

Underground Cable Steel Wire/type Armoured Copper Power cable



Product Description

1. Application

SWA cable can be referred to more generally as mains cable, armoured cable, power cable and booklet armoured cable. The name power cable, however, applies to a wide range of cables including 6381Y, NYCY, NYY-J and 6491X Cable.

The use of the armour as the means of providing everything to the equipment supplied by the cable (a function technically known as the circuit protective conductor or CPC) is a matter of debate within the electrical installation industry. It is sometimes the case that an additional core within the cable is specified as the CPC (for instance, instead of using a two core cable for line and neutral and the armouring as the CPC, a three core cable is used) or an external earth wire is run alongside the cable to serve as the CPC. Primary concerns are the relative conductivity of the armouring compared to the cores (which reduces as the cable size increases) and reliability issues. Recent articles by authoritative sources have analysed the practice in detail and concluded that, for the majority of situations, the armouring is adequate to serve as the CPC under UK wiring regulations.

It is a great quality and reliable product that is useful for home installations such as powered buildings in gardens as well as some Industrial Applications.

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2. Overview

6mm² SWA cable just commonly be called as 6mm² steel wire armoured cable, is an industry standard Armoured Cable size and a hard-wearing power cable designed for the supply of mains electricity. It is one of a number of armoured electrical cables – which include 11kV Cable and 33kV Cable – and is found in underground systems, power networks and cable ducting.

3. The typical construction of an SWA cable can be broken down as follow table

Size 6mm² Conductor

consists of plain stranded copper (cables are classified to indicate the degree of flexibility. Class 2 refers to rigid stranded copper conductors as stipulated by British Standard BS EN 60228:2005 Insulation Cross-linked polyethylene (XLPE) is used in a number of power cables because it has good water resistance and excellent electrical properties. Insulation in cables ensures that conductors and other metal substances do not come into contact with each other. Bedding Polyvinyl chloride (PVC) bedding is used to provide a protective boundary between inner and outer layers of the cable.

Armour Steel wire armour provides mechanical protection, which means the cable can withstand higher stresses, be buried directly and used in external or underground projects. The armouring is normally connected to earth and can sometimes be used as the circuit protective conductor ("earth wire") for the equipment supplied by cable.

Sheath a black PVC sheath holds all components of the cable together and provides additional protection from external stresses.

4. Operating Characteristics:

Rated power-frequency voltage $u_0/u: 0.6/1$ KV 3.6/6KV 12/20KV 18/35KV...

Max permissible continuous operating temperature of conductor 70

Max short-circuit temperature of the conductor shall not exceed (Max 5 seconds duration): cross-section of conductor 300 mm²

The ambient temperature under installations should not be below 0

The bending radius of single core cable should not be less than 20 times of the cable diameter ,the bending radius of multi-core cable should not be less than 15 times of the cable diameter.

5. Nominal Cross-sectional Areas:

1.5 mm² , 2.5 mm² , 4 mm² , 6 mm² , 10 mm² , 16 mm² , 25 mm² , 35 mm² , 50 mm² , 70 mm² , 95 mm² , 120 mm² , 150 mm² , 185 mm² , 240 mm² , 300 mm² 400 mm² 500 mm² 630 mm² 800 mm²

6. Production Range:

single core cable from 1.5 mm² to 800 mm², multi-core cable from 1.5 mm² to 400 mm²

7. Standards:

Our XLPE cable can be manufactured according to the company's specification which is equivalent to IEC 60502, IEC60332, IEC60754.

Some indexes are superior to above international standard.

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8. Type, Designation and Main Application of cable

Type	Description	Main applications
YJV YJLV ZR-YJV ZR-YJLV	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed power cable	Used indoor or outdoor able to bear external mechanical forces, but the tractive force during laying. Laying single core cable in magnetic duct is not permissible.
YJV22 YJLV22 ZR-YJV22 ZR-YJLV22	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed internal steel tape armored power cable	For laying in ground, able to bear external mechanical forces, but unable to bear large pulling force.
YJV32 YJLV32 ZR-YJV32 ZR-YJLV32	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed fine steel wire armored power cable	For laying in water or in ground along route with large difference of level, able to bear external forces and moderate pulling force.

9. Production Range of Cable

Type	No. of cores	Rated Voltage kv					
		3.6/6	6/6, 6/10	8.7/10, 8.7/15	12/20	21/35	26/35
		Nom. Cross sectional area of conductor mm ²					
YJV YJLV ZR-YJV ZR-YJLV	1	25-400	25-400	25-400	35-400	50-400	50-400
	3	25-300	25-300	25-300	35-300	50-185	50-185
YJV22 YJLV22 ZR-YJV22 ZR-YJLV22	3	25-300	25-300	25-300	35-300	50-185	50-185
YJV32 YJLV32 ZR-YJV32 ZR-YJLV32	1	25-400	25-400	25-400	35-400	50-400	50-400
	3	25-300	25-300	25-300	35-300		

Specifications, sizes and cross sections not listed can be produced accordingly.

