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# TBEA 特变电工

## 特变电工（德阳）电缆股份有限公司 TBEA DEYANG CABLE CO., LTD.

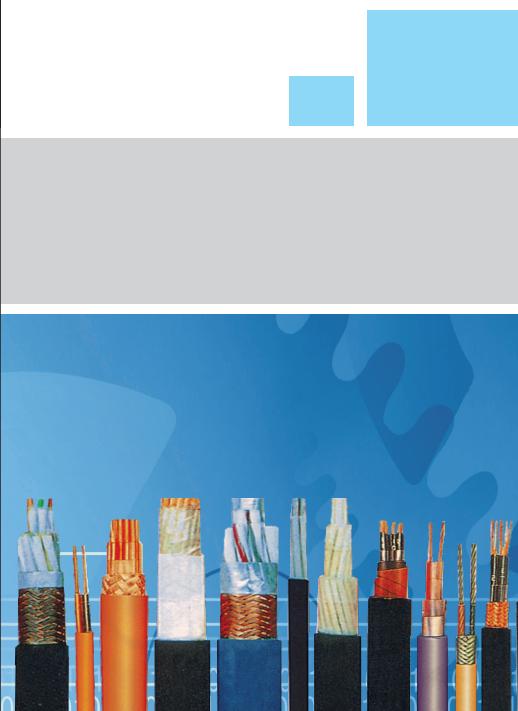
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# 常规产品选型指南

Product Selection Guide

特变电工(德阳)电缆股份有限公司  
TBEA DEYANG CABLE CO., LTD.



## 特变电工（德阳）电缆股份有限公司

特变电工股份有限公司（TBEA Co.,Ltd.）简称“特变电工”是为全球能源事业提供系统解决方案的服务商，是国家级高新技术企业和中国大型能源装备制造企业，由全球24个国家2万余名员工组成，培育了以能源为基础，“输变电高端制造、新能源、新材料”一高两新国家三大战略性新兴产业，成功构建了特变电工（股票代码600089）、新疆众和（股票代码600888）、新特能源（股票代码HK1799）三家上市公司，现已发展成为世界输变电行业的排头兵企业，国内拥有14个制造业工业园，海外建有两个基地。变压器年产量达2.6亿kVA，位居世界第一位，光伏EPC总量排名全球第一。全集团综合实力位居世界机械500强第228位、中国企业500强第277位、中国上市企业500强第154位、中国机械100强第9位、中国100大跨国企业第86位、中国对外承包工程企业100强第20位，品牌价值逾500亿元，排名中国500最具价值品牌第47位。

1998年，特变电工积极响应四川和新疆两地政府的号召，在四川德阳重组成立了西南输变电科技产业园——特变电工（德阳）电缆股份有限公司（简称“德缆公司”）。公司占地500亩，员工1000余人，是国家高新技术企业、国家科技兴贸基地、国家知识产权优势企业、四川省企业技术中心。公司走创新驱动发展之路，研制了直流 $\pm 1100\text{kV}$ 及交流 $1000\text{kV}$ 特高压导线、铝镁硅及高导电率节能导线、风力发电机电缆、盾构机电缆、石油钻采平台用电缆、轨道交通用电缆、舰船电缆、预分支电缆、柔性防火电缆、海洋工程电缆、实芯扇形导体、新能源充电桩电缆、飞机用中频卷筒电缆、架空阻水电缆、出口专用电缆等一大批具有自主知识产权的产品，延伸变压器检修、中低压电气智能化集成组装、重装专用变压器研发业务。公司拥有电力工程施工总承包一级；对外承包“AAA”级信用评价；承装（修、试）电力设施二级资质；送变电工程、城市及道路照明工程、机电设备安装工程二级资质。

产品广泛应用于北京奥运场馆、国家电网、京沪高铁、首都国际机场、三峡工程、特高压输电工程等31个省区的重大项目、重点工程，为澳大利亚、埃塞俄比亚、巴西等六十多个国家和地区提供产品和服务。



## TBEA Deyang Cable Co., Ltd

TBEA CO., LTD. (hereinafter TBEA) is a service provider integration solutions for global energy industry, and TBEA is a national high-tech enterprise and China's large energy equipment manufacturing company. TBEA has more than 20,000 staffs from 24 countries all over the world, and it has cultivated one high and two new national strategic emerging industries which are transmission and distribution high-end manufacturing, new energy and new materials, which are based on energy. TBEA has successfully cultivated three listed companies as TBEA Co., Ltd.(Stock Code:600089), Xinjiang Joinworld (Stock Code:600888), Xinte Energy Co., Ltd.(Stock Code:HK1799) which have become vanguard companies of the world's transmission and distribution industries. TBEA has 14 manufacturing industrial parks in China and 2 overseas bases. The annual output of transformer has reached 260 million kVA, ranking the first in the world. The annual EPC PV installation capacity is also ranking the first in the world. TBEA ranks the 228th among World Top 500 Manufacturing Industries, 277th among China Top 500 Companies, 154th among China Top 500 Listed Enterprises, 9th among China Top 100 Manufacturing Industries, 86th amount China Top 100 Multinational Companies, and 20th among China Top 100 Foreign Contracting Engineering Enterprises. The brand value of TBEA is over RMB 50 billion, ranking 47th among China Top 500 Valuable Brands.

In 1998, TBEA responded positively to the call of the governments of Sichuan and Xinjiang to set up the Southwest Transmission and Distribution Technology Industrial Park in Deyang, Sichuan – TBEA (Deyang) Cable Co., Ltd. (Hereinafter called TBEA Deyang) The company covers an area of 500 acres with more than 1,000 employees, which is the national high-tech enterprises, the National Science and Technology Commercial Innovation Base, the national intellectual property advantage enterprise, the Sichuan Province Technology Center. TBEA Deyang has taken the road of innovation and development, it has developed the DC ± 1100kV and AC 1000kV UHV conductor, aluminum magnesium silicon and high conductivity energy-saving conductor, wind turbine cable, shield machine cable, oil drilling platform cable, rail transportation Cables, ship cables, prefab branch power cables, flexible fireproof cables/oceanengineering cable, solid sector shaped conductor, energy vehicle charger cable, medium frequency roll cable for aircraft, aerial waterproof cable, export special cable and a large number of products with independent intellectual property rights, extended transformer maintenance, medium & low voltage electrical intelligent integrated assembly, heavy equipment special transformer R & D business. Furthermore, the company has ability of power engineering construction general contracting First Class qualification, foreign contract "AAA" level credit evaluation qualification, install (repair, test) power facilities Second Class qualifications, transmission and distribution projects, urban and roadway lighting engineering, mechanical and electrical equipment installation engineering Second Class qualification.

TBEA Deyang Cable Products are widely used in the Beijing Olympic stadiums, the State Grid, the Beijing–Shanghai high-speed railway, the Capital International Airport, the Three Gorges Project, UHV power transmission projects in 31 provinces major key projects, and also provide products and services for Australia, Ethiopia, Brazil etc. It's over 60 countries and regions.

# 全球信赖的电气服务商

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# 裸电线 Bare wire

## ◆ 电工圆铜线: GB/T 3953—2009

用途: 用于电线电缆制造及电机电器。  
范围: TR型软圆铜线、TY型硬圆铜线。

## ◆ 电工圆铝线: GB/T 3955—2009

用途: 用于电线电缆制造及电机电器。  
范围: 软圆铝线、硬圆铝线。

## ◆ 铝绞线和钢芯铝绞线: GB/T 1179—2008/IEC61089:1991

用途: 供架空电力线路用。  
范围: 铝绞线、钢芯铝绞线及防腐钢芯铝绞线、铝包钢绞线等。

## ◆ 大截面钢芯铝绞线

用途: 特高压输电线路用

## ◆ 节能导线

用途: 供架空电力线路用。  
范围: 钢芯高导电率铝绞线 (Q/GDW632-2011)  
铝合金芯高导电率绞线 (Q/GDW1815-2012)  
中强度铝合金绞线 (Q/GDW1816-2012)

## ◆ 铝合金绞线及钢芯铝合金绞线: GB/T 1179—2008/IEC 61089:1991

用途: 供架空电力线路用, 具有重量轻、载流量大、拉力单重比大等优点。  
范围: 铝合金绞线、钢芯铝合金绞线、铝合金芯铝绞线。

## ◆ 电工软铜绞线

① 软铜绞线: GB/T 12970.2—2009  
用途: 电气装备、电子电器或元件接线用。  
范围: 各类软铜绞线及镀锡软铜绞线。  
② 软铜天线: GB/T 12970.3—2009  
用途: 通信用架空天线。  
范围: 各种规格。

## ◆ 硬铜绞线

用途: 供架空输电线路或避雷线用。  
范围: 硬铜绞线 16 ~ 400 mm<sup>2</sup>。  
**Hard drawn copper wire**  
Use: For aerial power lines or lightning conductor  
Range: Hard drawn copper wire 16 ~ 400 mm<sup>2</sup>

## ◆ Electrical round copper wire: GB/T 3953 - 2009

Use: For cable production and electrical equipment  
Range: TR type soft round copper wire, TY type hard drawn round copper wire

## ◆ Electrical round aluminum wire: GB/T 3955 - 2009

Use: For cable production and electrical equipment  
Range: Soft round aluminum wire, hard drawn round aluminum wire

## ◆ AAC and ACSR: GB/T 1179 - 2008 / IEC 61089:1991

Use: For aerial power lines  
Range: AAC, ACSR and anticorrosive ACSR, aluminum wrapped steel cable

## ◆ ACSR with large section

Application: For UHV transmission line

## ◆ Energy-saving conductor

Application: For overhead power line  
Range: ACSR with high conductivity (Q/GDW632-2011)  
AAAC with high conductivity (Q/GDW1815-2012)  
AAAC with middle strength (Q/GDW1816-2012)

## ◆ AAAC and AACSR: GB/T 1179 - 2008 / IEC 61089:1991

Use: For aerial power lines, advantages included light-weight, heavy loads, tension weight strong  
Range: AAAC, AACSR, alloy aluminum core aluminum stranded conductor

## ◆ Electrical soft copper wire

1. Soft copper wire: GB/T 12970.2 - 2009  
Use: Electrical equipment, electronic devices or element-connection  
Range: All kinds of soft copper wire and tin soft copper wire  
2. Soft copper antenna wire: GB/T 12970.3 - 2009  
Use: For telecom aerial antenna wire  
Range: All kinds of specifications



## 1. 电工圆铜线 (GB/T 3953—2009) Electrical round copper wire

### ● 型号、名称及生产规格 Type, name and specification

型号 Type	名称 Name	生产规格 mm Specification (mm)
TR	软圆铜线 Soft round copper wire	0.1~3.0
TY	硬圆铜线 Hard round copper wire	0.1~3.0

### ● 圆铜线标称直径的允许偏差 Round copper wire standard diameter and allowable deviation

标称直径d mm Standard diameter (d mm)	允许偏差 mm Allowable deviation (mm)
0.100~0.125	±0.003
0.126~0.400	±0.004
0.401~3.000	±1%d

圆铜线垂直于轴线的同一截面上测得的最大和最小直径之差 (f值) 应不超过标称直径允许偏差的绝对值。

The difference between maximum value and minimum value on the same cross-section when round copper wire being horizontal to axis should not exceed the absolute value of standard diameter allowable deviation

### ● 电性能 Electrical performance

型号 Type	电阻率 $\rho$ 20Ω · mm <sup>2</sup> /m 不大于 Resistivity $\rho$ 20 Ωmm <sup>2</sup> /m ≤	
	2.00mm以下 2.00mm below	2.00mm及以上 2.00 and above
TR	0.017241	0.017241
TY	0.01796	0.01777

### ● 机械性能 Mechanical performance

标称直径 mm standard diameter (mm)	TR		TY		标称直径 mm Standard diameter (mm)	TR		TY	
	伸长率% Elongation (%)	抗拉强度N/mm <sup>2</sup> tensile strength (N/mm <sup>2</sup> )	伸长率% elongation(%)	抗拉强度N/mm <sup>2</sup> tensile strength (N/mm <sup>2</sup> )		伸长率% Elongation (%)		抗拉强度N/mm <sup>2</sup> tensile strength (N/mm <sup>2</sup> )	伸长率% Elongation (%)
	不小于≥					不小于≥			
0.100	10	421	/	/	1.56	25	405	0.6	
0.200	15	420	/	/	1.60	25	404	0.6	
0.300	15	419	/	/	1.70	25	403	0.6	
0.380	20	418	/	/	1.76	25	403	0.7	
0.480	20	417	/	/	1.83	25	402	0.7	
0.570	20	416	/	/	1.90	25	401	0.7	
0.660	25	415	/	/	2.00	25	400	0.7	
0.750	25	414	/	/	2.12	25	399	0.7	
0.850	25	413	/	/	2.24	25	398	0.8	
0.940	25	412	0.5	0.5	2.36	25	396	0.8	
1.03	25	411	0.5	0.5	2.50	25	395	0.8	
1.12	25	410	0.5	0.5	2.62	25	393	0.9	
1.22	25	409	0.5	0.5	2.65	25	393	0.9	
1.31	25	408	0.6	0.6	2.73	25	392	0.9	
1.41	25	407	0.6	0.6	2.85	25	391	0.9	
1.50	25	406	0.6	0.6	3.00	25	389	1.0	

注：标称直径介于表中所列紧邻两个数值之间时，采用较大标称直径的相应性能。

Note: When standard diameter is between the 2 adjacent data, apply for the bigger standard diameter corresponding performance

### ● 外观 Appearance

圆铜线表面应光洁，没有与良好工业产品不相称的任何缺陷。

Round copper wire surface should be smooth and clean, without any defects as a good industrial product

### ● 交货要求 Delivery requirement

圆铜线成盘或成圈交货，每盘或每圈应为一整根，不允许焊接或扭接。

Round copper wire delivers in circle or drum, each drum or circle should be one whole wire, not allowed to weld or twist

### ● 每盘或每圈圆铜线净重符合下表 Each drum or circle round copper wire net weight matches table below

标称直径mm Standard diameter (mm)	每根圆铜线重量kg 不小于each round copper wire weight (kg) ≥		短段 shorter part	
	成 盘 drum	成 圈 circle	重量/kg weight	交货数量/kg delivery number
0.110~1.150	0.3	/	不小于标准重量的50% ≥50% of standard weight	不大于交货总重量的15% ≤15% of whole delivery weight
0.160~0.250	0.5	/		
0.260~0.400	1.0	/		
0.410~0.600	2.5	2.5		
0.630~0.800	5	5		
0.820~1.000	10	10		
1.01~2.00	20	20		
2.01~4.00	40	40		

注：根据双方协议，允许以任何重量交货。Note: According to mutual agreement, it is allowed to delivery in any weight.

## 2. 电工圆铝线（GB/T 3955—2009） Electrical round aluminum wire

### ● 型号、名称、生产规格 Type, name and specification

型号 Type	名称 Name	生产规格mm Specification (mm)
LR	软圆铝线 Soft round aluminum wire	1.38~10.00
LY4	H4状态硬圆铝线 H4 status hard round aluminum wire	1.38~6.00

### ● 圆铝线标称直径的允许偏差 Round aluminum wire standard diameter allowable deviation

标称直径d mm standard diameter (d mm)	允许偏差 mm allowable deviation (mm)
1.38~2.49	± 0.025
2.50及以上 2.50 and above	± 1% d

圆铝线垂直于轴线的同一截面上测得的最大和最小直径之差（f值）应不超过标称直径允许偏差的绝对值。

The difference between maximum value and minimum value on the same cross-section when round aluminum wire being horizontal to axis should not exceed the absolute value of standard diameter allowable deviation

### ● 电性能 Electrical performance

型号 Type	电阻率 $\rho$ 20不大于 $\Omega \cdot \text{mm}^2/\text{m}$ Resistivity $\rho$ 20 $\Omega \text{mm}^2/\text{m}$ ≤
LR	0.02759
LY4	0.028264

### ● 机械性能 Mechanical performance

型号 Type	直径 mm Diameter (mm)	抗拉强度 N/mm <sup>2</sup> Tensile strength (N/mm <sup>2</sup> )		断裂伸长率% 不小于 Breaking elongation (%)	卷绕 winding
		最小 Minimum	最大 Maximum		
LR	1.38~10.00	/	98	20	/
LY4	1.38~6.00	95	125	/	见注

注：试样在等于自身直径的圆棒上紧密卷绕8圈，退绕6圈后，重新紧密卷绕，用正常目力检查，铝线应不断裂，但允许表面有轻微裂纹。

Note: Sample wind 8 circles tight in pole equals to its diameter, then unwind 6 circles, rewind tight again, under normal visual, the wire shouldn't break, but slight cracks are allowed.

### ● 外观 Appearance

圆铝线表面光洁，没有与良好工业产品不相称的任何缺陷。

Round aluminum wire surface should be smooth and clean, without any defect as a good industrial product

### ● 交货要求 Delivery requirement

圆铝线成盘或成圈交货，每盘或每圈应为一整根，不允许焊接或扭接。

Round aluminum wire delivers in circle or drum, each drum or circle should be one whole wire, not allowed to weld or twist

### ● 圆铝线每盘或每圈的净重应符合下表 Each drum or circle round aluminum wire net weight matches table below

标称直径mm Standard diameter (mm)	每根圆铝线质量kg不小于 Each round aluminum wire weight (kg) ≥	短段 Shorter part	
		质量 Weight	交货数量 Delivery number
1.38~2.00	8	不小于每根圆铝线 质量最小值的50% ≥50% of standard weight	不大于交货 总质量的15% ≤15% of whole delivery weight
2.01~4.00	15		
4.01~6.00	20		

## 3. 铝绞线和钢芯铝绞线 ( GB/T 1179—2008/IEC 61089:1991 )

### AAC and ACSR

#### ● 型号、名称 Type , name

型号 Type	名称 Name
JL(LJ)	铝绞线 AAC
JL/G1A(LGJ)、JL/G1B、JL/G2A、JL/G2B、JL/G3A	钢芯铝绞线 ACSR
JL/G1AF(LGJF)、JL/G2AF、JL/G3AF	防腐钢芯铝绞线 Anticorrosive ACSR

#### ● 性能参数表 Performance parameter table

##### JL(LJ)铝绞线 JL(LJ) AAC

标称截面mm <sup>2</sup> Standard cross-section (mm <sup>2</sup> )	结构 根数/直径mm Structure unit/diameter (mm)	绞线外径mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力 kN Rated pull-off force (kN)	20℃直流电阻 不大于Ω/km 20℃ DC resistance ≤ (Ω/km)
10	7/1.35	4.05	27.4	1.95	2.8633
16	7/1.71	5.12	43.8	3.04	1.7896
25	7/2.13	6.40	68.4	4.50	1.1453
35	7/2.50	7.50	94.0	6.01	0.8332
40	7/2.70	8.09	109.4	6.80	0.7158
50	7/3.00	9.00	135.3	8.41	0.5787
63	7/3.39	10.2	172.3	10.39	0.4545
70	7/3.60	10.8	194.9	11.40	0.4019
95	7/4.16	12.5	260.2	15.22	0.3010
100	19/2.59	12.9	274.8	17.00	0.2877
120	19/2.85	14.3	333.2	20.61	0.2374
125	19/2.89	14.5	343.6	21.25	0.2302
150	19/3.15	15.8	407.0	24.43	0.1943
160	19/3.27	16.4	439.8	26.40	0.1798
185	19/3.50	17.5	502.4	30.16	0.1574

标称截面mm <sup>2</sup> Standard cross-section (mm <sup>2</sup> )	结构 根数/直径mm Structure unit/diameter (mm)	外径mm Outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力 kN Rated pull-off force (kN)	20℃直流电阻 不大于Ω/km 20°C DC resistance ≤(Ω/km)
200	19/3.66	18.3	549.7	32.00	0.1439
210	19/3.75	18.8	576.8	33.58	0.1371
240	19/4.00	20.0	656.3	38.20	0.1205
250	19/4.09	20.5	687.1	40.00	0.1151
300	37/3.20	22.4	819.8	49.10	0.0969
315	37/3.29	23.0	867.9	51.97	0.0916
400	37/3.71	26.0	1102.0	64.00	0.0721
450	37/3.94	27.5	1239.8	72.00	0.0641
500	37/4.15	29.0	1377.6	80.00	0.0577
560	37/4.39	30.7	1542.9	89.60	0.0515
630	61/3.63	32.6	1738.3	100.80	0.0458
710	61/3.85	34.6	1959.1	113.60	0.0407
800	61/4.09	36.8	2207.4	128.00	0.0361
900	61/4.33	39.0	2483.3	144.00	0.0321
1000	61/4.57	41.1	2759.2	160.00	0.0289
1120	91/3.96	43.5	3093.5	179.20	0.0258
1250	91/4.18	46.0	3452.6	200.00	0.0231
1400	91/4.43	48.7	3866.9	224.00	0.0207
1500	91/4.58	50.4	4143.1	240.00	0.0193

JL/G1A(LGJ)钢芯铝绞线 JL/G1A(LGJ) ACSR

标称截面铝/钢mm <sup>2</sup> Standard cross-section aluminum/steel (mm <sup>2</sup> )	结构根数/直径 mm Structure unit/diameter (mm)		绞线外径mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力 kN Rated pull-off force (kN)	20℃直流电阻不大于 Ω/km 20°C DC resistance ≤(Ω/km)
	铝 Aluminum	钢 Steel				
10/2	6/1.50	1/1.50	4.50	42.8	4.14	2.7062
16/3	6/1.84	1/1.84	5.55	64.6	6.08	1.7934
35/6	6/2.72	1/2.72	8.16	140.8	12.55	0.8230
50/8	6/3.20	1/3.20	9.60	194.8	16.81	0.5946
50/30	12/2.32	7/2.32	11.60	371.1	42.61	0.5693
70/10	6/3.80	1/3.80	11.40	274.8	23.36	0.4217
70/40	12/2.72	7/2.72	13.60	511.3	58.22	0.4141
95/15	26/2.15	7/1.67	13.60	380.2	34.93	0.3059
95/20	7/4.16	7/1.85	13.90	408.2	37.24	0.3020
95/55	12/3.20	7/3.20	16.00	706.1	77.85	0.2992
120/7	18/2.90	1/2.90	14.50	378.5	27.74	0.2422
120/20	26/2.38	7/1.85	15.10	466.1	42.26	0.2496
120/25	7/4.72	7/2.10	15.70	525.7	47.96	0.2346
120/70	12/3.60	7/3.60	18.00	893.7	97.92	0.2364
150/8	18/3.20	1/3.20	16.00	460.9	32.73	0.1990
150/20	24/2.78	7/1.85	16.70	548.5	46.78	0.1981
150/25	26/2.70	7/2.10	17.10	600.1	53.67	0.1940
150/35	30/2.50	7/2.50	17.50	675.0	64.94	0.1962

标称截面铝/钢mm <sup>2</sup> Standard cross-section aluminum/steel (mm <sup>2</sup> )	结构根数/直径 mm Structure unit/diameter (mm)		绞线外径mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力 kN Rated pull-off force (kN)	20℃直流电阻不大于 Ω/km 20°C DC resistance ≤ (Ω/km)
	铝 Aluminum	钢 Steel				
185/10	18/3.60	1/3.60	18.00	583.3	40.51	0.1572
185/25	24/3.15	7/2.10	18.90	704.9	59.23	0.1543
185/30	26/2.98	7/2.32	18.90	731.4	64.56	0.1592
185/45	30/2.80	7/2.80	19.60	846.7	80.54	0.1564
210/10	18/3.80	1/3.80	19.00	649.9	45.14	0.1411
210/25	24/3.33	7/2.22	20.00	787.8	66.19	0.1380
210/35	26/3.22	7/2.50	20.40	852.5	74.11	0.1364
210/50	30/2.98	7/2.98	20.90	959.0	91.23	0.1381
240/30	24/3.60	7/2.40	21.60	920.7	75.19	0.1181
240/40	26/3.42	7/2.66	21.66	962.8	83.76	0.1209
240/55	30/3.20	7/3.20	22.40	1105.8	101.74	0.1198
300/15	42/3.00	7/1.67	23.00	938.7	68.41	0.0973
300/20	45/2.93	7/1.95	23.40	1000.8	76.04	0.0952
300/25	48/2.85	7/2.22	23.80	1057.0	83.76	0.0944
300/40	24/3.99	7/2.66	23.90	1131.0	92.36	0.0961
300/50	26/3.83	7/2.98	24.30	1207.7	103.58	0.0964
300/70	30/3.60	7/3.60	25.20	1399.6	127.23	0.0946
400/20	42/3.51	7/1.95	26.90	1284.3	89.48	0.0710
400/25	45/3.33	7/2.22	26.60	1293.5	96.37	0.0737
400/35	48/3.22	7/2.50	26.80	1347.5	103.67	0.0739
400/65	26/4.42	7/3.44	28.00	1608.7	135.39	0.0724
400/95	30/4.16	19/2.50	29.10	1856.7	171.56	0.0709
500/45	48/3.60	7/2.80	30.00	1685.5	127.31	0.0591
630/55	48/4.12	7/3.20	34.30	2206.4	164.31	0.0452
800/55	45/4.80	7/3.20	38.40	2687.5	192.22	0.0355
800/70	48/4.63	7/3.60	38.60	2787.6	207.68	0.0358
800/100	54/4.34	19/2.61	38.98	3004.2	243.52	0.0362

注：①JL/G1AF(LGJF)防腐型钢芯铝绞线的涂覆方式，按照标准规定，在订货时应说明。

②镀锌钢丝的镀层亦可采用特种镀锌层，如锌-5%铝-稀土合金镀层等。

③钢绞线可以采用铝包钢芯钢绞线或高强度钢线及特高强度钢线。

Note:

1.anti-corrosive ACSR coating method, conform standard regulation, should be stated when ordering products

2.The coating layer of galvanized steel wire can also apply special galvanized layer, for example Zinc -5% aluminum -rare earth alloy coating layer etc.

