

ELECTRIC WIRES & CABLE

变频器专用电缆 Special Cable for Transducer

1 产品特点及用途 Performance and usage of product

本产品适用于交流额定电压0.6/1kV及以下变频控制系统作供电电缆或电气连接，产品具有较强的耐电压冲击性，能经受变频时的脉冲电压，电缆具有良好的屏蔽性，并有效消除电磁干扰，降低变频电机噪音，保证系统稳定运行。广泛用于冶金、电力、石化等行业。

The product is used as power supply cable or electric connection for AC rated voltage 0.6/1kV and below transducing control system. It has strong impulse performance, which can endure impulse voltage in transducing. Cable has better shield performance and can eliminate electro-interference effectively, reducing motor noise of transducer and ensuring reliable operation of system. It is widely used in the fields of metallurgy, power and petrochemical.

2 使用特性 Operation performance

2.1 交流额定电压 U_0/U : 0.6/1kV

AC rated voltage U_0/U : 0.6/1kV

2.2 最高工作温度：硅橡胶绝缘180°C；氟46绝缘200°C和260°C两种；聚氯乙烯绝缘70°C；交联聚乙烯90°C。

Max. working temperature: silicon rubber insulation 180°C; F 46 insulation 200°C and 260°C; PVC insulation 70°C; cross-linked polyethylene 90°C.

2.3 最低环境温度：聚氯乙烯护套电缆不低于0°C。

PVC sheathed cable no lower than 0°C.

2.4 电缆允许弯曲半径：电缆最小为电缆外径的10倍。

Allowable bending radius of cable: Min. cable is 10 times smaller than external diameter.

3 型号及名称 Model and designation

型号 Model	名称 Designation
BPGGP	硅橡胶绝缘和护套铜丝编织屏蔽耐高温变频电力电缆 Silicon rubber insulated & sheathed copper wire weave shielded transducer power cable with high temperature resistant
BPGGP2	硅橡胶绝缘和护套铜带绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated & sheathed copper tape shielded transducer power cable with high temperature resistant
BPGGPP2	硅橡胶绝缘和护套铜丝编织铜带绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated & sheathed copper wire weave Cu tape shielded transducer power cable with high temperature resistant
BPGGP3	硅橡胶绝缘和护套铝聚酯复合膜绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated & sheathed Al polyester composite membrane shielded transducer power cable with high temperature resistant