10. 26/35(40.5) kv 1-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV62	YJLV62		YJV72	YJLV72
1×50	38.3	1839	1529	42.9	2334	1992	45.2	3642	3300
1×70	40.1	2122	1689	44.8	2646	2174	48.2	4443	3971
1×95	41.8	2447	1858	46.6	2999	2366	49.9	4868	4236
1×120	43.3	2759	2015	48.1	3336	2544	51.5	5270	4477
1×150	45.0	3128	2198	49.9	3734	2750	53.3	5739	4755
1×185	46.7	3543	2396	51.6	4179	2972	55.0	6256	5049
1×240	49.0	4177	2690	54.1	4855	3300	57.5	7032	5477
1×300	51.4	4855	2996	56.5	5576	3642	59.9	7852	5917
1×400	54.8	5960	3481	60.1	6745	4180	63.4	9166	6600
1×500	58.2	7092	3993	63.6	7944	4724	67.0	10508	7289
1×630	61.7	8479	4575	67.3	9402	5362	70.6	12115	8075

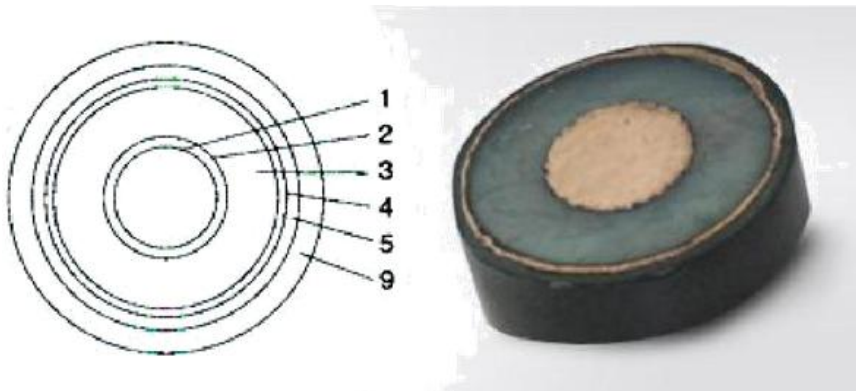
11. 26/35(40.5) kv 3-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV22	YJLV22		YJV32	YJLV32
3×50	81.0	6195	5265	87.4	8408	7478	92.0	12174	11244
3×70	84.9	7118	5817	92.7	10378	9077	96.1	13427	12126
3×95	88.6	8160	6393	96.4	11555	9788	99.8	14738	12971
3×120	91.8	9164	6933	100.0	12769	10538	103.2	16031	13800
3×150	95.4	10351	7562	103.8	14143	11354	107.1	17524	14753
3×185	99.3	11722	8282	107.5	15610	12170	110.8	19140	15700
3×240	104.2	13724	9262	112.8	17903	13441	116.1	21600	17138
3×300	109.4	15944	10367	118.0	20324	14747	121.3	24230	18653
3×400	116.1	19388	11952	125.1	24138	16702	128.3	28250	20814

12. D.C Resistance of finished cable at 20 per km is not more than the following.

Nominal Cross Section mm ²	25	35	50	70	95	120
Cu core Ω	0.727	0.524	0.387	0.268	0.193	0.153
Al core Ω	1.2	0.868	0.641	0.443	0.32	0.253
Nominal Cross Section mm ²	150	185	240	300	400	500
Cu core Ω	0.124	0.0991	0.0754	0.0601	0.047	0.0366
Al core Ω	0.206	0.164	0.125	0.1	0.0778	0.0605

13. Sample and Sketch of cable cross section structure



Single Core **XLPE Cable** non-armored



Three Core **XLPE Cable** Steel tape Armored

- | | | |
|---------------------------------------|---------------------|--------------------|
| 1. Conductor | 2. Conductor Screen | 3. XLPE insulation |
| 4. Insulation Screen | 5. Metal Screen | 6. Filler |
| 7. Separating Sheath (Inner Covering) | 8. Armor | 9. Outer sheath |

11KV Aluminum steel wires armoured Underground Cable AL/XLPE/STA/PVC



Product Description

1. Underground cable detail

Underground cable, cable, and overhead power lines compared with the common, because it is often buried in the ground, so it is also called the underground cable. Cable conductor is wrapped by one or a plurality of mutually insulated insulation layer and protective layer made of wire, used to power or information from one place to another. After entering the modern society, the tense city land, traffic pressure, city construction and other reasons, the big city is widely used in underground cable transmission mode. Compared with the overhead lines, cable has the advantages of small footprint, transmission reliability, strong anti-interference ability etc.

2. Application:

These cables are most suitable for direct burial or for installation on trays or ducts, Where there is a risk of mechanical damage, armoured cables should be used.

3. Construction: (Example of YJV32 8.7/15kV)

Copper(aluminum)conductor or conductor screen

XLPE insulation or insulation screen

Color for core identification

Assembly/ bedding/ armoured/outer sheath.

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4. Characteristic

1) The Rated Voltage(kv):

1st class 0.6/1 1.8/3 3.6/6 6/10 8.7/15 12/20 18/30 21/35 2nd class 1/1 3/3 6/6 8.7/10 12/15
18/20 - 26/35

2) Number of cores:

1core 2core 3core 3+1core 4core 4+1core 4+2core 5core and so on.

Nominal Section Area(mm²) :1.5 2.5 4 6 10 16 25 35 50 70 95 120 150 185 240 300 400 500 630 800

5. Standards:

IEC60502, and BS6346, VDE, AS/NZS, UL, etc or as customer's request.

6. Product Description:

XLPE insulated PVC sheathed power cable (**XLPE/PVC Cable**)

XLPE insulated steel tape armored PVC sheathed power cable (XLPE/STA/PVC Cable)

XLPE insulated steel wire armored PVC sheathed power cable (XLPE/SWA/PVC Cable)

Flame retardant XLPE insulated PVC sheathed power cable (FR/XLPE/PVC Cable)

Flame retardant XLPE insulated steel tape armored PVC sheathed power cable (FR/XLPE/STA/PVC Cable)

Flame retardant XLPE insulated steel wire armored PVC sheathed power cable (FR/XLPE/SWA/PVC Cable)

FR – Flame Retardant

7. Packaging & Shipping

Packing: by wooden drums or Iron wooden drum

Shipping: LCL, 20GP' 40GP' 40HP'

8. common use model:

Type		Description	Application n
Cu	Al		
YJV	YJLV	XLPE insulation PVC sheath <u>power cable</u>	To be laid indoors, in tunnel, cable furrow or pipe, the cable couldn't bear mechanical force outside
YJY	YJLY	XLPE insulation PE sheath power cable	
YJV22	YJLV22	XLPE insulation, steel tape armor, PVC sheath power cable	To be laid underground, the cable could bear certain mechanical force, but it couldn't bear great pulling force.
YJV23	YJLV23	XLPE insulation, steel tape armor, PE sheath power cable	
YJV62	YJLV62	XLPE insulation, have no the magnetism steel tape armor, PE sheath power cable	
YJV32	YJLV32	XLPE insulation, thin steel-wire armor, PVC sheath power cable	Be applicable to the well, water inside and fall in the bad soil, the cable cans bear the equal dint outside the machine with pull the dint
YJV72	YJLV72	XLPE insulation, have no the magnetism thick steel-wire armor, PVC sheath power cable	
YJV42	YJLV42	XLPE insulation, thick steel-wire armor, PVC sheath power cable	Be applicable to the well, underwater with the bottom of sea, the cable cans bear the bigger pressure with lead to pull the dint.

9. 6/6(7.2) kv 6/10(12) kv 1-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV62	YJLV62		YJV72	YJLV72
1×25	20.9	682	527	25.2	946	767	26.4	1485	1306
1×35	21.9	803	586	26.2	1079	835	27.4	1641	1397
1×50	23.2	978	668	27.5	1268	927	28.8	1870	1528
1×70	24.9	1211	777	29.3	1528	1056	30.6	2172	1700
1×95	26.5	1485	897	31.0	1829	1196	32.3	2513	1881
1×120	27.9	1752	1009	32.5	2121	1329	33.8	2840	2048
1×150	29.6	2078	1148	34.2	2467	1483	36.4	3484	2500
1×185	31.3	2449	1302	35.9	2859	1653	38.1	3929	2723
1×240	33.6	3022	1535	38.3	3458	1903	40.4	4600	3045
1×300	36.0	3641	1782	40.7	4114	2179	42.8	5331	3396
1×400	39.4	4568	2179	44.2	5187	2621	46.4	6514	3948
1×500	42.8	5702	2603	47.8	6289	3069	51.0	8183	4963

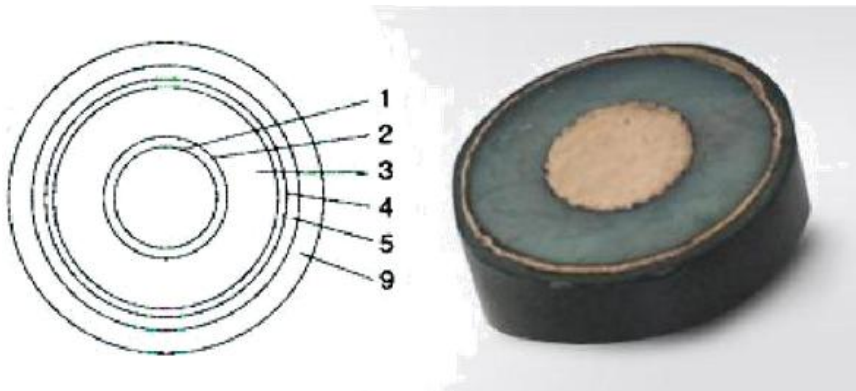
10. 6.6/6(7.2) kv 6/10(12) kv 3-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV22	YJLV22		YJV32	YJLV32
3×25	42.4	2136	1671	47.2	3201	2736	50.5	4617	4152
3×35	44.7	2536	1885	49.5	3658	3007	52.8	5139	4488
3×50	47.7	3108	2178	52.9	4356	3426	56.0	5909	4979
3×70	51.6	3866	2565	57.0	5242	3941	60.1	6920	5619
3×95	55.4	4777	3010	60.6	6224	4457	63.8	8016	6249
3×120	58.7	5645	3414	64.1	7207	4976	67.3	9105	6874
3×150	62.3	6678	3889	67.7	8336	5547	70.9	10345	7556
3×185	66.0	7851	4411	71.6	9642	6202	74.8	11773	8333
3×240	70.9	9645	5183	76.9	11643	7181	81.5	14885	10423
3×300	76.1	11617	6040	82.3	13798	8221	86.8	17245	11668
3×400	82.8	14772	7336	90.4	18073	10637	93.7	20938	13502

11. D.C Resistance of finished cable at 20 per km is not more than the following.

Nominal Cross Section mm ²	25	35	50	70	95	120
Cu core Ω	0.727	0.524	0.387	0.268	0.193	0.153
Al core Ω	1.2	0.868	0.641	0.443	0.32	0.253
Nominal Cross Section mm ²	150	185	240	300	400	500
Cu core Ω	0.124	0.0991	0.0754	0.0601	0.047	0.0366
Al core Ω	0.206	0.164	0.125	0.1	0.0778	0.0605

12. Sample and Sketch of cable cross section structure



Single Core **XLPE Cable** non-armored



Three Core **XLPE Cable** Steel tape Armored

- | | | |
|---------------------------------------|---------------------|--------------------|
| 1. Conductor | 2. Conductor Screen | 3. XLPE insulation |
| 4. Insulation Screen | 5. Metal Screen | 6. Filler |
| 7. Separating Sheath (Inner Covering) | 8. Armor | 9. Outer sheath |

240mm xlpe 4 core armoured cable



Description

For XLPE insulated power cable , either chemical method or physical method is employer to transform the molecular structure of PE form chain into three-dimensional network, i.e. thermoplastic PE is transformer into thermosetting XLPE. After cross-linking, the thermal and mechanical properties of PE have been greatly improved while its excellent property are still retained.

The maximum permissible operating temperature of the conductor of a XLPE insulated power cable is 90 which is higher than that of paper, PVC or PE insulated power cable. The cable has the advantage of simplicity in construction, lightness in weight, convenience in application besides its excellent electrical, thermal, mechanical and anti-chemical corrosion properties. It can also be laid with no limitation of level difference along the route.