3.AAC can apply aluminum wrapped ACSR or high strength steel wire and ultra-high strength steel wire

#### ●包装及短段导线 Packing and shorter part wire

电线应成盘交货，短段线可以成圈交货。短段导线的长度不小于合同规定制造长度的50%，其数量应不超过交货总量的5%。根据用户要求，可以任何长度交货。

对钢芯铝绞线，在选型和订货时请务必把铝和钢的标称截面和执行标准号同时注明。

Wire should be delivered in drum, shorter part wire can be delivered in circle. Shorter part wire length shouldn't be less than 50% of ordered length by contract, the number of shorter part wire shouldn't exceed 5% of the whole number of wire.

Based on the request of user, any kind of length can be delivered For ACSR, when selecting and ordering product, please make sure to state aluminum and steel cross-section and execution standard number.

## 4. 大截面钢芯铝绞线 Large cross-section ACSR

●用途：供架空电力线路用。Use: for aerial power lines

产品已通过电力工业电力工程材料部件质量检验测试中心、国网北京电力建设研究院、中国电力科学院高压所的型式试验，并且通过了中国电力企业联合会在北京召开的技术鉴定会。

The products passed Quality inspection and Testing Center for electric power engineering materials for power industry, Beijing Power Construction Research Institute of China Electric Power Enterprise Federation.

●型号、名称 Type, name

型号 Type	名称 Name
JL/G2A、JL/G3A	钢芯铝绞线 ACSR

●性能参数表 Performance parameter table

900mm<sup>2</sup>大截面导线技术参数表 900mm<sup>2</sup> large cross-section conductor technology parameter table

项目 Item		单位 Unit	技术要求 Technical requirement	
产品型号规格 Product type specification		/	JL/G3A-900/40-72/7	JL/G2A-900/75-84/7
外观及表面质量 Appearance and surface quality		/	绞线表面无肉眼可见的缺陷，如明显的压痕、划痕等，无与良好产品不相称的任何缺陷。 Wire surface no visible defect, such as obvious indentation and scratch, no defect as a good industrial product	
结构 Structure	铝 aluminum	外层 Outside layer	根/mm Unit/mm	27/3.99
		邻外层 Adjacent outside layer	根/mm Unit/mm	21/3.99
		邻内层 Adjacent inside layer	根/mm Unit/mm	15/3.99
		内层 Inside layer	根/mm Unit/mm	9/3.99
	钢 steel	6根层 6 units layer	根/mm Unit/mm	6/2.66
		中心根 Center unit	根/mm Unit/mm	1/2.66
计算截面 Calculated cross-section	合计 In total	mm <sup>2</sup>	939.16	973.16
	铝 aluminum	mm <sup>2</sup>	900.26	898.30
	钢 steel	mm <sup>2</sup>	38.90	74.86
	外径 Outside diameter	mm	39.9 <sup>+1%</sup>	40.6 <sup>+1%</sup>
结构重量 Structural weight		kg/km	2790.2 <sup>+1%</sup> <sub>-1%</sub>	3074.2 <sup>+1%</sup> <sub>-1%</sub>
20℃时直流电阻 20℃ DC resistance		Ω/km	≤0.0321	≤0.0322
额定拉断力 Rated pull-off force		kN	≥198.83	≥231.75
弹性模量 Modulus of elasticity		GPa	60.8±3	65.8±3
线膨胀系数 Linear expansion coefficient		1/℃	21.5×10 <sup>-6</sup>	20.5×10 <sup>-6</sup>
比径节 Lay ratio	铝 aluminum	外层 Outside layer	/	10~12
		邻外层 Adjacent outside layer	/	12~14
		邻内层 Adjacent inside layer	/	13~15
		内层 Inside layer	/	14~16
	钢 steel	6根层 6 units layer	/	16~22
	/	/	/	任何层的节径比应不大于紧邻内层的节径比。 Any layer's lay ratio should not exceed adjacent inside layer's lay ratio
绞向 Winding direction	外层 Outside layer	/	最外层绞向为右向，相邻层绞向相反。 Outermost winding direction to the right, adjacent layer winding direction is the opposite	
	其它层 Other layer	/		
每盘线长 Wire length in each drum		m	2900	2500

注：外层铝线不允许接头。内层和邻外层铝线（在盘长长度下）允许接头但总量不超过4个，接头间距离不小于15米。接头采用冷压焊接，强度不低于130MPa。

Note: Outside layer aluminum wire is not allowed to connect. Inside layer and adjacent outside layer aluminum wire (under drum length) is allowed to connect but not exceeding 4 in total, and each connection point's distance should not below 15m. Connection point should use cold-pressure welding, intensity should not below 130MPa.

900mm<sup>2</sup>大截面导线用(61.5%IACS)硬铝线技术参数表900mm<sup>2</sup> large cross-section wire (61.5% IACS) hard aluminum wire technology parameter table

项目 Item		单位 Unit	技术要求 Technical requirement	
直径 Diameter	mm	3.690+0.04	3.990+0.04	
计算截面积 Calculated cross-section area	mm <sup>2</sup>	10.6940+2%	12.5040 + 2%	
单位长度质量 Unit length mass	kg/km	28.8740+2%	33.7600 + 2%	
抗拉强度 Tensile strength	绞前最小值 Minimum before winding	MPa	≥176	
	绞前平均值 Average before winding		≥181	
	绞后最小值 Minimum after winding		≥167	
	绞后平均值 Average after winding		≥172	
	均匀性 Uniformity		≤25	
接头抗拉强度(冷压焊) Connection joint tensile strength (cold-pressure welding)	MPa	≥130		
20℃时电阻率 20℃ resistivity	nΩ · m	≤28.034 ( 61.5%IACS )		
卷绕 Winding	/	1D卷绕8圈，退6圈，重新紧密卷绕，铝线不断裂。 1D wind 8 circles, unwind 6 circles, rewind tight, aluminum wire doesn't break		
外观及表面质量 Appearance and surface quality	/	表面光洁，不得有与良好商品不相称的任何缺陷。 Surface smooth and clean, no defect as a good industrial product		

900mm<sup>2</sup>大截面导线用镀锌钢线技术参数表 900mm<sup>2</sup> large cross-section wire galvanized steel wire technical parameter table

项目 Item		单位 Unit	技术要求 Technical requirement	
直径 Diameter	mm	2.66 ( G3A )	3.69 ( G2A )	
直径允许偏差 Diameter allowable deviation	mm	± 0.04	± 0.06	
计算截面积 Calculated cross-section	mm <sup>2</sup>	5.557	10.694	
单位长度质量 Unit length mass	kg/km	43.346	83.414	
抗拉强度 Tensile strength	绞前 Before winding	MPa	≥1590	≥1380
	绞后偏差 After winding deviation	MPa	≤150	≤150
1%伸长应力 1% elongation stress	MPa	≥1410	≥1170	
伸长率(标距250mm) elongation(standard distance 250mm)	%	≥2.0	≥3.0	
扭转(L=100d, 同向连续) Reverse (L=100d, same direction continuous)	圈	≥14	≥12	
镀锌层重量 Galvanized layer weight	g/m <sup>2</sup>	≥230	≥260	
卷绕试验 Winding test	/	3倍钢丝直径芯轴上卷绕8圈，钢丝不断裂。 Wind on 3 times steel diameter core, steel wire doesn't break		
镀锌层附着性 Galvanized layer adhesion	/	4倍钢丝直径芯轴上卷绕8圈，锌层不得开裂或起皮。 Wind on 4 times steel diameter core, galvanized layer doesn't crack		
镀锌层连续性 Galvanized layer continuity	/	用肉眼观察镀层应没有孔隙，镀层光滑，厚度均匀。 Galvanized layer no visible pore, layer smooth, uniform thickness		
外观及表面质量 Appearance and surface quality	/	镀锌钢线应较光洁，并且不应有与良好的商品不相称的所有缺陷。 Galvanized steel wire should be smooth, and no defect as a good industrial product		

1250mm<sup>2</sup>大截面导线技术参数表 1250mm<sup>2</sup> large cross-section technical parameter table

项目 Item		单位 Unit	技术要求 Technical requirement	
产品型号规格 Product type specification	/	JL1/G3A-1250/70-76/7 JL1/G2A-1250/100-84/19		
外观及表面质量 Appearance and surface quality	/	绞线表面无肉眼可见的缺陷，如明显的压痕，划痕等，无与良好产品不相称的任何缺陷。 Wire surface shouldn't have visible defect, such as obvious indentation, scratch, no defect as a good industrial product		

项目 Item		单位 Unit	技术要求 Technical requirement		
构结 Structure	铝 aluminum	外层 Outside layer	根/mm	28/4.58	
		邻外层 Adjacent outside layer	根/mm	22/4.58	
		邻内层 Adjacent inside layer	根/mm	16/4.58	
		内层 Inside layer	根/mm	10/4.58	
	钢 steel	12根层12 units layer	根/mm	/	
		6根层 6 units layer	根/mm	6/3.57	
		中心根 Center unit	根/mm	1/3.57	
计算截面积 Calculated cross-section area		合计 In total	mm <sup>2</sup>	1322.16	
		铝 aluminum	mm <sup>2</sup>	1252.09	
		钢 steel	mm <sup>2</sup>	70.07	
		外径 Outside diameter	mm	47.350+1%	
单位长度质量 Unit length mass		kg/km	4011.10+2%	4252.30+2%	
20℃时直流电阻 20℃ DC resistivity		Ω/km	≤0.02291	≤0.02300	
额定抗拉力 Rated tensile strength		kN	≥294.23	≥329.85	
弹性模量 Modulus of elasticity		GPa	62.2±3	65.2±3	
线膨胀系数 Linear expansion coefficient		1/°C	21.1×10 <sup>-6</sup>	20.5×10 <sup>-6</sup>	
节径比 Lay ratio	铝 Aluminum	外层 Outside layer	/	10~12	
		邻外层 Adjacent outside layer		11~14	
		邻内层 Adjacent inside layer		12~15	
		内层 Inside layer		13~16	
	钢 Steel	12根层12 units layer	/	/	
		6根层 6 units layer	/	16~22	
		外层 Outside layer	/	右向 Right direction	
绞向 Winding direction		其他层 Other layer	/	相邻层绞向相反 Adjacent layers winding direction opposite	
每盘线长 Wire length each drum		m	2500		
线长偏差 Wire length deviation		正 positive	%	0.5%	
		负 negative	%	0	

注：节径比是参考值。钢芯无接头，外层铝线不允许有接头，其他层应满足GB/T 1179—2008的要求。

Noe: Lay ratio is reference value. Steel core no connection joint, aluminum wire outside layer is not allowed to have connection joint, other layers should meet GB/T1179 - 2008 requirements.

#### 1250mm<sup>2</sup>大截面导线用镀锌钢线技术参数表 1250mm<sup>2</sup> large cross-section wire galvanized steel wire technical parameter table

项目 Item		单位 Unit	技术要求 Technical requirement	
外观及表面质量 Appearance and surface quality		/	镀锌钢线应较光洁，并且不应有与良好的商品不相称的所有缺陷。 Galvanized steel wire should be smooth and clean, with no defect as a good industrial product	
直径 Diameter		mm	3.57 (G3A)	2.61 (G2A)
直径允许偏差 Diameter allowable deviation	正 positive	mm	0.06	0.04
	负 negative	mm	0.06	0.04
绞前抗拉强度 Tensile strength before winding		MPa	≥1520	≥1410
1%伸长应力 1% elongation stress		MPa	≥1340	≥1280
伸长率 (标距250mm) Elongation (standard distance 250mm)		%	≥2.5	≥2.5
扭转 reverse		次	10	16
卷绕试验 Winding test		/	5倍钢丝直径芯轴上卷绕8圈，钢丝不断裂。 Wind on 5 times steel diameter core 8 circles, steel wire doesn't break	3倍钢丝直径芯轴上卷绕8圈，钢丝不断裂。 Wind on 3 times steel diameter core 8 circles, steel wire doesn't break

项目 Item	单位 Unit	技术要求 Technical requirement	
抗拉强度绞后极差 Tensile strength range after winding	MPa	≤150	≤150
计算截面积 Calculated cross-section area	mm <sup>2</sup>	10.01	5.35
单位长度质量 Unit length mass	kg/km	77.88	41.62
镀锌层质量 Galvanized layer mass	g/m <sup>2</sup>	≥260	≥230
镀锌层附着性 Galvanized layer adhesion	/	5倍钢丝直径芯轴上卷绕8圈，锌层不得开裂或起皮。 Wind on 5 times steel wire diameter core 8 circles, zinc layer doesn't crack.	4倍钢丝直径芯轴上卷绕8圈，锌层不得开裂或起皮。 Wind on 4 times steel wire diameter core 8 circles, zinc layer doesn't crack.
镀锌层连续性 Galvanized continuity	/	用肉眼观察镀层应没有孔隙，镀层光滑，厚度均匀。 No visible pore on coating layer, coating layer should be smooth and clean, uniform thickness	

### 1250mm<sup>2</sup>大截面导线用(61.5%IACS)圆铝单线技术参数表

1250mm<sup>2</sup> large cross-section wire (61.5% IACS) round aluminum wire technical parameter table

项目 Item	单位 Unit	技术要求 Technical requirement	
外观及表面质量 Appearance and surface quality	/	表面应光洁，并不得有与良好的商品不相称的任何缺陷。 Surface should be smooth and clean, with no defect as a good industrial product	
直径 Diameter	mm	4.58	4.35
直径允许偏差 Diameter allowable deviation	正 positive 负 negative	mm mm	0.046 0.044 0 0
20℃时直流电阻率 20°C DC resistivity	n Ω · m	≤28.034(61.5%IACS)	≤28.034 61.5%IACS )
抗拉强度 Tensile strength	绞前最小值 Minimum before winding 绞前平均值 Average before winding 绞后最小值 Minimum after winding 绞后平均值 Average after winding 极差 Range	Mpa	165 170 157 162 ≤25
接头抗拉强度 (冷压焊) Connection joint tensile strength (cold-pressure welding)	MPa	≥130	≥130
计算截面积 Calculated cross-section area	mm <sup>2</sup>	16.47	14.86
单位长度质量 Unit length mass	kg/km	44.52	40.17
卷绕 Winding	/	1d卷绕8圈，退6圈，重新紧密卷绕，铝线不得断裂。 1d wind 8 circles, unwind 6 circles, rewind tight, aluminum doesn't break	

## 5. 节能导线 Energy-saving wire

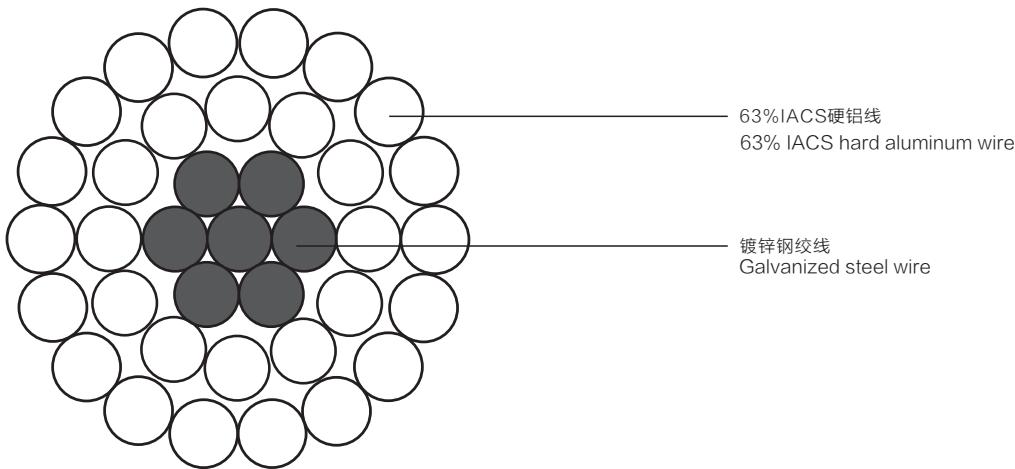
### ◆钢芯高导电率铝绞线 (Q/GDW 632—2011) High conductivity ACSR (Q/GDW 632 -2011)

#### ●产品特点 Product features

以多根镀锌钢线为芯，外部同心绞合多层导电率在61.5%IACS至63%IACS之间的硬铝线构成的绞线。与普通钢芯铝绞线相比，由于铝线导电率的提高，可使导线整体直流电阻值降低，导电能力提高，电能损耗减少。

Hard aluminum wire wound wire using multiple galvanized steel wire as core, outside multiple layers conductivity between 61.5% IACS and 63% IACS. Compare to regular ACSR, since the raise of the aluminum wire conductivity, the whole wire DC resistance lowered, conductivity raised, the waste of electric energy reduced.

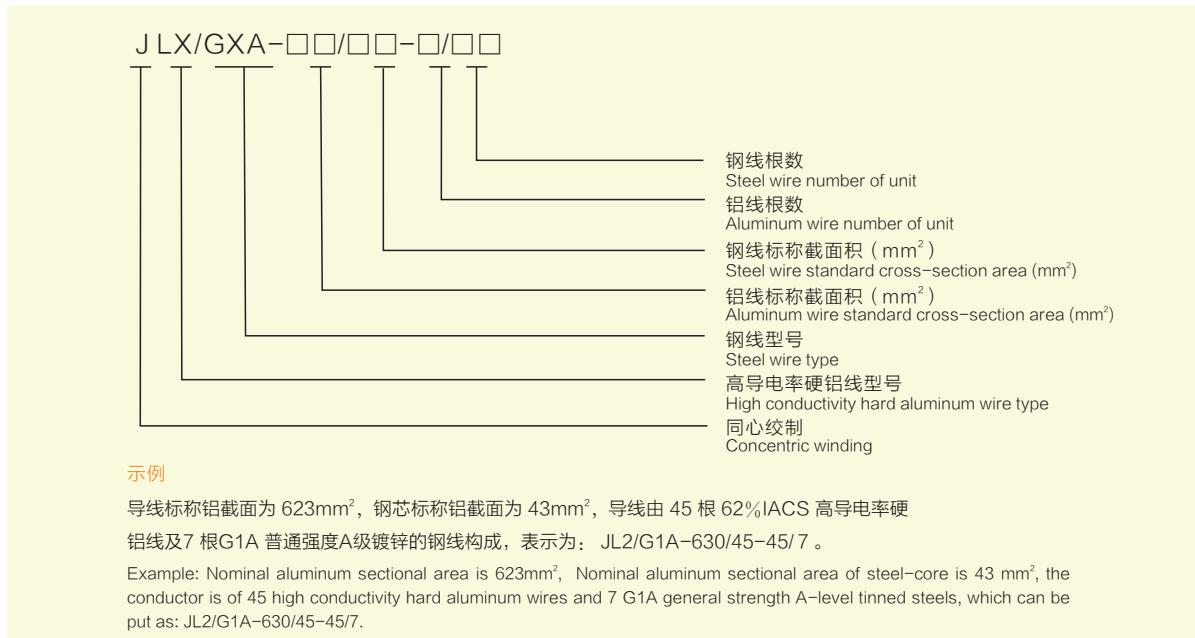
## ●产品示意图 Product sketch



## ●产品型号及名称 Product type and name

项目 Type	单位 Name	硬铝线导电率 Hard aluminum wire conductivity
JL1/G1A JL1/G2A JL1/G3A	圆线同心绞钢芯高导电率铝绞线 Round wire concentric winding steel core high conductivity aluminum wire	61.5%IACS
JL2/G1A JL2/G2A JL2/G3A	圆线同心绞钢芯高导电率铝绞线 Round wire concentric winding steel core high conductivity aluminum wire	62%IACS
JL3/G1A JL3/G2A JL3/G3A	圆线同心绞钢芯高导电率铝绞线 Round wire concentric winding steel core high conductivity aluminum wire	62.5%IACS
JL4/G1A JL4/G2A JL4/G3A	圆线同心绞钢芯高导电率铝绞线 Round wire concentric winding steel core high conductivity aluminum wire	63%IACS

## ●产品表示方法 Product signs



## ● 钢芯高导电率铝绞线参数表 High conductivity ACSR parameter table

标称截面 Standard cross-section	面积/mm <sup>2</sup> Area (mm <sup>2</sup> )			单线根数 Single wire number of unit		单线直径/mm Single wire diameter (mm)		直径/mm Diameter (mm)		单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力/kN Rated pull-off force (kN)			直流电阻 (20℃) / (Ω/km) 20℃ DC resistance (Ω/km)			
	铝/aluminum	钢/steel	总和 In total	铝/aluminum	钢/steel	铝/aluminum	钢/steel	钢芯 Steel core	绞线 Winding wire		G1A	G2A	G3A	61.5%	62.0%	62.5%	63.0%
70/40	69.73	40.67	110.40	12	7	2.72	2.72	8.16	13.6	510.3	58.22	63.91	69.20	0.4108	0.4075	0.4042	0.4010
95/55	96.51	56.30	152.81	12	7	3.20	3.20	9.60	16.0	706.4	77.85	85.74	93.62	0.2968	0.2944	0.2920	0.2897
120/70	122.15	71.25	193.40	12	7	3.60	3.60	10.8	18.0	894.0	97.92	102.91	115.02	0.2345	0.2326	0.2307	0.2289
180/30	181.34	29.59	210.93	26	7	2.98	2.32	6.96	18.9	731.9	64.56	68.70	72.55	0.1579	0.1567	0.1554	0.1542
200/30	200.06	32.46	232.52	26	7	3.13	2.43	7.29	19.8	806.1	70.01	74.56	78.78	0.1432	0.1420	0.1409	0.1397
240/40	238.85	38.90	277.75	26	7	3.42	2.66	7.98	21.7	962.8	83.76	89.20	94.26	0.1199	0.1189	0.1180	0.1171
245/30	244.29	31.67	275.96	24	7	3.60	2.40	7.20	21.6	921.5	75.19	79.62	83.74	0.1171	0.1162	0.1153	0.1144
300/25	306.21	27.10	333.31	48	7	2.85	2.22	6.66	23.8	1057.0	83.76	87.56	91.35	0.0936	0.0928	0.0921	0.0912
300/40	300.09	38.90	338.99	24	7	3.99	2.66	7.98	23.9	1131.0	92.36	97.81	102.86	0.0954	0.0946	0.0938	0.0931
300/50	299.54	48.82	348.36	26	7	3.83	2.98	8.94	24.3	1208.6	103.58	110.42	116.76	0.0956	0.0948	0.0941	0.0933
300/70	305.36	71.25	376.61	30	7	3.60	3.60	10.8	25.2	1400.5	127.23	132.22	144.33	0.0939	0.0931	0.0924	0.0916
400/25	391.91	27.10	419.01	45	7	3.33	2.22	6.66	26.6	1294.7	96.37	100.17	103.96	0.0731	0.0725	0.0720	0.0714
400/35	390.88	34.36	425.24	48	7	3.22	2.50	7.50	26.8	1347.3	103.67	108.48	112.94	0.0733	0.0727	0.0722	0.0716
400/50	399.73	51.82	451.55	54	7	3.07	3.07	9.21	27.6	1509.3	122.95	130.21	137.47	0.0718	0.0712	0.0706	0.0701
500/35	499.67	34.64	534.31	45	7	3.76	2.51	7.53	30.1	1651.4	119.44	124.29	128.79	0.0574	0.0569	0.0564	0.0560
500/45	488.58	43.10	531.68	48	7	3.60	2.80	8.40	30.0	1687.0	127.31	133.34	138.94	0.0587	0.0582	0.0577	0.0573
500/65	498.97	64.68	563.65	54	7	3.43	3.43	10.3	30.9	1885.5	153.48	162.53	171.59	0.0575	0.0570	0.0566	0.0561
630/45	629.40	43.41	672.81	45	7	4.22	2.81	8.43	33.8	2078.4	150.19	156.27	161.91	0.0455	0.0452	0.0448	0.0445
630/55	639.92	56.30	696.22	48	7	4.12	3.20	9.60	34.3	2208.3	164.32	172.20	180.08	0.0448	0.0444	0.0441	0.0437
720/50	725.27	50.14	775.41	45	7	4.53	3.02	9.06	36.2	2395.9	171.20	178.22	185.24	0.0395	0.0392	0.0389	0.0386
800/35	799.46	34.64	834.10	72	7	3.76	2.51	7.53	37.6	2481.7	167.40	172.25	176.76	0.0359	0.0356	0.0353	0.0350
800/55	814.30	56.30	870.60	45	7	4.80	3.20	9.60	38.4	2690.0	192.22	200.10	207.98	0.0352	0.0349	0.0346	0.0344
800/65	798.97	66.58	865.55	84	7	3.48	3.48	10.4	38.2	2731.7	205.07	214.39	223.71	0.0359	0.0356	0.0354	0.0351
900/40	900.26	38.90	939.16	72	7	3.99	2.66	7.98	39.9	2793.8	188.39	193.83	198.89	0.0319	0.0316	0.0314	0.0311
900/75	898.30	74.86	973.16	84	7	3.69	3.69	11.1	40.6	3071.3	226.07	231.31	244.04	0.0320	0.0317	0.0314	0.0312
1000/45	1002.28	43.10	1045.38	72	7	4.21	2.80	8.40	42.1	3108.8	209.50	215.53	221.14	0.0286	0.0284	0.0282	0.0279
1000/80	1003.46	81.71	1085.17	84	19	3.90	2.34	11.7	42.9	3418.0	253.70	265.14	275.76	0.0286	0.0284	0.0282	0.0279
1120/50	1119.81	47.28	1167.09	72	19	4.45	1.78	8.90	44.5	3467.7	234.49	241.11	247.73	0.0256	0.0254	0.0252	0.0250
1120/90	1119.86	91.04	1210.90	84	19	4.12	2.47	12.4	45.4	3813.4	282.96	295.71	307.54	0.0256	0.0254	0.0252	0.0250
1250/50	1249.16	52.74	1301.90	72	19	4.70	1.88	9.40	47.0	3868.3	261.57	268.96	276.34	0.0230	0.0228	0.0226	0.0224
1250/100	1248.39	101.65	1350.04	84	19	4.35	2.61	13.1	47.9	4252.3	315.62	329.85	343.07	0.0230	0.0228	0.0226	0.0224
1400/115	1402.08	114.50	1516.58	84	19	4.61	2.77	13.9	50.8	4778.4	354.86	370.89	385.78	0.0205	0.0203	0.0201	0.0200
1505/120	1507.39	122.92	1630.31	84	19	4.78	2.87	14.4	52.6	5135.9	381.31	398.52	414.50	0.0190	0.0189	0.0187	0.0186

## ◆ 铝合金芯高导电率铝绞线 (Q/GDW 1815—2012)

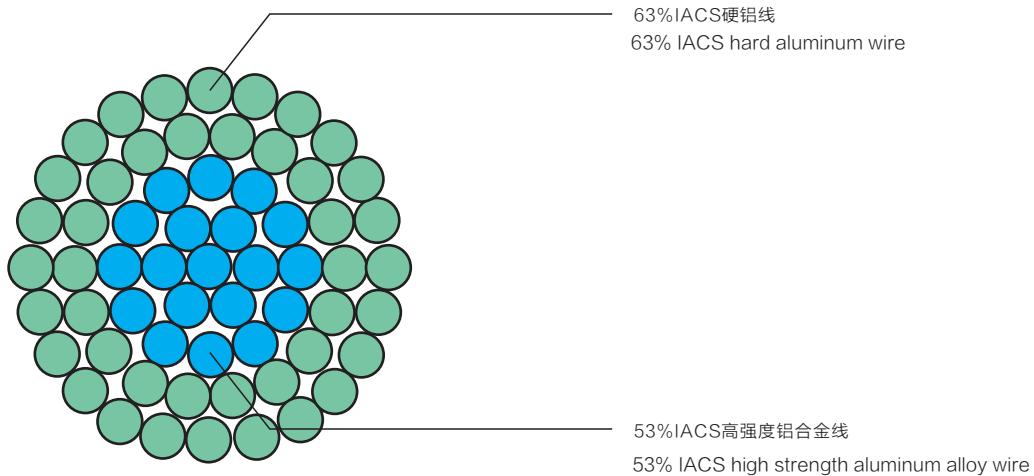
◆ Aluminum alloy core high conductivity aluminum wire (Q/GDW 1815—2012)

## ● 产品特点 Product features

以多根导电率为52.5%IACS或53%IACS的铝合金线同心绞合为芯，外层同心绞合多层导电率在61.5%IACS至63%IACS之间的硬铝线构成的绞线。在等总截面应用条件下，由于基本无导电能力的9%IACS钢芯被铝合金芯替代，同时铝线导电率也相应提高，所以直流电阻比普通钢芯铝绞线小，提高了导电能力。

Winding wire using multiple conductivity 52.5% IACS or 53% IACS aluminum alloy wire concentric wound as core, outside layers concentric wended with multiple layers of conductivity between 61.5% IACS and 63% IACS hard aluminum wire. At the same cross-section usage condition, 9% IACS steel core with basically no conductivity ability was replaced by aluminum alloy core, at the same time aluminum wire conductivity raised, so DC resistance is less than normal ACSR, the conductivity raised.

