer and the purchaser, according to its suitability for the particular condition.

Introduction of High Voltage XLPE insulated power cable

Core Identification

• Multiple conductors shall be identified by color or numbering with a suitable method. The color code may be changed in any contract.

Single core: Nature

Cable Marking

• The standard marking for all cables shall be shown on the external surface of the outer sheath with voltage designation, manufacturer's name, year of manufacture and others as required, with a suitable method.

Test

• The finished cable shall meet all the test requirements specified by IEC 60840 or IEC 62067 as applicable.

Cable code designation

Item	Code
Conductor	
Copper	CU
Aluminum	AL
Insulation	
Cross-Linked Polyethylene	XLPE
Metallic screen	
Copper tape screened	CTS
Copper wire shielding	CWS
Armor	
Steel tape	STA
Stainless steel tape	SSTA
Steel wire	SWA
Stainless Steel wire	SSWA
Metal sheath	
Corrugated aluminum	CAS
Corrugated aluminum	LW
Outer sheath	
Polyvinyl Chloride	PVC
Polyethylene	PE
MDPE outer sheath	MDPE
HDPE outer sheath	HDPE

Reference standards

The products meet the international standards of IEC series(as listed on Table-3)and can be manufactured according to customers' requirements of standards such as ICEA, AS, BS, DIN/VDE, etc. The company also can produce XLPE insulated cable with special requirements including waterproofing, termite protection, rat proofing, river crossing and submarine laying etc.

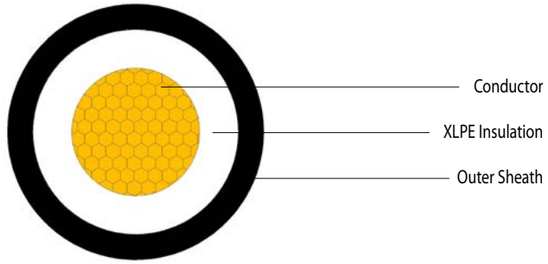
Table 3-Main IEC Standards for HV Cables

Standard code	Standard name
IEC 60840	Power cables with extruded insulation and their accessories for rated voltages above 30 kV (Um = 36 kV) up to 150 kV (Um = 170 kV) –Test methods and requirements
IEC 62067	Power cables with extruded insulation and their accessories for rated voltages above 150 kV (Um = 170 kV) up to 500 kV (Um = 550 kV) –Test methods and requirements
IEC 60228	Conductors of insulated cables
IEC 60811	Common test methods for insulating and sheathing materials of electric cables
IEC 60754	Test on gases evolved during combustion of materials from cables
IEC 61034	Measurement of smoke density of cables burning under defined conditions
IEC 60332-3	Tests on electric cables under fire conditions

Note:

- Only the halogen free cables shall be generally complied with IEC 61034 and IEC 60754.
- Only the fire retardant cables shall be generally complied with IEC 60332-3.
- ZTT also can design and produce copper wire screen plus lead sheath high voltage power cables according to customer's requirements quickly.

Low voltage XLPE insulated power cable of 0.6/1kV

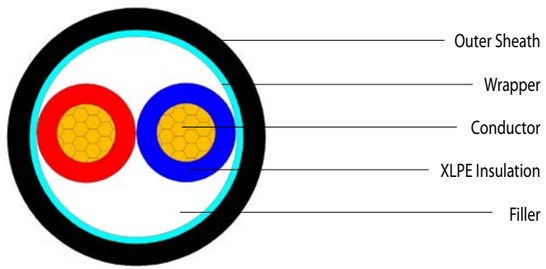


Rated voltage: 0.6/1kV-single core

(ZR)YJV: CU/XLPE/PVC, (ZR)YJY: CU/XLPE/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)			
mm^2	mm	mm	kg/km	Ω/km	Soil …	Soil ∴	Air …	Air ∴
2.5	0.7	6.0	56.7	7.41	41	38	37	28
4	0.7	6.5	74.4	4.61	53	49	49	37
6	0.7	7.0	96.6	3.08	66	62	61	47
10	0.7	8.0	139.2	1.83	88	83	84	64
16	0.7	9.0	198.9	1.15	110	100	110	80
25	0.9	10.6	295.7	0.727	140	135	140	110
35	0.9	11.6	391.4	0.524	170	160	180	135
50	1.0	13.0	523.3	0.387	210	190	210	160
70	1.1	15.0	725.1	0.268	250	240	265	210
95	1.1	16.7	978.3	0.193	300	290	330	260
120	1.2	18.4	1218.2	0.153	350	320	390	300
150	1.4	20.5	1503.9	0.124	390	370	445	350
185	1.6	22.7	1867.3	0.0991	440	410	510	400
240	1.7	25.4	2415.9	0.0754	510	480	610	480
300	1.8	27.8	3000.1	0.0601	580	540	710	560
400	2.0	31.5	3831.6	0.0470	660	615	830	650
500	2.2	35.1	4883.7	0.0366	755	700	970	750
630	2.4	39.3	6270.4	0.0283	850	780	1130	860

Low voltage XLPE insulated power cable of 0.6/1kV

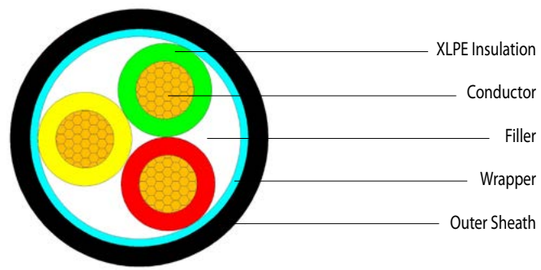


Rated voltage: 0.6/1kV-two core

(ZR)YJV: CU/XLPE/PVC, (ZR)YJY: CU/XLPE/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	10.2	134.5	7.41	41	30
4	0.7	11.2	175.5	4.61	53	39
6	0.7	12.2	226.0	3.08	67	49
10	0.7	14.2	325.1	1.83	90	68
16	0.7	16.2	460.5	1.15	120	90
25	0.9	19.4	684.3	0.727	150	120
35	0.9	21.4	897.5	0.524	180	140
50	1.0	24.2	1195.5	0.387	220	175
70	1.1	28.2	1656.0	0.268	260	220
95	1.1	31.6	2221.3	0.193	320	270
120	1.2	35.1	2767.1	0.153	360	320
150	1.4	39.1	3425.8	0.124	400	360
185	1.6	43.6	4260.3	0.0991	460	420
240	1.7	48.9	5502.5	0.0754	530	500
300	1.8	53.8	6819.9	0.0601	600	575
400	2.0	61.1	8732.6	0.0470	680	670

Low voltage XLPE insulated power cable of 0.6/1kV

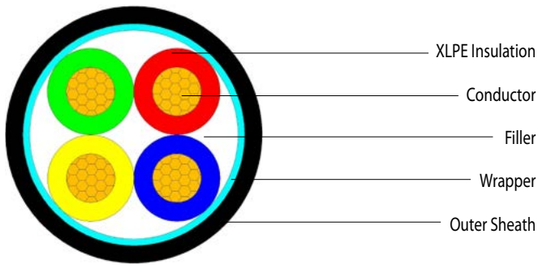


Rated voltage: 0.6/1kV-three core

(ZR)YJV: CU/XLPE/PVC, (ZR)YJY: CU/XLPE/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	10.7	164.4	7.41	35	25
4	0.7	11.8	219.9	4.61	46	33
6	0.7	12.9	289.3	3.08	58	42
10	0.7	15.0	424.2	1.83	77	58
16	0.7	17.2	612.1	1.15	100	75
25	0.9	20.6	920.3	0.727	130	100
35	0.9	22.8	1221.0	0.524	150	120
50	1.0	25.8	1638.9	0.387	180	150
70	1.1	30.3	2291.1	0.268	225	190
95	1.1	34.0	3093.1	0.193	270	240
120	1.2	37.7	3861.2	0.153	310	280
150	1.4	42.1	4783.1	0.124	350	310
185	1.6	46.9	5954.4	0.0991	390	360
240	1.7	52.7	7710.5	0.0754	450	430
300	1.8	58.0	9577.7	0.0601	510	500
400	2.0	65.8	12266.0	0.0470	575	575

