

变频电机用交联聚乙烯绝缘电缆（变频电缆）

XLPE Insulation Cable for Variable Frequency Motor Application (Frequency Conversion Cable)

变频电缆主要用于变频电源和变频电机之间连接用的电缆，以及额定电压1kV及以下的输配电线路中，作输送电能用。尤其适用于造纸、冶金、纺织、金属加工、矿山、铁路和食品加工等行业。

一、生产执行标准

GB/T12706-2020及企业标准。

二、使用条件

- 1、额定电压 U_0/U ：0.6/1kV；
- 2、电缆导体长期允许最高温度为90℃，短路时最高温度为250℃（最长持续时间为5秒）；
- 3、安装敷设环境温度不低于0℃，固定敷设时环境温度不低于-10℃；
- 4、电缆允许最小弯曲半径不小于15D（D-电缆外径，mm）。

三、产品性能

- 1、BPYJVP、BPYJVP2、BPYJVPR、BPYJVP2R、BPYJVTP2、BPYJVPP2R、BPYJVP1P2R、BPYJVPP2R型设计采用符合GB/T3956规定的铜导体，原型号前加ZA-、ZB-、ZC-、ZD-表示阻燃型；
- 2、交联聚乙烯绝缘，耐温耐候性好；
- 3、低传输阻抗，电磁兼容性好；
- 4、低工作电容；
- 5、良好的抗干扰和低辐射性能；
- 6、对称的三芯电缆结构设计，具有比四芯电缆更好的传输性能。

四、主要技术参数

- 1、20℃时导体最大直流电阻：

导体标称截面 mm ² Nominal cross section area of conductor	20℃时导体最大直流电阻Ω/km Max.DC resistance of conductor at 20℃		导体标称截面 mm ² Nominal cross section area of conductor	20℃时导体最大直流电阻Ω/km Max.DC resistance of conductor at 20℃	
	1类导体或2类绞合导体 category 1 conductor or stranded conductor(category 2)	5类软导体 Flexible conductor (category 5)		1类导体或2类绞合导体 category 1 conductor or stranded conductor(category 2)	5类软导体 Flexible conductor (category 5)
0.75	24.5	26.0	35	0.524	0.554
1.0	18.1	19.5	50	0.387	0.386
1.5	12.1	13.3	70	0.268	0.272
2.5	7.41	7.98	95	0.193	0.206
4	4.61	4.95	120	0.153	0.161
6	3.08	3.30	150	0.124	0.129
10	1.83	1.91	185	0.0991	0.106
16	1.15	1.21	240	0.0754	0.0801
25	0.727	0.780	300	0.0601	0.0641

It is used for power transmission on power lines of rated voltage 0.6/1kV or lower. It has strong electromagnetic interference, lightning and equilibrium potential, and improves the quality of power supply. It is specially used in the field of paper-making, metallurgy, textile mill, metalworking, mine, railway and food processing, etc.

Executive standard

GB/T12706-2020 and Enterprise standard.

Working Condition

1. Rated voltage U_0/U : 0.6/1kV.
2. Max. temperature of cable conductor for Long-term working is 90℃. Max. working temperature of cable conductor is 250℃ during short circuit (the longest lasting time shall be no more than 5 seconds).
3. Environment temperature for installing is no less than 0℃, the ambient temperature of fixed laying is no less than -10℃.
4. Min. bending radius allowed by cable is no less than 15D. (D means outer diameter of cable with unit "mm")

Product Performance

1. Design for type BPYJVP、BPYJVP2、BPYJVPR、BPYJVP2R、BPYJVTP2、BPYJVPLPR、BPYJVPLP1R、BPYJVP2PR use copper conductor which meets the requirements of GB/T3956 standard.
2. XLPE insulation, good heat resistance and good weather resistance.
3. Low transmission impedance; good performance of electromagnetic compatibility.
4. Low working capacitance.
5. Good performance of interference resistance and low radiation
6. The symmetrical 3 cores cable is designed to have better transmission performance than the 4 cores cable.