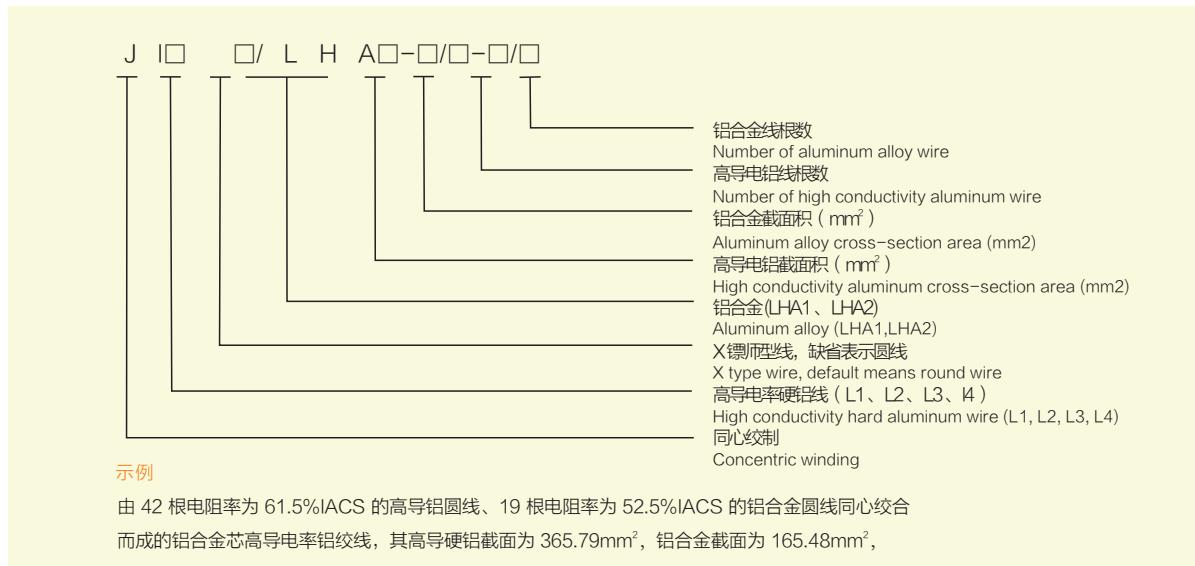
#### ● 产品示意图 Product sketch



#### ● 产品型号及名称 Product type and name

项目 Type	名 称 Name	硬铝线导电率 Hard aluminum wire conductivity
JL1/LHA1 JL1/LHA2	圆线同心绞铝合金芯高导电率铝绞线 Round concentric winding aluminum alloy core high conductivity aluminum wire	61.5%IACS
JL2/LHA1 JL2/LHA2	圆线同心绞铝合金芯高导电率铝绞线 Round concentric winding aluminum alloy core high conductivity aluminum wire	62%IACS
JL3/LHA1 JL3/LHA2	圆线同心绞铝合金芯高导电率铝绞线 Round concentric winding aluminum alloy core high conductivity aluminum wire	62.5%IACS
JL4/LHA1 JL4/LHA2	圆线同心绞铝合金芯高导电率铝绞线 Round concentric winding aluminum alloy core high conductivity aluminum wire	63%IACS

#### ● 产品表示方法 Product signs



表示为：JL1/LHA1-365/165-42/19。

Example:

Aluminum alloy core high conductivity aluminum wire made by 42 units of 61.5% IACS resistivity high conductivity round aluminum wire, 19 units of 52.5% IACS resistivity aluminum alloy round wire concentric winding, its high conductivity hard aluminum cross-section area is 365.79 mm<sup>2</sup>, aluminum alloy cross-section area is 165.48 mm<sup>2</sup>, should be: JL1/LHA1- 365/165 42/19.

### ● 铝合金芯高导电率铝绞线的性能参数 Luminum alloy high conductivity aluminum wire performance parameters

#### JL1/LHA1 绞线性能 JL1/LHA1 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直 径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直 径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长 度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull -off force (kN)	20℃直 流电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线附录 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	65.83	0.1125	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	66.69	0.1110	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	80.23	0.0923	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	81.17	0.0912	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	98.69	0.0727	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	104.43	0.0687	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	111.45	0.0566	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	137.02	0.0446	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	159.20	0.0390	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	199.90	0.0310	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	223.30	0.0278	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	292.96	0.0226	1250/100

#### JL2/LHA1 绞线性能 JL2/LHA1 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直 径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直 径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长 度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull -off force (kN)	20℃直 流电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线附录 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	65.83	0.1120	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	66.69	0.1106	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	80.23	0.0919	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	81.17	0.0908	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	98.69	0.0724	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	104.43	0.0684	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	111.45	0.0563	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	137.02	0.0444	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	159.20	0.0387	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	199.90	0.0309	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	223.30	0.0276	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	292.96	0.0225	1250/100

## JL3/LHA1 绞线性能 JL3/LHA1 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力/kN Rated pull-off force (kN)	20℃直流 电阻不大于Ω/km 20℃ DC resistance ≤(Ω/km)	等外径钢芯 铝绞线规格 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	65.83	0.1115	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	66.69	0.1101	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	80.23	0.0915	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	81.17	0.0905	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	98.69	0.0721	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	104.43	0.0682	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	111.45	0.0560	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	137.02	0.0441	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	159.20	0.0385	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	199.90	0.0307	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	223.30	0.0275	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	292.96	0.0224	1250/100

## JL4/LHA1 绞线性能 JL4/LHA1 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力/kN Rated pull-off force (kN)	20℃直流 电阻不大于Ω/km 20℃ DC resistance ≤(Ω/km)	等外径钢芯 铝绞线规格 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	65.83	0.1111	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	66.69	0.1106	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	80.23	0.0911	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	81.17	0.0901	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	98.69	0.0718	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	104.43	0.0679	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	111.45	0.0556	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	137.02	0.0439	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	159.20	0.0383	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	199.90	0.0305	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	223.30	0.0273	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	292.96	0.0222	1250/100

## JL1/LHA2 绞线性能 JL1/LHA2 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉断力/kN Rated pull-off force (kN)	20℃直流 电阻不大于Ω/km 20℃ DC resistance ≤(Ω/km)	等外径钢芯 铝绞线规格 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	61.80	0.1120	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	62.61	0.1105	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	75.31	0.0919	300/25

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull-off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线附录 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	76.20	0.0908	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	94.53	0.0724	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	100.03	0.0684	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	106.73	0.0565	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	133.03	0.0445	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	152.37	0.0389	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	191.32	0.0310	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	213.73	0.0277	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	282.51	0.0225	1250/100

## JL2/LHA2 绞线性能 JL2/LHA2 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull-off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线附录 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	61.80	0.1115	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	62.61	0.1101	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	75.31	0.0915	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	76.20	0.0904	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	94.53	0.0721	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	100.03	0.0681	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	106.73	0.0561	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	133.03	0.0443	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	152.37	0.0386	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	191.32	0.0308	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	213.73	0.0275	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	282.51	0.0224	1250/100

## JL3/LHA2 绞线性能 JL3/LHA2 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull-off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线附录 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	铝导高 High conductivity aluminum	金合铝 Aluminum alloy							
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	61.80	0.1110	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	62.61	0.1096	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	75.31	0.0911	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	76.20	0.0901	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	94.53	0.0718	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	100.03	0.0679	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	106.73	0.0558	500/45

## JL4/LHA2 绞线性能 JL4/LHA2 wire performance

标称截面 Standard cross-section	截面积/mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )			单线根数 Single wire number of unit		高导铝 单线直 径/mm High conductivity aluminum single wire diameter (mm)	铝合金 单线直 径/mm Aluminum alloy single wire diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长 度质量 kg/km Unit length mass (kg/km)	额定拉 断力/kN Rated pull-off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线规格 Equal outside diameter ACSR specification
	高导铝 High conductivity aluminum	铝合金 Aluminum alloy	总和 In total	高导铝 High conductivity aluminum	金合铝 Aluminum alloy							
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	133.03	0.0440	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	152.37	0.0384	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	191.32	0.0306	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	213.73	0.0274	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	282.51	0.0223	1250/100
135/140	134.11	141.56	275.67	18	19	3.08	3.08	21.56	761.9	61.80	0.1106	240/30
135/145	135.86	143.41	279.27	18	19	3.10	3.10	21.70	771.8	62.61	0.1091	240/40
165/170	163.43	172.51	335.94	18	19	3.40	3.40	23.80	928.4	75.31	0.0907	300/25
165/175	165.35	174.54	339.89	18	19	3.42	3.42	23.94	939.4	76.20	0.0897	300/40
210/220	207.38	218.90	426.28	18	19	3.83	3.83	26.81	1178.1	94.53	0.0715	400/35
220/230	219.46	231.65	451.11	18	19	3.94	3.94	27.58	1246.7	100.03	0.0676	400/50
365/165	365.79	165.48	531.27	42	19	3.33	3.33	29.97	1470.0	106.73	0.0555	500/45
465/210	463.88	209.85	673.73	42	19	3.75	3.75	33.75	1864.2	133.03	0.0438	630/45
535/240	533.08	239.36	772.44	42	37	4.02	2.87	36.17	2138.8	152.37	0.0382	720/50
665/300	667.98	301.30	969.28	42	37	4.50	3.22	40.54	2683.8	191.32	0.0304	900/75
745/335	747.40	335.93	1083.33	42	37	4.76	3.40	42.84	2999.6	213.73	0.0272	1000/80
800/550	802.53	549.88	1352.41	54	37	4.35	4.35	47.85	3744.5	282.51	0.0222	1250/100

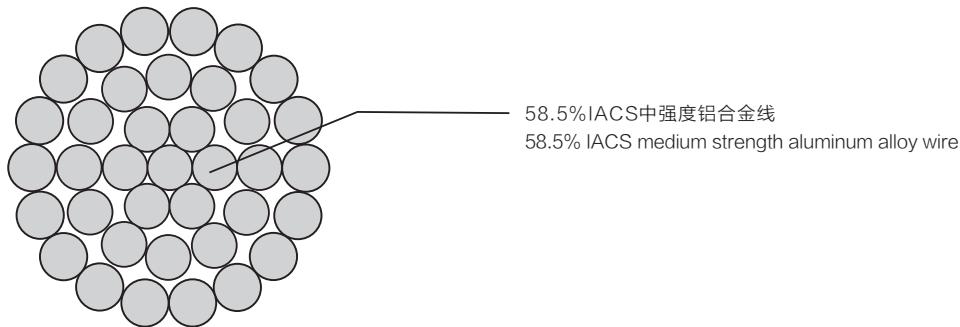
## ◆ 中强度铝合金绞线 (Q/GDW 1816—2012) Medium strength AAAC (Q/GDW 1816 –2012)

## ● 产品特点 Product features

由多根导电率不低于58.5%IACS，抗拉强度在230MPa至295MPa之间的中强度铝合金线同心绞合而成的绞线。与等总截面的普通钢芯铝绞线相比，同样由于铝合金材料替代了钢芯，相当于增大了导线的导电截面，使导线的整体直流电阻降低，提高了导电能力。

Made by multiple conductivity no less than 58.5% IACS, tensile strength between 230MPa and 295MPa medium strength aluminum alloy wires wound. Compare to equal cross-section area normal ACSR, at the same time aluminum alloy material replaced steel core, the wire's conductive cross-section increased, lowered whole DC resistance of the wire, the conductivity raised.

## ● 产品示意图 Product sketch



## ● 产品型号及名称 Product type and name

型 号 Product type and name	名 称 Name	硬铝合金线导电率 Hard aluminum alloy wire conductivity
JLHA3	中强度铝合金绞线 Medium strength AAAC	58.5%IACS

## ● 产品表示方法 Product signs



## 示例

由61根中强度铝合金线绞合而成的中强度铝合金绞线，其截面积为673.73mm<sup>2</sup>，表示为：JLHA3-675-61。

Example:

Medium strength AAAC made by 61 units of medium strength aluminum alloy wended, its cross-section area is 673.73mm<sup>2</sup>, should be: JLHA3 - 675 - 61.

## JLHA3 中强度铝合金绞线性能 JLHA3 medium strength AAAC performance

绞线型号 Wire type	标称截面积 mm <sup>2</sup> Standard cross -section area (mm <sup>2</sup> )	截面积 mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )	根数 Number of unit	单线直径 mm Single wire diameter (mm)	直径 mm Diameter (mm)	绞线外径 mm Strand outside diameter (mm)	单位长度 质量kg/km Unit length mass (kg/km)	20℃直流电阻 不大于Ω/km 20 C DC resistance ≤(Ω/km)	等外径钢芯 铝绞线截面 Equal outside diameter ACSR cross-section
JLHA3-275-37	275	275.67	37	3.08	21.56	761.9	66.16	0.1093	240/30
JLHA3-280-37	280	279.26	37	3.10	21.70	771.8	67.02	0.1079	240/40
JLHA3-335-37	335	335.93	37	3.40	23.80	928.4	80.62	0.0897	300/25
JLHA3-340-37	340	339.90	37	3.42	23.94	939.4	81.58	0.0887	300/40
JLHA3-425-37	425	426.28	37	3.83	26.81	1178.2	102.31	0.0707	400/35
JLHA3-450-37	450	451.11	37	3.94	27.58	1246.8	108.27	0.0668	400/50
JLHA3-530-61	530	531.26	61	3.33	29.97	1470.0	127.50	0.0568	500/45
JLHA3-675-61	675	673.73	61	3.75	33.75	1864.3	161.70	0.0448	630/45
JLHA3-775-91	775	773.61	91	3.29	36.19	2141.9	176.38	0.0390	720/50
JLHA3-870-91	870	870.53	91	3.49	38.39	2410.2	198.48	0.0347	800/55
JLHA3-940-91	940	941.77	91	3.63	39.93	2607.5	214.72	0.0321	900/40
JLHA3-975-91	975	973.16	91	3.69	40.59	2694.4	221.88	0.0310	900/75
JLHA3-1050-91	1050	1048.41	91	3.83	42.13	2902.7	239.04	0.0288	1000/50
JLHA3-1080-91	1080	1081.51	91	3.89	42.79	2994.4	246.58	0.0279	1000/80
JLHA3-1215-91	1215	1213.18	91	4.12	45.32	3358.9	265.08	0.0249	1120/90
JLHA3-1350-91	1350	1352.42	91	4.35	47.85	3744.4	295.50	0.0223	1250/100
JLHA3-1645-91	1645	1646.70	91	4.80	52.80	4559.2	359.80	0.0183	1520/125

## 6. 铝合金绞线及钢芯铝合金绞线 (GB/T 1179—2008/IEC 61089:1991)

AAAC and AACSR (GB/T 1179 - 2008 / IEC 61089 : 1991)

## ● 产品型号、名称 Product type and name

型号 Type	名称 Name
JLHA2、JLHA1	铝合金绞线 AAAC
JLHA2/G1A	钢芯铝合金绞线 AACSR
JLHA1/G1A	钢芯铝合金绞线 AACSR
JL/LHA2、JL/LHA1	铝合金芯铝绞线 Aluminum alloy core aluminum wire

## ●性能参数 Performance parameters

## JLHA1铝合金绞线性能 JLHA1 AAAC performance

标称截面积mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	面积mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )	单线根数n Single wire number of unit	直径/mmDiameter (mm)		单位长度质量kg/km Unit length mass (kg/km)	额定抗拉力/kN Rated pull-off force (kN)	20℃直流电阻不大于Ω/km 20℃ DC resistance ≤(Ω/km)
			单线 Single wire	绞线 Winded wire			
10	10.02	7	1.35	4.05	27.4	3.26	3.3205
16	16.08	7	1.71	5.13	44.0	5.22	2.0695
25	24.94	7	2.13	6.39	68.2	8.11	1.3339
35	34.91	7	2.52	7.56	95.5	11.35	0.9529
50	50.14	7	3.02	9.06	137.2	16.30	0.6635
70	70.07	7	3.57	10.7	191.7	22.07	0.4748
95	95.14	7	4.16	12.5	261.5	29.97	0.3514
150	149.96	19	3.17	15.9	412.2	48.74	0.2229
210	209.85	19	3.75	18.8	576.8	66.10	0.1593
240	239.96	19	4.01	20.1	661.1	75.59	0.1397
300	299.43	37	3.21	22.5	825.0	97.32	0.1119
400	399.98	37	3.71	26.0	1102.0	125.99	0.0838
500	500.48	37	4.15	29.1	1380.9	157.65	0.0671
630	631.30	61	3.63	32.7	1741.8	198.86	0.0532
800	801.43	61	4.09	36.8	2211.3	252.45	0.0419
1000	1000.58	61	4.57	41.1	2760.7	315.18	0.0335

## JLHA2铝合金绞线性能 JLHA2 AAAC performance

标称截面积mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	面积mm <sup>2</sup> Cross-section area (mm <sup>2</sup> )	单线根数n Single wire number of unit	直径/mmDiameter (mm)		单位长度质量kg/km Unit length mass (kg/km)	额定抗拉力/kN Rated pull-off force (kN)	20℃直流电阻不大于Ω/km 20℃ DC resistance ≤(Ω/km)
			单线 Single wire	绞线 Winded wire			
10	10.02	7	1.35	4.05	27.4	2.96	3.2891
16	16.08	7	1.71	5.13	44.0	4.74	2.0500
25	24.94	7	2.13	6.39	68.2	7.36	1.3213
35	34.91	7	2.52	7.56	95.5	10.30	0.9439
50	50.14	7	3.02	9.06	137.2	14.79	0.6573
70	70.07	7	3.57	10.7	191.7	20.67	0.4703
95	95.14	7	4.16	12.5	261.5	28.07	0.3481
120	120.36	19	2.84	14.2	330.8	35.51	0.2751
150	149.96	19	3.17	15.9	412.2	44.24	0.2208
210	209.85	19	3.75	18.8	576.8	61.91	0.1578
240	239.96	19	4.01	20.1	661.1	70.79	0.1383
300	299.43	37	3.21	22.5	825.0	88.33	0.1109
400	399.98	37	3.71	26.0	1102.0	117.99	0.0830
500	500.48	37	4.15	29.1	1380.9	147.64	0.0664
630	631.30	61	3.63	32.7	1741.8	186.23	0.0527
800	801.43	61	4.09	36.8	2211.3	236.42	0.0415
1000	1000.58	61	4.57	41.1	2760.7	295.17	0.0332

## JLHA1/G1A钢芯铝合金绞线性能 JLHA1/G1A AACSR performance

标称截面 铝合金/钢 Standard cross-section aluminum alloy/steel	钢比% Rate of steel (%)	面积mm <sup>2</sup> Area (mm <sup>2</sup> )			单线根数n Single wire number of unit		单线直径mm Single wire diameter (mm)		直径mm Diameter (mm)		单位长度 质量kg/km Unit length mass (kg/km)	额定抗 拉力/kN Rated pull -off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)
		铝 Aluminum	钢 Steel	总和 In total	铝 Aluminum	钢 Steel	铝 Aluminum	钢 Steel	钢芯 Steel core	绞线 Winded wire			
10/2	17	10.60	1.77	12.37	6	1	1.50	1.50	1.50	4.50	42.8	5.51	3.1444
16/3	17	16.13	2.69	18.82	6	1	1.85	1.85	1.85	5.55	65.1	8.39	2.0671
25/4	17	25.36	4.23	29.59	6	1	2.32	2.32	2.32	6.96	102.4	13.06	1.3144
35/6	17	34.86	5.81	40.67	6	1	2.72	2.72	2.72	8.16	140.8	17.96	0.9563
50/8	17	48.25	8.04	56.30	6	1	3.20	3.20	3.20	9.60	194.8	24.53	0.6909
50/30	58	50.73	29.59	80.32	12	7	2.32	2.32	6.96	11.6	371.1	50.22	0.6614
70/10	17	68.05	11.34	79.39	6	1	3.80	3.80	3.80	11.4	274.8	33.91	0.4899
70/40	58	69.73	40.67	110.40	12	7	2.72	2.72	8.16	13.6	510.2	69.03	0.4812
95/15	16	94.39	15.33	109.73	26	7	2.15	1.67	5.01	13.6	380.2	48.62	0.3554
95/55	58	96.51	56.30	152.81	12	7	3.20	3.20	9.60	16.0	706.1	93.29	0.3477
120/7	6	118.89	6.61	125.50	18	1	2.90	2.90	8.70	14.5	378.5	46.17	0.2815
120/20	16	115.67	18.82	134.49	26	7	2.38	1.85	5.55	15.1	466.1	59.61	0.2900
120/70	58	122.15	71.25	193.40	12	7	3.60	3.60	10.8	18.0	893.7	116.85	0.2747
150/8	6	144.76	8.04	152.81	18	1	3.20	3.20	3.20	16.0	460.9	55.90	0.2312
150/25	16	148.86	24.25	173.11	26	7	2.70	2.10	6.30	17.1	600.1	76.75	0.2254
185/10	6	183.22	10.18	193.40	18	1	3.60	3.60	3.60	18.0	583.3	68.91	0.1826
210/10	6	204.14	11.34	215.48	18	1	3.80	3.80	3.80	19.0	649.9	76.78	0.1639
210/35	16	211.73	34.36	246.09	26	7	3.22	2.50	7.50	20.4	852.5	107.98	0.1585
240/30	13	244.29	31.67	275.96	24	7	3.60	2.40	7.20	21.6	920.7	113.05	0.1372
240/40	16	238.84	38.90	277.74	26	7	3.42	2.66	7.98	21.7	962.8	121.97	0.1405
300/20	7	303.42	20.91	324.32	45	7	2.93	1.95	5.85	23.4	1000.8	123.07	0.1106
300/50	16	299.54	48.82	348.37	26	7	3.83	2.98	8.94	24.3	1207.7	150.01	0.1120
300/70	23	305.36	71.25	376.61	30	7	3.60	3.60	10.8	25.2	1399.6	174.57	0.1099
400/25	7	391.91	27.10	419.01	45	7	3.33	2.22	6.66	26.6	1293.5	159.07	0.0857
400/50	13	399.72	51.82	451.54	54	7	3.07	3.07	9.21	27.6	1509.3	186.91	0.0841
400/95	23	407.75	93.27	501.02	30	19	4.16	2.50	12.5	29.1	1856.7	234.77	0.0823
500/35	7	497.01	34.36	531.37	45	7	3.75	2.50	7.50	30.0	1640.3	195.73	0.0675
500/65	13	501.88	56.06	566.94	54	7	3.44	3.44	10.3	31.0	1895.0	234.68	0.0670
630/45	7	623.45	43.10	666.55	45	7	4.20	2.80	8.40	33.6	2057.6	245.52	0.0538
630/80	13	635.19	80.32	715.51	54	19	3.87	2.32	11.6	34.8	2384.7	291.65	0.0529
800/55	7	814.30	56.30	870.60	45	7	4.80	3.20	9.60	38.4	2687.5	318.43	0.0412
800/100	13	795.17	100.88	896.05	54	19	4.33	2.60	13.0	39.0	2987.8	365.48	0.0423
1000/45	4	1002.27	43.10	1045.38	72	7	4.21	2.80	8.40	42.1	3106.8	364.85	0.0335
1000/125	13	993.51	125.50	1119.01	54	19	4.84	2.90	14.5	43.5	3728.9	456.03	0.0338