型号 Model	名称 Designation
BPGVFP	硅橡胶绝缘丁腈护套铜丝编织屏蔽耐高温变频电力电缆 Silicon rubber insulated butyronitrile sheathed brass wire weave shielded transducer power cable with high temperature resistant
BPGVFP2	硅橡胶绝缘丁腈护套铜带绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated butyronitrile sheathed Cu tape shielded transducer power cable with high temperature resistant
BPGVFPP2	硅橡胶绝缘丁腈护套铜丝编织铜带绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated butyronitrile sheathed brass wire weave Cu tape shielded transducer power cable with high temperature resistant
BPGVFP3	硅橡胶绝缘丁腈护套铝聚酯复合膜绕包屏蔽耐高温变频电力电缆 Silicon rubber insulated butyronitrile sheathed Al polyester composite membrane shielded transducer power cable with high temperature resistant
BPFFP	氟46绝缘和护套铜丝编织屏蔽耐高温变频电力电缆 F46 insulated & sheathed brass wire weave shielded transducer power cable with high temperature resistant
BPFFP2	氟46绝缘和护套铜带绕包屏蔽耐高温变频电力电缆 F46 insulated & sheathed Cu tape weave shielded transducer power cable with high temperature resistant
BPFFP2	氟46绝缘和护套铜丝编织铜带绕包屏蔽耐高温变频电力电缆 F46 insulated & sheathed brass wire weave Cu tape shielded transducer power cable with high temperature resistant
BPFFP3	氟46绝缘和护套铝聚酯复合膜绕包屏蔽耐高温变频电力电缆 F46 insulated & sheathed Al polyester composite membrane shielded transducer power cable with high temperature resistant
BPVVP	聚氯乙烯绝缘和护套铜丝编织屏蔽变频电力电缆 Silicon rubber insulated & sheathed brass wire weave shielded transducer power cable
BPVVP2	聚氯乙烯绝缘和护套铜带绕包屏蔽变频电力电缆 Silicon rubber insulated & sheathed Cu tape shielded transducer power cable
BPVVP2	聚氯乙烯绝缘和护套铜丝编织铜带绕包屏蔽变频电力电缆 Silicon rubber insulated & sheathed brass wire weave Cu tape shielded transducer power cable
BPVVP3	聚氯乙烯绝缘和护套铝聚酯复合膜绕包屏蔽变频电力电缆 Silicon rubber insulated & sheathed Al polyester composite membrane shielded transducer power cable
BPYJVP	交联聚乙烯绝缘聚氯乙烯护套铜丝编织屏蔽变频电力电缆 XLPE insulated PVC sheathed brass wire weave shielded transducer power cable
BPYJVP2	交联聚乙烯绝缘聚氯乙烯护套铜带绕包屏蔽变频电力电缆 XLPE insulated PVC sheathed Cu tape shielded transducer power cable
BPYJVPP2	交联聚乙烯绝缘聚氯乙烯护套铜丝编织铜带绕包屏蔽变频电力电缆 XLPE insulated PVC sheathed brass wire weave Cu tape shielded transducer power cable
BPYJVP3	交联聚乙烯绝缘聚氯乙烯护套铝聚酯复合膜绕包屏蔽变频电力电缆 XLPE insulated PVC sheathed Al polyester composite membrane shielded transducer power cable

备注：导体线芯中铜丝可以采用镀锡，阻燃型电缆型号前加Z，软结构电缆加R。

Notes: Brass wire in conductor core can adopt tinning, add Z before flame-retardant type cable and R before flexible structure cable.

4 代号名称和含义 Code designation and meaning

代号 Code	代号含义 Code meaning
BP	变频电力电缆 Transducer power cable
铜导体 Cu conductor	省略 Omitted
G	硅橡胶绝缘或护套 Silicon rubber insulated or sheath
F	F46绝缘或护套 F46insulated or sheath
V	聚氯乙烯绝缘或护套 PVC insulated or sheath
YJ	交联聚乙烯绝缘 Corss-linked polyethylene insulated
VF	丁腈护套 Butyronitrile shield
P(P1)	铜编织屏蔽(镀锡编织屏蔽) Cu weave shield(tinning weave shield)
P2	铜带绕包屏蔽 Cu tape shield
P3	铝聚酯复合膜绕包屏蔽 Al polyester composite membrane shield
PP2	铜丝编织铜带绕包屏蔽 Brass wire weave Cu tape shield

5 电缆规格 Cable specification

主线芯截面 Main section area of wire core

型号 Model	芯数 Core No.	标称截面 Norminal section area mm ²
全部型号 All models	3+3	4, 6, 10, 16, 25, 35, 50, 70, 95, 120, 150, 185, 240
	3+1	
	1	

电线电缆类

主线芯标称截面 Main wire core nominal section area mm ²	接地线芯截面 Grounding wire core section area mm ²
4	1(0.75)
6	1.5(1)
10	2.5(1.5)
16, 25	4(2.5)
35	6
50, 70	10
95	16
120, 150	25
185	35
240	50(35)

6 主要技术指标 Main technical data

6.1 成品电缆导体直流电阻(符合GB/T 3956规定)。

DC resistance of finished product cable conductor (tallying with GB/T 3956)

6.2 成品电缆的绝缘电阻(20℃): 氟塑料及硅橡胶绝缘应不小于100MΩ km; 聚氯乙烯绝缘应不小于50 MΩ km。

Insulating resistance of finished cable (20℃): F plastic and silicon rubber insulation shall be no smaller than 100MΩ km; PVC insulation shall be no smaller than 50 MΩ km.