Low voltage XLPE insulated power cable of 0.6/1kV

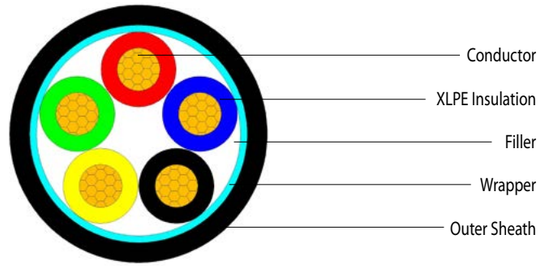


Rated voltage: 0.6/1kV-four core

(ZR)YJV: CU/XLPE/PVC, (ZR)YJY: CU/XLPE/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	12.8	271.3	4.61	46	33
6	0.7	14.0	361.2	3.08	58	42
10	0.7	16.4	535.3	1.83	77	58
16	0.7	18.8	779.8	1.15	100	75
25	0.9	22.7	1180.2	0.727	130	100
35	0.9	25.1	1574.2	0.524	150	120
50	1.0	28.6	2126.7	0.387	180	150
70	1.1	33.7	2987.1	0.268	225	190
95	1.1	37.8	4042.1	0.193	270	240
120	1.2	42.0	5050.4	0.153	310	280
150	1.4	46.9	6259.4	0.124	350	310
185	1.6	52.3	7796.8	0.0991	390	360
240	1.7	58.7	10106.1	0.0754	450	430
300	1.8	64.7	12563.3	0.0601	510	500
400	2.0	73.5	16094.5	0.0470	575	575

Low voltage XLPE insulated power cable of 0.6/1kV

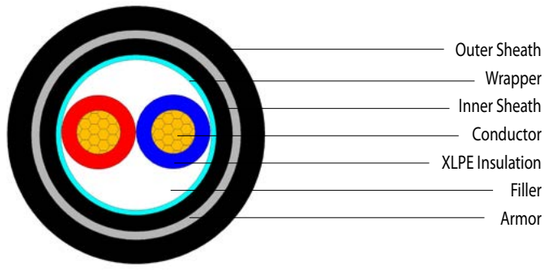


Rated voltage: 0.6/1kV-five core

(ZR)YJV: CU/XLPE/PVC, (ZR)YJY: CU/XLPE/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	13.8	325.1	4.61	46	33
6	0.7	15.1	436.0	3.08	58	42
10	0.7	17.8	650.9	1.83	77	58
16	0.7	20.5	953.7	1.15	100	75
25	0.9	24.9	1449.6	0.727	130	100
35	0.9	27.6	1939.5	0.524	150	120
50	1.0	31.6	2638.2	0.387	180	150
70	1.1	37.3	3709.6	0.268	225	190
95	1.1	42.0	5024.9	0.193	270	240
120	1.2	46.6	6281.7	0.153	310	280
150	1.4	52.0	7788.5	0.124	350	310
185	1.6	58.1	9705.3	0.0991	390	360
240	1.7	65.3	12585.6	0.0754	450	430
300	1.8	71.9	15651.1	0.0601	510	500
400	2.0	81.7	20055.8	0.0470	575	575

Low voltage XLPE insulated power cable of 0.6/1kV

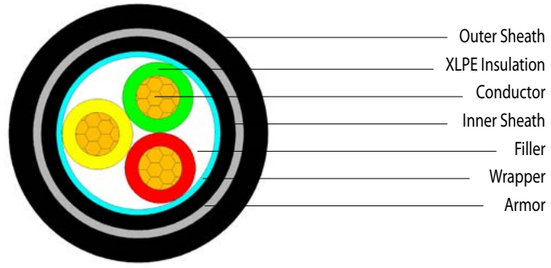


Rated voltage: 0.6/1kV- two core

(ZR)YJV22: CU/XLPE/ STA/PVC, (ZR)YJY23: CU/XLPE/ STA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	13.0	253.4	7.41	40	30
4	0.7	14.0	305.8	4.61	53	38
6	0.7	15.0	367.7	3.08	66	49
10	0.7	17.0	489.6	1.83	90	67
16	0.7	19.0	647.9	1.15	120	90
25	0.9	22.2	908.2	0.727	150	110
35	0.9	24.2	1144.3	0.524	180	140
50	1.0	27.0	1474.3	0.387	220	170
70	1.1	31.2	1994.1	0.268	265	220
95	1.1	35.1	2633.7	0.193	320	270
120	1.2	39.8	3607.7	0.153	360	310
150	1.4	43.8	4358.4	0.124	410	360
185	1.6	48.7	5345.4	0.0991	460	410
240	1.7	54.1	6713.7	0.0754	535	490
300	1.8	59.4	8208.1	0.0601	590	570
400	2.0	66.7	10299.6	0.0470	680	665

Low voltage XLPE insulated power cable of 0.6/1kV

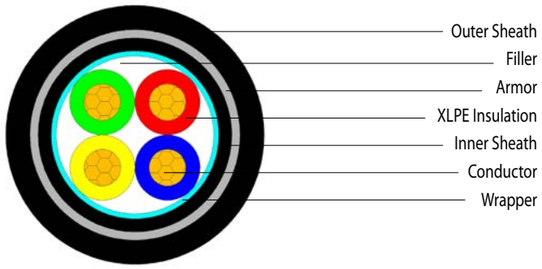


Rated voltage: 0.6/1kV-three core

(ZR)YJV22: CU/XLPE/ STA/PVC, (ZR)YJY23: CU/XLPE/ STA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	13.5	289.1	7.41	31	24
4	0.7	14.6	356.9	4.61	45	32
6	0.7	15.7	438.7	3.08	54	41
10	0.7	17.8	598.2	1.83	76	58
16	0.7	20.0	810.8	1.15	100	75
25	0.9	23.4	1158.5	0.727	130	100
35	0.9	25.6	1483.9	0.524	150	120
50	1.0	28.7	1943.2	0.387	180	150
70	1.1	33.7	2686.8	0.268	220	190
95	1.1	38.7	3909.6	0.193	270	230
120	1.2	42.4	4761.4	0.153	300	270
150	1.4	47.2	5832.2	0.124	340	310
185	1.6	52.0	7117.8	0.0991	390	355
240	1.7	58.2	9069.9	0.0754	450	420
300	1.8	63.5	11067.4	0.0601	510	480
400	2.0	71.4	13948.8	0.0470	580	560

