

# 电线电缆类

## 同心导体电力电缆 Power Cable with Con-centric Conductor



执行标准 Executive Standard  
 本产品按GB/T12706-2002制造  
 It is manufactured according to GB/T12706-2002 standards.

### 1 用途 Application

本产品适用于交流额定电压0.6/1kV及以下的电力线路中作电力传输用  
 It is suitable for power transmission as power lines with rated voltage 0.6/1kV or lower.

### 2 型号及名称 Type and Designation

型号 Model		名称 Designation
铜芯Cu	铝芯Al	
VV-T	VLV-T	铜芯或铝芯聚氯乙烯绝缘聚氯乙烯护套同心导体电力电缆 Cu/Al conductor PVC insulated PVC sheathed power cable with concentric conductor
YJV-T	YJLV-T	铜芯或铝芯交联聚乙烯绝缘聚氯乙烯护套同心导体电力电缆 Cu/Al conductor XLPE insulated PVC sheathed power cable with concentric conductor
VV <sub>22</sub> -T	VLV <sub>22</sub> -T	铜芯或铝芯聚氯乙烯绝缘钢带铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor PVC insulated steel tape armored PVC sheathed power cable with concentric conductor
YJV <sub>22</sub> -T	YJLV <sub>22</sub> -T	铜芯或铝芯交联聚乙烯绝缘钢带铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor XLPE insulated steel tape armored PVC sheathed power cable with concentric conductor
VV <sub>32</sub> -T	VLV <sub>32</sub> -T	铜芯或铝芯聚氯乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor PVC insulated thin steel wire armored PVC sheathed power cable with concentric conductor
YJV <sub>32</sub> -T	YJLV <sub>32</sub> -T	铜芯或铝芯交联聚乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor XLPE insulated thin steel wire armored PVC sheathed power cable with concentric conductor
VV <sub>42</sub> -T	VLV <sub>42</sub> -T	铜芯或铝芯聚氯乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor PVC insulated thick steel wire armored PVC sheathed power cable with concentric conductor
YJV <sub>42</sub> -T	YJLV <sub>42</sub> -T	铜芯或铝芯交联聚乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体电力电缆 Cu/Al conductor XLPE insulated thick steel wire armored PVC sheathed power cable with concentric conductor
Z-VV-T	Z-VLV-T	铜芯或铝芯聚氯乙烯绝缘聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor PVC insulated PVC sheathed flame-retardant power cable with concentric conductor
Z-YJV-T	Z-YJLV-T	铜芯或铝芯交联聚乙烯绝缘聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor XLPE insulated PVC sheathed flame-retardant power cable with concentric conductor
Z-VV <sub>22</sub> -T	Z-VLV <sub>22</sub> -T	铜芯或铝芯聚氯乙烯绝缘钢带铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor PVC insulated steel tape armored PVC sheathed flame-retardant power cable with concentric conductor
Z-YJV <sub>22</sub> -T	Z-YJLV <sub>22</sub> -T	铜芯或铝芯交联聚乙烯绝缘钢带铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor XLPE insulated steel tape armored PVC sheathed flame-retardant power cable with concentric conductor
Z-VV <sub>32</sub> -T	Z-VLV <sub>32</sub> -T	铜芯或铝芯聚氯乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor PVC insulated thin steel wire armored PVC sheathed flame-retardant power cable with concentric conductor
Z-YJV <sub>32</sub> -T	Z-YJLV <sub>32</sub> -T	铜芯或铝芯交联聚乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor XLPE insulated thin steel wire armored PVC sheathed flame-retardant power cable with concentric conductor
Z-VV <sub>42</sub> -T	Z-VLV <sub>42</sub> -T	铜芯或铝芯聚氯乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor PVC insulated thick steel wire armored PVC sheathed flame-retardant power cable with concentric conductor
Z-YJV <sub>42</sub> -T	Z-YJLV <sub>42</sub> -T	铜芯或铝芯交联聚乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体阻燃电力电缆 Cu/Al conductor XLPE insulated thick steel wire armored PVC sheathed flame-retardant power cable with concentric conductor
N-VV-T	—	铜芯聚氯乙烯绝缘聚氯乙烯护套同心导体耐火电力电缆 Cu conductor PVC insulated PVC sheathed fire- resistance power cable with concentric conductor
N-YJV-T	—	铜芯交联聚乙烯绝缘聚氯乙烯护套同心导体耐火电力电缆 Cu conductor XLPE insulated PVC sheathed fire- resistance power cable with concentric conductor

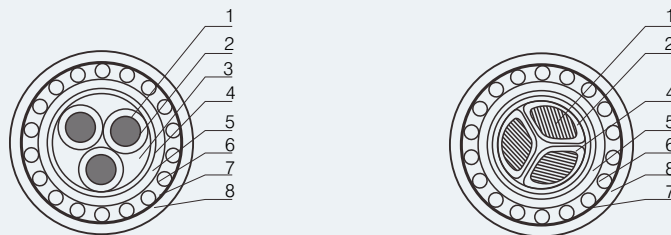
# ELECTRIC WIRES & CABLE

型号 Model		名称 Designation
铜芯Cu	铝芯Al	
N-VV <sub>22</sub> -T	—	铜芯聚氯乙烯绝缘钢带铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor PVC insulated steel tape armored PVC sheathed fire- resistance power cable with concentric conductor
N-YJV <sub>22</sub> -T	—	铜芯交联聚乙烯绝缘钢带铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor XLPE insulated steel tape armored PVC sheathed fire- resistance power cable with concentric conductor
N-VV <sub>32</sub> -T	—	铜芯聚氯乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor PVC insulated thin steel wire armored PVC sheathed fire- resistance power cable with concentric conductor
N-YJV <sub>32</sub> -T	—	铜芯交联聚乙烯绝缘细钢丝铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor XLPE insulated thin steel wire armored PVC sheathed fire- resistance power cable with concentric conductor
N-VV <sub>42</sub> -T	—	铜芯聚氯乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor PVC insulated thick steel wire armored PVC sheathed fire- resistance power cable with concentric conductor
N-YJV <sub>42</sub> -T	—	铜芯交联聚乙烯绝缘粗钢丝铠装聚氯乙烯护套同心导体耐火电力电缆 Cu conductor XLPE insulated thick steel wire armored PVC sheathed fire- resistance power cable with concentric conductor

