

## Concentric Conductor Power Cable

### Concentric Conductor Power cable application and features

- 1.This product is intended for power transmission system of rated voltage 0.6/1KV and below.
- 2.low and uniform positive (inverse) and zero sequence impedance will help to improve quality of power supply.
- 3.concentric conductor layer is much lower than the fourth reactor core value of the ordinary four-core cable in the zero-sequence work state is conducive to short-circuit protection device automatically sensitive actions, so as to ensure the safe operation of cable-related equipment.
- 4.It has a strong anti-electromagnetic interference and anti-lightning performance.
- 5.five core concentric conductor cables applies for three-phase five-wire power distribution system.

### Concentric Conductor Power cable service condition

- 1, the maximum allowable operating temperature long conductor: PVC insulated 70 °C; XLPE 90 °C.
- 2, cable short circuit (the longest duration of no more than 5s), does not exceed the maximum temperature of the conductor: PVC insulated cable 160 °C; XLPE insulated cable 250 °C.
- 3, when the ambient temperature under installation should not below 0 °C.
- 4, cable bending diameter: Single cable not less than 40 times the cable diameter; multi-core cable is not less than 30 times the cable diameter.
- 5, flame retardant, fire-resistant cables conform to the appropriate flame retardant, fire resistance requirements.

### Concentric Conductor Power cable Model

Model		Name
Copper Conductor	Aluminum Conductor	
VV-T YJV-T	VLV-T YJLV-T	PVC(XLPE) insulated concentric conductor PVC sheathed power cable
VV22-T YJV22-T	VLV22-T YJLV22-T	PVC(XLPE) insulated concentric conductor steel tape armored PVC sheathed power cable
VV32-T YJV32-T	VLV32-T YJLV32-T	PVC(XLPE) insulated concentric conductor thin steel wire armored PVC sheathed power cable
VV42-T YJV42-T	VLV42-T YJLV42-T	PVC(XLPE) insulated concentric conductor thick steel wire armored PVC sheathed power cable
ZR-VV-T	ZR-VLV-T	Flame retardant PVC(XLPE) insulated concentric conductor PVC

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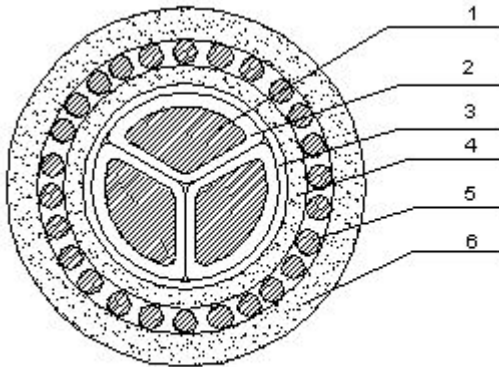
ZR-YJV-T	ZR-YJLV-T	sheathed power cable
ZR-VV22-T	ZR-VLV22-T	Flame retardant PVC(XLPE) insulated concentric conductor steel
ZR-YJV22-T	ZR-YJLV22-T	tape armored PVC sheathed power cable
ZR-VV32-T	ZR-VLV32-T	Flame retardant PVC(XLPE) insulated concentric conductor thin
ZR-YJV32-T	ZR-YJLV32-T	steel wire armored PVC sheathed power cable
ZR-VV42-T	ZR-VLV42-T	Flame retardant PVC(XLPE) insulated concentric conductor thick
ZR-YJV42-T	ZR-YJLV42-T	steel wire armored PVC sheathed power cable
NH-VV-T	-	PVC(XLPE) insulated concentric conductor PVC sheathed fire
NH-YJV-T	-	resistant power cable
NH-VV22-T	-	PVC(XLPE) insulated concentric conductor Steel tape armored
NH-YJV22-T	-	PVC sheathed fire resistant power cable
NH-VV32-T	-	PVC(XLPE) insulated concentric conductor Thin Steel wire
NH-YJV32-T	-	armored PVC sheathed fire resistant power cable
NH-VV42-T	-	PVC(XLPE) insulated concentric conductor Thick Steel wire
NH-YJV42-T	-	armored PVC sheathed fire resistant power cable

### Concentric Conductor Power cable Specification

Model				Cores Number	Nominal Cross-section area mm <sup>2</sup>
Copper Conductor	Aluminum Core				
VV-T	YJV-T	VLV-T	YJLV-T	3+1(T)	4~300
NH-VV-T	NH-YJV-T	-	-		
ZR-VV-T	ZR-YJV-T	ZR-VLV-T	ZR-YJLV-T		
VV22-T	YJV22-T	VLV22-T	YJLV22-T		
NH-VV22-T	NH-YJV22-T	-	-		
ZR-VV22-T	ZR-YJV22-T	ZR-VLV22-T	ZR-YJLV22-T		
VV32-T	YJV32-T	VLV32-T	YJLV32-T	4+1(T)	4~300
NH-VV32-T	NH-YJV32-T	-	-		
ZR-VV32-T	ZR-YJV32-T	ZR-VLV32-T	ZR-YJLV32-T		
VV42-T	YJV42-T	VLV42-T	YJLV42-T		
NH-VV42-T	NH-YJV42-T	-	-		
ZR-VV42-T	ZR-YJV42-T	ZR-VLV42-T	ZR-YJLV42-T		

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## Concentric Conductor Power cable construction



1-导体 2-绝缘 3-包带 4-内衬 5-外导体  
6-外护套

1-Conductor 2-Insulation 3-Tape 4-Inner liner 5-Outer conductor 6-Outer sheath

## Concentric Conductor Power cable technical performance

Conductor D.C resistant is the same as plastic insulated and sheathed power cable.

Insulation resistant refer the table below.

No.	Performance	PVC insulation	XLPE insulation
1	Volume resistivity $\rho$ $\Omega \cdot \text{cm}$		
	20°C	$10^{13}$	-
	When cable working	$10^{10}$	$10^{12}$
2	Insulation resistance constant $M\Omega \cdot \text{km}$		
	20°C	36.7	-
	When cable working	0.037	3.67

A.C Voltage test: Finished cable can withstand 50HZ and 3.5KV for 5 min no breakdown. For single core cable, soaking voltage test applied.

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A.C resistant see table below

Nominal area mm <sup>2</sup>	Conductor resistant at 20°C Ω/km		Each phase electrical impedance Ω/km	
	Copper core	Aluminum core	Positive (inverse)	Zero sequence
4	0.564	7.336	0.0989	0.1479
6	3.049	4.564	0.0937	0.1380
10	1.812	0.049	0.0843	0.1320
16	1.139	1.891	0.0799	0.1236
25	0.7200	1.188	0.0791	0.1194
35	0.5190	0.8590	0.0758	0.1176
50	0.3830	0.6350	0.0755	0.1146
70	0.2650	0.4390	0.0733	0.1125
95	0.1920	0.3180	0.0730	0.1098
120	0.1520	0.2520	0.0716	0.1081
150	0.1230	0.2050	0.0714	0.1041
185	0.0985	0.1630	0.0713	0.1002
240	0.0750	0.1240	0.0711	0.0951
300	0.0597	0.0994	0.0708	0.0888