Low voltage XLPE insulated power cable of 0.6/1kV

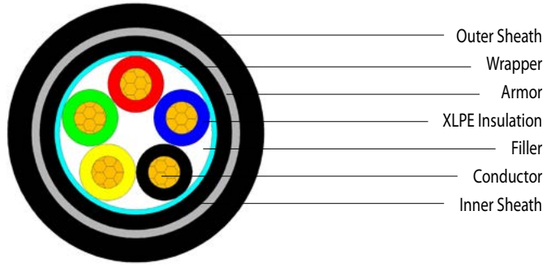


Rated voltage: 0.6/1kV-four core

(ZR)YJV22: CU/XLPE/ STA/PVC, (ZR)YJY23: CU/XLPE/ STA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	15.6	419.3	4.61	45	32
6	0.7	16.8	523.0	3.08	54	41
10	0.7	19.2	724.8	1.83	76	58
16	0.7	21.6	997.0	1.15	100	75
25	0.9	25.5	1441.6	0.727	130	100
35	0.9	27.9	1865.4	0.524	150	120
50	1.0	31.6	2468.6	0.387	180	150
70	1.1	38.4	3796.5	0.268	220	190
95	1.1	42.5	4945.4	0.193	270	230
120	1.2	47.1	6097.1	0.153	300	270
150	1.4	52.0	7422.0	0.124	340	310
185	1.6	57.8	9146.9	0.0991	390	355
240	1.7	64.3	11614.9	0.0754	450	420
300	1.8	70.2	14218.1	0.0601	510	480
400	2.0	79.5	18045.4	0.0470	580	560

Low voltage XLPE insulated power cable of 0.6/1kV

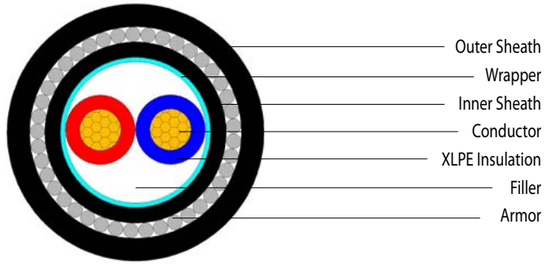


Rated voltage: 0.6/1kV-five core

(ZR)YJV22: CU/XLPE/ STA/PVC, (ZR)YJY23: CU/XLPE/ STA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	16.6	484.9	4.61	45	32
6	0.7	17.9	611.3	3.08	54	41
10	0.7	20.6	857.1	1.83	76	58
16	0.7	23.3	1190.7	1.15	100	75
25	0.9	27.7	1735.9	0.727	130	100
35	0.9	30.6	2269.8	0.524	150	120
50	1.0	35.1	3050.2	0.387	180	150
70	1.1	42.0	4601.8	0.268	220	190
95	1.1	47.1	6071.2	0.193	270	230
120	1.2	51.7	7437.1	0.153	300	270
150	1.4	57.6	9132.6	0.124	340	310
185	1.6	63.6	11197.8	0.0991	390	355
240	1.7	70.8	14255.2	0.0754	450	420
300	1.8	77.9	17562.0	0.0601	510	480
400	2.0	89.0	23106.2	0.0470	580	560

Low voltage XLPE insulated power cable of 0.6/1kV

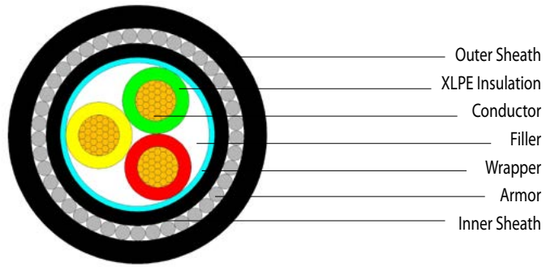


Rated voltage: 0.6/1kV-two core

(ZR)YJV32: CU/XLPE/SWA/PVC, (ZR)YJY33: CU/XLPE/SWA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	13.8	337.8	7.41	40	30
4	0.7	14.8	399.3	4.61	53	38
6	0.7	15.8	466.4	3.08	66	49
10	0.7	17.8	606.5	1.83	90	67
16	0.7	19.8	779.0	1.15	120	90
25	0.9	24.6	1380.8	0.727	150	110
35	0.9	26.6	1667.5	0.524	180	140
50	1.0	29.6	2069.2	0.387	220	170
70	1.1	34.6	2908.3	0.268	265	220
95	1.1	38.5	3677.7	0.193	320	270
120	1.2	41.9	4373.1	0.153	360	310
150	1.4	47.0	5593.0	0.124	410	360
185	1.6	51.9	6740.0	0.0991	460	410
240	1.7	57.3	8261.8	0.0754	535	490
300	1.8	62.6	9909.6	0.0601	590	570
400	2.0	69.9	12203.7	0.0470	680	665

Low voltage XLPE insulated power cable of 0.6/1kV

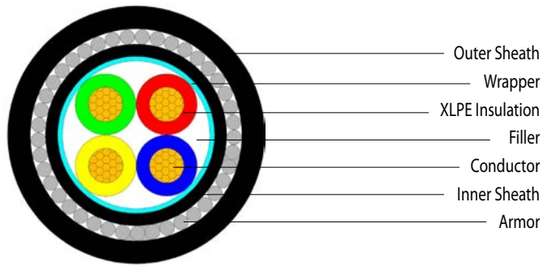


Rated voltage: 0.6/1kV-three core

(ZR)YJV32: CU/XLPE/ SWA/PVC, (ZR)YJY33: CU/XLPE/ SWA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
2.5	0.7	14.3	378.0	7.41	31	24
4	0.7	15.4	454.4	4.61	45	32
6	0.7	16.5	544.7	3.08	54	41
10	0.7	18.6	721.4	1.83	76	58
16	0.7	20.8	951.1	1.15	100	75
25	0.9	25.8	1654.6	0.727	130	100
35	0.9	28.1	2032.6	0.524	150	120
50	1.0	31.3	2576.6	0.387	180	150
70	1.1	37.2	3687.8	0.268	220	190
95	1.1	40.9	4641.3	0.193	270	230
120	1.2	44.5	5560.8	0.153	300	270
150	1.4	50.4	7171.9	0.124	340	310
185	1.6	55.2	8618.5	0.0991	390	355
240	1.7	61.4	10710.8	0.0754	450	420
300	1.8	66.7	12862.3	0.0601	510	480
400	2.0	76.0	16879.1	0.0470	580	560

Low voltage XLPE insulated power cable of 0.6/1kV

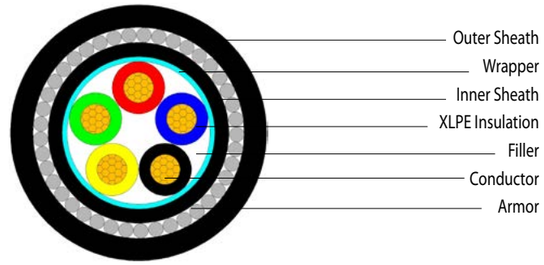


Rated voltage: 0.6/1kV-four core

(ZR)YJV32: CU/XLPE/ SWA/PVC, (ZR)YJY33: CU/XLPE/ SWA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	16.4	522.1	4.61	45	32
6	0.7	17.6	637.5	3.08	54	41
10	0.7	20.0	858.7	1.83	76	58
16	0.7	24.0	1457.6	1.15	100	75
25	0.9	27.9	1989.2	0.727	130	100
35	0.9	30.5	2487.1	0.524	150	120
50	1.0	35.0	3406.7	0.387	180	150
70	1.1	40.5	4533.0	0.268	220	190
95	1.1	44.7	5767.8	0.193	270	230
120	1.2	50.3	7438.4	0.153	300	270
150	1.4	55.2	8884.0	0.124	340	310
185	1.6	61.1	10793.7	0.0991	390	355
240	1.7	67.5	13437.1	0.0754	450	420
300	1.8	73.5	16223.7	0.0601	510	480
400	2.0	84.1	21291.1	0.0470	580	560