## 3 规格 Specification

型号 Type		芯数 Core No.		导体标称截面 Nominal section of conductor mm <sup>2</sup>
铜芯 Cu	铝芯 Al			
VV-T	YJV-T	VLV	YJLV-T	4~300
N-VV-T	N-YJV-T	—	—	
Z-VV-T	Z-YJV-T	Z-VLV-T	Z-YJLV-T	
VV <sub>22</sub> -T	YJV <sub>22</sub> -T	VLV <sub>22</sub> -T	YJLV <sub>22</sub> -T	
N-VV <sub>22</sub> -T	N-YJV <sub>22</sub> -T	—	—	
Z-VV <sub>22</sub> -T	Z-YJV <sub>22</sub> -T	Z-VLV <sub>22</sub> -T	Z-YJLV <sub>22</sub> -T	
VV <sub>32</sub> -T	YJV <sub>32</sub> -T	VLV <sub>32</sub> -T	YJLV <sub>32</sub> -T	
N-VV <sub>32</sub> -T	N-YJV <sub>32</sub> -T	—	—	
Z-VV <sub>32</sub> -T	Z-YJV <sub>32</sub> -T	Z-VLV <sub>32</sub> -T	Z-YJLV <sub>32</sub> -T	
VV <sub>42</sub> -T	YJV <sub>42</sub> -T	VLV <sub>42</sub> -T	YJLV <sub>42</sub> -T	
N-VV <sub>42</sub> -T	N-YJV <sub>42</sub> -T	—	—	
Z-VV <sub>42</sub> -T	Z-YJV <sub>42</sub> -T	Z-VLV <sub>42</sub> -T	Z-YJLV <sub>42</sub> -T	

## 4 电缆的结构 Construction of cable



同心导体电力电缆结构示意图

The structure indicator diagram of power cable with concentric conductor

- |                 |                         |
|-----------------|-------------------------|
| 1、导体 Conductor  | 5、内衬层 Inner layer       |
| 2、绝缘 Insulation | 6、外导体 Outside Conductor |
| 3、填充 Filler     | 7、包带层 Tape layer        |
| 4、包带 Tape       | 8、外护套 Outer sheath      |

## 5 使用特性及技术性能 Using feature & technical Performance

- 5.1 额定电压  $U_0/U$ 为0.6/1kV。  
Rated Voltage  $U_0/U$ : 0.6/1kV.
- 5.2 电缆导体长期允许的最高工作温度，交联聚乙烯绝缘90℃，聚氯乙烯绝缘70℃。  
The Max.long-term operating temperature of cable conductor: XLPE Insulation: 90℃,PVC insulation: 70℃.
- 5.3 电缆短路时(最长持续时间不超过5S)，导体的最高温度：交联聚乙烯绝缘电缆250℃，聚氯乙烯绝缘电缆160℃。  
Max.temperature for cable when short-circuit. (lasting for max.5 seconds): 250℃ for XLPE insulation. 160℃ for PVC insulation.
- 5.4 敷设的环境温度应不低于0℃，低于0℃应预先加热。电缆允许弯曲半径为：单芯电缆无铠装不小于电缆外径的20倍，有铠装的不小于电缆外径的12倍；多芯电缆无铠装的不小于电缆外径的15倍，有铠装的不小于电缆外径的12倍。  
Environment temperature in laying the cable should be no lower than0℃.Otherwise it should be preheated .Permissible bending radius of cable:single cable is no less than 20 times of the overall diameter. multi -core cable is no less than 15 times of the overall diameter.
- 5.5 成品电缆应经受 $2.5U_0+2kV$ 工频电压试验5min不击穿。  
The finished cable should pass voltage test of A.C  $2.5U_0+2kV$  lasting 5minutes without puncture.
- 5.6 20℃时导体直流电阻符合GB/T3956—1997的规定  
D.C conductor resistance complies with the stipulations of GB/T 13956-1997 in 20℃.
- 5.7 电缆具有较低且均匀的正(逆)序和零序工作阻抗，有利于改善供电品质。  
Low and even forward (breckard) and zero sequence impedance improves the quality of power supply.
- 5.8 同心层导体比普通四芯电缆的第四芯在零序工作状态下的电抗值低很多，有利于短路自动保护装置的灵敏动作，从而保证电缆相关设备的安全运行。  
Compared with the fourth core of ordinary four power cables, the outer coaxial conductor has a much lower reactance value when operating in zero sequence, which contributes to the fast action of automatic short circuit protection so as to ensure the safe operation of cables and related equipment.
- 5.9 具有较强的抗电磁干扰和抗雷击等性能。  
The complete cable has strong resistance characters against electromagnetic interference and thunder strike.
- 5.10 电缆的燃烧特性：阻燃电缆应能经受 GB/T19666-2005规定的成束燃烧试验；  
耐火电缆应能经受 GB/T19666-2005规定的耐火特性试验。  
The combustion character of the cable:  
Flame-retardant cable could endure firing test in bundle stipulated in GB/T19666-2005  
Fire-resistance cable could endure fire rating in GB/T19666-2005.