## JLHA2/G1A钢芯铝合金绞线性能 JLHA2/G1A AACSR performance

标称截面 铝合金/钢 Standard cross-section aluminum alloy/steel	钢比% Rate of steel (%)	面积mm <sup>2</sup> Area (mm <sup>2</sup> )			单线根数 Single wire number of unit		单线直径mm Single wire diameter (mm)		直径mm Diameter (mm)		单位长度 质量kg/km Unit length mass (kg/km)	额定抗 拉力kN Rated pull -off force (kN)	20℃直流 电阻不大 于Ω/km 20°C DC resistance ≤(Ω/km)
		铝 Aluminum	钢 Steel	总和 In total	铝 Aluminum	钢 Steel	铝 Aluminum	钢 Steel	钢芯 Steel core	绞线 Winded wire			
10/2	17	10.60	1.77	12.37	6	1	1.50	1.50	1.50	4.50	42.8	5.20	3.1147
16/3	17	16.13	2.69	18.82	6	1	1.85	1.85	1.85	5.55	65.1	7.90	2.0476
25/4	17	25.36	4.23	29.59	6	1	2.32	2.32	2.32	6.96	102.4	12.30	1.3020
35/6	17	34.86	5.81	40.67	6	1	2.72	2.72	2.72	8.16	140.8	16.91	0.9472
50/30	58	50.73	29.59	80.32	12	7	2.32	2.32	6.96	11.6	371.1	48.70	0.6552
70/10	17	68.05	11.34	79.39	6	1	3.80	3.80	3.80	11.4	274.8	32.55	0.7853
70/40	58	69.73	40.67	110.40	12	7	2.72	2.72	8.16	13.6	510.2	66.94	0.4766
95/15	16	94.39	15.33	109.73	26	7	2.15	1.67	5.01	13.6	380.2	45.79	0.3521
95/55	58	96.51	56.30	152.81	12	7	3.20	3.20	9.60	16.0	706.1	90.40	0.3444
120/7	6	118.89	6.61	125.50	18	1	2.90	2.90	8.70	14.5	378.5	42.60	0.2788
120/20	16	115.67	18.82	134.49	26	7	2.38	1.85	5.55	15.1	466.1	56.14	0.2873
120/70	58	122.15	71.25	193.40	12	7	3.60	3.60	10.8	18.0	893.7	114.41	0.2721
150/8	6	144.76	8.04	152.81	18	1	3.20	3.20	3.20	16.0	460.9	51.55	0.2290
150/25	16	148.86	24.25	173.11	26	7	2.70	2.10	6.30	17.1	600.1	72.28	0.2232
210/10	6	204.14	11.34	215.48	18	1	3.80	3.80	3.80	19.0	649.9	72.70	0.1624
210/35	16	211.73	34.36	246.09	26	7	3.22	2.50	7.50	20.4	852.5	101.63	0.1570
240/30	13	244.29	31.67	275.96	24	7	3.60	2.40	7.20	21.6	920.7	108.17	0.1359
240/40	16	238.84	38.90	277.74	26	7	3.42	2.66	7.98	21.7	962.8	114.81	0.1391
300/20	7	303.42	20.91	324.32	45	7	2.93	1.95	5.85	23.4	1000.8	113.97	0.1096
300/50	16	299.54	48.82	348.37	26	7	3.83	2.98	8.94	24.3	1207.7	144.02	0.1109
300/70	23	305.36	71.25	376.61	30	7	3.60	3.60	10.8	25.2	1399.6	168.46	0.1089
400/25	7	391.91	27.10	419.01	45	7	3.33	2.22	6.66	26.6	1293.5	147.32	0.0849
400/50	13	399.72	51.82	451.54	54	7	3.07	3.07	9.21	27.6	1509.3	174.92	0.0833
400/95	23	407.75	93.27	501.02	30	19	4.16	2.50	12.5	29.1	1856.7	226.61	0.0816
500/35	7	497.01	34.36	531.37	45	7	3.75	2.50	7.50	30.0	1640.3	185.79	0.0669
500/65	13	501.88	56.06	566.94	54	7	3.44	3.44	10.3	31.0	1895.0	219.62	0.0663
630/45	7	623.45	43.10	666.55	45	7	4.20	2.80	8.40	33.6	2057.6	233.05	0.0533
630/80	13	635.19	80.32	715.51	54	19	3.87	2.32	11.6	34.8	2384.7	278.95	0.0524
800/55	7	814.30	56.30	870.60	45	7	4.80	3.20	9.60	38.4	2687.5	302.15	0.0408
800/100	13	795.17	100.88	896.05	54	19	4.33	2.60	13.0	39.0	2987.8	349.57	0.0419
1000/45	4	1002.27	43.10	1045.38	72	7	4.21	2.80	8.40	42.1	3106.8	344.81	0.0332
1000/125	13	993.51	125.50	1119.01	54	19	4.84	2.90	14.5	43.5	3728.9	436.16	0.0335

## JL/LHA1铝合金芯铝绞线性能 JL/LHA1 aluminum alloy core aluminum wire performance

标称截面 铝/铝合金 Standard cross-section aluminum/ aluminum alloy	规格号 Specification number	直径mm Diameter (mm)		单线根数n Single wire number of unit		面积mm <sup>2</sup> Area (mm <sup>2</sup> )			单位长度 质量 kg/km Unit length mass (kg/km)	额定抗 拉力/kN Rated pull- off force (kN)	20℃直流电 阻不大于 Ω/km 20°C DC resistance ≤(Ω/km)
		单线 Single wire	绞线 Winded wire	铝 Aluminum	铝合金 Aluminum alloy	铝 Aluminum	铝合金 Aluminum alloy	总和 In total			
10/7	16	1.76	5.29	4	3	9.78	7.33	17.1	46.8	4.07	1.7896
15/10	25	2.21	6.62	4	3	15.3	11.5	26.7	73.1	6.29	1.1453
24/20	40	2.79	8.37	4	3	24.4	18.3	42.8	117.0	9.82	0.7158
40/30	63	3.50	10.5	4	3	38.5	28.9	67.4	184.3	14.80	0.4545
60/45	100	4.41	13.2	4	3	61.1	45.8	107	292.5	23.49	0.2863
80/50	125	2.98	14.9	12	7	84	48.8	132	364.1	29.49	0.2302
105/60	160	3.37	16.9	12	7	107	62.5	170	466.0	36.95	0.1798
135/80	200	3.77	18.8	12	7	134	78.1	212	582.5	44.78	0.1439
170/95	250	4.21	21.1	12	7	167	97.6	265	728.1	55.98	0.1151
130/140	250	3.05	21.4	18	19	132	139	271	746	64.67	0.1154
265/60	315	3.34	23.4	30	7	263	61.4	325	894.4	62.40	0.0916
165/175	315	3.43	24.0	18	19	166	175	341	940.0	81.48	0.0916
355/80	400	3.77	26.4	30	7	334	78	412	1135.8	76.82	0.0721
210/220	400	3.86	27.0	18	19	211	222	433	1193.7	100.30	0.0721
375/85	450	3.99	28.0	30	7	376	87.7	464	1277.8	86.42	0.0641
235/250	450	4.10	28.7	18	19	237	250	487	1342.9	112.84	0.0641
415/95	500	4.21	29.5	30	7	418	97.5	515	1419.8	96.03	0.0577
260/275	500	4.32	30.2	18	19	263	278	542	1492.1	125.38	0.0577
465/110	560	4.46	31.2	30	7	468	109	577	1590.1	107.55	0.0515
505/65	560	3.45	31.1	54	7	505	65.5	570	1573.9	103.53	0.0515
455/205	630	3.72	33.4	42	19	456	206	662	1826.0	134.59	0.0458
270/420	630	3.80	34.2	24	37	272	420	692	1909.0	169.14	0.0458
514/230	710	3.95	35.5	42	19	514	232	746	2057.8	151.68	0.0407
307/470	710	4.03	36.3	24	37	307	473	780	2151.4	190.61	0.0407
580/260	800	4.19	37.7	42	19	579	262	840	2318.7	170.9	0.0361
345/530	800	4.28	38.5	24	37	346	533	879	2424.2	214.78	0.0361
650/295	900	4.44	40.0	42	19	651	294	945	2608.5	192.27	0.0321
570/390	900	3.66	40.3	54	37	569	390	959	2649.5	207.79	0.0321
630/430	1000	3.86	42.5	54	37	632	433	1066	2943.9	230.88	0.0289
705/485	1120	4.09	45.0	54	37	708	485	1194	3297.2	258.58	0.0258
820/215	1000	3.80	41.8	72	19	818	216	1034	2855.4	195.47	0.0289
915/240	1120	4.02	44.3	72	19	916	242	1158	3198.1	218.92	0.0258
1020/270	1250	4.25	46.8	72	19	1022	270	1292	3569.3	244.33	0.0231
790/540	1250	4.32	47.5	54	37	791	542	1332	3679.9	288.6	0.0231
1145/300	1400	4.50	49.5	72	19	1145	302	1447	3997.6	273.65	0.0207

## JL/LHA2铝合金芯铝绞线性能 JL/LHA2 aluminum alloy core aluminum wire performance

标称截面 铝/铝合金 Standard cross-section aluminum/ aluminum alloy	规格号 Specification number	直径mm Diameter (mm)		单线根数n Single wire number of unit		面积mm <sup>2</sup> Area (mm <sup>2</sup> )			单位长度 质量 kg/km Unit length mass (kg/km)	额定抗 拉力/kN Rated pull- off force (kN)	20℃直流电 阻不大于 Ω/km 20°C DC resistance ≤(Ω/km)
		单线 Single wire	绞线 Winded wire	铝 Aluminum	铝合金 Aluminum alloy	铝 Aluminum	铝合金 Aluminum alloy	总和 In total			
10/7	16	1.76	5.28	4	3	9.73	7.30	17.0	46.6	3.85	1.7896
15/10	25	2.20	6.60	4	3	15.2	11.4	26.6	72.8	5.93	1.1453
24/20	40	2.78	8.35	4	3	24.3	18.3	42.6	116.5	9.25	0.7158
40/30	63	3.49	10.5	4	3	38.3	28.7	67.1	183.5	14.38	0.4545
60/45	100	4.40	13.2	4	3	60.8	45.6	106	291.2	22.52	0.2863
80/50	125	2.97	14.9	12	7	83.3	48.6	132	362.7	27.79	0.2302
105/60	160	3.36	16.8	12	7	107	62.2	169	464.2	35.04	0.1798
135/80	200	3.76	18.8	12	7	133	77.8	211	580.3	43.13	0.1439
170/95	250	4.21	21.0	12	7	167	97.2	264	725.3	53.92	0.1151
130/140	250	3.04	21.3	18	19	131	138	269	742.2	60.39	0.1154
265/60	315	3.34	23.4	30	7	263	61.3	324	892.6	60.52	0.0916
165/175	315	3.42	23.9	18	19	165	174	339	935.1	76.09	0.0916
335/80	400	3.76	26.3	30	7	334	77.8	411	1133.5	75.19	0.0721
210/220	400	3.85	27.0	18	19	210	221	431	1187.5	95.58	0.0721
375/85	450	3.99	27.9	30	7	375	87.6	463	1275.2	84.59	0.0641
235/250	450	4.08	28.6	18	19	236	249	485	1335.9	107.52	0.0641
415/95	500	4.21	29.4	30	7	417	97.3	514	1416.9	93.98	0.0577
260/275	500	4.31	30.1	18	19	262	277	539	1484.3	119.47	0.0577
465/110	560	4.45	31.2	30	7	467	109	576	1586.9	105.26	0.0515
505/65	560	3.45	31.0	54	7	504	65.4	570	1571.9	101.54	0.0515
455/205	630	3.71	33.4	42	19	454	205	660	1820.0	130.25	0.0458
270/420	630	3.79	34.1	24	37	271	417	688	1897.5	160.19	0.0458
514/230	710	3.94	35.5	42	19	512	232	743	2051.2	146.78	0.0407
307/470	710	4.02	36.2	24	37	305	470	775	2138.4	180.53	0.0407
580/260	800	4.18	37.6	42	19	577	261	838	2311.2	165.39	0.0361
345/530	800	4.27	38.4	24	37	344	530	873	2409.5	203.41	0.0361
650/295	900	4.43	39.9	42	19	649	294	942	2600.1	186.06	0.0321
570/390	900	3.66	40.2	54	37	567	388	955	2638.4	199.54	0.0321
820/215	1000	3.80	41.8	72	19	816	215	1032	2849.1	190.94	0.0289
630/430	1000	3.85	42.4	54	37	630	432	1061	2931.6	221.71	0.0289
705/485	1120	4.08	44.9	54	37	705	483	1189	3283.4	248.32	0.0258
1020/270	1250	4.25	46.7	72	19	1020	269	1289	3561.4	238.68	0.0231
790/540	1250	4.31	47.4	54	37	787	539	1327	3664.5	277.14	0.0231
1145/300	1400	4.50	49.4	72	19	1143	302	1444	3988.8	267.32	0.0207

## 7. 电工软铜绞线 Electric soft copper wire

◆ 软铜绞线 ( GB/T 12970.2—2009) Soft copper wire (GB/T 12970.2 - 2009)

● 产品型号、名称、规格 Product type, name and specification

型 号 Type	名 称 Name	标称截面积mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )
TJR1	1型软铜绞线 Type 1 soft copper wire	0.10 ~ 1000
TJR2	2型软铜绞线 Type 2 soft copper wire	2.5 ~ 63
TJR3	3型软铜绞线 Type 3 soft copper wire	0.025 ~ 500
TJRX1	1型镀锡软铜绞线 Type 1 tin soft copper wire	0.1 ~ 2.5
TJRX2	2型镀锡软铜绞线 Type 2 tin soft copper wire	2.5 ~ 63
TJRX3	3型镀锡软铜绞线 Type 3 tin soft copper wire	0.025 ~ 500

● 性能参数 Performance parameters

TJR1型及TJRX1型软铜绞线性能 TJR1 type and TJRX1 type soft copper wire performance

标称截面mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	结构 structure		计算外径mm Calculated outside diameter (mm)	20℃直流电阻 Ω/km最大值 20℃ DC resistance ≤(Ω/km)		计算重量kg/km Calculated weight (kg/km)
	单线总数 Single wire number in total	股数×根数/ 单线标称直径mm Number of strands X number of unit / single wire standard diameter (mm)		TJR 1	TJRX 1	
0.10	9	9/0.12	0.44	176	179	0.94
(0.12)	7	7/0.15	0.45	145	147	1.15
0.16	9	9/0.15	0.56	113	115	1.47
(0.20)	11	11/0.15	0.60	92.9	94.4	1.80
0.25	14	14/0.15	0.68	72.9	74.1	2.29
(0.30)	17	17/0.15	0.74	60.3	61.3	2.80
0.40	13	13/0.20	0.86	44.2	44.9	3.79
0.50	16	16/0.20	0.96	36.0	36.6	4.70
0.63	20	20/0.20	1.05	28.8	29.3	5.86
(0.75)	24	24/0.20	1.14	24.0	24.4	7.04
1.00	32	32/0.20	1.30	17.9	18.2	9.43
1.60	32	32/0.25	1.63	11.5	11.7	14.7
(2.00)	40	40/0.25	1.82	9.24	9.39	18.3
2.5	49	7×7/0.25	2.25	7.58	7.92	22.7
4.0	49	7×7/0.32	2.88	4.64	/	37.1
6.3	49	7×7/0.40	3.60	2.97	/	58.0
10	49	7×7/0.51	4.59	1.83	/	94.3
16	84	7×12/0.49	6.17	1.16	/	150
25	133	19×7/0.49	7.35	0.736	/	239
(35)	133	19×7/0.58	8.70	0.525	/	334
40	133	19×7/0.62	9.30	0.459	/	382
(50)	133	19×7/0.68	10.20	0.382	/	459
63	189	27×7/0.65	12.00	0.294	/	597
(70)	189	27×7/0.68	12.53	0.269	/	653
80	259	37×7/0.62	13.02	0.236	/	744
(95)	259	37×7/0.68	14.28	0.196	/	895
100	259	37×7/0.70	14.70	0.185	/	948

标称截面mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	结构structure		计算外径mm Calculated outside diameter (mm)	20℃直流电阻Ω/km最大值 20℃ DC resistance ≤(Ω/km)		计算重量kg/km Calculated weight (kg/km)
	单线总数 Single wire number in total	股数×根数/ 单线标称直径mm Number of strands X number of unit / single wire standard diameter (mm)		TJR 1	TJRX 1	
(120)	324	27×12/0.68	17.39	0.157	/	1119
125	324	27×12/0.70	17.90	0.148	/	1186
160	324	27×12/0.80	20.20	0.113	/	1549
(185)	324	27×12/0.85	21.74	0.100	/	1749
200	444	37×12/0.75	21.80	0.0940	/	1866
250	444	37×12/0.85	24.72	0.0732	/	2397
315	703	37×19/0.75	26.25	0.0594	/	2954
400		37×19/0.85	29.75	0.0462	/	3795
500	703	37×19/0.95	33.25	0.0370	/	4740
630	1159	61×19/0.83	37.35	0.0294	/	5965
800	1159	61×19/0.94	42.30	0.0229	/	7651
1000	1159	61×19/1.05	47.25	0.0184	/	9547

## TJR2型及TJRX2型软铜绞线性能 TJR2 type TJRX2 type soft copper wire performance

标称截面mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	结构structure		计算外径mm Calculated outside diameter (mm)	20℃直流电阻Ω/km最大值 20℃ DC resistance ≤(Ω/km)		计算重量kg/km Calculated weight (kg/km)
	单线总数 Single wire number in total	股数×根数/ 单线标称直径mm Number of strands X number of unit / single wire standard diameter (mm)		TJR2	TJRX 2	
2.5	140	7×20/0.15	2.369	7.40	7.73	23.3
4.0	126	7×18/0.20	3.00	4.62	4.82	37.3
6.3	196	7×28/0.20	3.72	2.97	3.10	58.0
10	315	7×45/0.20	4.62	1.85	1.93	93.3
16	504	12×42/0.20	6.18	1.16	1.23	150
25	798	19×42/0.20	7.45	0.736	0.781	238
(35)	1127	7×7×23/0.20	10.57	0.521	0.545	337
40	1274	7×7×26/0.20	10.62	0.461	0.482	381
(50)	1568	7×7×32/0.20	11.70	0.375	0.392	469
63	2009	7×7×41/0.20	13.32	0.292	0.305	600

## TJR3型及TJRX3型软铜绞线性能 The performance of TJR3/TJRX3 the annealed copper strand wiring

标称截面mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	结构structure		计算外径mm Calculated outside diameter (mm)	20℃直流电阻Ω/km最大值 20℃ DC resistance ≤(Ω/km)		计算重量kg/km Calculated weight (kg/km)
	单线总数 Single wire number in total	股数×根数/ 单线标称直径mm Number of strands X number of unit / single wire standard diameter (mm)		TJR2	TJRX 2	
0.025	13	13/0.05	0.22	707	759	0.24
0.04	10	10/0.07	0.27	466	500	0.36
0.063	16	16/0.07	0.34	294	316	0.58
0.10	26	26/0.07	0.42	181	194	0.93
0.16	41	41/0.07	0.52	115	123	1.47
0.25	65	65/0.07	0.65	72.4	77.7	2.33
(0.30)	77	7×11/0.07	0.84	61.7	64.5	2.79
0.40	105	7×15/0.07	0.97	45.2	48.5	3.81

标称截面mm <sup>2</sup> Standard cross-section area (mm <sup>2</sup> )	结构structure		计算外径mm Calculated outside diameter (mm)	20℃直流电阻Ω/km最大值 20℃ DC resistance ≤(Ω/km)		计算重量kg/km Calculated weight (kg/km)
	单线总数 Single wire number in total	股数×根数/ 单线标称直径mm Number of strands X number of unit / single wire standard diameter (mm)		TJR2	TJRX 2	
(0.50)	133	7×19/0.07	1.05	35.7	38.3	4.82
0.63	161	7×23/0.07	1.18	29.5	31.7	5.84
(0.75)	196	7×28/0.07	1.28	24.2	26.0	7.11
1.00	259	7×37/0.07	1.47	18.3	19.6	9.40
1.60	408	12×34/0.07	1.97	11.70	12.6	14.8
2.5	646	19×34/0.07	2.35	7.41	7.96	23.7
4.0	513	19×27/0.10	3.08	4.58	4.79	38.3
6.3	798	19×42/0.10	3.73	2.94	3.07	59.6
10	1273	10×67/0.10	4.73	1.85	1.93	95.1
16	2016	12×7×24/0.10	7.18	1.16	1.21	150
25	3192	19×7×24/0.10	8.55	0.736	0.769	238
(35)	4389	19×7×33/0.10	9.90	0.535	0.559	328
40	2261	19×7×17/0.15	11.03	0.462	0.483	380
(50)	2793	19×7×21/0.15	12.15	0.374	0.391	470
63	3591	19×7×27/0.15	13.50	0.291	0.304	604
(70)	3990	19×7×30/0.15	14.18	0.262	0.274	671
80	4522	19×7×34/0.15	15.08	0.231	0.241	760
(95)	5320	19×7×40/0.15	16.43	0.196	0.205	894
100	5700	19×12×25/0.15	18.27	0.183	0.191	958
(120)	6840	19×12×30/0.15	20.24	0.153	0.160	1150
125	7220	19×19×20/0.15	20.29	0.145	0.152	1214
160	9025	19×19×25/0.15	21.75	0.116	0.121	1517
(185)	10469	19×19×29/0.15	23.25	0.0997	0.104	1760
200	11100	37×12×25/0.15	25.58	0.0940	0.0982	1866
250	14208	37×12×32/0.15	28.67	0.0735	0.0768	2388
315	17575	37×19×25/0.15	30.45	0.0594	0.0621	2954
400	22496	37×19×32/0.15	34.13	0.0464	0.0485	3782
500	28120	37×19×40/0.15	38.06	0.0371	0.0388	4727

## ◆软铜天线 (GBT/ 12970.3—2009) Flexible copper wire for antenna (GBT/12970.3-2009)

●产品用途：通信用架空天线 Application: overhead antenna for communication

●产品型号、规格 Type、standards

型 号 Type	标称截面mm <sup>2</sup> Cross sectional area mm <sup>2</sup>
TTR	1.0~25

## ●性能参数 Performance parameters

标称截面mm <sup>2</sup> Cross sectional area mm <sup>2</sup>	结构 Structure	计算外径mm Diameter mm	拉断力kN Breaking force kN	20℃直流电阻Ω/km不大于 D.C. resistance of conductor at 20℃ ≤ Ω/km	计算重量kg/km Weight Kg/km
	股数×根数/单线标称直径mm Number/Diameter mm				
1.0	7×7/0.16	1.44	0.16	18.0	9.0
1.6	7×7/0.20	1.80	0.26	11.5	14.1
2.5	7×7/0.25	2.25	0.40	7.37	22.1
4.0	7×7/0.32	2.88	0.66	4.51	36.1
6.3	7×7/0.40	3.60	1.03	2.88	56.4
10	7×7/0.51	4.59	1.67	1.77	91.7
16	7×7/0.65	5.85	2.71	1.09	149
25	7×7/0.80	7.20	4.11	0.72	226

软铜绞线、软铜天线的表面应光洁，不应有与良好工业产品不相称的任何缺陷。产品应成盘或成圈交货，每个包装件应为同一型号同一规格，若在一个包装件内装有2个以上线段时，应在两根连接处加明显标志，如有特殊要求，应标明线段数量。

The surface of the annealed copper strand wire and flexible copper wire for antenna should be bright and clean, and should not have any defects which may not match with good industrial products. Products should be submitted by drum or roll, and same type, same standard in every package. If there are two or more wires in one package, the obvious sign should be marked in the joint. For special requirements, the quantity of wires should be indicated.