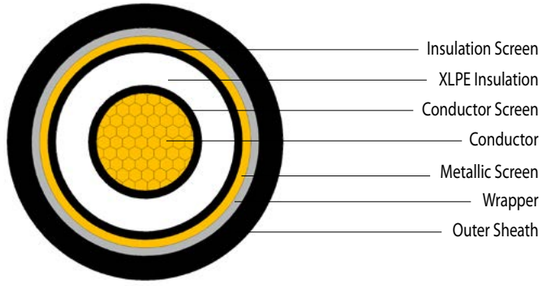
Low voltage XLPE insulated power cable of 0.6/1kV



Rated voltage: 0.6/1kV-five core

(ZR)YJV32: CU/XLPE/ SWA/PVC, (ZR)YJY33: CU/XLPE/ SWA/PE

Nominal area of conductor	Thickness of insulation	Approx. outer diameter	Approx. weight	Max. DC resistance of conductor at 20℃	Current ratings(A)	
mm^2	mm	mm	kg/km	Ω/km	Soil	Air
4	0.7	17.4	596.6	4.61	45	32
6	0.7	18.7	733.7	3.08	54	41
10	0.7	23.0	1292.2	1.83	76	58
16	0.7	25.7	1687.6	1.15	100	75
25	0.9	30.2	2342.5	0.727	130	100
35	0.9	33.1	2940.7	0.524	150	120
50	1.0	38.5	4094.9	0.387	180	150
70	1.1	44.2	5406.6	0.268	220	190
95	1.1	50.3	7412.6	0.193	270	230
120	1.2	54.9	8903.9	0.153	300	270
150	1.4	60.8	10783.5	0.124	340	310
185	1.6	66.9	13030.2	0.0991	390	355
240	1.7	74.1	16290.8	0.0754	450	420
300	1.8	82.5	20705.5	0.0601	510	480
400	2.0	92.3	25775.7	0.0470	580	560



Rated voltage: 3.6/6kV -single core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500	630
Thickness of insulation	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0	3.2	3.2
Approx. outer diameter	mm	19.8	21.0	22.8	24.4	25.8	27.5	29.2	31.9	34.6	39.0	43.4	47.2
Approx. weight (kg/km)	Cu	672	810	1043	1318	1567	1854	2229	2822	3459	4392	5568	6981
	Al	453	517	621	731	833	954	1104	1335	1594	2007	2522	3041
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Current ratings(A)													
Soil ⋯	Cu	190	225	275	330	375	425	480	555	630	725	825	940
	Al	145	175	215	255	290	330	370	435	490	565	650	745
Soil ∴	Cu	180	215	265	315	360	405	455	530	595	680	765	860
	Al	135	160	200	240	270	305	345	400	455	520	595	680
Air ⋯	Cu	205	245	305	370	430	490	560	665	765	890	1030	1190
	Al	155	190	235	290	335	380	435	515	595	695	810	950
Air ∴	Cu	170	205	260	315	360	410	470	555	640	745	855	980
	Al	135	160	200	245	280	320	365	435	500	585	680	790

Medium voltage XLPE insulated power cable from 6kV up to 30kV

Rated voltage: 6/6kV, 6/10kV -single core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500	630
Thickness of insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Approx. outer diameter	mm	21.6	22.8	24.6	26.2	27.8	29.2	31.2	33.6	35.8	39.7	44.2	48.0
Approx. weight (kg/km)	Cu	739	881	1118	1399	1663	1943	2336	2926	3531	4445	5597	7034
	Al	521	588	695	811	929	1043	1211	1439	1666	2060	2552	3094
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Current ratings(A)													
Soil ⋯	Cu	190	225	275	330	375	425	480	555	630	725	825	940
	Al	145	175	215	255	290	330	370	435	490	565	650	745
Soil ∴	Cu	180	215	265	315	360	405	455	530	595	680	765	860
	Al	135	160	200	240	270	305	345	400	455	520	595	680
Air ⋯	Cu	205	245	305	370	430	490	560	665	765	890	1030	1190
	Al	155	190	235	290	335	380	435	515	595	695	810	950
Air ∴	Cu	170	205	260	315	360	410	470	555	640	745	855	980
	Al	135	160	200	245	280	320	365	435	500	585	680	790

Rated voltage: 8.7/10kV, 8.7/15kV -single core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500	630
Thickness of insulation	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Approx. outer diameter	mm	23.8	25.0	27.0	28.6	30.2	31.6	33.6	35.8	38.2	42.1	46.6	50.2
Approx. weight (kg/km)	Cu	829	974	1229	1516	1787	2072	2473	3056	3685	4615	5785	7215
	Al	610	681	807	928	1053	1171	1348	1569	1821	2230	2739	3275
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Current ratings(A)													
Soil ⋯	Cu	190	225	275	330	375	425	480	555	630	725	825	940
	Al	145	175	215	255	290	330	370	435	490	565	650	745
Soil ∴	Cu	180	215	265	315	360	405	455	530	595	680	765	860
	Al	135	160	200	240	270	305	345	400	455	520	595	680
Air ⋯	Cu	205	245	305	370	430	490	560	665	765	890	1030	1190
	Al	155	190	235	290	335	380	435	515	595	695	810	950
Air ∴	Cu	170	205	260	315	360	410	470	555	640	745	855	980
	Al	135	160	200	245	280	320	365	435	500	585	680	790

Rated voltage: 12/20kV -single core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

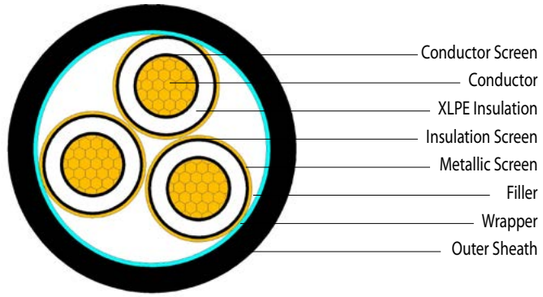
Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500	630
Thickness of insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Approx. outer diameter	mm	25.8	27.2	29.0	30.8	32.2	33.8	35.6	38.0	40.4	45.1	48.8	52.4
Approx. weight (kg/km)	Cu	916	1077	1327	1631	1894	2198	2591	3198	3835	4849	5965	7408
	Al	697	784	905	1044	1160	1298	1466	1711	1971	2464	2920	3468
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Current ratings(A)													
Soil ⋯	Cu	190	225	275	330	375	425	480	555	630	725	825	940
	Al	145	175	215	255	290	330	370	435	490	565	650	745
Soil ∴	Cu	180	215	265	315	360	405	455	530	595	680	765	860
	Al	135	160	200	240	270	305	345	400	455	520	595	680
Air ⋯	Cu	205	245	305	370	430	490	560	665	765	890	1030	1190
	Al	155	190	235	290	335	380	435	515	595	695	810	950
Air ∴	Cu	170	205	260	315	360	410	470	555	640	745	855	980
	Al	135	160	200	245	280	320	365	435	500	585	680	790