1. standard

The product is manufactured according to the standard of GB12706 or IEC,BS,DIN and ICEA upon request.

2. Applications

The product is suitable for use in power distribution lines or fixed installations with rated power frequency voltage up to and including 0.6/1kV

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3. Operating characteristics

- 1, Rated power-frequency voltage U_0/U : 0.6/1kV
- 2,Max.permmissible continuous operating temperature of conductor: 90
- 3,Max.short-circuit temperature of the conductor shall not exceed 250.(5s maximum duration).
- 4,The ambient temperature under installation should not below 0
- 5, The bending radius of a cable should not less than 15 times of the cable diameter.

4. Voltage designation

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 , and is expressed in the form of U_0/U (U_m)KV .Where :

U_0 -The rated power-frequency voltage between conductor and earth or metallic screen ,for which the cable designed;

U -The rated power-frequency voltage between conductors, for which the cable designed;

U_m -The maximum value of the highest system voltage for which the equipment may be used.

5. Construction:

Scope of XLPE cable

Type No. of Core Nominal cross-section

Type	No. of Core	Nominal cross-section
Cu(AL)/XLPE/PVC(PE) Cu(AL)/XLPE/ATA/PVC(PE)Cu(AL)/XLPE/AWA/PVC(PE)	1	1.5-1000
Cu(AL)/XLPE/STA/PVC(PE) Cu(AL)/XLPE/SWA/PVC(PE)	2、 3、 4、 5	1.5-400
	3+1,4+1,3+2	2.5-400

Cross-section area of neutral conductor

In 3+1cores and 3+2cores should conform to specification of following table:

Nominal cross-section	Main core	2.5	4	6	10	16	25	35	50
	Neutral core	1.5	2.5	4	6	10	16	16	25
Nominal cross-section	Main core	70	95	120	150	185	240	300	400
	Neutral core	35	50	70	70	95	120	150	185

6. D.C Resistance of finished cable at 20°C per km is not more than the following:

Nominal cross-section mm²	15	2.5	4	6	10	16	25
Cu core	12.1	7.41	4.61	3.08	1.83	1.15	0.727
Al core	18.1	12.1	7.41	4.61	3.08	1.91	1.20
Nominal cross-section mm²	35	50	70	95	120	150	185
Cu core	0.524	0.387	0.268	0.193	0.153	0.124	0.0991
Al core	0.868	0.641	0.443	0.320	0.253	0.206	0.164
Nominal cross-section mm²	240	300	400	500	630	800	1000
Cu core	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0176
Al core	0.125	0.100	0.0778	0.0605	0.0469	0.0367	0.0291

Voltage test:

Each drum of finished cable should withstand power frequency voltage 3.5kV for 5 minutes, the insulation is not breakdown.

Service conditions and operation parameters of Cable:

The cable is applied to fixed installation for rated voltage 0.6/1kV of power transportation and distribution line.

Max. rated temperature of conductor. nominal operating 90°C

Short circuit: max. for 5 sec.250°C

The cable can be laid without drop restriction, and the environment temperature shall not be lower than 0°C.

7. Type, Designation and Main Application of cable

Type	Description	Main applications
YJV YJLV ZR-YJV ZR-YJLV	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed power cable	Used indoor or outdoor able to bear external mechanical forces, but the tractive force during laying. Laying single core cable in magnetic duct is not permissible.
YJV22 YJLV22 ZR-YJV22 ZR-YJLV22	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed internal steel tape armored power cable	For laying in ground, able to bear external mechanical forces, but unable to bear large pulling force.
YJV32 YJLV32 ZR-YJV32 ZR-YJLV32	Flame retardant and non-flame retardant Cu or Al conductor XLPE insulated PVC sheathed fine steel wire armored power cable	For laying in water or in ground along route with large difference of level, able to bear external forces and moderate pulling force.

8. Specification & approximate size & approximate weight of cable

0.6/1kV 4-Core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV22	YJLV22		YJV32	YJLV32
4x4	15.2	355	256	17.6	501	402	/	/	/
4x6	16.4	453	305	18.8	612	463	/	/	/
4x10	19.5	670	422	21.9	858	610	/	/	/
4x16	22.1	947	550	24.5	1159	762	/	/	/
4x25	22.7	1322	703	25.1	1540	921	30.3	2316	1801
4x35	24.9	1729	862	27.5	1981	1114	29.6	2615	1741
4x50	28.7	2398	1159	31.3	2687	1448	34.2	3648	2400
4x70	32.3	3221	1487	36.1	3883	2149	38.1	4682	2935
4x95	36.8	4290	1936	40.8	5062	2708	42.5	5917	3818
4x120	39.8	5277	2303	43.8	6110	3137	47.8	7643	4648
4x150	44.4	6567	2850	48.2	7469	3752	52.2	9164	5420
4x185	49.0	8062	3478	53.2	9094	4509	57.1	10905	6288
4x240	54.9	10334	4387	59.1	11488	5541	62.9	13466	7476
4x300	60.7	12811	5377	64.9	14082	6648	69.1	16480	9040

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3*240mm² copper conductor armoured underground cable



Product Description

1. Overview

3 core armoured cable is mainly use for laying underground with large different altitude, be able to bear external machanical force and moderate pulling force. Huadong provide Kinds of 3 core armoured cables, Cross section area is 0.75~630mm².

2. Application:

3 core armoured cable is designed for use in mains supply electricity. These cables are provided with mechanical protection are therefore suitable for external use and direct burial.

It is a great quality and reliable product that is useful for home installations such as powered buildings in gardens as well as some Industrial Applications. Please check with an electrician to find out what size Armoured Cable you require, be it 3 Core 4mm Armoured Cable or any of the other sizes that are available through this page.