6.3 成品电缆经受交流50Hz 3.5kV/5min电压试验不击穿。

Cable of finished product can endure AC 50Hz 3.5kV/5min. testing voltage no puncture.

6.4 屏蔽层传输阻抗 Transmit impedance of screen layer

电缆在100MHz时传输阻抗等于或小于100Ω/m。

Transmit impedance equals or smaller than 100Ω/m as cable is in 100MHz.

电缆的理想屏蔽抑制系数等于或小于0.7。

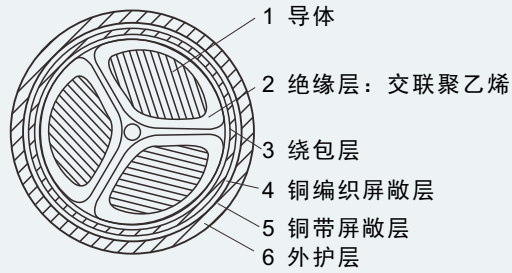
Restained factor of ideal screen of cable equals or smaller than 0.7.

7 基本电缆规格及结构参数 Basic cable specification and structure parameter

线芯*标称截 Core*Nominal section(mm ²)	导体结构(根数*直径) Conductor structure (No.*Dia.) mm	电缆最大外径Max. outer dia. of cable(mm)	
		BPVVPP2 BPYJVPP2	BPGGPP2
3*4	1/2.26	13.5	15.5
3*6	1/2.78	14.0	16.0
3*10	7/1.35	19.0	21.0
3*16	7/1.70	22.0	24.0
3*25	7/2.15	25.0	26.5
3*35	7/2.52	26.0	35.5
3*50	10/2.52	28.5	40.0
3*70	14/2.52	31.5	43.5
3*95	19/2.52	36.5	50.0
3*120	24/2.52	40.0	56.0
3*150	30/2.52	45.0	60.0
3*185	37/2.52	47.0	67.0
3*4+3*0.75	1/2.26	14.5	16.5
3*6+3*1	1/2.78	15.0	17.0
3*10+3*2.5	7/1.35	20.8	22.0
3*16+3*2.5	7/1.70	23.0	25.0
3*25+3*4	7/2.15	28.0	27.5
3*35+3*6	7/2.52	32.0	36.5
3*50+3*10	10/2.52	37.0	41.0
3*70+3*10	14/2.52	41.6	44.5
3*95+3*16	19/2.52	47.0	51.0
3*120+3*25	24/2.52	50.1	57.0
3*150+3*25	30/2.52	52.0	61.0
3*185+3*35	37/2.52	58.5	68.0

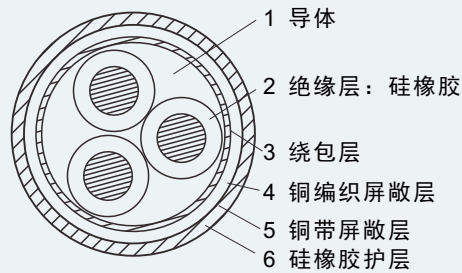
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8 产品结构示意图 Diagram of product structure



BPYJVPP2结构示意图
Structure diagram of BPYJVPP2

- | | |
|--|--------------------------------|
| 1、导体 Conductor | 4、铜编织屏蔽层 Cu weave shield layer |
| 2、绝缘层：交联聚乙烯
Insulation layer: Corss-linked polyethylene | 5、铜带屏蔽层 Cu tape shield layer |
| 3、绕包层 Lapping layer | 6、外护层 Outer covering |



BPGGPP2结构示意图
Structure diagram of BPGGPP2

- | | |
|--|---------------------------------|
| 1、导体 Conductor | 4、铜编织屏蔽层 Cu weave shield layer |
| 2、绝缘：硅橡胶
Insulation: silicon rubber | 5、铜带屏蔽层 Cu tape shield layer |
| 3、绕包层 Lapping layer | 6、硅橡胶护层 Silicon rubber covering |