Rated voltage: 18/30kV -single core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	50	70	95	120	150	185	240	300	400	500	630
Thickness of insulation	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Approx. outer diameter	mm	32.4	34.4	36.2	37.6	39.3	41.0	43.5	45.8	50.2	53.8	57.6
Approx. weight (kg/km)	Cu	1348	1627	1948	2223	2541	2949	3577	4236	5291	6440	7914
	Al	1055	1205	1360	1489	1640	1824	2090	2371	2906	3395	3974
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
	Al	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605	0.0469
Current ratings(A)												
Soil ⋯	Cu	225	275	330	375	420	475	555	630	720	825	940
	Al	175	215	255	290	325	370	430	490	565	645	740
Soil ∴	Cu	215	265	315	360	400	455	525	595	680	775	875
	Al	165	200	240	270	305	345	400	455	525	600	685
Air ⋯	Cu	245	305	370	425	485	555	650	745	870	1000	1160
	Al	190	235	285	330	375	430	505	580	680	790	920
Air ∴	Cu	220	270	330	375	375	485	560	650	760	875	1000
	Al	170	210	255	290	425	380	435	510	595	690	800

Medium voltage XLPE insulated power cable from 6kV up to 30kV



Rated voltage: 3.6/6kV-three core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0	3.2
Approx. outer diameter	mm	39.0	41.8	46.0	49.7	52.9	56.3	60.2	66.0	71.8	81.4	91.7
Approx. weight (kg/km)	Cu	2079	2559	3341	4246	5018	5942	7162	9052	11068	14128	18048
	Al	1437	1697	2092	2501	2834	3267	3804	4617	5493	7005	8835
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	180	210	260	305	350	390	445	515	580	660	740
	Al	140	165	200	240	275	305	350	405	455	525	595
Air	Cu	160	195	245	300	345	395	455	540	615	720	825
	Al	130	155	190	235	270	310	355	420	485	575	665

Rated voltage: 6/6kV, 6/10kV-three core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Approx. outer diameter	mm	43.3	46.0	50.1	53.8	57.0	60.2	64.5	69.4	74.6	82.9	92.6
Approx. weight (kg/km)	Cu	2363	2853	3642	4509	5366	6298	7586	9429	11417	14406	18139
	Al	1726	1994	2396	2768	3186	3628	4233	4999	5846	7225	8712
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	180	210	260	305	350	390	445	515	580	660	740
	Al	140	165	200	240	275	305	350	405	455	525	595
Air	Cu	160	195	245	300	345	395	455	540	615	720	825
	Al	130	155	190	235	270	310	355	420	485	575	665

Rated voltage: 8.7/10kV, 8.7/15kV-three core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Approx. outer diameter	mm	48.2	51.2	55.3	58.9	62.1	65.3	69.4	74.6	79.7	88.1	97.7
Approx. weight (kg/km)	Cu	2694	3228	4057	5009	5815	6788	8063	9986	11993	15042	18840
	Al	2059	2374	2816	3273	3461	4125	4715	5564	6429	7918	9536
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	180	210	260	305	350	390	445	520	585	665	745
	Al	140	165	200	240	275	305	350	405	455	525	600
Air	Cu	170	205	255	310	360	405	465	550	625	730	835
	Al	130	160	200	240	285	315	365	430	490	580	670

Rated voltage: 12/20kV-three core

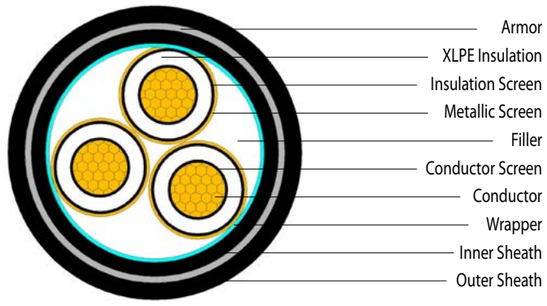
(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Approx. outer diameter	mm	52.9	55.7	59.8	63.4	66.8	70.5	74.1	79.3	84.2	93.6	102.4
Approx. weight (kg/km)	Cu	3053	3597	4440	5432	6283	7287	8583	10523	12551	15907	19531
	Al	2424	2747	3203	3700	4114	4608	5241	6120	6992	8683	10114
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	180	210	260	315	355	395	445	520	585	665	745
	Al	140	165	200	240	275	305	350	405	455	525	600
Air	Cu	175	210	260	315	365	410	470	555	630	735	835
	Al	135	160	200	245	280	320	365	430	495	580	670

Rated voltage: 18/30kV-three core

(ZR)YJV: CU/XLPE/CTS/PVC; (ZR)YJLV:AL/XLPE/CTS/PVC (ZR)YJY:CU/XLPE/CTS/PE;(ZR)YJLY:AL/XLPE/CTS/PE

Nominal area of conductor	mm^2	50	70	95	120	150	185	240	300	400
Thickness of insulation	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Approx. outer diameter	mm	67.3	71.3	75.0	78.4	81.6	85.7	90.8	95.8	106.1
Approx. weight (kg/km)	Cu	4635	5544	6596	7580	8528	9918	11937	14144	17682
	Al	3798	4320	4877	5426	5890	6591	7542	8602	10479
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
	Al	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Current ratings(A)										
Soil	Cu	210	265	310	360	400	445	525	585	670
	Al	165	205	245	275	305	350	410	455	525
Air	Cu	215	270	320	370	420	480	565	640	745
	Al	165	205	250	285	330	375	435	505	590



Rated voltage: 3.6/6kV-three core

(ZR)YJV22: CU/XLPE/CTS/STA/PVC; (ZR)YJLV22:AL/XLPE/CTS/STA/PVC (ZR)YJY23: CU/XLPE/CTS/ STA/PE; (ZR)YJLY23: AL/XLPE/CTS/ STA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0	3.2
Approx. outer diameter	mm	43.8	46.6	50.8	54.5	58.1	61.7	65.6	71.6	77.6	88.8	99.3
Approx. weight (kg/km)	Cu	3013	3557	4437	5424	6323	7352	8671	10728	12927	17169	21519
	Al	2353	2675	3163	3653	4109	4636	5276	6242	7302	9975	12332
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	300	345	385	435	505	565	645	725
	Al	140	165	200	235	270	300	340	390	445	510	580
Air	Cu	165	195	245	300	345	390	445	525	595	695	800
	Al	130	150	190	230	265	305	350	410	470	550	640

Rated voltage: 6/6kV, 6/10kV-three core

(ZR)YJV22: CU/XLPE/CTS/STA/PVC; (ZR)YJLV22:AL/XLPE/CTS/STA/PVC (ZR)YJY23: CU/XLPE/CTS/ STA/PE; (ZR)YJLY23: AL/XLPE/CTS/ STA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Approx. outer diameter	mm	47.9	51.0	55.3	59.0	62.4	65.6	69.9	75.2	80.6	90.3	100.2
Approx. weight (kg/km)	Cu	3372	3970	4881	5835	6797	7807	9199	11230	13383	17511	21643
	Al	2713	3088	3608	4063	4584	5091	5804	6744	7758	10317	12456
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	300	345	385	435	505	565	645	725
	Al	140	165	195	235	270	300	340	390	445	510	580
Air	Cu	165	195	245	300	345	390	445	525	595	695	800
	Al	130	150	190	230	265	305	350	410	470	550	640

Rated voltage: 8.7/10kV, 8.7/15kV-three core

(ZR)YJV22: CU/XLPE/CTS/STA/PVC; (ZR)YJLV22:AL/XLPE/CTS/STA/PVC (ZR)YJY23: CU/XLPE/CTS/ STA/PE; (ZR)YJLY23: AL/XLPE/CTS/ STA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Approx. outer diameter	mm	53.2	56.2	60.3	64.3	67.7	70.9	75.2	80.6	87.1	95.7	105.5
Approx. weight (kg/km)	Cu	3863	4466	5391	6486	7401	8453	9864	11952	14979	18375	22578
	Al	3204	3584	4117	4714	5188	5737	6469	7466	9354	11181	13391
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	210	255	305	350	390	440	510	565	645	725
	Al	140	165	200	240	270	300	340	400	445	510	585
Air	Cu	170	205	250	310	350	400	450	530	605	700	805
	Al	130	160	195	240	270	310	350	415	475	555	645