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3. Specification

U0/U 0.6/1KV,8.7/15KV,26/35KV Standard applied IEC60502, BS7870, GB/T12706

Max. working temperature 70 °C , can be 90 °C ,105 °C and 125 °C as per requirement Conductor

Class 1/2 Plain annealed copper wires Insulation XLPE Cores 3 cores Cross section area 0.75~630mm²

Sheath PVC black Armour Steel wire armour or steel tape armour 100 meters per roll or as per request

Certification : ISO9001/ISO14001 /OHSAS18001/CCC

Long time operating temperature is 90 degrees. In short circuit, conductor highest temperature should be not more than

250 Degrees. Flame retardant or Fire resistance or low smoking and Halogen free or other property can be available

We can manufacture the suitable 3 core armoured cable for you by your inquiry (sales@hlcables.com)

4. Product Description:

XLPE insulated PVC sheathed power cable ([XLPE/PVC Cable](#))

XLPE insulated steel tape armored PVC sheathed power cable (XLPE/STA/PVC Cable)

XLPE insulated steel wire armored PVC sheathed power cable (XLPE/SWA/PVC Cable)

Flame retardant XLPE insulated PVC sheathed power cable (FR/XLPE/PVC Cable)

Flame retardant XLPE insulated steel tape armored PVC sheathed power cable (FR/XLPE/STA/PVC Cable)

Flame retardant XLPE insulated steel wire armored PVC sheathed power cable (FR/XLPE/SWA/PVC Cable)

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5. Packaging & Shipping

Packaging Detail: wooden drum or steel wooden drum or as your special requirement

Delivery Detail: within one week for one container

6. common use model:

Type		Description	Application n
Cu	Al		
YJV	YJLV	XLPE insulation PVC sheath <u>power cable</u>	To be laid indoors, in tunnel, cable furrow or pipe, the cable couldn't bear mechanical force outside
YJY	YJLY	XLPE insulation PE sheath power cable	
YJV22	YJLV22	XLPE insulation, steel tape armor, PVC sheath power cable	To be laid underground, the cable could bear certain mechanical force, but it couldn't bear great pulling force.
YJV23	YJLV23	XLPE insulation, steel tape armor, PE sheath power cable	
YJV62	YJLV62	XLPE insulation, have no the magnetism steel tape armor, PE sheath power cable	
YJV32	YJLV32	XLPE insulation, thin steel-wire armor, PVC sheath power cable	Be applicable to the well, water inside and fall in the bad soil, the cable cans bear the equal dint outside the machine with pull the dint
YJV72	YJLV72	XLPE insulation, have no the magnetism thick steel-wire armor, PVC sheath power cable	
YJV42	YJLV42	XLPE insulation, thick steel-wire armor, PVC sheath power cable	Be applicable to the well, underwater with the bottom of sea, the cable cans bear the bigger pressure with lead to pull the dint.

7. 6/6(7.2) kv 6/10(12) kv 1-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV62	YJLV62		YJV72	YJLV72
1×25	20.9	682	527	25.2	946	767	26.4	1485	1306
1×35	21.9	803	586	26.2	1079	835	27.4	1641	1397
1×50	23.2	978	668	27.5	1268	927	28.8	1870	1528
1×70	24.9	1211	777	29.3	1528	1056	30.6	2172	1700
1×95	26.5	1485	897	31.0	1829	1196	32.3	2513	1881
1×120	27.9	1752	1009	32.5	2121	1329	33.8	2840	2048
1×150	29.6	2078	1148	34.2	2467	1483	36.4	3484	2500
1×185	31.3	2449	1302	35.9	2859	1653	38.1	3929	2723
1×240	33.6	3022	1535	38.3	3458	1903	40.4	4600	3045
1×300	36.0	3641	1782	40.7	4114	2179	42.8	5331	3396
1×400	39.4	4568	2179	44.2	5187	2621	46.4	6514	3948
1×500	42.8	5702	2603	47.8	6289	3069	51.0	8183	4963

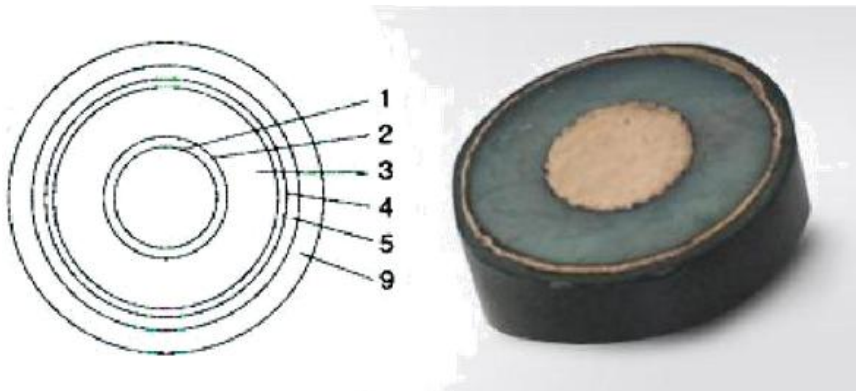
8. 6.6/6(7.2) kv 6/10(12) kv 3-core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV22	YJLV22		YJV32	YJLV32
3×25	42.4	2136	1671	47.2	3201	2736	50.5	4617	4152
3×35	44.7	2536	1885	49.5	3658	3007	52.8	5139	4488
3×50	47.7	3108	2178	52.9	4356	3426	56.0	5909	4979
3×70	51.6	3866	2565	57.0	5242	3941	60.1	6920	5619
3×95	55.4	4777	3010	60.6	6224	4457	63.8	8016	6249
3×120	58.7	5645	3414	64.1	7207	4976	67.3	9105	6874
3×150	62.3	6678	3889	67.7	8336	5547	70.9	10345	7556
3×185	66.0	7851	4411	71.6	9642	6202	74.8	11773	8333
3×240	70.9	9645	5183	76.9	11643	7181	81.5	14885	10423
3×300	76.1	11617	6040	82.3	13798	8221	86.8	17245	11668
3×400	82.8	14772	7336	90.4	18073	10637	93.7	20938	13502