## 8.硬铜绞线 Hard drawn copper strand wire

## ●产品型号、规格 Type、standards

型 号 Type	名称 Name	标称截面mm <sup>2</sup> Cross sectional area mm <sup>2</sup>
TJ	硬铜绞线 Hard drawn copper strand wire	16~400

## ●性能参数 Performance parameters

标称截面mm <sup>2</sup> Cross sectional area mm <sup>2</sup>	结构根数/直径mm Number/Diameter mm	计算截面积mm <sup>2</sup> Calculation sectional area mm <sup>2</sup>	外径mm Diameter mm	20℃直流电阻Ω/km不大于 D.C. resistance of conductor at 20℃ ≤ Ω/km	计算拉断力kN不大于 Calculation of breaking force ≤ kN	单位重量kg/km Weight Kg/km
16	7/1.70	15.89	5.10	1.146	5.76	143.3
25	7/2.12	24.71	6.36	0.7293	8.87	222.8
35	7/2.50	34.36	7.50	0.5245	12.22	309.8
50	7/3.00	49.48	9.00	0.3642	17.32	446.1
70	19/1.12	67.07	10.60	0.2706	24.08	604.7
95	19/2.50	93.27	12.50	0.1943	33.16	840.9
120	19/2.80	116.99	14.00	0.1549	41.17	1055
150	19/3.15	148.07	15.75	0.1224	51.71	1335
185	37/2.50	181.62	17.50	0.1000	64.57	1651
240	37/2.85	236.04	19.95	0.0770	83.06	2145
300	37/3.15	288.35	22.05	0.0630	100.7	2621
400	61/2.85	389.14	25.65	0.0467	136.9	3541

# 电气装备用电线电缆

## Wire and cable for electrical equipment

分类代号或用途 Classification code/ Application		绝缘 Insulation		护套 Sheath		派生 Derivation	
符号 Sign	意义 Meaning	符号 Sign	意义 Meaning	符号 Sign	意义 Meaning	符号 Sign	意义 Meaning
A	安装电缆 Install cable	V	聚氯乙烯 PVC	V	聚氯乙烯 PVC	P	编双屏蔽 Coupling shielding
B	固定敷设用电缆 fixed laying cable	F	氟塑料 Fluoroplastics			R	软 Soft
		Y	聚乙烯 PE			S	双绞 Twin-twisted
						B	平行 Parallel
						90	耐热90℃ Heat-resisting90℃

### ◆额定电压450/750V及以下聚氯乙烯绝缘电缆

#### ◆PVC Insulated Cable with designated voltage 450/750V and under 450/750V

用途：用于额定电压450/750V及以下的动力装置、家用电器、小型电动工具、仪器仪表及动力、照明线路。

Application: Used in power plant、appliance、mini-electric tools、instrumentation and power、lighting circuit which the esignated voltage is 450/750V and following.

①固定布线用无护套电缆：GB/T5023.3—2008/IEC 60227-3:1997

型号：60227 IEC 01 (BV)、60227 IEC 02 (RV)、60227 IEC 05 (BV)、60227 IEC 06 (RV)、60227 IEC 07 (BV-90)、60227 IEC 08 (RV-90)。

Non-sheath cables for fixed wiring: GB/T5023.3-2008/IEC 60227-3:1997

Type:60227 IEC 01(BV)、60227 IEC 02(RV)、60227 IEC 05(BV)、60227 IEC 06(RV)、60227 IEC 07(BV-90)、60227 IEC 08(RV-90)

②固定布线用护套电缆：GB/T 5023.4—2008/IEC 60227-4:1997

型号：轻型聚氯乙烯护套电缆60227 IEC 10(BVV)。

Sheathed cables for fixed wiring: GB/T5023.4-2008/IEC 60227-4:1997

Type: Light PVC sheathed cable60227 IEC 10(BVV)

③软电缆：GB/T 5023.5—2008/IEC 60227-5:2003

型号：户内装饰照明回路用软线60227 IEC 43(SVR)、轻型聚氯乙烯护套软线60227 IEC 52(RVV)、普通聚氯乙烯护套软线60227 IEC 53(RVV)及60227 IEC 56(RVV-90)、60227 IEC 57(RVV-90)

Flexible cables: GB/T5023.5-2008/IEC 60227-5:2003

Type: Indoor decoration lighting circuit flexible cable 60227 IEC 43(SVR)、Light PVC sheathed flexible cable 60227 IEC 52(RVV)、Common PVC sheathed flexible cable 60227 IEC 53(RVV) and 60227 IEC 56(RVV-90)、60227 IEC 57(RVV)

### ◆额定电压450/750V及以下聚氯乙烯绝缘电线和软线

#### ◆PVC Insulated wire and flexible cable with designated voltage 450/750V and under 450/750V

①固定布线用电缆电线：JB/T 8734.2—2012

型号：BV、BLV、BVR、BVV、BLVV、BVVB、BLVVB

Cables and wires for fixed wiring: JB/T 8734.2-2012

Type: BV、BLV、BVR、BVV、BLVV、BVVB、BLVVB

②连接用软电线和软电缆：JB/T 8734.3—2012

型号：RVS、RVB、RVV

Flexible wires and flexible cables for connections: JB/T 8734.3-2012

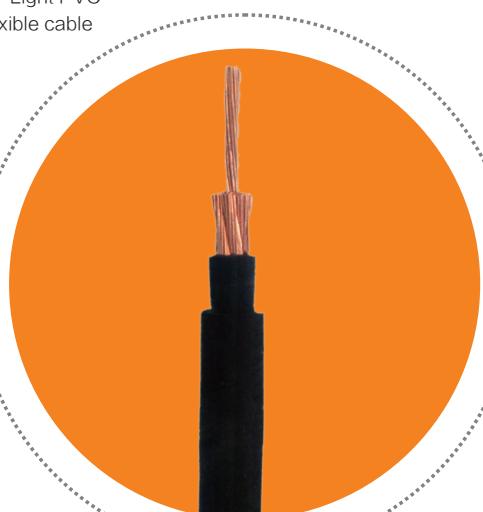
Type: RVS、RVB、RVV

③屏蔽电线：JB/T 8734.5—2012

型号：铜芯聚氯乙烯绝缘聚氯乙烯护套屏蔽软电线RVVP

Shielded wire:

Type: Copper core PVC Insulation/PVC Sheath Shielding flexible wire RVVP



1. 额定电压450/750V及以下聚氯乙烯绝缘电缆 ( GB/T 5023—2008/IEC 60227 )  
 PVC Insulated Cable with designated voltage 450/750V and under 450/750V (GB/T5023-2008/IEC 60227)

- ◆ 固定布线用无护套电缆 ( GB/T 5023.3—2008/IEC 60227-3:1997 )
- ◆ Non-sheath cables for fixed wiring(GB/T5023.3-2008/IEC 60227-3:1997)

● 型号、名称 Type、name

型号 Type	名称 Name	使用特征 Use characteristics
60227 IEC 01 (BV)	一般用途单芯硬导体无护套电缆 Single core hard conductor non-sheath cables for general service	
60227 IEC 02 (RV)	一般用途单芯软导体无护套电缆 Single core soft conductor non-sheath cables for general service	
60227 IEC 05 (BV)	内部布线用导体温度为70℃的单芯实心导体无护套电缆 Single core solid conductor non-sheath cables for 70℃ inner wiring	
60227 IEC 06 (RV)	内部布线用导体温度为70℃的单芯软导体无护套电缆 Single core soft conductor non-sheath cables for 70℃ inner wiring	
60227 IEC 07 (BV-90)	内部布线用导体温度为90℃的单芯实心导体无护套电缆 Single core solid conductor non-sheath cables for 90℃ inner wiring	
60227 IEC 08 (RV-90)	内部布线用导体温度为90℃的单芯软导体无护套电缆 Single core soft conductor non-sheath cables for 90℃ inner wiring	

● 性能参数 Performance parameters

60227 IEC 01 ( BV ) 450/750V一般用途单芯硬导体无护套电缆

60227 IEC 01(BV) 450/750V Single core hard conductor Non-sheath cables for general service

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤ Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
			下限 Min	上限 Max	
1.5	1	0.7	2.6	3.2	12.1
1.5	2	0.7	2.7	3.3	12.1
2.5	1	0.8	3.2	3.9	7.41
2.5	2	0.8	3.3	4.0	7.41
4	1	0.8	3.6	4.4	4.61
4	2	0.8	3.8	4.6	4.61
6	1	0.8	4.1	5.0	3.08
6	2	0.8	4.3	5.2	3.08
10	2	1.0	5.6	6.7	1.83
16	2	1.0	6.4	7.8	1.15
25	2	1.2	8.1	9.7	0.727
35	2	1.2	9.0	10.9	0.524
50	2	1.4	10.6	12.8	0.387
70	2	1.4	12.1	14.6	0.268
95	2	1.6	14.1	17.1	0.193
120	2	1.6	15.6	18.8	0.153
150	2	1.8	17.3	20.9	0.124
185	2	2.0	19.3	23.3	0.0991
240	2	2.2	22.0	26.6	0.0754
300	2	2.4	24.5	29.6	0.0601
400	2	2.6	27.5	33.2	0.0470

## 60227 IEC 02 ( RV ) 450/750V一般用途单芯软导体无护套电缆

60227 IEC 02(RV) 450/750V Single core soft conductor non-sheath cables for general service

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体内最大 单线直径mm The max diameter of single line in conductor mm	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20°C 导体直流电阻 ≤ Ω/km D.C. resistance of conductor at 20°C ≤ Ω/km
			下限 Min	上限 Max	
1.5	0.26	0.7	2.8	3.4	13.3
2.5	0.26	0.8	3.4	4.1	7.98
4	0.31	0.8	3.9	4.8	4.95
6	0.31	0.8	4.4	5.3	3.30
10	0.41	1.0	5.7	6.8	1.91
16	0.41	1.0	6.7	8.1	1.21
25	0.41	1.2	8.4	10.2	0.780
35	0.41	1.2	9.7	11.7	0.554
50	0.41	1.4	11.5	13.9	0.386
70	0.51	1.4	13.2	16.0	0.272
95	0.51	1.6	15.1	18.2	0.206
120	0.51	1.6	16.7	20.2	0.161
150	0.51	1.8	18.6	22.5	0.129
185	0.51	2.0	20.6	24.9	0.106
240	0.51	2.2	23.5	28.4	0.0801

## 60227 IEC 05 ( BV ) 300/500V内部布线用导体温度为70°C的单芯实心导体无护套电缆

60227 IEC 05(BV) 300/500V Single core solid conductor non-sheath cables for 70°C inner wiring

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20°C 导体直流电阻 ≤ Ω/km D.C. resistance of conductor at 20°C ≤ Ω/km
			下限 Min	上限 Max	
0.5	1	0.6	1.9	2.3	36.0
0.75	1	0.6	2.1	2.5	24.5
1.0	1	0.6	2.2	2.7	18.1

## 60227 IEC 06 ( RV ) 300/500V内部布线用导体温度为70°C的单芯软导体无护套电缆

60227 IEC 06(RV) 300/500V Single core soft conductor non-sheath cables for 70°C inner wiring

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20°C 导体直流电阻 ≤ Ω/km D.C. resistance of conductor at 20°C ≤ Ω/km
			下限 Min	上限 Max	
0.5	5	0.6	2.1	2.5	39.0
0.75	5	0.6	2.2	2.7	26.0
1.0	5	0.6	2.4	2.8	19.5

## 60227 IEC 07 ( BV-90 ) 300/500V内部布线用导体温度为90°C的单芯实心导体无护套电缆

60227 IEC 07(BV-90) 300/500V Single core solid conductor Non-sheath cables for 90°C inner wiring

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20°C 导体直流电阻 ≤ Ω/km D.C. resistance of conductor at 20°C ≤ Ω/km
			下限 Min	上限 Max	
0.5	1	0.6	1.9	2.3	36.0
0.75	1	0.6	2.1	2.5	24.5

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤Ω/km
			下限 Min	上限 Max	
1.0	1	0.6	2.2	2.7	18.1
1.5	1	0.7	2.6	3.2	12.1
2.5	1	0.8	3.2	3.9	7.41

60227 IEC 08(RV-90) 300/500V 内部布线用导体温度为90℃的单芯软导体无护套电缆  
60227 IEC 08(RV-90) 300/500V Single core soft conductor non-sheath cables for 90°C inner wiring

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤Ω/km
			下限 Min	上限 Max	
0.5	5	0.6	2.1	2.5	39.0
0.75	5	0.6	2.2	2.7	26.0
1.0	5	0.6	2.4	2.8	19.5
1.5	5	0.7	2.8	3.4	13.3
2.5	5	0.8	3.4	4.1	7.98

- ◆ 固定布线用护套电缆 ( GB/T 5023.4—2008/IEC 60227-4:1997 )  
 ◆ Sheathed cables for fixed wiring(GB/T5023.4-2008/IEC 60227-4:1997)

● 型号、名称 Type、name

型号 Type	名称 Name	使用特征 Use characteristics
60227 IEC 10(BVV)	轻型聚氯乙烯护套电缆 Light PVC sheathed cable	正常使用时，电缆导体最高温度为70℃ In normal use, the max temperature is 70°C.

● 性能参数 Performance parameters

60227 IEC 10 ( BVV ) 300/500V 轻型聚氯乙烯护套电缆  
60227 IEC 10(BVV) 300/500V Light PVC sheathed cable

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	内护套厚度近似值mm Inner sheath thickness approximation mm	护套厚度规定值mm Sheath thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤Ω/km
					下限 Min	上限 Max	
2×1.5	1	0.7	0.4	1.2	7.6	10.0	12.1
2×1.5	2	0.7	0.4	1.2	7.8	10.5	12.1
2×2.5	1	0.8	0.4	1.2	8.6	11.5	7.41
2×2.5	2	0.8	0.4	1.2	9.0	12.0	7.41
2×4	1	0.8	0.4	1.2	9.6	12.5	4.61
2×4	2	0.8	0.4	1.2	10.0	13.0	4.61
2×6	1	0.8	0.4	1.2	10.5	13.5	3.08
2×6	2	0.8	0.4	1.2	11.0	14.0	3.08
2×10	2	1.0	0.6	1.4	13.5	17.5	1.83
2×16	2	1.0	0.6	1.4	15.5	20.0	1.15
2×25	2	1.2	0.8	1.4	18.5	24.0	0.727
2×35	2	1.2	1.0	1.6	21.0	27.5	0.524
3×1.5	1	0.7	0.4	1.2	8.0	10.5	12.1
3×1.5	2	0.7	0.4	1.2	8.2	11.0	12.1

导体标称截面mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	内护套厚度近似值mm Inner sheath thickness approximation mm	护套厚度规定值mm Sheath thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
					下限 Min	上限 Max	
3×2.5	1	0.8	0.4	1.2	9.2	12.0	7.41
3×2.5	2	0.8	0.4	1.2	9.4	12.5	7.41
3×4	1	0.8	0.4	1.2	10.0	13.0	4.61
3×4	2	0.8	0.4	1.2	10.5	13.5	4.61
3×6	1	0.8	0.4	1.4	11.5	14.5	3.08
3×6	2	0.8	0.4	1.4	12.0	15.5	3.08
3×10	2	1.0	0.6	1.4	14.5	19.0	1.83
3×16	2	1.0	0.8	1.4	16.5	21.5	1.15
3×25	2	1.2	0.8	1.6	20.5	26.0	0.727
3×35	2	1.2	1.0	1.6	22.0	29.0	0.524
4×1.5	1	0.7	0.4	1.2	8.6	11.5	12.1
4×1.5	2	0.7	0.4	1.2	9.0	12.0	12.1
4×2.5	1	0.8	0.4	1.2	10.0	13.0	7.41
4×2.5	2	0.8	0.4	1.2	10.0	13.5	7.41
4×4	1	0.8	0.4	1.4	11.5	14.5	4.61
4×4	2	0.8	0.4	1.4	12.0	15.0	4.61
4×6	1	0.8	0.6	1.4	12.5	16.0	3.08
4×6	2	0.8	0.6	1.4	13.0	17.0	3.08
4×10	2	1.0	0.6	1.4	16.0	20.5	1.83
4×16	2	1.0	0.8	1.4	18.0	23.5	1.15
4×25	2	1.2	1.0	1.6	22.5	28.5	0.727
4×35	2	1.2	1.0	1.6	24.5	32.0	0.524
5×1.5	1	0.7	0.4	1.2	9.4	12.0	12.1
5×1.5	2	0.7	0.4	1.2	9.8	12.5	12.1
5×2.5	1	0.8	0.4	1.2	11.0	14.0	7.41
5×2.5	2	0.8	0.4	1.2	11.0	14.5	7.41
5×4	1	0.8	0.6	1.4	12.5	16.0	4.61
5×4	2	0.8	0.5	1.4	13.0	17.0	4.61
5×6	1	0.8	0.6	1.4	13.5	17.5	3.08
5×6	2	0.8	0.5	1.4	14.5	18.5	3.08
5×10	2	1.0	0.6	1.4	17.5	22.0	1.83
5×16	2	1.0	0.8	1.6	20.5	26.0	1.15
5×25	2	1.2	1.0	1.6	24.5	31.5	0.727
5×35	2	1.2	1.2	1.6	27.0	35.0	0.524

◆软电缆 ( GB/T 5023.5—2008/IEC 60227-5:2003) Flexible cables: ( GB/T5023.5-2008/IEC 60227-5:2003)

●型号、名称 Type、name

型 号 Type	名 称 Name	使用特征 Use characteristics
60227 IEC 52(RVV)	轻型聚氯乙烯护套软线 Light PVC sheathed flexible cable	正常使用时，电缆导体最高温度为70℃ In normal use, the max temperature is 70℃.
60227 IEC 53(RVV)	普通聚氯乙烯护套软线 Common PVC sheathed flexible cable	

## ●性能参数 Performance parameters

60227 IEC 52 (RVV) 300/300V轻型聚氯乙烯护套软线  
 60227 IEC 52(RVV) 300/300V Light PVC sheathed flexible cable

导体芯数×标称 截面mm <sup>2</sup> Conductor number × nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	护套厚度规定值mm Sheath thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
				下限 Min	上限 Max	
2×0.5	5	0.5	0.6	4.6	5.9	39.0
2×0.5	5	0.5	0.6	3.0×4.9	3.7×5.9	39.0
2×0.75	5	0.5	0.6	4.9	6.3	26.0
2×0.75	5	0.5	0.6	3.2×5.2	3.8×6.3	26.0
3×0.5	5	0.5	0.6	4.9	6.3	39.0
3×0.75	5	0.5	0.6	5.2	6.7	26.0

60227 IEC 53 ( RVV ) 300/500V普通聚氯乙烯护套软线  
 60227 IEC 53(RVV) 300/500V Common PVC sheathed flexible cable

导体芯数×标称 截面mm <sup>2</sup> Conductor number × nominal cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘厚度规定值mm Insulation thickness mm	护套厚度规定值mm Sheath thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
				下限 Min	上限 Max	
2×0.75	5	0.6	0.8	5.7	7.2	26.0
2×0.75	5	0.6	0.8	3.7×6.0	4.5×7.2	26.0
2×1.0	5	0.6	0.8	5.9	7.5	19.5
2×1.0	5	0.6	0.8	3.9×6.2	4.7×7.5	19.5
2×1.5	5	0.7	0.8	6.8	8.6	13.3
2×2.5	5	0.8	1.0	8.4	10.6	7.98
3×0.75	5	0.6	0.8	6.0	7.6	26.0
3×1.0	5	0.6	0.8	6.3	8.0	19.5
3×1.5	5	0.7	0.9	7.4	9.4	13.3
3×2.5	5	0.8	1.1	9.2	11.4	7.98
4×0.75	5	0.6	0.8	6.6	8.3	26.0
4×1.0	5	0.6	0.9	7.1	9.0	19.5
4×1.5	5	0.7	1.0	8.4	10.5	13.3
4×2.5	5	0.8	1.1	10.1	12.5	7.98
5×0.75	5	0.6	0.9	7.4	9.3	26.0
5×1.0	5	0.6	0.9	7.8	9.8	19.5
5×1.5	5	0.7	1.1	9.3	11.6	13.3
5×2.5	5	0.8	1.2	11.2	13.9	7.98

**2. 额定电压450/750V及以下聚氯乙烯绝缘电缆电线和软线 (JB/T 8734—2012)**  
**PVC Insulated wire and flexible cable with designated voltage 450/750V and under 450/750V (JB/T 8734—2012)**

◆**固定布线用电缆电线 (JB/T 8734.2—2012) Cables and wires for fixed wiring( JB/T 8734.2—2012)**

●**性能参数 Performance parameters**

型号 Type	名称 Name	主要用途 Use characteristics
BV	铜芯聚氯乙烯绝缘电线 Copper core PVC insulated wire	固定布线 Fixed wiring
BLV	铝芯聚氯乙烯绝缘电缆 Aluminum core PVC insulated cable	固定布线 Fixed wiring
BVR	铜芯聚氯乙烯绝缘软电缆 Copper core PVC insulated flexible cables	固定布线时要求柔软的场合 Fixed wiring in soft situation
BVV	铜芯聚氯乙烯绝缘聚氯乙烯护套圆形电缆 Copper core PVC insulated PVC sheathed round cables	固定布线 Fixed wiring
BLVV	铝芯聚氯乙烯绝缘聚氯乙烯护套圆形电缆 Aluminum core PVC insulated PVC sheathed round cables	固定布线 Fixed wiring
BVVB	铜芯聚氯乙烯绝缘聚氯乙烯护套扁形电缆 Copper core PVC insulated PVC sheathed flat cables	固定布线 Fixed wiring
BLVVB	铝芯聚氯乙烯绝缘聚氯乙烯护套扁形电缆 Aluminum core PVC insulated PVC sheathed flat cables	固定布线 Fixed wiring

●**型号、名称 Type、name**

**BV型300/500V铜芯聚氯乙烯绝缘电线 BV 300/500V Copper core PVC insulated wire**

导体标称截面 mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	绞合导体中单线最少根数 The min number of single line in stranded conductor	绝缘厚度规定值mm Insulation thickness mm	平均外径上限mm Max of average diameter mm	20℃直流电阻不大于Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km	
				铜芯 Copper core	镀锡铜芯 Tin-copper core
0.75	7	0.6	2.6	24.5	24.8
1.0	7	0.6	2.8	18.1	18.2

**BLV型450/750V铝芯聚氯乙烯绝缘电缆 BLV 450/750V Aluminum core PVC insulated cable**

导体标称截面 mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	实心导体或绞合导体中单线最少根数 The min number of single line in solid conductor or stranded conductor	绝缘厚度规定值mm Insulation thickness mm	平均外径上限mm Max of average diameter mm	20℃直流电阻不大于Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
2.5	1	0.8	3.9	12.1
4	1	0.8	4.4	7.41
6	1	0.8	5.0	4.61
10	7	1.0	6.7	3.08
16	7	1.0	7.8	1.91
25	7	1.2	9.7	1.20
35	7	1.2	10.9	0.868
50	19	1.4	12.8	0.641
70	19	1.4	14.6	0.443
95	19	1.6	17.1	0.320
120	37	1.6	18.7	0.253
150	37	1.8	20.9	0.206
185	37	2.0	23.3	0.164
240	61	2.2	26.6	0.125
300	61	2.4	29.6	0.100
400	61	2.6	33.2	0.0778

## BVR型450/750V铜芯聚氯乙烯绝缘软电缆 BVR 450/750V Copper core PVC insulated flexible cables

导体标称截面 mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	绞合导体中单线最少根数 The min. number of single line in stranded conductor	绝缘厚度规定值mm Insulation thickness mm	平均外径上限mm Max of average diameter mm	20℃直流电阻不大于Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km	
				铜芯 Copper core	镀锡铜芯 Tin-copper core
2.5	19	0.8	4.1	7.41	7.56
4	19	0.8	4.8	4.61	4.70
6	19	0.8	5.3	3.08	3.11
10	49	1.0	7.3	1.83	1.84
16	49	1.0	8.6	1.15	1.16
25	98	1.2	10.2	0.727	0.734
35	133	1.2	11.7	0.524	0.529
50	133	1.4	13.9	0.387	0.391
70	189	1.4	16.0	0.268	0.270
95	259	1.6	18.2	0.193	0.195
120	259	1.6	19.8	0.153	0.154
150	336	1.8	22.2	0.124	0.126
185	427	2.0	24.6	0.0991	0.100

BVV、BLVV型300/500V铜芯和铝芯聚氯乙烯绝缘聚氯乙烯护套圆型电缆  
BVV、BLVV 300/500V Copper core and Aluminum core PVC insulated PVC sheathed round cables

导体标称截面 mm <sup>2</sup> Conductor nominal cross sectional area mm <sup>2</sup>	绞合导体中单线最少根数 The min. number of single line in stranded conductor	绝缘厚度规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km		
			下限 Min	上限 Max	铜芯 Copper core	镀锡铜芯 Tin-copper core	铝芯 Aluminum core
0.75	1	0.6	3.6	4.4	24.5	24.8	/
1.0	1	0.6	3.7	4.5	18.1	18.2	/
1.5	1	0.7	4.2	5.0	12.1	12.2	/
1.5	7	0.7	4.3	5.2	12.1	12.2	/
2.5	1	0.8	4.8	5.7	7.41	7.56	12.1
2.5	7	0.8	4.8	5.9	7.41	7.56	/
4	1	0.8	5.4	6.5	4.61	4.70	7.41
4	7	0.8	5.5	6.8	4.61	4.70	/
6	1	0.8	5.9	7.1	3.08	3.11	4.61
6	7	0.8	6.0	7.3	3.08	3.11	/
10	7	1.0	7.3	8.8	1.83	1.84	3.08
16	7	1.0	8.0	9.5	1.15	1.16	1.91
25	7	1.2	9.7	12.3	0.727	0.734	1.20
35	7	1.2	10.9	14.1	0.524	0.529	0.868
50	19	1.4	12.8	17.5	0.387	0.391	0.641
70	19	1.4	14.4	19.8	0.268	0.270	0.443
95	19	1.6	16.6	24.2	0.193	0.195	0.320
120	37	1.6	18.1	26.6	0.153	0.154	0.253
150	37	1.8	20.1	31.0	0.124	0.126	0.206
185	37	2.0	22.3	35.8	0.0991	0.100	0.164

BVVB、BLVVB型300/500V铜芯和铝芯聚氯乙烯绝缘聚氯乙烯护套扁型电缆  
 BVVB、BLVVB 300/500V Copper core and Aluminum core PVC insulated PVC sheathed flat cables