Main Technical Parameter

1. Max. DC resistance of conductor at 20℃

2、交流电压试验

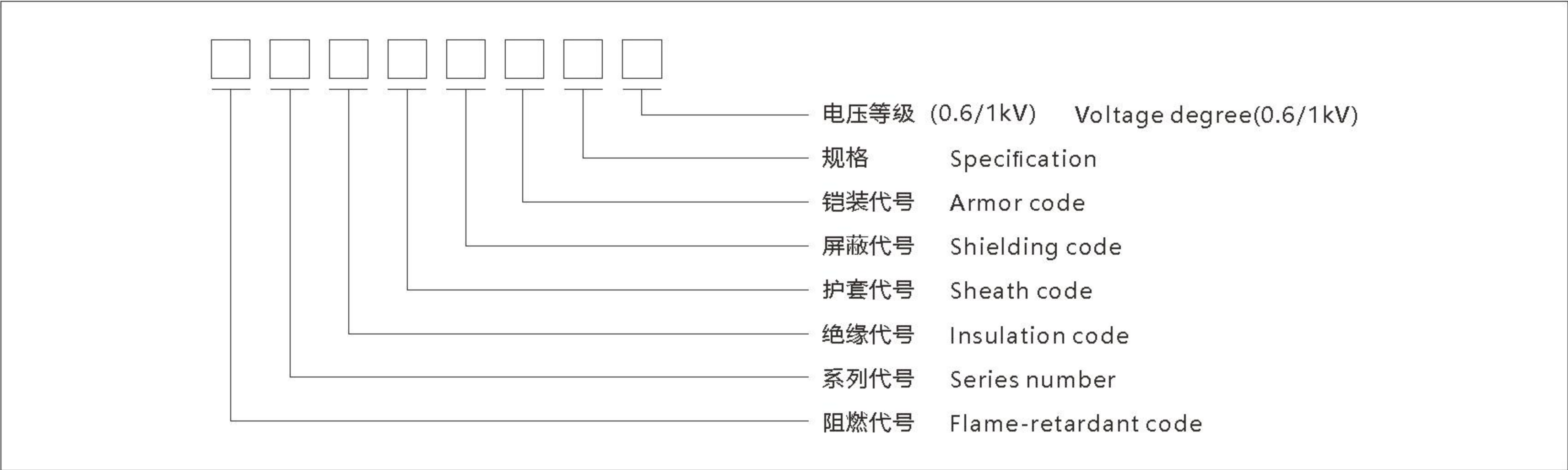
电压应依次施加在每一绝缘导体对其余导体和金属层之间施加试验电压3500V/5min，绝缘应无击穿。试验应在环境温度下进行。

2.A.C. Voltage Test

The voltage should be applied in turn to the test voltage 3500V/5min between the other conductors and the rest of the conductor and the metal layer without puncture of insulation. And test will be done at the environment temperature.

五、型号说明

Type Introduction



名称 Item	代号 Code	说明 Description
系列代号 Series No.	BP	变频电缆 Frequency converter cable
绝缘代号 Insulation No.	YJ	交联聚乙烯绝缘 XLPE insulation
护套代号 Sheath Code	V	聚氯乙烯护套 PVC sheath
	Y/E	聚乙烯或聚烯烃 PE or Polyolefin
屏蔽代号 Shielding Code	TP2	铜丝缠绕+铜带绕包屏蔽 Copper wire twine+copper tape wrapped shielding
	PP2	铜丝编织屏蔽+铜带绕包屏蔽 Copper wire braided shielding+copper tape wrapped shielding
	P	铜丝编织屏蔽 Copper wire braided shielding
	P1	镀锡铜丝编织屏蔽 Tinned copper wire braided shielding
	P2	铜带屏蔽 Cu tape shielding
	P3	铝箔带屏蔽 Al (foil) tape shielding
	P1P3	铝箔绕包屏蔽+镀锡铜丝编织屏蔽 Al+PET wrapped shielding plus tinned copper wire braided shielding
铠装代号 Armour Code	22	钢带铠装聚氯乙烯护套 Steel tape Armour, PVC sheath
	23	钢带铠装聚烯烃护套/钢带铠装聚乙烯护套 Steel tape Armour, polyolefin sheath; steel tape armored, PE sheath
阻燃代号 Flame retardant Code	ZR	阻燃型 (C类) Flame-retardant type (Category C)
	WDZ	低烟无卤阻燃 Low smoke halogen free flame retardant

六、生产范围

Production Scope

型号 Type	芯数 Core No.	导体标称截面 mm ² Nominal cross section area of conductor
BPYJVP、BPYJVP2、BPYJVTP2	3、3+1	2.5~300
BPYJVP(R)、BPYJVP2(R)、BPYJVP1P2(R)、BPYJVPP2(R)、BPYJVPP2(R)、BPYJVP1P2(R)	3+3	主线芯截面：2.5~300 Cross section area of main core: 2.5~300 副线芯截面：0.5~35 Cross section area of auxiliary core: 0.5~35

注：可根据用户需要提供铠装结构变频电缆。

Note: We also produce frequency converter cable with armored structure according to the requirement of customer.