9. D.C Resistance of finished cable at 20 per km is not more than the following.

Nominal Cross Section mm ²	25	35	50	70	95	120
Cu core Ω	0.727	0.524	0.387	0.268	0.193	0.153
Al core Ω	1.2	0.868	0.641	0.443	0.32	0.253
Nominal Cross Section mm ²	150	185	240	300	400	500
Cu core Ω	0.124	0.0991	0.0754	0.0601	0.047	0.0366
Al core Ω	0.206	0.164	0.125	0.1	0.0778	0.0605

10. Sample and Sketch of cable cross section structure



Single Core **XLPE Cable** non-armored



Three Core **XLPE Cable** Steel tape Armored

- | | | |
|---------------------------------------|---------------------|--------------------|
| 1. Conductor | 2. Conductor Screen | 3. XLPE insulation |
| 4. Insulation Screen | 5. Metal Screen | 6. Filler |
| 7. Separating Sheath (Inner Covering) | 8. Armor | 9. Outer sheath |

Laying armoured cable underground insulated copper conductor



Product Description

1. Underground cable detail

Underground cable, cable, and overhead power lines compared with the common, because it is often buried in the ground, so it is also called the underground cable. Cable conductor is wrapped by one or a plurality of mutually insulated insulation layer and protective layer made of wire, used to power or information from one place to another. After entering the modern society, the tense city land, traffic pressure, city construction and other reasons, the big city is widely used in underground cable transmission mode. Compared with the overhead lines, cable has the advantages of small footprint, transmission reliability, strong anti-interference ability etc.

2. Application:

This series cable is mainly laid indoor, cable slot, direct burial, channel, mining well and water condition. This series cable has the following characteristics. The Max. Rated temperature of the conductor is 70 degree. The Max. Temperature of the conductor of the cables can't exceed 160 degree. Several of flame-retardant and non-flame retardant XLPE cable can be manufactured with three technologies (peroxide, silane and irradiation crosslinking). The flame-retardant cable covers all kinds of low-smoke low-halogen low-smoke halogen free, and non-smoke nonhalogenated and three classes of A, B, C.

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3. Construction:

Stranded and compacted copper conductor

Inner semi conductor

PVC/XLPE insulation

Outer semi conductor

Water blocking semi conducting tape

Copper wire screen plus copper tape

Polyester tape

PVC inner sheath

Steel tape armored

PVC outer sheath

Standard: IEC60502, IEC60228

The kind of cable can be produced with 3 cores, Steel wire armored.

4. Characteristic

1) The Rated Voltage(kv):

1st class 0.6/1 1.8/3 3.6/6 6/10 8.7/15 12/20 18/30 21/35 2nd class 1/1 3/3 6/6 8.7/10 12/15
18/20 - 26/35

2) Number of cores:

1core 2core 3core 3+1core 4core 4+1core 4+2core 5core and so on.

Nominal Section Area(mm²) :1.5 2.5 4 6 10 16 25 35 50 70 95 120 150 185 240 300 400 500 630 800

5. Product Description:

XLPE insulated PVC sheathed power cable (**XLPE/PVC Cable**)

XLPE insulated steel tape armored PVC sheathed power cable (**XLPE/STA/PVC Cable**)

XLPE insulated steel wire armored PVC sheathed power cable (**XLPE/SWA/PVC Cable**)

Flame retardant XLPE insulated PVC sheathed power cable (**FR/XLPE/PVC Cable**)

Flame retardant XLPE insulated steel tape armored PVC sheathed power cable (**FR/XLPE/STA/PVC Cable**)

Flame retardant XLPE insulated steel wire armored PVC sheathed power cable (**FR/XLPE/SWA/PVC Cable**)

FR – Flame Retardant

6. Packaging & Shipping

Packaging Details: packed in wooden drums or steel-wooden drums or as your request.

Delivery Detail: 20-25days

7. common use model:

Type		Description	Application
Cu	Al		
YJV	YJLV	XLPE insulation PVC sheath <u>power cable</u>	To be laid indoors, in tunnel, cable furrow or pipe, the cable couldn't bear mechanical force outside
YJY	YJLY	XLPE insulation PE sheath power cable	
YJV22	YJLV22	XLPE insulation, steel tape armor, PVC sheath power cable	To be laid underground, the cable could bear certain mechanical force, but it couldn't bear great pulling force.
YJV23	YJLV23	XLPE insulation, steel tape armor, PE sheath power cable	
YJV62	YJLV62	XLPE insulation, have no the magnetism steel tape armor, PE sheath power cable	
YJV32	YJLV32	XLPE insulation, thin steel-wire armor, PVC sheath power cable	Be applicable to the well, water inside and fall in the bad soil, the cable cans bear the equal dint outside the machine with pull the dint
YJV72	YJLV72	XLPE insulation, have no the magnetism thick steel-wire armor, PVC sheath power cable	
YJV42	YJLV42	XLPE insulation, thick steel-wire armor, PVC sheath power cable	Be applicable to the well, underwater with the bottom of sea, the cable cans bear the bigger pressure with lead to pull the dint.