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	实心导体或绞合导体中单线最少根数 The min. number of single line in solid conductor or stranded conductor	绝缘厚度规定值mm Insulation thickness mm	护套厚度规定值mm Sheath thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km		
				下限 Min	上限 Max	铜芯 Copper core	镀锡铜芯 Tin-copper core	铝芯 Aluminum core
2×0.75	1	0.6	0.9	3.8×5.9	4.6×7.1	24.5	24.8	/
2×1.0	1	0.6	0.9	3.9×6.1	4.8×7.4	18.1	18.2	/
2×1.5	1	0.7	0.9	4.4×7.0	5.3×8.5	12.1	12.2	/
2×2.5	1	0.8	1.0	5.1×8.4	6.2×10.1	7.41	7.56	12.1
2×4	1	0.8	1.0	5.6×9.2	6.7×11.1	4.61	4.70	7.41
2×4	7	0.8	1.0	5.7×9.5	6.9×11.5	4.61	4.70	/
2×6	1	0.8	1.1	6.2×10.4	7.5×12.5	3.08	3.11	4.61
2×6	7	0.8	1.1	6.4×10.8	7.8×13.0	3.08	3.11	/
2×10	7	1.0	1.2	7.9×13.4	9.5×16.2	1.83	1.84	3.08
3×0.75	1	0.6	0.9	3.8×7.9	4.6×9.6	24.5	24.8	/
3×1.0	1	0.6	0.9	3.9×8.4	4.8×10.1	18.1	18.2	/
3×1.5	1	0.7	0.9	4.4×9.6	5.3×11.7	12.1	12.2	/
3×2.5	1	0.8	1.0	5.1×11.6	6.2×14.0	7.41	7.56	12.1
3×4	1	0.8	1.0	5.8×13.1	7.0×15.8	4.61	4.70	7.41
3×4	7	0.8	1.0	5.9×13.5	7.1×16.3	4.61	4.70	/
3×6	1	0.8	1.1	6.2×14.5	7.5×17.5	3.08	3.11	4.61
3×6	7	0.8	1.1	6.4×15.1	7.8×18.2	3.08	3.11	/
3×10	7	1.0	1.2	7.9×19.0	9.5×23.0	1.83	1.84	3.08

#### ◆连接用软电线 ( JB/T 8734.3-2012 ) Flexible wires for connections(JB/T 8734.3-2012)

●型号、名称 Type、name

型号 Type	名称 Name
RVS	铜芯聚氯乙烯绝缘绞型连接用软电线 Copper core PVC insulated twisted flexible wires for connections
RVB	铜芯聚氯乙烯绝缘扁形无护套软电线 Copper core PVC insulated flat non-sheathed flexible wires
RVV	聚氯乙烯绝缘聚氯乙烯护套软电缆 PVC insulated PVC sheathed flexible cables

●性能参数 Performance parameters

RVS型300/300V铜芯聚氯乙烯绝缘绞型连接用软电线 RVS 300/300V Copper core PVC insulated twisted flexible wires for connections

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体中单线最大直径mm The max diameter of single line in conductor mm	绝缘厚度规定值mm Insulation thickness mm	平均外径上限mm Max of average diameter mm	20℃导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km	
				铜芯 Copper core	镀锡铜芯 Tin-copper core
2×0.5	0.16	0.8	6.0	39.0	40.1
2×0.75	0.16	0.8	6.2	26.0	26.7
2×1.0	0.16	0.8	6.6	19.5	20.0
2×1.5	0.16	0.8	7.2	13.3	13.7
2×2.5	0.16	0.8	8.2	7.98	8.21
2×4	0.16	0.8	9.5	4.95	5.09
2×6	0.21	1.0	11.6	3.30	3.39

RVB型300/300V铜芯聚氯乙烯绝缘扁形无护套软电线 RVB 300/300V Copper core PVC insulated flat non-sheathed flexible wires

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体中单线最大 直径mm The max diameter of single line in conductormm	绝缘厚度 规定值mm Insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km	
			下限 Min	上限 Max	Copper core	Tin-copper core
2×0.5	0.16	0.8	2.5×5.0	3.0×6.0	39.0	40.1
2×0.75	0.16	0.8	2.7×5.4	3.2×6.4	26.0	26.7
2×1.0	0.16	0.8	2.8×5.6	3.3×6.6	19.5	20.0
2×1.5	0.16	0.8	3.0×6.0	3.6×7.2	13.3	13.7
2×2.5	0.16	0.8	3.4×6.8	4.1×8.2	7.98	8.21
2×4	0.16	1.0	4.3×8.6	5.2×10.4	4.95	5.09
2×6	0.21	1.0	4.8×9.6	5.8×11.6	3.30	3.39

RVV型300/500V聚氯乙烯绝缘聚氯乙烯护套软电线 RVV 300/500V PVC insulated PVC sheathed flexible cables

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	绝缘厚度 规定值mm Insulation thickness mm	护套绝缘厚度 规定值mm Sheath insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km	
			下限 Min	上限 Max	Copper core	Tin-copper core
2×1.5	0.7	0.8	4.3×6.0	5.8×8.0	13.3	13.3
2×2.5	0.8	1.0	5.3×7.6	7.1×10.0	7.98	7.98
2×4	0.8	1.0	5.9×8.6	7.9×11.6	4.95	4.95
2×4	0.8	1.1	10.0	12.4	4.95	4.95
2×6	0.8	1.1	6.5×10.0	8.8×13.4	3.30	3.30
2×6	0.8	1.1	10.6	13.9	3.30	3.30
2×10	1.0	1.2	13.3	17.2	1.91	1.91
3×4	0.8	1.2	10.8	13.5	4.95	4.95
3×6	0.8	1.2	11.5	15.0	3.30	3.30
4×4	0.8	1.2	11.8	14.6	4.95	4.95
4×6	0.8	1.2	12.7	16.4	3.30	3.30
4×10	1.0	1.4	16.1	20.5	1.91	1.91
5×4	0.8	1.4	13.3	16.5	4.95	4.95
5×6	0.8	1.4	14.3	18.4	3.30	3.30
5×10	1.0	1.6	18.1	22.9	1.91	1.91
6×0.75	0.4	0.8	6.5	9.6	26.0	26.0
6×1.0	0.6	1.0	8.7	11.0	19.5	19.5
6×1.5	0.7	1.1	9.9	13.3	13.3	13.3
6×2.5	0.8	1.2	12.2	15.8	7.98	7.98
7×0.75	0.4	0.8	6.5	9.6	26.0	26.0
7×1.0	0.6	1.1	8.7	11.0	19.5	19.5
7×1.5	0.7	1.1	9.9	13.3	13.3	13.3
7×2.5	0.8	1.2	12.2	15.8	7.98	7.98
8×0.75	0.4	1.0	7.5	10.6	26.0	26.0
8×1.0	0.6	1.2	9.5	13.2	19.5	19.5
8×1.5	0.7	1.2	10.8	14.2	13.3	13.3
8×2.5	0.8	1.2	13.8	17.7	7.98	7.98

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	绝缘厚度 规定值mm Insulation thickness mm	护套绝缘厚度 规定值mm Sheath insulation thickness mm	平均外径mm Average diameter mm		20℃导体直流电阻 ≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
			下限 Min	上限 Max	
10×0.5	0.4	1.0	8.3	11.1	39.0
10×0.75	0.4	1.0	9.0	13.2	26.0
10×1.0	0.6	1.2	11.7	14.5	19.5
10×1.5	0.7	1.4	13.5	17.4	13.3
10×2.5	0.8	1.5	16.2	20.6	7.98
12×0.5	0.4	1.0	8.4	11.2	39.0
12×0.75	0.4	1.2	9.5	13.2	26.0
12×1.0	0.6	1.2	11.9	14.8	19.5
15×0.75	0.4	1.2	10.7	14.0	26.0
15×1.0	0.6	1.2	11.6	15.5	19.5
16×0.75	0.4	1.2	10.7	14.0	26.0
16×1.0	0.6	1.2	11.6	15.5	19.5
19×0.75	0.4	1.2	11.3	15.0	26.0
19×1.0	0.6	1.2	14.1	17.8	19.5
20×0.5	0.4	1.2	11.0	14.3	39.0
20×0.75	0.4	1.2	11.6	15.5	26.0
20×1.0	0.6	1.2	14.6	18.3	19.5
24×0.75	0.4	1.2	13.5	17.0	26.0
24×1.0	0.6	1.2	16.8	20.5	19.5
25×0.75	0.4	1.2	13.6	17.1	26.0
25×1.0	0.6	1.2	17.0	20.8	19.5
30×0.75	0.4	1.4	14.3	19.5	26.0
30×1.0	0.6	1.4	18.1	22.6	19.5
37×0.75	0.4	1.4	15.5	21.6	26.0
37×1.0	0.6	1.4	19.0	23.0	19.5
40×0.75	0.4	1.4	16.2	21.8	26.0
40×1.0	0.6	1.4	20.6	25.5	19.5
41×0.75	0.4	1.4	16.8	22.5	26.0
41×1.0	0.6	1.4	21.6	27.0	19.5
2×0.75+1×2.0	0.4/0.4	0.8	6.3	8.5	26.0/9.79
5×0.75+1×2.0	0.4/0.4	1.0	7.7	9.8	26.0/9.79
6×0.75+1×2.0	0.4/0.4	1.0	8.0	11.0	26.0/9.79
7×0.75+1×2.0	0.4/0.4	1.2	8.4	11.5	26.0/9.79
11×0.75+1×2.0	0.4/0.4	1.2	9.5	14.2	26.0/9.79
12×0.75+1×2.0	0.4/0.4	1.2	9.7	14.5	26.0/9.79
18×0.75+1×2.0	0.4/0.4	1.2	12.2	15.5	26.0/9.79
19×0.75+1×2.0	0.4/0.4	1.2	12.8	16.0	26.0/9.79
24×0.75+1×2.0	0.4/0.4	1.4	14.0	18.8	26.0/9.79
29×0.75+1×2.0	0.4/0.4	1.4	14.5	19.5	26.0/9.79
36×0.75+1×2.0	0.4/0.4	1.4	15.8	22.0	26.0/9.79
38×0.75+1×2.0	0.4/0.4	1.4	16.7	23.0	26.0/9.79

注：导体采用GB/T 3956—2008规定的第5种软铜导体。Note: the conductor uses the fifth flexible copper conductor according to the standard of GB/T 3956—2008

## ◆ 屏蔽电线 (JB/T 8734.5—2012) Shielded wire (JB/T 8734.5—2012)

## ● 型号、名称 Type、name

型号 Type	名称 designation
RVVP	铜芯聚氯乙烯绝缘聚氯乙烯护套屏蔽软电线 Copper core PVC insulated PVC sheathed shielding flexible wire

## ● 性能参数 Performance parameters

RVVP型300/300V铜芯聚氯乙烯绝缘聚氯乙烯护套屏蔽软电线  
RVVP 300/300V Copper core PVC insulated PVC sheathed shielding flexible wire

芯数 × 标称截面 mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体中单线最大直径mm The max diameter of single line in conductor	绝缘厚度规定值mm Insulation thickness mm	屏蔽层单线直径mm Single line diameter of shielding mm	护套厚度规定值mm Sheath thickness mm	平均外径或外径尺寸mm Average diameter mm		20℃ 导体直流电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤Ω/km
					下限 Min	上限 Max	
2 × 0.5	0.21	0.5	0.15	0.6	5.3	6.8	39.0
2 × 0.5	0.21	0.5	0.15	0.6	3.7 × 5.6	4.5 × 6.8	
2 × 0.75	0.21	0.5	0.15	0.6	5.8	7.4	26.0
2 × 0.75	0.21	0.5	0.15	0.6	4.0 × 6.1	4.8 × 7.4	
2 × 1.0	0.21	0.6	0.15	0.6	6.4	8.2	19.5
2 × 1.0	0.21	0.6	0.15	0.6	4.3 × 6.7	5.2 × 8.3	
2 × 1.5	0.26	0.6	0.15	0.8	7.3	9.2	13.3
2 × 1.5	0.26	0.6	0.15	0.8	4.9 × 7.6	6.0 × 9.3	
2 × 2.5	0.26	0.7	0.15	1.0	8.8	11.7	7.98
2 × 4	0.31	0.8	0.15	1.2	10.6	13.9	4.95
3 × 0.5	0.21	0.5	0.15	0.6	5.6	7.1	39.0
3 × 0.75	0.21	0.5	0.15	0.6	6.1	7.8	26.0
3 × 1.0	0.21	0.6	0.15	0.8	7.2	9.1	19.5
3 × 1.5	0.26	0.6	0.20	0.8	8.0	10.0	13.3
3 × 2.5	0.26	0.7	0.20	1.0	9.5	12.6	7.98
3 × 4	0.31	0.8	0.20	1.2	11.5	14.9	4.95
4 × 0.5	0.21	0.5	0.15	0.8	6.5	8.9	39.0
4 × 0.75	0.21	0.5	0.15	0.8	6.8	9.3	26.0
4 × 1.0	0.21	0.6	0.15	0.9	7.8	10.5	19.5
4 × 1.5	0.26	0.6	0.20	0.9	8.7	11.5	13.3
4 × 2.5	0.26	0.7	0.20	1.0	10.4	13.6	7.98
5 × 0.5	0.21	0.5	0.15	0.8	7.0	9.5	39.0
5 × 0.75	0.21	0.5	0.15	0.8	7.4	10.0	26.0
5 × 1.0	0.21	0.6	0.15	0.9	8.5	11.3	19.5
5 × 1.5	0.26	0.6	0.20	1.0	9.6	12.6	13.3
5 × 2.5	0.26	0.7	0.20	1.1	11.5	14.9	7.98
6 × 0.5	0.21	0.5	0.15	0.8	7.6	10.2	39.0
6 × 0.75	0.21	0.5	0.15	0.8	8.0	10.7	26.0
6 × 1.0	0.21	0.6	0.15	1.0	9.4	12.4	19.5
6 × 1.5	0.26	0.6	0.20	1.0	10.4	13.6	13.3
6 × 2.5	0.26	0.7	0.20	1.1	12.4	16.1	7.98
7 × 0.5	0.21	0.5	0.15	0.8	7.6	10.2	39.0
7 × 0.75	0.21	0.5	0.15	0.8	8.0	10.7	26.0

芯数×标称截面 mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体中单线最 大直径mm The max diameter of single line in conductor	绝缘厚度 规定值mm Insulation thickness mm	屏蔽层单线 直径mm Single line diameter of shielding mm	护套厚度 规定值mm Sheath thickness mm	平均外径或外径尺寸mm Average diameter mm		20℃导体直流 电阻≤Ω/km D.C. resistance of conductor at 20℃ ≤ Ω/km
					下限 Min	上限 Max	
7×1.0	0.21	0.6	0.15	1.0	9.4	12.4	19.5
7×1.5	0.26	0.6	0.20	1.0	10.4	13.6	13.3
7×2.5	0.26	0.7	0.20	1.1	12.4	16.1	7.98
8×0.5	0.21	0.5	0.15	0.8	8.4	11.2	39.0
8×0.75	0.21	0.5	0.15	0.8	8.9	11.8	26.0
8×1.0	0.21	0.6	0.15	1.0	10.5	13.7	19.5
8×1.5	0.26	0.6	0.20	1.0	11.5	15.0	13.3
8×2.5	0.26	0.7	0.20	1.2	14.1	18.0	7.98
9×0.5	0.21	0.5	0.15	0.8	9.1	12.0	39.0
9×0.75	0.21	0.5	0.15	0.8	9.6	12.7	26.0
9×1.0	0.21	0.6	0.20	1.0	11.5	15.0	19.5
9×1.5	0.26	0.6	0.20	1.0	12.4	16.1	13.3
9×2.5	0.26	0.7	0.20	1.2	15.2	19.4	7.98
10×0.5	0.21	0.5	0.20	0.9	9.9	13.0	39.0
10×0.75	0.21	0.5	0.20	1.0	10.6	13.9	26.0
10×1.0	0.21	0.6	0.20	1.0	12.0	15.5	19.5
10×1.5	0.26	0.6	0.20	1.1	13.1	16.9	13.3
10×2.5	0.26	0.7	0.20	1.2	15.8	20.2	7.98
12×0.5	0.21	0.5	0.20	0.9	10.2	13.4	39.0
12×0.75	0.21	0.5	0.20	1.0	11.0	14.3	26.0
12×1.0	0.21	0.6	0.20	1.0	12.4	16.0	19.5
12×1.5	0.26	0.6	0.20	1.2	13.7	17.7	13.3
12×2.5	0.26	0.7	0.20	1.4	16.7	21.3	7.98
16×0.5	0.21	0.5	0.20	1.0	11.4	14.8	39.0
16×0.75	0.21	0.5	0.20	1.2	12.4	16.1	26.0
16×1.0	0.21	0.6	0.20	1.2	14.0	18.0	19.5
16×1.5	0.26	0.6	0.20	1.2	15.1	19.4	13.3
16×2.5	0.26	0.7	0.20	1.4	18.5	23.4	7.98
20×0.5	0.21	0.5	0.20	1.0	12.6	16.2	39.0
26×0.5	0.21	0.5	0.20	1.2	14.2	17.5	39.0

## 控制电缆 Control Cable

### ● 使用特性 Using performance

电缆的敷设温度应不低于0℃，推荐的允许弯曲半径：

无铠装层的电缆，聚氯乙烯绝缘控制电缆应不小于电缆外径的6倍，交联聚乙烯绝缘控制电缆应不小于电缆外径的8倍。

有铠装或铜带屏蔽结构的电缆，应不小于电缆外径的12倍。

有屏蔽层结构的软电缆，应不小于电缆外径的6倍。

Laying temperature should not be under 0℃ and using the allowable bending semi-diameter .

Non-armoured cables: PVC insulated control cable should not less than 6 times of diameter, XLPE insulated control cable should not less than 8 times of diameter.

Armoured or copper tape shielded cables should not less than 12 times of diameter.

Armoured flexible cables should not less than 6 times of diameter.

### ◆ 聚氯乙烯绝缘聚氯乙烯护套控制电缆：GB/T 9330.2—2008

### ◆ PVC insulated PVC sheathed control cable: GB/T 9330.2-2008

用途：用于额定电压450/750V及以下控制、监控回路及保护线路等场合。

型号：KVV、KVVP、KVVP2、KVVP22、KVV22、KVVP2-22、KVVR、KVVRP、KVV32等。

规格：标称截面：0.75~10mm<sup>2</sup>，电缆芯数：2~61芯。

Application: using in control、monitoring loop and protective line with designated voltage 450/750V and under 450/750V.

Type: KVV、KVVP、KVVP2、KVVP22、KVVP2-22、KVVR、KVVRP、KVV32

Standards: nominal cross sectional area:0.75~10mm<sup>2</sup>,core number:2~61.

### ◆ 交联聚乙烯绝缘聚氯乙烯护套控制电缆：GB/T 9330.3—2008

### ◆ XLPE insulated PVC sheathed control cable: GB/T 9330.3-2008

用途：用于额定电压450/750V及以下控制、监控回路及保护线路等场合。

型号： KYJV、KYJVP、KYJVP2、KYJVP22、KYJV22、KYJVP2-22、

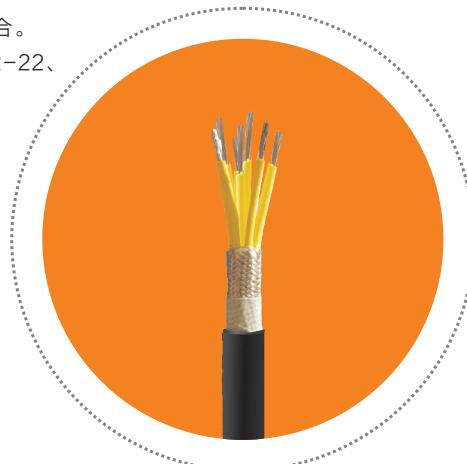
KYJVR、KYJVRP、KYJV32等

规格：标称截面：0.75~10mm<sup>2</sup>，电缆芯数：2~61芯。

Application: using in control、monitoring loop and protective line with designated voltage 450/750V and under 450/750V.

Type: KYJV、KYJVP、KYJVP2、KYJVP22、KYJV22、KYJVP2-22、  
KYJVR、KYJVRP、KYJV32

Standards: nominal cross sectional area:0.75~10mm<sup>2</sup>,core number:2~61.



### ● 产品结构特征代号 Structure、sign

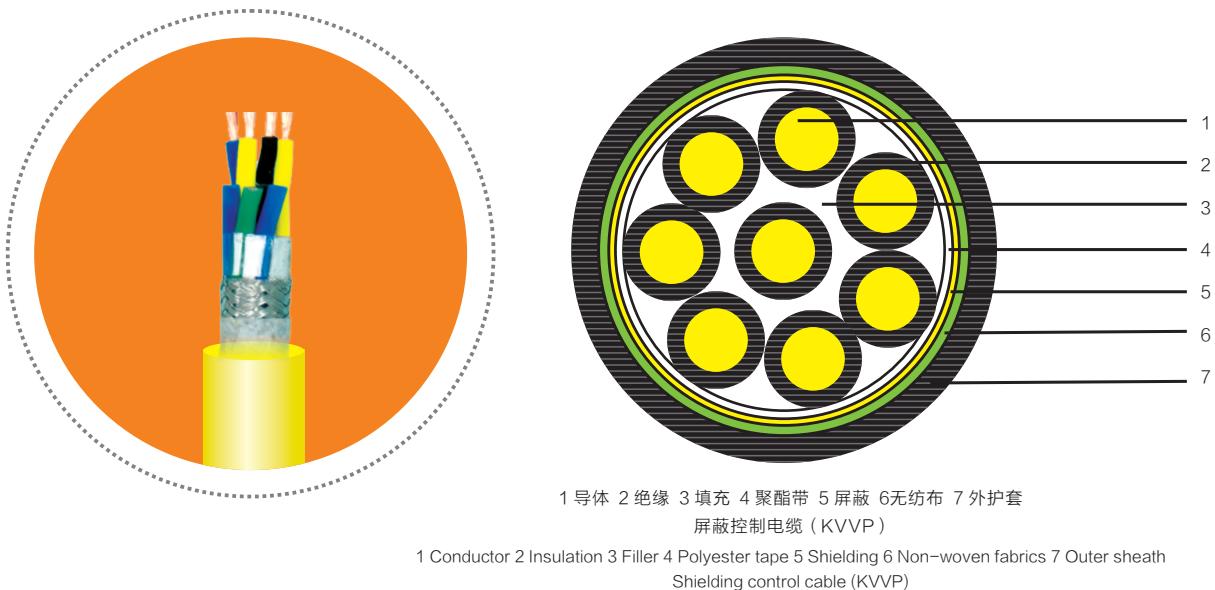
结构特征 Structure	代 号 Sign	结构特征 Structure	代 号 Sign
编织屏蔽 Compiling shielding	P	双钢带铠装 Double steel tape armour	2
铜带屏蔽 Copper tape shielding	P2	钢丝铠装 Steel wire armour	3
铝/塑复合薄膜屏蔽 Aluminum/Plastic laminated film shielding	P3	聚氯乙烯外护套 PVC outer sheath	2
软结构(移动敷设) Soft structure(Mobile laying)	R	聚乙烯或聚烯烃外护套 PE/PO outer sheath	3

● 不同类型绝缘混合物电缆导体的长期允许工作温度

Long term allowable operating temperature of insulated compound cables conductor:

绝缘混合物 Insulated compound	导体长期允许工作温度℃ Long term allowable operating temperature of conductor	混合物代号 Compound sign
热塑性聚氯乙烯 Thermoplasticity PVC	70	PVC/A
热塑性柔软型聚氯乙烯 Thermoplasticity soft PVC	70	PVC/D
热固性交联聚乙烯 Thermoset XLPE	90	XLPE

● 产品结构图 Structure drawing



## 1. 聚氯乙烯绝缘聚氯乙烯护套控制电缆 (GB/T 9330.2—2008) PVC insulated PVC sheathed control cable (GB/T 9330.2-2008)

● 型号、名称及使用范围 Type、Name、Application

型 号 Type	名 称 designation	主要使用范围 Application
KVV	铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆 Copper core PVC insulated PVC sheathed control cable	敷设在室内、电缆沟、管道等固定场合 Laying in fixed occasion, such as indoor, cable trench, pipeline etc.
KVVP	铜芯聚氯乙烯绝缘聚氯乙烯护套编织屏蔽控制电缆 Copper core PVC insulated PVC sheathed compiling shielding control cable	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 Laying in the request for shielding fixed occasion, such as indoor, cable trench, pipeline etc.
KVVP2	铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽控制电缆 Copper core PVC insulated PVC sheathed copper tape shielding control cable	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 Laying in the request for shielding fixed occasion, such as indoor, cable trench, pipeline etc.
KVV22	铜芯聚氯乙烯绝缘聚氯乙烯护套钢带铠装控制电缆 Copper core PVC insulated PVC sheathed steel tape armour control cable	敷设在室内、电缆沟、直埋、管道等能承受较大机械外力的固定场合 Laying in fixed occasion which can bear a large mechanical force, such as indoor, cable trench, buried, pipeline etc.
KVVP2-22	铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽钢带铠装控制电缆 Copper core PVC insulated PVC sheathed copper tape shielding and steel tape armour control cable	敷设在室内、电缆沟、直埋、管道等要求屏蔽并能承受较大机械外力的固定场合 Laying in fixed occasion which can bear a large mechanical force and request shielding, such as indoor, cable trench, buried, pipeline etc.
KVVR	铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆 Copper core PVC insulated PVC sheathed control flexible cable	敷设在室内移动要求柔软等场合 Laying in indoor occasion and moving softly.
KVVRP	铜芯聚氯乙烯绝缘聚氯乙烯护套编织屏蔽控制软电缆 Copper core PVC insulated PVC sheathed compiling shielding control flexible cable	敷设在室内移动要求柔软、屏蔽等场合 Laying in indoor occasion and moving softly and shielded.
KVV32	铜芯聚氯乙烯绝缘聚氯乙烯护套钢丝铠装控制电缆 Copper core PVC insulated PVC sheathed steel wire armour control cable	敷设在室内、电缆沟、管道、竖井等能承受较大机械拉力等固定场合 Laying in fixed occasion which can bear a large mechanical force, such as indoor, cable trench, buried, drilled shaft etc.