Rated voltage: 12/20kV-three core

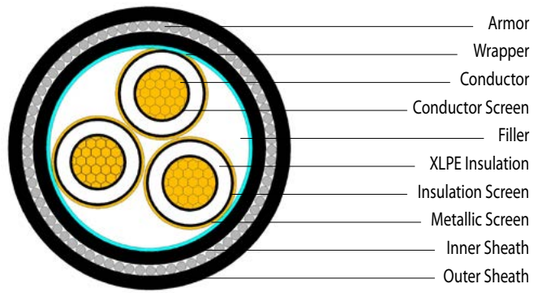
(ZR)YJV22: CU/XLPE/CTS/STA/PVC; (ZR)YJLV22:AL/XLPE/CTS/STA/PVC (ZR)YJY23: CU/XLPE/CTS/ STA/PE; (ZR)YJLY23: AL/XLPE/CTS/ STA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Approx. outer diameter	mm	58.1	61.1	65.2	69.0	72.4	76.1	80.1	86.7	91.8	102.3	110.4
Approx. weight (kg/km)	Cu	4358	4996	5938	7051	7986	9079	10537	13492	15744	19522	23491
	Al	3699	4114	4665	5279	5772	6363	7142	9007	10119	12328	14304
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	305	345	385	440	510	570	645	725
	Al	140	165	195	240	270	300	345	400	445	515	585
Air	Cu	170	205	255	310	350	400	455	535	605	705	805
	Al	130	160	200	240	275	310	355	415	475	560	645

Rated voltage: 18/30kV-three core

(ZR)YJV22: CU/XLPE/CTS/STA/PVC; (ZR)YJLV22:AL/XLPE/CTS/STA/PVC (ZR)YJY23: CU/XLPE/CTS/ STA/PE; (ZR)YJLY23: AL/XLPE/CTS/ STA/PE

Nominal area of conductor	mm^2	50	70	95	120	150	185	240	300	400
Thickness of insulation	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Approx. outer diameter	mm	73.1	77.1	81.0	85.8	89.0	93.3	98.6	103.8	113.6
Approx. weight (kg/km)	Cu	6380	7391	8572	10517	11581	13162	15413	17852	21827
	Al	5498	6118	6801	8304	8865	9767	10927	12228	14633
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
	Al	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Current ratings(A)										
Soil	Cu	205	255	305	345	385	440	510	570	645
	Al	165	200	240	270	305	350	400	450	515
Air	Cu	210	265	315	360	410	465	545	615	705
	Al	165	205	245	280	320	365	425	485	560



Rated voltage: 3.6/6kV-three core

(ZR)YJV32: CU/XLPE/CTS/SWA/PVC; (ZR)YJLV32: AL/XLPE/CTS/SWA/PVC; (ZR)YJY33: CU/XLPE/CTS/SWA/PE; (ZR)YJLY33: AL/XLPE/CTS/SWA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.8	3.0	3.2
Approx. outer diameter	mm	47.0	49.8	54.0	57.7	61.3	64.9	68.8	74.8	82.1	92.1	102.6
Approx. weight (kg/km)	Cu	4299	4963	5979	7073	8085	9236	10645	12911	16189	20077	24722
	Al	3640	4081	4706	5301	5871	6520	7250	8425	10565	12883	15535
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	300	345	385	435	505	565	645	725
	Al	140	165	200	235	270	300	340	390	445	510	580
Air	Cu	165	195	245	300	345	390	445	525	595	695	800
	Al	130	150	190	230	265	305	350	410	470	550	640

Rated voltage: 6/6kV, 6/10kV-three core

(ZR)YJV32: CU/XLPE/CTS/SWA/PVC; (ZR)YJLV32: AL/XLPE/CTS/SWA/PVC; (ZR)YJY33: CU/XLPE/CTS/SWA/PE; (ZR)YJLY33: AL/XLPE/CTS/SWA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Approx. outer diameter	mm	51.3	54.2	58.5	62.2	65.6	68.8	73.1	79.7	85.1	93.6	103.7
Approx. weight (kg/km)	Cu	4781	5471	6474	7569	8597	9716	11239	14314	16702	20316	24803
	Al	4122	4589	5200	5797	6384	7000	7844	9828	11077	13122	15616
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	300	345	385	435	505	565	645	725
	Al	140	165	195	235	270	300	340	390	445	510	580
Air	Cu	160	195	245	300	345	390	445	525	595	695	800
	Al	130	150	190	230	265	305	350	410	470	550	640

Rated voltage: 8.7/10kV, 8.7/15kV-three core

(ZR)YJV32: CU/XLPE/CTS/SWA/PVC; (ZR)YJLV32: AL/XLPE/CTS/SWA/PVC; (ZR)YJY33: CU/XLPE/CTS/SWA/PE; (ZR)YJLY33: AL/XLPE/CTS/SWA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Approx. outer diameter	mm	56.4	59.4	63.5	67.5	70.9	75.4	79.7	85.1	90.4	99.0	108.8
Approx. weight (kg/km)	Cu	5407	6084	7142	8377	9359	11352	12948	15271	17683	21363	25876
	Al	4748	5201	5869	6606	7145	8636	9553	10785	12058	14168	16689
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	210	255	305	350	390	440	510	565	645	725
	Al	140	165	200	240	270	300	340	400	445	510	585
Air	Cu	170	205	250	310	350	400	450	530	605	700	805
	Al	130	160	195	240	270	310	350	415	475	555	645

Rated voltage: 12/20kV-three core

(ZR)YJV32: CU/XLPE/CTS/SWA/PVC; (ZR)YJLV32: AL/XLPE/CTS/SWA/PVC; (ZR)YJY33: CU/XLPE/CTS/SWA/PE; (ZR)YJLY33: AL/XLPE/CTS/SWA/PE

Nominal area of conductor	mm^2	35	50	70	95	120	150	185	240	300	400	500
Thickness of insulation	mm	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Approx. outer diameter	mm	61.3	64.3	68.4	72.2	77.1	80.8	84.6	90.0	95.1	105.6	113.8
Approx. weight (kg/km)	Cu	6067	6778	7855	9065	11019	12246	13864	16145	18578	22719	27053
	Al	5408	5896	6581	7294	8805	9531	10469	11659	12953	15525	17866
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470	0.0366
	Al	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778	0.0605
Current ratings(A)												
Soil	Cu	175	205	255	305	345	385	440	510	570	645	725
	Al	140	165	195	240	270	300	345	400	445	515	585
Air	Cu	170	205	255	310	350	400	455	535	605	705	805
	Al	130	160	200	240	275	310	355	415	475	560	645

Rated voltage: 18/30kV-three core

(ZR)YJV32: CU/XLPE/CTS/SWA/PVC; (ZR)YJLV32: AL/XLPE/CTS/SWA/PVC; (ZR)YJY33: CU/XLPE/CTS/SWA/PE; (ZR)YJLY33: AL/XLPE/CTS/SWA/PE