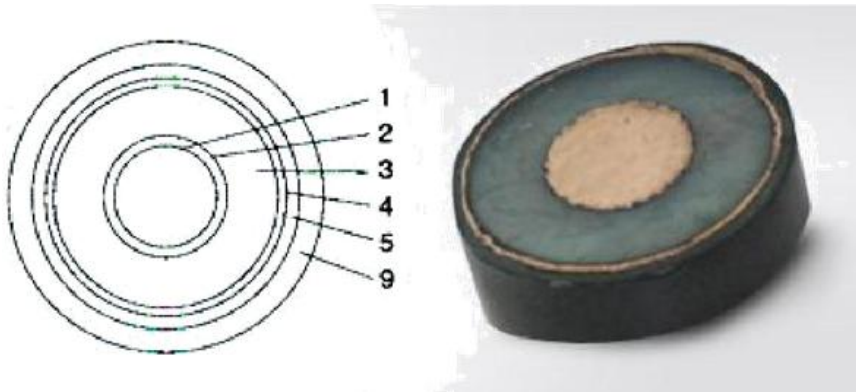
8. specifications

U ₀ /U _m (kv)	1st class	0.6/1	1.8/3	3.6/6	6/10	8.7/15	12/20	18/30	21/35
No.of Core	2nd class	1/1	3/3	6/6	8.7/10	12/15	18/20	-	26/35
1 Core	Section area(mm ²)	1.5-800	25-800	25-800	25-800	35-800	50-800	50-800	50-800
2 Core	Section Area(mm ²)	1.5-185	/	/	/	/	/	/	/
3 Core	Section area(mm ²)	1.5-400	25-400	25-400	25-400	35-400	50-400	50-400	50-400
4 Core	Section Area(mm ²)	2.5-400	25-400	/	/	/	/	/	/
5 Core	Section area(mm ²)	2.5-400	25-400	/	/	/	/	/	/

9. D.C Resistance of finished cable at 20 per km is not more than the following.

NominalCross Section mm ²	25	35	50	70	95	120
Cu core Ω	0.727	0.524	0.387	0.268	0.193	0.153
Alcore Ω	1.2	0.868	0.641	0.443	0.32	0.253
NominalCross Section mm ²	150	185	240	300	400	500
Cu core Ω	0.124	0.0991	0.0754	0.0601	0.047	0.0366
Alcore Ω	0.206	0.164	0.125	0.1	0.0778	0.0605

10. Sample and Sketch of cable cross section structure



Single Core **XLPE Cable** non-armored



Three Core **XLPE Cable** Steel tape Armored

- | | | |
|--------------------------------------|---------------------|--------------------|
| 1. Conductor | 2. Conductor Screen | 3. XLPE insulation |
| 4. Insulation Screen | 5. Metal Screen | 6. Filler |
| 7. Separating Sheath(Inner Covering) | 8. Armor | 9. Outer sheath |

PVC Sheath wire braided armoured electrical cable



1. Braided cable Brief introduction

Armoured cable mainly increase the mechanical strength, at the same time as the wire (belt) is high permeability materials, have certain effect to restrain low frequency interference, although not high rate of covering steel armor, but the bending performance.

Tinned copper wire, bare copper wire braiding should not armored, because the mechanical strength than the steel wire. But the copper wire (belt) conductivity is far better than the steel wire (belt), the inhibition of high-frequency interference, electrostatic discharge is very useful.

2. Braided cable Construction:

Stranded and compacted copper conductor

Inner semi conductor

PVC/XLPE insulation

Outer semi conductor

Water blocking semi conducting tape

Copper wire screen plus copper tape

Polyester tape

PVC inner sheath

Steel tape armored

PVC outer sheath

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3. Braided cable Standard

The kind of cable can be produced with 3 cores, Steel wire armored.

Type	Description	Application
VV	Copper conductor ,PVC insulated ,PVC sheathed power cable	Used for installing indoors, in tunnel or cable trench, unable to bear external mechanical forces. Single core cable is not permissible to lay in magnetic duct
VLV	Aluminum conductor ,PVC insulated ,PVC sheathed power cable	
VY	Copper conductor, PVC insulated, PE sheathed power cable	
VLY	Aluminum conductor ,PVC insulated ,PE sheathed power cable	
VV22	Copper conductor ,PVC insulated ,steel tape armoured, PVC sheathed power cable	Used for Installing indoors, in cable trench or direct in ground ,able to bear external mechanical forces, but unable to bear pulling force
VLV22	Aluminum conductor ,PVC insulated ,steel tape armoured ,PVC sheathed power cable	
VV23	Copper conductor ,PVC insulated ,steel tape armoured ,PE sheathed power cable	
VLV23	Aluminum conductor ,PVC insulated ,steel tape armoured ,PE sheathed power cable	
VV32	Copper conductor, PVC insulated, steel wire armoured, PVC insulated power cable	Used for installing indoors, in cable or direct in ground ,able to bear external mechanical forces, but unable to bear large pulling forces
VLV32	Aluminum conductor, PVC insulated ,steel tape armoured ,PVC sheathed power cable	
VV33	Copper conductor, PVC insulated steel wire armoured , PE sheathed power cable	
VLV33	Aluminum conductor , PVC insulated , steel wire armoured ,PE sheathed power cable	

1) Standards: IEC60502, GB12706, BS7889

2) Voltage: 0.6/1kv

3) Insulation: XLPE/PVC/EPR

4. Braided cable Packaging & Delivery

Packaging Details: packed in wooden drums or steel-wooden drums or as your request.

Delivery Detail: 20-25days

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Steel wire armoured power cable PVC sheathed 4 core copper cable



Description

For XLPE insulated power cable, either chemical method or physical method is employed to transform the molecular structure of PE from chain into three-dimensional network, i.e. thermoplastic PE is transformed into thermosetting XLPE. After cross-linking, the thermal and mechanical properties of PE have been greatly improved while its excellent properties are still retained.

The maximum permissible operating temperature of the conductor of a XLPE insulated power cable is 90 which is higher than that of paper, PVC or PE insulated power cable. The cable has the advantage of simplicity in construction, lightness in weight, convenience in application besides its excellent electrical, thermal, mechanical and anti-chemical corrosion properties. It can also be laid with no limitation of level difference along the route.

1. standard

The product is manufactured according to the standard of GB12706 or IEC,BS,DIN and ICEA upon request.

2. Applications

- 1) These cables are most suitable for direct burial or for installation on trays or ducts, Where there is a risk of mechanical damage, armoured cables should be used.
- 2) For laying in ground along route with large difference of level able to bear external mechanical forces.