## ● 性能参数 Performance parameters

KVV型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆 KVV 450/750V Copper core PVC insulated PVC sheathed control cable

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
2×0.75	1	0.6	1.2	6.7	8.1
2×0.75	2	0.6	1.2	6.9	8.4
2×1.0	1	0.6	1.2	7.0	8.5
2×1.0	2	0.6	1.2	7.2	8.7
2×1.5	1	0.7	1.2	7.9	9.5
2×1.5	2	0.7	1.2	8.1	9.7
2×2.5	1	0.8	1.2	9.0	10.9
2×2.5	2	0.8	1.2	9.2	11.1
2×4	1	0.8	1.2	9.9	11.9
2×4	2	0.8	1.2	10.2	12.3
2×6	1	0.8	1.2	10.8	13.1
2×6	2	0.8	1.2	11.2	13.6
2×10	2	1.0	1.5	14.3	17.3
3×0.75	1	0.6	1.2	7.1	8.5
3×0.75	2	0.6	1.2	7.3	8.8
3×1.0	1	0.6	1.2	7.4	8.9
3×1.0	2	0.6	1.2	7.6	9.1
3×1.5	1	0.7	1.2	8.3	10.0
3×1.5	2	0.7	1.2	8.5	10.3
3×2.5	1	0.8	1.2	9.5	11.5
3×2.5	2	0.8	1.2	9.7	11.8
3×4	1	0.8	1.2	10.5	12.7
3×4	2	0.8	1.2	10.8	13.0
3×6	1	0.8	1.2	11.5	13.9
3×6	2	0.8	1.2	11.9	14.4
3×10	2	1.0	1.5	15.2	18.4
4×0.75	1	0.6	1.2	7.6	9.2
4×0.75	2	0.6	1.2	7.8	9.4
4×1.0	1	0.6	1.2	7.9	9.6
4×1.0	2	0.6	1.2	8.2	9.9
4×1.5	1	0.7	1.2	9.0	10.9
4×1.5	2	0.7	1.2	9.2	11.1
4×2.5	1	0.8	1.2	10.4	12.5
4×2.5	2	0.8	1.2	10.6	12.8
4×4	1	0.8	1.2	11.4	13.8
4×4	2	0.8	1.2	11.8	14.2
4×6	1	0.8	1.5	13.2	15.9
4×6	2	0.8	1.5	13.6	16.5
4×10	2	1.0	1.5	16.6	20.1

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
5 × 0.75	1	0.6	1.2	8.2	9.9
5 × 0.75	2	0.6	1.2	8.4	10.2
5 × 1.0	1	0.6	1.2	8.6	10.3
5 × 1.0	2	0.6	1.2	8.8	10.6
5 × 1.5	1	0.7	1.2	9.7	11.7
5 × 1.5	2	0.7	1.2	10.0	12.1
5 × 2.5	1	0.8	1.2	11.3	13.6
5 × 2.5	2	0.8	1.2	11.5	13.9
5 × 4	1	0.8	1.5	13.0	15.7
5 × 4	2	0.8	1.5	13.4	16.2
5 × 6	1	0.8	1.5	14.3	17.3
5 × 6	2	0.8	1.5	14.8	17.9
5 × 10	2	1.0	1.5	18.2	22.0
7 × 0.75	1	0.6	1.2	8.8	10.6
7 × 0.75	2	0.6	1.2	9.1	11.0
7 × 1.0	1	0.6	1.2	9.2	11.1
7 × 1.0	2	0.6	1.2	9.5	11.5
7 × 1.5	1	0.7	1.2	10.5	12.7
7 × 1.5	2	0.7	1.2	10.8	13.1
7 × 2.5	1	0.8	1.5	12.8	15.5
7 × 2.5	2	0.8	1.5	13.1	15.8
7 × 4	1	0.8	1.5	14.1	17.1
7 × 4	2	0.8	1.5	14.5	17.6
7 × 6	1	0.8	1.5	15.6	18.8
7 × 6	2	0.8	1.5	16.1	19.5
7 × 10	2	1.0	1.7	20.3	24.5
8 × 0.75	1	0.6	1.2	9.7	11.7
8 × 0.75	2	0.6	1.2	10.0	12.1
8 × 1.0	1	0.6	1.2	10.2	12.3
8 × 1.0	2	0.6	1.2	10.5	12.7
8 × 1.5	1	0.7	1.2	11.7	14.1
8 × 1.5	2	0.7	1.5	12.6	15.2
8 × 2.5	1	0.8	1.5	14.3	17.2
8 × 2.5	2	0.8	1.5	14.6	17.6
8 × 4	1	0.8	1.5	15.8	19.0
8 × 4	2	0.8	1.5	16.3	19.6
8 × 6	1	0.8	1.5	17.4	21.0
8 × 6	2	0.8	1.5	18.1	21.8
8 × 10	2	1.0	1.7	22.8	27.5
10 × 0.75	1	0.6	1.2	10.8	13.1
10 × 0.75	2	0.6	1.2	11.2	13.6
10 × 1.0	1	0.6	1.2	11.4	13.8

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
10×1.0	2	0.6	1.2	11.8	14.3
10×1.5	1	0.7	1.5	13.7	16.6
10×1.5	2	0.7	1.5	14.1	17.1
10×2.5	1	0.8	1.5	16.0	19.4
10×2.5	2	0.8	1.5	16.4	19.8
10×4	1	0.8	1.5	17.8	21.5
10×4	2	0.8	1.7	18.7	22.6
10×6	1	0.8	1.7	20.1	24.2
10×6	2	0.8	1.7	20.8	25.2
10×10	2	1.0	1.7	25.8	31.2
12×0.75	1	0.6	1.2	11.2	13.5
12×0.75	2	0.6	1.2	11.6	14.0
12×1.0	1	0.6	1.2	11.8	14.2
12×1.0	2	0.6	1.5	12.8	15.4
12×1.5	1	0.7	1.5	14.2	17.1
12×1.5	2	0.7	1.5	14.5	17.6
12×2.5	1	0.8	1.5	16.5	20.0
12×2.5	2	0.8	1.5	16.9	20.5
12×4	1	0.8	1.5	18.7	22.6
12×4	2	0.8	1.7	19.3	23.4
12×6	1	0.8	1.7	20.7	25.0
12×6	2	0.8	1.7	21.5	26.0
14×0.75	1	0.6	1.2	11.7	14.1
14×0.75	2	0.6	1.5	12.7	15.3
14×1.0	1	0.6	1.5	12.9	15.6
14×1.0	2	0.6	1.5	13.3	16.1
14×1.5	1	0.7	1.5	14.8	17.9
14×1.5	2	0.7	1.5	15.2	18.4
14×2.5	1	0.8	1.5	17.4	21.0
14×2.5	2	0.8	1.5	17.8	21.5
14×4	1	0.8	1.7	19.6	23.7
14×4	2	0.8	1.7	20.3	24.5
14×6	1	0.8	1.7	21.8	26.3
14×6	2	0.8	1.7	22.6	27.3
16×0.75	1	0.6	1.5	12.9	15.5
16×0.75	2	0.6	1.5	13.3	16.1
16×1.0	1	0.6	1.5	13.5	16.4
16×1.0	2	0.6	1.5	14.0	16.9
16×1.5	1	0.7	1.5	15.6	18.8
16×1.5	2	0.7	1.5	16.0	19.4
16×2.5	1	0.8	1.7	18.3	22.1
16×2.5	2	0.8	1.7	19.1	23.1

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
19 × 0.75	1	0.6	1.5	13.5	16.3
19 × 0.75	2	0.6	1.5	14.0	16.9
19 × 1.0	1	0.6	1.5	14.2	17.2
19 × 1.0	2	0.6	1.5	14.7	17.7
19 × 1.5	1	0.7	1.5	16.4	19.8
19 × 1.5	2	0.7	1.5	16.8	20.4
19 × 2.5	1	0.8	1.7	19.6	23.7
19 × 2.5	2	0.8	1.7	20.1	24.3
24 × 0.75	1	0.6	1.5	15.6	18.8
24 × 0.75	2	0.6	1.5	16.1	19.5
24 × 1.0	1	0.6	1.5	16.4	19.8
24 × 1.0	2	0.6	1.5	17.0	20.5
24 × 1.5	1	0.7	1.7	19.4	23.4
24 × 1.5	2	0.7	1.7	20.0	24.1
24 × 2.5	1	0.8	1.7	22.8	27.6
24 × 2.5	2	0.8	1.7	23.4	28.3
27 × 0.75	1	0.6	1.5	15.9	19.2
27 × 0.75	2	0.6	1.5	16.5	19.9
27 × 1.0	1	0.6	1.5	16.7	20.2
27 × 1.0	2	0.6	1.5	17.3	20.9
27 × 1.5	1	0.7	1.7	19.8	23.9
27 × 1.5	2	0.7	1.7	20.4	24.6
27 × 2.5	1	0.8	1.7	23.3	28.2
27 × 2.5	2	0.8	1.7	23.9	28.9
30 × 0.75	1	0.6	1.5	16.4	19.8
30 × 0.75	2	0.6	1.5	17.0	20.6
30 × 1.0	1	0.6	1.5	17.5	20.5
30 × 1.0	2	0.6	1.5	18.0	22.0
30 × 1.5	1	0.7	1.5	20.0	23.0
30 × 1.5	2	0.7	1.7	21.0	25.0
30 × 2.5	1	0.8	1.7	24.0	27.0
30 × 2.5	2	0.8	1.7	24.5	29.5
37 × 0.75	1	0.6	1.5	17.5	20.5
37 × 0.75	2	0.6	1.7	18.0	22.0
37 × 1.0	1	0.6	1.7	19.0	23.0
37 × 1.0	2	0.6	1.7	19.7	23.8
37 × 1.5	1	0.7	1.7	22.0	26.6
37 × 1.5	2	0.7	1.7	22.7	27.4
37 × 2.5	1	0.8	1.7	26.1	31.5
37 × 2.5	2	0.8	1.7	26.7	32.3

## KVV型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套编织屏蔽控制电缆

KVV 450/750V Copper core PVC insulated PVC sheathed compiling shielding control cable

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称 直径 mm Single line diameter of shielding mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
2 × 0.75	1	0.6	0.15	1.2	7.7	9.3
2 × 1.0	1	0.6	0.15	1.2	8.0	9.7
2 × 1.5	1	0.7	0.15	1.2	8.9	10.7
2 × 2.5	1	0.8	0.15	1.2	10.0	12.1
2 × 4	1	0.8	0.15	1.2	10.9	13.2
2 × 6	1	0.8	0.15	1.2	11.9	14.3
3 × 0.75	1	0.6	0.15	1.2	8.1	9.7
3 × 1.0	1	0.6	0.15	1.2	8.4	10.1
3 × 1.5	1	0.7	0.15	1.2	9.3	11.2
3 × 2.5	1	0.8	0.15	1.2	10.5	12.7
3 × 4	1	0.8	0.15	1.2	11.5	13.9
3 × 6	1	0.8	0.15	1.5	13.1	15.8
4 × 0.75	1	0.6	0.15	1.2	8.6	10.4
4 × 1.0	1	0.6	0.15	1.2	8.9	10.8
4 × 1.5	1	0.7	0.15	1.2	10.0	12.1
4 × 2.5	1	0.8	0.15	1.2	11.4	13.8
4 × 4	1	0.8	0.15	1.5	13.0	15.7
4 × 6	1	0.8	0.20	1.5	14.4	17.4
5 × 0.75	1	0.6	0.15	1.2	9.2	11.1
5 × 1.0	1	0.6	0.15	1.2	9.6	11.6
5 × 1.5	1	0.7	0.15	1.2	10.7	13.0
5 × 2.5	1	0.8	0.15	1.5	12.9	15.5
5 × 4	1	0.8	0.20	1.5	14.3	17.2
5 × 6	1	0.8	0.20	1.5	15.6	18.8
7 × 0.75	1	0.6	0.15	1.2	9.8	11.8
7 × 1.0	1	0.6	0.15	1.2	10.2	12.4
7 × 1.5	1	0.7	0.15	1.2	11.5	13.9
7 × 2.5	1	0.8	0.20	1.5	14.1	17.0
7 × 4	1	0.8	0.20	1.5	15.4	18.6
7 × 6	1	0.8	0.20	1.5	16.8	20.3
8 × 0.75	1	0.6	0.15	1.2	10.7	13.0
8 × 1.0	1	0.6	0.15	1.2	11.2	13.6
8 × 1.5	1	0.7	0.15	1.5	13.5	16.3
8 × 2.5	1	0.8	0.20	1.5	15.5	18.7
8 × 4	1	0.8	0.20	1.5	17.0	20.5
8 × 6	1	0.8	0.20	1.7	19.0	23.0
10 × 0.75	1	0.6	0.15	1.2	11.9	14.3
10 × 1.0	1	0.6	0.15	1.5	13.0	15.7

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称 直径 mm Single line diameter of shielding mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
10×1.5	1	0.7	0.20	1.5	15.0	18.1
10×2.5	1	0.8	0.20	1.5	17.3	20.9
10×4	1	0.8	0.20	1.7	19.4	23.4
10×6	1	0.8	0.20	1.7	21.3	25.8
12×0.75	1	0.6	0.15	1.5	12.8	15.4
12×1.0	1	0.6	0.15	1.5	13.6	16.4
12×1.5	1	0.7	0.20	1.5	15.4	18.6
12×2.5	1	0.8	0.20	1.5	17.8	21.5
12×4	1	0.8	0.20	1.7	20.0	24.1
12×6	1	0.8	0.20	1.7	22.0	26.6
14×0.75	1	0.6	0.15	1.5	13.5	16.3
14×1.0	1	0.6	0.20	1.5	14.2	17.1
14×1.5	1	0.7	0.20	1.5	16.1	19.4
14×2.5	1	0.8	0.20	1.7	19.0	22.9
14×4	1	0.8	0.20	1.7	20.9	25.2
14×6	1	0.8	0.20	1.7	23.0	27.8
16×0.75	1	0.6	0.20	1.5	14.1	17.1
16×1.0	1	0.6	0.20	1.5	14.8	17.9
16×1.5	1	0.7	0.20	1.5	16.8	20.3
16×2.5	1	0.8	0.20	1.7	19.9	24.1
19×0.75	1	0.6	0.20	1.5	14.7	17.8
19×1.0	1	0.6	0.20	1.5	15.5	18.7
19×1.5	1	0.7	0.20	1.5	17.6	21.3
19×2.5	1	0.8	0.20	1.7	20.9	25.2
24×0.75	1	0.6	0.20	1.5	16.8	20.3
24×1.0	1	0.6	0.20	1.5	17.7	21.3
24×1.5	1	0.7	0.20	1.7	20.6	24.9
24×2.5	1	0.8	0.25	1.7	24.3	29.4
27×0.75	1	0.6	0.20	1.5	17.1	20.7
27×1.0	1	0.6	0.20	1.5	18.0	21.7
27×1.5	1	0.7	0.20	1.7	21.0	25.4
27×2.5	1	0.8	0.25	1.7	24.8	30.0
30×0.75	1	0.6	0.20	1.5	17.6	21.3
30×1.0	1	0.6	0.20	1.7	19.0	22.9
30×1.5	1	0.7	0.20	1.7	21.7	26.2
30×2.5	1	0.8	0.25	1.7	25.7	31.0
37×0.75	1	0.6	0.20	1.7	19.2	23.3
37×1.0	1	0.6	0.20	1.7	20.3	24.5
37×1.5	1	0.7	0.20	1.7	23.3	28.1
37×2.5	1	0.8	0.25	2.0	28.1	34.0

## KVV2型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽控制电缆

KVV22 450/750V Copper core PVC insulated PVC sheathed steel tape armour control cable

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Shielded copper strip thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4×0.75	1	0.6	0.05~0.10	1.2	8.1	9.7
4×1.0	1	0.6	0.05~0.10	1.2	8.4	10.2
4×1.5	1	0.7	0.05~0.10	1.2	9.5	11.4
4×2.5	1	0.8	0.05~0.10	1.2	10.9	13.1
4×4	1	0.8	0.05~0.10	1.2	12.5	15.1
4×6	1	0.8	0.05~0.10	1.5	13.6	16.5
4×10	2	1.0	0.05~0.10	1.5	17.1	20.7
5×0.75	1	0.6	0.05~0.10	1.2	8.6	10.4
5×1.0	1	0.6	0.05~0.10	1.2	9.0	10.9
5×1.5	1	0.7	0.05~0.10	1.2	10.2	12.3
5×2.5	1	0.8	0.05~0.10	1.2	11.8	14.2
5×4	1	0.8	0.05~0.10	1.5	13.5	16.3
5×6	1	0.8	0.05~0.10	1.5	14.8	17.9
5×10	2	1.0	0.05~0.10	1.7	19.1	23.0
7×0.75	1	0.6	0.05~0.10	1.2	9.3	11.2
7×1.0	1	0.6	0.05~0.10	1.2	9.7	11.7
7×1.5	1	0.7	0.05~0.10	1.2	11.0	13.3
7×2.5	1	0.8	0.05~0.10	1.5	13.3	16.1
7×4	1	0.8	0.05~0.10	1.5	14.6	17.6
7×6	1	0.8	0.05~0.10	1.5	16.0	19.4
7×10	2	1.0	0.05~0.10	1.7	20.7	25.1
8×0.75	1	0.6	0.05~0.10	1.2	10.2	12.3
8×1.0	1	0.6	0.05~0.10	1.2	10.7	12.9
8×1.5	1	0.7	0.05~0.10	1.5	12.8	15.4
8×2.5	1	0.8	0.05~0.10	1.5	14.7	17.8
8×4	1	0.8	0.05~0.10	1.5	16.2	19.6
8×6	1	0.8	0.05~0.10	1.5	17.9	21.6
8×10	2	1.0	0.05~0.10	1.7	23.2	28.1
10×0.75	1	0.6	0.05~0.10	1.2	11.3	13.7
10×1.0	1	0.6	0.05~0.10	1.2	12.5	15.1
10×1.5	1	0.7	0.05~0.10	1.5	14.2	17.2
10×2.5	1	0.8	0.05~0.10	1.5	16.5	20.0
10×4	1	0.8	0.05~0.10	1.5	18.6	22.5
10×6	1	0.8	0.05~0.10	1.7	20.5	24.8
10×10	2	1.0	0.05~0.10	1.7	26.3	31.8
12×0.75	1	0.6	0.05~0.10	1.2	11.7	14.1
12×1.0	1	0.6	0.05~0.10	1.5	12.8	15.5
12×1.5	1	0.7	0.05~0.10	1.5	14.6	17.7

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Shielded copper strip thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
12×2.5	1	0.8	0.05~0.10	1.5	17.0	20.6
12×4	1	0.8	0.05~0.10	1.7	19.2	23.2
12×6	1	0.8	0.05~0.10	1.7	21.2	25.6
14×0.75	1	0.6	0.05~0.10	1.5	12.2	14.7
14×1.0	1	0.6	0.05~0.10	1.5	13.4	16.2
14×1.5	1	0.7	0.05~0.10	1.5	15.3	18.5
14×2.5	1	0.8	0.05~0.10	1.5	17.8	21.5
14×4	1	0.8	0.05~0.10	1.7	20.1	24.3
14×6	1	0.8	0.05~0.10	1.7	22.2	26.9
16×0.75	1	0.6	0.05~0.10	1.5	13.3	16.1
16×1.0	1	0.6	0.05~0.10	1.5	14.0	16.9
16×1.5	1	0.7	0.05~0.10	1.5	16.0	19.4
16×2.5	1	0.8	0.15~0.10.	1.7	19.1	23.1
19×0.75	1	0.6	0.15~0.10	1.5	14.0	16.9
19×1.0	1	0.6	0.15~0.10	1.5	14.7	17.7
19×1.5	1	0.7	0.15~0.10	1.5	16.8	20.4
19×2.5	1	0.8	0.15~0.10	1.7	20.1	24.3
24×0.75	1	0.6	0.15~0.10	1.5	16.0	19.4
24×1.0	1	0.6	0.15~0.10	1.5	16.9	20.4
24×1.5	1	0.7	0.15~0.10	1.7	19.9	24.0
24×2.5	1	0.8	0.15~0.10	1.7	23.3	28.2
27×0.75	1	0.6	0.15~0.10	1.5	16.3	19.7
27×1.0	1	0.6	0.15~0.10	1.5	17.2	20.8
27×1.5	1	0.7	0.15~0.10	1.7	20.3	24.5
27×2.5	1	0.8	0.15~0.10	1.7	23.8	28.8
30×0.75	1	0.6	0.15~0.10	1.5	16.9	20.4
30×1.0	1	0.6	0.15~0.10	1.5	17.8	21.5
30×1.5	1	0.7	0.15~0.10	1.7	21.0	25.3
30×2.5	1	0.8	0.15~0.10	1.7	24.6	29.8
37×0.75	1	0.6	0.15~0.10	1.5	18.1	21.9
37×1.0	1	0.6	0.15~0.10	1.7	19.5	23.5
37×1.5	1	0.7	0.15~0.10	1.7	22.5	27.2
37×2.5	1	0.8	0.15~0.10	1.7	26.5	32.1

## KVV22型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套钢带铠装控制电缆

KVV22 450/750V Copper core PVC insulated PVC sheathed copper tape shielding control cable

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	钢带层数 × 厚度 mm Steel tape number × thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4 × 1.5	1	0.7	2 × 0.2	1.5	12.0	
4 × 2.5	1	0.8	2 × 0.2	1.5	13.4	
4 × 4	1	0.8	2 × 0.2	1.5	14.4	17.4
4 × 6	1	0.8	2 × 0.2	1.5	15.6	18.8
4 × 10	2	1.0	2 × 0.2	1.7	19.4	23.5
5 × 1.5	1	0.7	2 × 0.2	1.5	12.7	15.3
5 × 2.5	1	0.8	2 × 0.2	1.5	14.3	17.2
5 × 4	1	0.8	2 × 0.2	1.7	15.4	18.6
5 × 6	1	0.8	2 × 0.2	1.7	16.7	20.2
5 × 10	2	1.0	2 × 0.2	1.7	21.0	25.4
7 × 0.75	1	0.6	2 × 0.2	1.5	11.8	14.2
7 × 1.0	1	0.6	2 × 0.2	1.5	12.2	14.7
7 × 1.5	1	0.7	2 × 0.2	1.5	13.5	16.3
7 × 2.5	1	0.8	2 × 0.2	1.5	15.2	18.4
7 × 4	1	0.8	2 × 0.2	1.7	16.5	20.0
7 × 6	1	0.8	2 × 0.2	1.7	18.0	21.7
7 × 10	2	1.0	2 × 0.2	1.7	22.7	27.4
8 × 0.75	1	0.6	2 × 0.2	1.5	12.7	15.3
8 × 1.0	1	0.6	2 × 0.2	1.5	13.2	15.9
8 × 1.5	1	0.6	2 × 0.2	1.5	14.7	17.7
8 × 2.5	1	0.8	2 × 0.2	1.5	16.7	20.1
8 × 4	1	0.8	2 × 0.2	1.7	18.2	21.9
8 × 6	1	0.8	2 × 0.2	1.7	20.2	24.4
8 × 10	2	1.0	2 × 0.2	1.7	25.2	30.4
10 × 0.75	1	0.6	2 × 0.2	1.5	13.8	16.7
10 × 1.0	1	0.6	2 × 0.2	1.5	14.4	17.4
10 × 1.5	1	0.7	2 × 0.2	1.5	16.1	19.5
10 × 2.5	1	0.8	2 × 0.2	1.7	18.8	22.7
10 × 4	1	0.8	2 × 0.2	1.7	20.5	24.8
10 × 6	1	0.8	2 × 0.2	1.7	22.5	27.1
10 × 10	2	1.0	2 × 0.2	2.0	29.5	35.3
12 × 0.75	1	0.6	2 × 0.2	1.5	14.1	17.1
12 × 1.0	1	0.6	2 × 0.2	1.5	14.8	17.8
12 × 1.5	1	0.7	2 × 0.2	1.5	16.6	20.0
12 × 2.5	1	0.8	2 × 0.2	1.7	19.3	23.4
12 × 4	1	0.8	2 × 0.2	1.7	21.1	25.5
12 × 6	1	0.8	2 × 0.2	1.7	23.1	27.9
14 × 0.75	1	0.6	2 × 0.2	1.5	14.7	17.7
14 × 1.0	1	0.6	2 × 0.2	1.5	15.3	18.5
14 × 1.5	1	0.7	2 × 0.2	1.5	17.2	20.8