Nominal area of conductor	mm^2	50	70	95	120	150	185	240	300	400
Thickness of insulation	mm	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Approx. outer diameter	mm	77.6	81.6	85.7	89.1	92.3	96.6	101.9	107.1	117.2
Approx. weight (kg/km)	Cu	9374	10574	11984	13194	14365	16025	18458	21079	25699
	Al	8492	9301	10213	10980	11649	12630	13972	15455	18505
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.0470
	Al	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.0778
Current ratings(A)										
Soil	Cu	205	255	305	345	385	440	510	570	645
	Al	165	200	240	270	305	350	400	450	515
Air	Cu	210	265	315	360	410	465	545	615	710
	Al	165	205	245	280	320	365	425	485	565

Assumed condition and correction factors of current ratings for medium voltage cable

Assumed condition

Operation condition of cable laying	
Maximum conductor temperature	90℃
Ambient air temperature	40℃
Ground temperature	25℃
Thermal resistivity of soil	1.2 K·m/W
Depth of laying	1m
Metallic screen grounding method	single-end earthed

Current ratings correction factors for ambient air temperatures

Air temp.℃	0	5	10	15	20	25	30	35	40	45	50
Factors	1.34	1.30	1.27	1.22	1.18	1.14	1.09	1.04	1.00	0.94	0.89

Current ratings correction factors for ambient ground temperatures

Soil temp. ℃	0	5	10	15	20	25	30	40	45	50
Factors	1.18	1.14	1.11	1.07	1.04	1.00	0.96	0.92	0.87	0.78

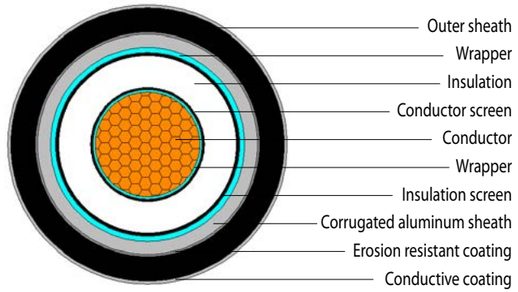
Current ratings correction factors for soil thermal resistivity

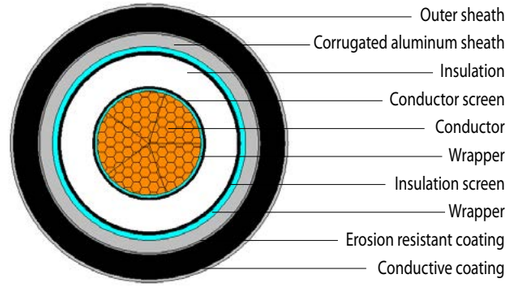
Soil thermal resistivity K·m/W	0.8	1.0	1.2	1.5	1.8	2.0	2.5	3.0
Factors	1.07	1.06	1.0	0.92	0.86	0.83	0.75	0.70

Current ratings correction factors for depths of laying

Depth of laying (m)	0.5	0.7	0.9	1.0	1.2	1.5
Factors	1.10	1.05	1.01	1.00	0.98	0.95

High voltage XLPE insulated power cable from38kV up to 500kV





Rated voltage: 38/66kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC; YJLLW03:AL/XLPE/CAS/HDPE; YJLLW02: AL/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	95	120	150	185	240	300	400	500	630	800	800*	1000	1200	1400	1600	1800	2000
Thickness of insulation	mm	13.0	13.0	12.0	12.0	12.0	11.0	11.0	11.0	11.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Thickness of aluminum tape	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Thickness of outer sheath	mm	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0
Approx. outer diameter	mm	70.8	72.4	71.6	73.4	75.8	75.9	78.5	81.7	86.2	88.4	90.6	95.4	99.8	103.8	107.1	109.8	113.8
Approx. weight (kg/km)	Cu	4116	4454	4593	5046	5724	6205	7120	8300	9939	11559	11842	14216	16103	18144	20123	21981	24149
	Al	3562	3755	3736	3967	4298	4412	4872	5376	6113	6642	6925	8029	8985	9799	10601	11355.5	12170
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.1930	0.1530	0.1240	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113	0.0101	0.0090
	Al	0.3200	0.2530	0.2060	0.1640	0.1250	0.1000	0.0778	0.0605	0.0469	0.0367	0.0367	0.0291	0.0247	0.0212	0.0186	0.0165	0.0149
Current ratings(A)																		
Soil ∴	Cu	327	371	416	470	545	616	700	796	903	1015	1059	1188	1280	1377	1460	1530	1602
Air ∴	Cu	383	440	498	569	668	764	880	1016	1171	1342	1406	1607	1754	1905	2044	2161	2285
Soil …	Cu	385	439	495	560	649	737	838	951	1075	1209	1258	1397	1494	1593	1675	1741	1806
Air …	Cu	393	451	511	583	685	785	904	1042	1200	1373	1436	1629	1771	1912	2038	2142	2248

* Represents segmentation conductor

High voltage XLPE insulated power cable from38kV up to 500kV

Rated voltage: 64/110kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC; YJLLW03:AL/XLPE/CAS/HDPE; YJLLW02: AL/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	240	300	400	500	630	800	800*	1000	1200	1400	1600
Thickness of insulation	mm	19.0	18.5	17.5	17.0	16.5	16.0	16.0	16.0	16.0	16.0	16.0
Thickness of aluminum tape	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3
Thickness of outer sheath	mm	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	5.0	5.0	5.0
Approx. outer diameter	mm	89.8	90.9	91.5	93.7	97.2	100.4	102.0	106.8	112.2	115.2	118.5
Approx. weight (kg/km)	Cu	7295	7900	8620	9731	11316	13109	13339	15811	17808	19861	21894
	Al	5868	6108	6372	6808	7490	8191	8421	9624	10689	11517	12372
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113
	Al	0.1250	0.1000	0.0778	0.0605	0.0469	0.0367	0.0367	0.0291	0.0247	0.0212	0.0186
Current ratings(A)												
Soil ∴	Cu	539	609	693	789	897	1006	1048	1174	1265	1358	1440
Air ∴	Cu	657	752	868	1003	1159	1322	1380	1576	1718	1866	2000
Soil ⋯	Cu	624	707	807	919	1043	1164	1211	1341	1433	1525	1600
Air ⋯	Cu	670	767	886	1022	1180	1340	1398	1583	1717	1852	1971

Rated voltage: 76/132kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC; YJLLW03:AL/XLPE/CAS/HDPE; YJLLW02: AL/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	150	185	240	300	400	500	630	800	800*	1000	1200	1400	1600	1800	2000
Thickness of insulation	mm	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Thickness of aluminum tape	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Thickness of outer sheath	mm	4.0	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0
Approx. outer diameter	mm	84.0	85.8	88.2	90.3	92.9	96.1	100.6	105.8	108.0	112.8	118.2	121.2	124.5	128.2	131.2
Approx. weight (kg/km)	Cu	5896	6382	7104	7830	8800	10047	11782	13766	14104	16624	18656	20732	22790	24749	26953
	Al	5039	5303	5678	6037	6552	7123	7956	8849	9186	10437	11537	12387	13268	14123	14974
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.1240	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113	0.0101	0.0090
	Al	0.2060	0.1640	0.1250	0.1000	0.0778	0.0605	0.0469	0.0367	0.0367	0.0291	0.0247	0.0212	0.0186	0.0165	0.0149
Current ratings(A)																
Soil ∴	Cu	411	464	538	607	690	784	890	998	1041	1166	1256	1349	1429	1496	1565
Air ∴	Cu	489	558	655	747	860	992	1142	1302	1363	1554	1694	1839	1971	2083	2200
Soil ⋯	Cu	478	541	627	708	805	913	1032	1151	1198	1327	1418	1509	1584	1645	1704
Air ⋯	Cu	499	570	669	763	878	1011	1162	1320	1379	1560	1692	1825	1943	2041	2140