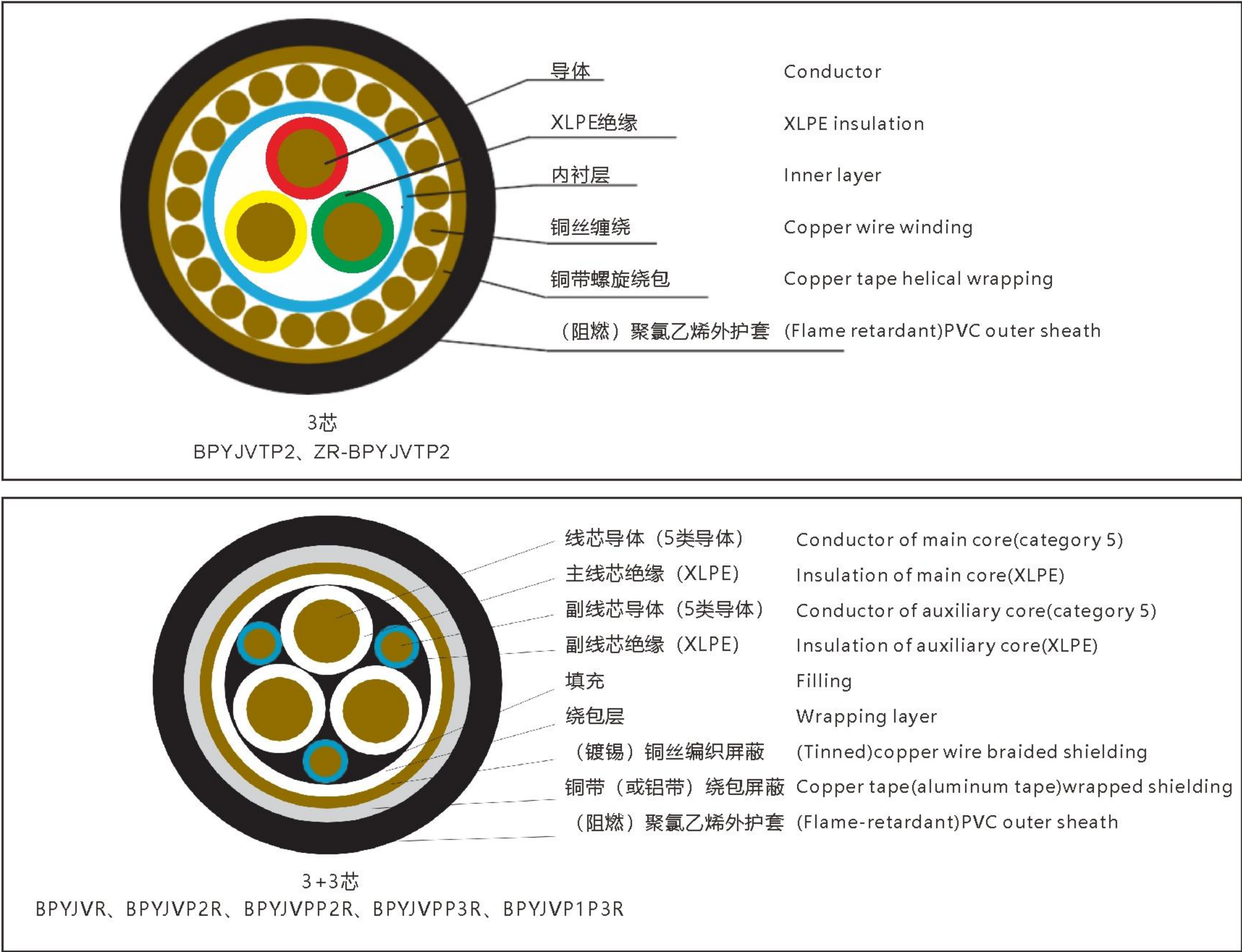
七、型号名称

Type and Description

型号 Type	名称 Description
BPYJVP(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套铜丝编织屏蔽变频（软）电缆 Frequency converter (flexible) cable with copper core, XLPE insulation, copper wire braid shielding, PVC sheath
BPYJVP2(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套铜带绕包屏蔽变频（软）电缆 Frequency converter (flexible) cable with copper core, XLPE insulation, copper tape wrapped shielding,PVC sheath
BPYJVTP2	铜芯交联聚乙烯绝缘聚氯乙烯护套铜丝缠绕+铜带绕包屏蔽变频电缆 Frequency converter cable with copper core, XLPE insulation, copper wire twine plus copper tape wrapped shielding, PVC sheath
BPYJVP13(R) BPYJVPP3(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套铜丝编织屏蔽+铝箔绕包屏蔽变频（软）电缆 Frequency converter flexible cable with copper core, XLPE insulation, AL. polyester wrapped plus copper wire braided shielding, PVC sheath
BPYJVP1P3(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套镀锡丝编织屏蔽+铝箔绕包屏蔽变频（软）电缆 Frequency converter flexible cable with copper core, XLPE insulation, AL. polyester wrapped plus copper tape wrapped shielding, PVC sheath
BPYJVP12(R) BPYJVPP2(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套铜丝编织屏蔽+铜带绕包变频（软）电缆 Frequency converter flexible cable with copper core, XLPE insulation, copper wire braided plus copper tape wrapped shielding, PVC sheath
BPYJVP1P2(R)	铜芯交联聚乙烯绝缘聚氯乙烯护套镀锡丝编织屏蔽+铜带绕包变频（软）电缆 Frequency converter flexible cable with copper core, XLPE insulation, tinned copper wire braided plus copper tape wrapped shielding, PVC sheath