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3. Specification:**Conductor: Solid or stranded copper****Insulation: Cross-linked polyethylene (XLPE) or Polyvinyl chloride (PVC)****Filler: Polypropylene filament with lapped binding tape****Binder: Binding tape****Inner sheath: Polyvinyl chloride (PVC)****Amour: Galvanized steel wire armored(SWA) or steel tape armored(STA)****Sheath: Polyvinyl chloride (PVC)****4. Operating characteristics****1, Rated power-frequency voltage U_0/U : 0.6/1kV****2,Max.permmissible continuous operating temperature of conductor: 90****3,Max.short-circuit temperature of the conductor shall not exceed 250.(5s maximum duration).****4,The ambient temperature under installation should not below 0****5, The bending radius of a cable should not less than 15 times of the cable diameter.****5. Construction:****Scope of XLPE cable****Type No. of Core Nominal cross-section**

Type	No. of Core	Nominal cross-section
Cu(AL)/XLPE/PVC(PE) Cu(AL)/XLPE/ATA/PVC(PE)Cu(AL)/XLPE/AWA/PVC(PE)	1	1.5-1000
Cu(AL)/XLPE/STA/PVC(PE) Cu(AL)/XLPE/SWA/PVC(PE)	2、 3、 4、 5	1.5-400
	3+1,4+1,3+2	2.5-400

Cross-section area of neutral conductor**In 3+1cores and 3+2cores should conform to specification of following table:**

Nominal cross-section	Main core	2.5	4	6	10	16	25	35	50
	Neutral core	1.5	2.5	4	6	10	16	16	25
Nominal cross-section	Main core	70	95	120	150	185	240	300	400
	Neutral core	35	50	70	70	95	120	150	185

6. D.C Resistance of finished cable at 20°C per km is not more than the following:

Nominal cross-section mm2	15	2.5	4	6	10	16	25
Cu core	12.1	7.41	4.61	3.08	1.83	1.15	0.727
Al core	18.1	12.1	7.41	4.61	3.08	1.91	1.20
Nominal cross-section mm2	35	50	70	95	120	150	185
Cu core	0.524	0.387	0.268	0.193	0.153	0.124	0.0991
Al core	0.868	0.641	0.443	0.320	0.253	0.206	0.164
Nominal cross-section mm2	240	300	400	500	630	800	1000
Cu core	0.0754	0.0601	0.0470	0.0366	0.0283	0.0221	0.0176
Al core	0.125	0.100	0.0778	0.0605	0.0469	0.0367	0.0291

Voltage test:

Each drum of finished cable should withstand power frequency voltage 3.5kV for 5 minutes,the insulation is not breakdown.

Service conditions and operation parameters of Cable:

The cable is applied to fixed installation for rated voltage 0.6/1kV of power transportation and distribution line.

Max. rated temperature of conductor. nominal operating 90°C

Short circuit: max. for 5 sec.250°C

The cable can be laid without drop restriction, and the environment temperature shall not be lower than 0°C.

7. Type, Description and Main Application of cable

China Type		Description	Application
Cu	Al		
YJV	YJLV	XLPE insulation PVC sheath power cable (Cu/XLPE/PVC)	To be laid indoors, in tunnel, cable furrow or pipe, the cable couldn't bear mechanical force outside
YJY	YJLY	XLPE insulation PE sheath power cable (Cu/XLPE/PE)	To be laid underground, the cable could bear certain mechanical force, but it couldn't bear great pulling force.
YJV22	YJLV22	XLPE insulation, steel tape armor, PVC sheath power cable (Cu/XLPE/PVC/STA/PVC)	
YJV23	YJLV23	XLPE insulation, steel tape armor, PE sheath power cable (Cu/XLPE/PVC/STA/PE)	Be applicable to the well, water inside and fall in the bad soil, the cable cans bear the equal dint outside the machine.
YJV62	YJLV62	XLPE insulation, no magnetism steel tape armor, PE sheath power cable	
YJV32	YJLV32	XLPE insulation, thin steel-wire armor, PVC sheath power cable (Cu/XLPE/PVC/SWA/PVC)	
YJV72	YJLV72	XLPE insulation, have no the magnetism thick steel-wire armor, PVC sheath power cable	Be applicable to the well, underwater with the bottom of sea, the cable can bear the bigger pressure.
YJV42	YJLV42	XLPE insulation, thick steel-wire armor, PVC sheath power cable	

8. Specification & approximate size & approximate weight of cable

0.6/1kV 4-Core XLPE insulation power cable

Nominal Area mm ²	Non armored			Tape-armored			Wire-armored		
	Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km		Reference diameter mm	Approximate weight kg/km	
		YJV	YJLV		YJV22	YJLV22		YJV32	YJLV32
4x4	15.2	355	256	17.6	501	402	/	/	/
4x6	16.4	453	305	18.8	612	463	/	/	/
4x10	19.5	670	422	21.9	858	610	/	/	/
4x16	22.1	947	550	24.5	1159	762	/	/	/
4x25	22.7	1322	703	25.1	1540	921	30.3	2316	1801
4x35	24.9	1729	862	27.5	1981	1114	29.6	2615	1741
4x50	28.7	2398	1159	31.3	2687	1448	34.2	3648	2400
4x70	32.3	3221	1487	36.1	3883	2149	38.1	4682	2935
4x95	36.8	4290	1936	40.8	5062	2708	42.5	5917	3818
4x120	39.8	5277	2303	43.8	6110	3137	47.8	7643	4648
4x150	44.4	6567	2850	48.2	7469	3752	52.2	9164	5420
4x185	49.0	8062	3478	53.2	9094	4509	57.1	10905	6288
4x240	54.9	10334	4387	59.1	11488	5541	62.9	13466	7476
4x300	60.7	12811	5377	64.9	14082	6648	69.1	16480	9040

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