* Represents segmentation conductor

High voltage XLPE insulated power cable from38kV up to 500kV

Rated voltage: 87/150kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC; YJLLW03:AL/XLPE/CAS/HDPE; YJLLW02: AL/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	185	240	300	400	500	630	800	800*	1000	1200	1400	1600	1800	2000
Thickness of insulation	mm	22.0	21.0	21.0	21.0	21.0	21.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Thickness of aluminum tape	mm	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.3	2.3	2.3	2.3	2.3
Thickness of outer sheath	mm	4.0	4.0	4.0	4.0	4.0	4.5	4.5	4.5	4.5	5.0	5.0	5.0	5.0	5.0
Approx. outer diameter	mm	93.8	94.2	96.3	98.9	102.1	106.6	109.8	112.0	116.8	122.2	125.2	128.5	132.2	135.2
Approx. weight (kg/km)	Cu	7361	7850	8594	9587	10862	12637	14355	14705	17261	19318	21412	23489	25464	27685
	Al	6282	6424	6802	7339	7938	8811	9437	9788	11074	12200	13067	13967	14838	15706
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113	0.0101	0.0090
	Al	0.1640	0.1250	0.1000	0.0778	0.0605	0.0469	0.0367	0.0367	0.0291	0.0247	0.0212	0.0186	0.0165	0.0149
Current ratings(A)															
Soil ∴	Cu	463	538	606	690	784	888	997	1040	1164	1253	1344	1423	1490	1557
Air ∴	Cu	557	655	747	860	991	1140	1303	1363	1553	1692	1836	1966	2077	2192
Soil ⋯	Cu	532	620	699	794	900	1016	1138	1183	1309	1397	1485	1557	1615	1670
Air ⋯	Cu	567	668	761	875	1006	1155	1317	1374	1553	1683	1814	1929	2024	2121

Rated voltage: 127/220kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	400	500	630	800	800*	1000	1200	1400	1600	1800	2000	2200	2500
Thickness of insulation	mm	27.0	27.0	26.0	25.0	25.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Thickness of aluminum tape	mm	2.4	2.4	2.4	2.4	2.4	2.6	2.6	2.6	2.6	2.8	2.8	2.8	2.8
Thickness of outer sheath	mm	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Approx. outer diameter	mm	116.7	119.9	121.4	123.6	124.8	127.4	131.8	134.8	138.1	142.2	145.2	148.7	151.4
Approx. weight (kg/km)	Cu	12295	13652	15017	16751	16963	19163	21093	23230	25354	27618	29887	31790	35008
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.0470	0.0366	0.0283	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113	0.0101	0.0090	0.0083	0.0072
Current ratings(A)														
Soil ∴	Cu	686	779	883	991	1031	1155	1242	1331	1409	1474	1540	1587	1662
Air ∴	Cu	851	981	1131	1292	1347	1539	1675	1817	1945	2057	2171	2262	2392
Soil ⋯	Cu	773	875	989	1105	1147	1275	1358	1442	1510	1566	1619	1652	1709
Air ⋯	Cu	862	991	1139	1295	1349	1530	1655	1782	1893	1989	2083	2156	2258

* Represents segmentation conductor

High voltage XLPE insulated power cable from38kV up to 500kV

Rated voltage: 290/500kV

YJLW03: CU/XLPE/CAS/HDPE; YJLW02: CU/XLPE/CAS/PVC;

Nominal area of conductor	mm^2	800	800*	1000	1200	1400	1600	1800	2000	2200	2500
Thickness of insulation	mm	34.0	34.0	33.0	33.0	32.0	32.0	31.0	31.0	31.0	31.0
Thickness of aluminum tape	mm	2.9	2.9	3.0	3.0	3.0	3.1	3.2	3.2	3.2	3.3
Thickness of outer sheath	mm	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Approx. outer diameter	mm	148.0	148.4	150.8	154.2	155.2	158.7	159.6	162.6	166.1	169.0
Approx. weight (kg/km)	Cu	21520	21600	23786	25793	27592	29956	31707	34060	36061	39503
Max. DC resistance of conductor at 20℃ (Ω/km)	Cu	0.0221	0.0221	0.0176	0.0151	0.0129	0.0113	0.0101	0.0090	0.0083	0.0072
Current ratings(A)											
Soil ∴	Cu	962	1001	1119	1201	1287	1361	1425	1486	1530	1596
Air ∴	Cu	1248	1301	1486	1613	1753	1878	1991	2101	2188	2306
Soil ⋯	Cu	1050	1090	1208	1285	1366	1431	1490	1540	1572	1624
Air ⋯	Cu	1246	1297	1468	1587	1714	1824	1923	2015	2086	2183

* Represents segmentation conductor

Assumed condition and correction factors of current ratings for high voltage cable

Assumed condition

Operation condition of cable laying	
Maximum conductor temperature	90℃
Ambient air temperature	40℃
Ground temperature	25℃
Thermal resistivity of soil	1.2 K·m/W
Depth of laying	1m
Metallic screen grounding method	single-end earthed

Current ratings correction factors for ambient air temperatures

Air temp.℃	0	5	10	15	20	25	30	35	40	45	50
Factors	1.34	1.30	1.27	1.22	1.18	1.14	1.09	1.04	1.00	0.94	0.89

Current ratings correction factors for ambient ground temperatures

Soil temp. ℃	0	5	10	15	20	25	30	40	45	50
Factors	1.18	1.14	1.11	1.07	1.04	1.00	0.96	0.92	0.87	0.78

Current ratings correction factors for soil thermal resistivity

soil thermal resistivity K·m/W	0.8	1.0	1.2	1.5	1.8	2.0	2.5	3.0
Factors	1.07	1.06	1.0	0.92	0.86	0.83	0.75	0.70

Current ratings correction factors for depths of laying

Depth of laying (m)	0.5	0.7	0.9	1.0	1.2	1.5
Factors	1.10	1.05	1.01	1.00	0.98	0.95

Certificate

ZTT has established a complete, advanced quality inspection center of controlling raw materials and product quality. To ensure high quality of Power Cable, ZTT always selects raw materials from international and domestic famous brands. ZTT also has received certifications of ISO9001, ISO14001 and OHSAS18001.

High voltage VCV production line brief introduction

The height of the VCV production line tower is 133.3 meters. We introduce the world's most advanced 750kV VCV XLPE production line from Germany TROSTER. This production line consists of pay-off stands, conductor holder, pay-off accumulator,belt-type capstan, front preheat, triple extrusion machine, cross head, eccentricity measuring device, rear preheat, continuous vulcanisation tube, cooling tube,turn around vessel, belt-type caterpillar, converse wheel, swiveling wheel, help belt-type caterpillar and take-up strands.

Production capacity:

1000km high voltage power cable per year

Specification:

240-3000mm^2, up to 750kV voltage level

Equipment function:

This production line adopts dry crosslinking, dry cooling, the whole production process are computer automation controlled, we used advanced TCC software to make formula process calculation. Meanwhile, this production line is equipped with Germany SIKORA X-RAY 8000 NXT eccentricity measuring device, this eccentricity measuring device adopts advanced double sensor measurement technology to effectively guarantee the roundness of the products and various performance indicators.

Production line loading zone is equipped with thousand-grade level clean room, material falling zone is equipped with hundred-grade level clean glove box. The whole production line is equipped with the front and rear preheat sets to guarantee the inside and the outside of the insulation core have the uniform temperature when crosslinking in the curing tube, which effectively avoids insulation internal stress.