八、产品结构示意图

The Figure of Cable Structure



九、外径尺寸

Dimension of Outer Diameter

1、BPYJVP、BPYJVTP2、BPYJVP2、3+1芯

1、BPYJVP、BPYJVTP2、BPYJVP2 (3+1 cores)

规格 Specification	绝缘厚度 mm Insulation thickness	近似外径 mm Approximate OD	电缆载流量 A Current-loading capacity of cable
3×4+1×2.5	0.7/0.7	16.0	34
3×6+1×4	0.7/0.7	17.3	45
3×10+1×6	0.7/0.7	20.2	53
3×16+1×10	0.7/0.7	22.7	84
3×25+1×16	0.9/0.7	27.4	109
3×35+1×16	0.9/0.7	28.9	132
3×50+1×25	1.0/0.9	30.2	159
3×70+1×35	1.1/0.9	32.8	195
3×95+1×50	1.1/0.9	34.9	237
3×120+1×70	1.2/1.1	39.6	274
3×150+1×70	1.4/1.1	44.2	310
3×185+1×95	1.6/1.1	48.5	355
3×240+1×120	1.7/1.2	54.6	416
3×300+1×150	1.8/1.4	64.0	555

2、BPYJVPR、BPYJVP2R、BPYJVPP2R
BPYJVP1P2R、3+3芯

2、BPYJVPR、BPYJVP2R、BPYJVPP2R、BPYJVP1P2R、3+3 cores

规格 Specification	绝缘厚度 mm Insulation thickness	近似外径 mm Approximate OD	电缆载流量 A Current-loading capacity of cable
3×2.5+3×0.5	0.7/0.7	12.5	26
3×4+3×0.75	0.7/0.7	14.0	34
3×6+3×1.0	0.7/0.7	15.4	45
3×10+3×1.5	0.7/0.7	19.6	53
3×16+3×2.5	0.7/0.7	22.7	84
3×25+3×4	0.9/0.7	28.0	109
3×35+3×6	0.9/0.7	29.4	132
3×50+3×10	1.0/0.7	36.3	159
3×70+3×10	1.1/0.7	40.0	195
3×95+3×16	1.1/0.7	45.5	237
3×120+3×16	1.2/0.7	50.4	274
3×150+3×25	1.4/0.9	55.5	310
3×185+3×25	1.6/0.9	60.6	355
3×240+3×35	1.7/0.9	69.0	416
3×300+3×50	1.8/1.0	70.0	555

十、交货长度

Delivery Length

根据双方协议长度供货。

According to the agreement between both parties.