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	钢带层数×厚度 mm Steel tape number × thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
14×2.5	1	0.8	2×0.2	1.7	20.1	24.3
14×4	1	0.8	2×0.2	1.7	22.0	26.6
14×6	1	0.8	2×0.2	1.7	24.2	29.2
16×0.75	1	0.6	2×0.2	1.5	15.3	18.5
16×1.0	1	0.6	2×0.2	1.5	16.0	19.3
16×1.5	1	0.7	2×0.2	1.7	18.0	21.7
16×2.5	1	0.8	2×0.2	1.7	21.1	25.5
19×0.75	1	0.6	2×0.2	1.5	15.9	19.2
19×1.0	1	0.6	2×0.2	1.5	16.6	20.1
19×1.5	1	0.7	2×0.2	1.7	19.2	23.1
19×2.5	1	0.8	2×0.2	1.7	22.0	266
24×0.75	1	0.6	2×0.2	1.7	18.0	21.7
24×1.0	1	0.6	2×0.2	1.7	19.2	23.2
24×1.5	1	0.7	2×0.2	1.7	21.8	26.3
24×2.5	1	0.8	2×0.2	1.7	25.6	31.0
27×0.75	1	0.6	2×0.2	1.7	18.7	22.5
27×1.0	1	0.6	2×0.2	1.7	19.5	23.6
27×1.5	1	0.7	2×0.2	1.7	22.2	26.8
27×2.5	1	0.8	2×0.2	1.7	26.1	31.6
30×0.75	1	0.6	2×0.2	1.7	19.2	23.2
30×1.0	1	0.6	2×0.2	1.7	20.1	24.3
30×1.5	1	0.6	2×0.2	1.7	22.9	27.6
30×2.5	1	0.8	2×0.2	2.0	27.0	32.6
37×0.75	1	0.6	2×0.2	1.7	20.4	24.7
37×1.0	1	0.6	2×0.2	1.7	21.4	25.9
37×1.5	1	0.7	2×0.2	1.7	24.4	29.5
37×2.5	1	0.8	2×0.2	2.0	29.4	35.6

KVV2-22型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽钢带铠装控制电缆

KVV2-22 450/750V Copper core PVC insulated PVC sheathed copper tape shielding and steel tape armour control cable

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Copper tape shielding thickness mm	钢带层数×厚度 mm Steel tape number × thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
						下限 Min	上限 Max
4×1.5	1	0.7	0.05~0.10	2×0.2	1.5	12.7	15.4
4×2.5	1	0.8	0.05~0.10	2×0.2	1.5	14.1	17.1
4×4	1	0.8	0.05~0.10	2×0.2	1.5	15.2	18.3
4×6	1	0.8	0.05~0.10	2×0.2	1.5	16.3	19.3
4×10	2	1.0	0.05~0.10	2×0.2	1.7	20.2	24.4
5×1.5	1	0.7	0.05~0.10	2×0.2	1.5	13.5	16.3
5×2.5	1	0.8	0.05~0.10	2×0.2	1.5	15.0	18.1
5×4	1	0.8	0.05~0.10	2×0.2	1.5	16.2	19.6

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Copper tape shielding thickness mm	钢带层数×厚度 mm Steel tape number × thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
						下限 Min	上限 Max
5×6	1	0.8	0.05~0.10	2×0.2	1.5	17.5	20.9
5×10	2	1.0	0.05~0.10	2×0.2	1.7	21.8	26.3
7×0.75	1	0.6	0.05~0.10	2×0.2	1.5	12.5	15.1
7×1.0	1	0.6	0.05~0.10	2×0.2	1.5	13.0	16.9
7×1.5	1	0.7	0.05~0.10	2×0.2	1.5	14.3	17.2
7×2.5	1	0.8	0.05~0.10	2×0.2	1.5	16.0	19.3
7×4	1	0.8	0.05~0.10	2×0.2	1.5	17.3	20.9
7×6	1	0.8	0.05~0.10	2×0.2	1.7	19.1	23.1
7×10	2	1.0	0.05~0.10	2×0.2	1.7	23.4	28.3
8×0.75	1	0.6	0.05~0.10	2×0.2	1.5	13.5	16.3
8×1.0	1	0.6	0.05~0.10	2×0.2	1.5	14.0	16.9
8×1.5	1	0.7	0.05~0.10	2×0.2	1.5	15.4	18.7
8×2.5	1	0.8	0.05~0.10	2×0.2	1.5	17.4	21.1
8×4	1	0.8	0.05~0.10	2×0.2	1.7	19.3	23.3
8×6	1	0.8	0.05~0.10	2×0.2	1.7	21.0	25.3
8×10	2	1.0	0.05~0.10	2×0.2	1.7	26.3	31.8
10×0.75	1	0.6	0.05~0.10	2×0.2	1.5	14.6	17.6
10×1.0	1	0.6	0.05~0.10	2×0.2	1.5	15.2	18.3
10×1.5	1	0.7	0.05~0.10	2×0.2	1.5	16.9	20.4
10×2.5	1	0.8	0.05~0.10	2×0.2	1.7	19.6	23.7
10×4	1	0.8	0.05~0.10	2×0.2	1.7	21.3	25.8
10×6	1	0.8	0.05~0.10	2×0.2	1.7	23.2	28.1
10×10	2	1.0	0.05~0.10	2×0.2	2.0	30.0	36.2
12×0.75	1	0.6	0.05~0.10	2×0.2	1.5	14.9	18.0
12×1.0	1	0.6	0.05~0.10	2×0.2	1.5	15.5	18.8
12×1.5	1	0.7	0.05~0.10	2×0.2	1.7	17.3	20.8
12×2.5	1	0.8	0.05~0.10	2×0.2	1.7	20.1	24.6
12×4	1	0.8	0.05~0.10	2×0.2	1.7	21.9	26.5
12×6	1	0.8	0.05~0.10	2×0.2	1.7	23.9	28.9
14×0.75	1	0.6	0.05~0.10	2×0.2	1.5	15.4	18.7
14×1.0	1	0.6	0.05~0.10	2×0.2	1.5	16.1	19.4
14×1.5	1	0.7	0.05~0.10	2×0.2	1.7	18.4	22.2
14×2.5	1	0.8	0.05~0.10	2×0.2	1.7	20.9	25.3
14×4	1	0.8	0.05~0.10	2×0.2	1.7	22.8	27.6
14×6	1	0.8	0.05~0.10	2×0.2	1.7	24.9	30.1
16×0.75	1	0.6	0.05~0.10	2×0.2	1.5	16.0	19.4
16×1.0	1	0.6	0.05~0.10	2×0.2	1.5	16.7	20.2
16×1.5	1	0.7	0.05~0.10	2×0.2	1.7	19.1	24.1
16×2.5	1	0.8	0.05~0.10	2×0.2	1.7	21.8	27.6
19×0.75	1	0.6	0.05~0.10	2×0.2	1.5	16.7	20.1
19×1.0	1	0.6	0.05~0.10	2×0.2	1.7	17.4	21.0
19×1.5	1	0.7	0.05~0.10	2×0.2	1.7	19.9	24.1

芯数×标称截面mm <sup>2</sup> Core number×Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Copper tape shielding thickness mm	钢带层数×厚度 mm Steel tape number × thickness mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
						下限 Min	上限 Max
19×2.5	1	0.8	0.05~0.10	2×0.2	1.7	22.8	27.6
24×0.75	1	0.6	0.05~0.10	2×0.2	1.7	19.0	23.1
24×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.0	24.1
24×1.5	1	0.7	0.05~0.10	2×0.2	1.7	22.6	27.3
24×2.5	1	0.8	0.05~0.10	2×0.2	1.7	26.4	31.9
27×0.75	1	0.6	0.05~0.10	2×0.2	1.7	19.4	23.5
27×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.3	24.5
27×1.5	1	0.7	0.05~0.10	2×0.2	1.7	23.0	27.7
27×2.5	1	0.8	0.05~0.10	2×0.2	1.7	26.9	32.5
30×0.75	1	0.6	0.05~0.10	2×0.2	1.7	20.0	24.1
30×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.9	25.2
30×1.5	1	0.7	0.05~0.10	2×0.2	1.7	23.6	28.6
30×2.5	1	0.8	0.05~0.10	2×0.2	2.0	28.3	34.2
37×0.75	1	0.6	0.05~0.10	2×0.2	1.7	21.2	25.6
37×1.0	1	0.6	0.05~0.10	2×0.2	1.7	22.2	26.8
37×1.5	1	0.7	0.05~0.10	2×0.2	1.7	25.6	30.9
37×2.5	1	0.8	0.05~0.10	2×0.2	2.0	30.2	36.5

KVVR型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆

KVVR Type450//750V Copper-core PVC insulated PVC sheathed flexible control cables

芯数×标称截面mm <sup>2</sup> Core number×Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
4×0.5	5	0.6	1.2	7.3	9.2
4×0.75	5	0.6	1.2	7.6	9.6
4×1.0	5	0.6	1.2	8.0	10.0
4×1.5	5	0.7	1.2	9.0	11.3
4×2.5	5	0.8	1.2	10.5	13.1
5×0.5	5	0.6	1.2	7.9	9.9
5×0.75	5	0.6	1.2	8.3	10.3
5×1.0	5	0.6	1.2	8.6	10.8
5×1.5	5	0.7	1.2	9.8	12.2
5×2.5	5	0.8	1.2	11.5	14.3
7×0.5	5	0.6	1.2	8.5	10.6
7×0.75	5	0.6	1.2	8.9	11.1
7×1.0	5	0.6	1.2	9.3	11.7
7×1.5	5	0.7	1.2	10.6	13.2
7×2.5	5	0.8	1.5	13.1	16.2
8×0.5	5	0.6	1.2	9.4	11.7
8×0.75	5	0.6	1.2	9.9	12.3
8×1.0	5	0.6	1.2	10.4	12.9
8×1.5	5	0.7	1.5	12.5	15.4
8×2.5	5	0.8	1.5	14.6	18.0

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
10 × 0.5	5	0.6	1.2	10.5	13.1
10 × 0.75	5	0.6	1.2	11.1	13.8
10 × 1.0	5	0.6	1.5	12.3	15.2
10 × 1.5	5	0.7	1.5	14.0	17.3
10 × 2.5	5	0.8	1.5	16.5	20.3
12 × 0.5	5	0.6	1.2	10.9	13.5
12 × 0.75	5	0.6	1.2	11.5	14.2
12 × 1.0	5	0.6	1.5	12.7	15.7
12 × 1.5	5	0.7	1.5	14.4	17.8
12 × 2.5	5	0.8	1.5	17.0	21.0
14 × 0.5	5	0.6	1.2	11.4	14.1
14 × 0.75	5	0.6	1.5	12.6	15.6
14 × 1.0	5	0.6	1.5	13.2	16.4
14 × 1.5	5	0.7	1.5	15.1	18.7
14 × 2.5	5	0.8	1.5	17.9	22.0
16 × 0.5	5	0.6	1.5	12.6	15.5
16 × 0.75	5	0.6	1.5	13.2	16.4
16 × 1.0	5	0.6	1.5	13.9	17.2
16 × 1.5	5	0.7	1.5	16.0	19.6
16 × 2.5	5	0.8	1.7	19.3	23.6
19 × 0.5	5	0.6	1.5	13.2	16.3
19 × 0.75	5	0.6	1.5	13.9	17.2
19 × 1.0	5	0.6	1.5	14.6	18.0
19 × 1.5	5	0.7	1.5	16.8	20.6
19 × 2.5	5	0.8	1.7	20.3	24.9
24 × 0.5	5	0.6	1.5	15.3	18.8
24 × 0.75	5	0.6	1.5	16.1	19.8
24 × 1.0	5	0.6	1.5	17.0	20.9
24 × 1.5	5	0.7	1.7	20.0	24.5
24 × 2.5	5	0.8	1.7	23.7	29.0
27 × 0.5	5	0.6	1.5	15.6	19.2
27 × 0.75	5	0.6	1.5	16.4	20.2
27 × 1.0	5	0.6	1.5	17.3	21.3
27 × 1.5	5	0.7	1.7	20.4	25.0
27 × 2.5	5	0.8	1.7	24.2	29.6
30 × 0.5	5	0.6	1.5	16.1	19.8
30 × 0.75	5	0.6	1.5	17.0	20.9
30 × 1.0	5	0.6	1.7	17.9	22.0
30 × 1.5	5	0.7	1.7	21.1	25.9
30 × 2.5	5	0.8	1.7	25.1	30.7
37 × 0.5	5	0.6	1.5	17.3	21.3
37 × 0.75	5	0.6	1.7	18.7	23.0
37 × 1.0	5	0.6	1.7	19.7	24.2
37 × 1.5	5	0.7	1.7	22.7	27.8
37 × 2.5	5	0.8	2.0	27.7	33.8

## KVVVP型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套编织屏蔽控制软电缆

KVVVP Type 450/750V copper-core PVC insulated PVC sheathed braid shield flexible control cables

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称 直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4×0.5	5	0.6	0.15	1.2	8.3	10.4
4×0.75	5	0.6	0.15	1.2	8.6	10.8
4×1.0	5	0.6	0.15	1.2	9.0	11.2
4×1.5	5	0.7	0.15	1.2	10.0	12.5
4×2.5	5	0.8	0.15	1.2	11.5	14.3
5×0.5	5	0.6	0.15	1.2	8.9	11.1
5×0.75	5	0.6	0.15	1.2	9.3	11.6
5×1.0	5	0.6	0.15	1.2	9.7	12.0
5×1.5	5	0.7	0.15	1.2	10.8	13.4
5×2.5	5	0.8	0.15	1.5	13.3	16.5
7×0.5	5	0.6	0.15	1.2	9.5	11.8
7×0.75	5	0.6	0.15	1.2	9.9	12.4
7×1.0	5	0.6	0.15	1.2	10.4	12.9
7×1.5	5	0.7	0.15	1.2	12.2	15.1
7×2.5	5	0.8	0.20	1.5	14.3	17.7
8×0.5	5	0.6	0.15	1.2	10.4	13.0
8×0.75	5	0.6	0.15	1.2	10.9	13.6
8×1.0	5	0.6	0.20	1.2	11.4	14.2
8×1.5	5	0.7	0.20	1.5	13.7	16.9
8×2.5	5	0.8	0.20	1.5	15.9	19.5
10×0.5	5	0.6	0.15	1.2	11.6	14.3
10×0.75	5	0.6	0.15	1.5	12.7	15.7
10×1.0	5	0.6	0.20	1.5	13.5	16.7
10×1.5	5	0.7	0.20	1.5	15.3	18.8
10×2.5	5	0.8	0.20	1.5	17.7	21.8
12×0.5	5	0.6	0.15	1.5	12.5	15.4
12×0.75	5	0.6	0.15	1.5	13.3	16.4
12×1.0	5	0.6	0.20	1.5	13.9	17.2
12×1.5	5	0.7	0.20	1.5	15.7	19.3
12×2.5	5	0.8	0.20	1.7	18.7	22.9
14×0.5	5	0.6	0.15	1.5	13.2	16.3
14×0.75	5	0.6	0.20	1.5	13.9	17.1
14×1.0	5	0.6	0.20	1.5	14.5	17.9
14×1.5	5	0.7	0.20	1.5	16.4	20.2
14×2.5	5	0.8	0.20	1.7	19.5	24.0
16×0.5	5	0.6	0.20	1.5	13.8	17.1
16×0.75	5	0.6	0.20	1.5	14.5	17.9
16×1.0	5	0.6	0.20	1.5	15.2	18.7
16×1.5	5	0.7	0.20	1.5	17.2	21.1
16×2.5	5	0.8	0.20	1.7	20.5	25.2

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
19×0.5	5	0.6	0.20	1.5	14.4	17.8
19×0.75	5	0.6	0.20	1.5	15.2	18.7
19×1.0	5	0.6	0.20	1.5	15.9	19.5
19×1.5	5	0.7	0.20	1.5	18.4	22.6
19×2.5	5	0.8	0.20	1.7	21.5	26.4
24×0.5	5	0.6	0.20	1.5	16.5	20.3
24×0.75	5	0.6	0.20	1.5	17.4	21.3
24×1.0	5	0.6	0.20	1.7	18.6	22.9
24×1.5	5	0.7	0.20	1.7	21.2	26.0
24×2.5	5	0.8	0.25	1.7	25.2	30.8
27×0.5	5	0.6	0.20	1.5	16.8	20.7
27×0.75	5	0.6	0.20	1.5	17.7	21.7
27×1.0	5	0.6	0.20	1.7	19.0	23.3
27×1.5	5	0.7	0.20	1.7	21.6	26.5
27×2.5	5	0.8	0.25	1.7	25.7	31.4
30×0.5	5	0.6	0.20	1.5	17.3	21.3
30×0.75	5	0.6	0.20	1.7	18.7	22.9
30×1.0	5	0.6	0.20	1.7	19.6	24.0
30×1.5	5	0.7	0.25	1.7	22.3	27.4
30×2.5	5	0.8	0.25	1.7	26.6	32.5
37×0.5	5	0.6	0.20	1.7	18.9	23.3
37×0.75	5	0.6	0.20	1.7	20.0	24.5
37×1.0	5	0.6	0.20	1.7	21.0	25.7
37×1.5	5	0.7	0.25	1.7	24.2	29.6
37×2.5	5	0.8	0.25	2.0	29.2	35.6

## 2.交联聚乙烯绝缘聚氯乙烯护套控制电缆 (GB/T 9330.3—2008) XLPE insulated PVC sheathed control cables (GB/T 9330.3-2008)

●型号、名称及使用范围 Type、Name & Application scope

型 号 Type	名 称 Name	主要使用范围 Application Scope
KYJV	交联聚乙烯绝缘聚氯乙烯护套控制电缆 XLPE insulated PVC sheathed control cables	敷设在室内、电缆沟、管道等固定场合 Laid in fixed position such as indoor, cable channel and pipe, etc.
KYJVP	交联聚乙烯绝缘聚氯乙烯护套编织屏蔽控制电缆 XLPE insulated PVC sheathed braided shielded control cables	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 Laid in fixed and shield position such as indoor, cable channel and pipe, etc.
KYJVP2	交联聚乙烯绝缘聚氯乙烯护套铜带屏蔽控制电缆 XLPE insulated PVC sheathed copper-tape shield control cables	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 Laid in fixed and shielded position such as indoor, cable channel and pipe, etc.
KYJV22	交联聚乙烯绝缘聚氯乙烯护套钢带铠装控制电缆 XLPE insulated PVC sheathed steel-tape armored control cables	敷设在室内、电缆沟、直埋、管道等能承受较大机械外力的固定场合 Laid in fixed position able to bear large mechanical force such as indoor, cable channel, underground and pipe, etc.
KYJVP2-22	交联聚乙烯绝缘聚氯乙烯护套铜带屏蔽钢带铠装控制电缆 XLPE insulated PVC sheathed copper-tape shield steel-tape armored control cables	敷设在室内、电缆沟、直埋、管道等要求屏蔽并能承受较大机械外力的固定场合 Laid in fixed and shielded position able to bear large mechanical forces such as indoor, cable channel, underground and pipe, etc.
KYJVR	交联聚乙烯绝缘聚氯乙烯护套控制软电缆 XLPE insulated PVC sheathed flexible control cables	敷设在室内移动要求柔软等场合 Laid indoor where movement requiring flexible

型 号 Type	名 称 Name	主要使用范围 Application Scope
KYJVRP	交联聚乙烯绝缘聚氯乙烯护套编织屏蔽控制软电缆 XLPE insulated PVC sheathed braid shield flexible control cables	敷设在室内移动要求柔软、屏蔽等场合 Laid indoor where movement requiring flexible and shielded
KYJV32	交联聚乙烯绝缘聚氯乙烯护套钢丝铠装控制电缆 XLPE insulated PVC sheathed fine steel wire armored control cables	敷设在室内、电缆沟、管道、竖井等能承受较大机械拉力等固定场合 Laid in fixed position able to bear large mechanical pulling force such as indoor, cable channel, pipe and shaft, etc.

注：本表中未列出的电缆型号可按GB/T 9330.1-2008中第4章的规定进行组合。

Noted: The cable type not listed in the above table can be combined according to rules in chapter 4 of GB/T 9330.1-2008.

#### ●性能参数 Performance parameters

**KYJV型450/750V铜芯交联聚乙烯绝缘聚氯乙烯护套控制电缆**  
**KYJV type 450/750V Copper-core XLPE insulated PVC sheathed control cables**

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
2 × 0.75	1	0.6	1.2	6.7	8.1
2 × 1.0	1	0.6	1.2	7.0	8.5
2 × 1.5	1	0.6	1.2	7.5	9.0
2 × 2.5	1	0.7	1.2	8.6	10.4
2 × 4	1	0.7	1.2	9.5	11.5
2 × 6	1	0.7	1.2	10.5	12.6
2 × 10	2	0.7	1.5	13.2	15.9
3 × 0.75	1	0.6	1.2	7.1	8.5
3 × 1.0	1	0.6	1.2	7.4	8.9
3 × 1.5	1	0.6	1.2	7.9	9.5
3 × 2.5	1	0.7	1.2	9.1	11.0
3 × 4	1	0.7	1.2	10.1	12.2
3 × 6	1	0.7	1.2	11.1	13.4
3 × 10	2	0.7	1.5	14.0	16.9
4 × 0.75	1	0.6	1.2	7.6	9.2
4 × 1.0	1	0.6	1.2	7.9	9.6
4 × 1.5	1	0.6	1.2	8.5	10.3
4 × 2.5	1	0.7	1.2	9.9	12.0
4 × 4	1	0.7	1.2	11.0	13.2
4 × 6	1	0.7	1.2	12.7	15.3
4 × 10	2	0.7	1.5	15.2	18.4
5 × 0.75	1	0.6	1.2	8.2	9.9
5 × 1.0	1	0.6	1.2	8.6	10.3
5 × 1.5	1	0.6	1.2	9.2	11.1
5 × 2.5	1	0.7	1.2	10.8	13.0
5 × 4	1	0.7	1.5	11.9	14.4
5 × 6	1	0.7	1.5	13.8	16.7
5 × 10	2	0.7	1.5	16.6	20.1
7 × 0.75	1	0.6	1.2	8.8	10.6
7 × 1.0	1	0.6	1.2	9.2	11.1
7 × 1.5	1	0.6	1.2	9.9	12.0
7 × 2.5	1	0.7	1.2	11.7	14.1

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
7×4	1	0.7	1.5	13.5	16.4
7×6	1	0.7	1.5	15.0	18.1
7×10	2	0.7	1.5	18.1	21.9
8×0.75	1	0.6	1.2	9.7	11.7
8×1.0	1	0.6	1.2	10.2	12.3
8×1.5	1	0.6	1.2	11.0	13.3
8×2.5	1	0.7	1.5	13.6	16.4
8×4	1	0.7	1.5	15.1	18.2
8×6	1	0.7	1.5	16.7	20.2
8×10	2	0.7	1.5	20.8	25.1
10×0.75	1	0.6	1.2	10.8	13.1
10×1.0	1	0.6	1.2	11.4	13.8
10×1.5	1	0.6	1.5	13.0	15.7
10×2.5	1	0.7	1.5	15.3	18.4
10×4	1	0.7	1.5	17.0	20.5
10×6	1	0.7	1.5	19.3	23.3
10×10	2	0.7	1.5	23.5	28.4
12×0.75	1	0.6	1.2	11.2	13.5
12×1.0	1	0.6	1.2	11.8	14.2
12×1.5	1	0.6	1.5	13.4	16.1
12×2.5	1	0.7	1.5	15.7	19.0
12×4	1	0.7	1.5	17.5	21.2
12×6	1	0.7	1.5	19.9	24.1
14×0.75	1	0.6	1.2	11.7	14.1
14×1.0	1	0.6	1.5	12.9	15.6
14×1.5	1	0.6	1.5	14.0	16.9
14×2.5	1	0.7	1.5	16.5	19.9
14×4	1	0.7	1.5	18.8	22.7
14×6	1	0.7	1.5	20.9	25.3
16×0.75	1	0.6	1.5	12.9	15.5
16×1.0	1	0.6	1.5	13.5	16.4
16×1.5	1	0.6	1.5	14.7	17.7
16×2.5	1	0.7	1.5	17.4	21.0
19×0.75	1	0.6	1.5	13.5	16.3
19×1.0	1	0.6	1.5	14.2	17.2
19×1.5	1	0.6	1.5	15.4	18.6
19×2.5	1	0.7	1.5	18.7	22.6
24×0.75	1	0.6	1.5	15.6	18.8
24×1.0	1	0.6	1.5	16.4	19.8
24×1.5	1	0.6	1.5	17.9	21.6
24×2.5	1	0.7	1.7	21.7	26.2
27×0.75	1	0.6	1.5	15.9	19.2
27×1.0	1	0.6	1.5	16.7	20.2
27×1.5	1	0.6	1.5	18.2	22.0
27×2.5	1	0.7	1.7	22.1	26.8

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
				下限 Min	上限 Max
30×0.75	1	0.6	1.5	16.4	19.8
30×1.0	1	0.6	1.5	17.3	20.9
30×1.5	1	0.6	1.7	19.2	23.3
30×2.5	1	0.7	1.7	22.9	27.7
37×0.75	1	0.6	1.5	17.6	21.3
37×1.0	1	0.6	1.7	19.0	23.0
37×1.5	1	0.6	1.7	20.7	25.0
37×2.5	1	0.7	1.7	24.7	29.9

KYJVP型450/750V铜芯交联聚乙烯绝缘聚氯乙烯护套编织屏蔽控制电缆

KYJVP Type 450/750V Copper-core XLPE insulated PVC sheathed braid shielded control cables

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称 直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
2×0.75	1	0.6	0.15	1.2	7.7	9.3
2×0.75	2	0.6	0.15	1.2	7.9	9.6
2×1.0	1	0.6	0.15	1.2	8.0	9.7
2×1.0	2	0.6	0.15	1.2	8.2	9.9
2×1.5	1	0.6	0.15	1.2	8.5	10.3
2×1.5	2	0.6	0.15	1.2	8.7	10.5
2×2.5	1	0.7	0.15	1.2	9.6	11.7
2×2.5	2	0.7	0.15	1.2	9.8	11.9
2×4	1	0.7	0.15	1.2	10.5	12.7
2×4	2	0.7	0.15	1.2	10.8	13.1
2×6	1	0.7	0.15	1.2	11.5	13.9
2×6	2	0.7	0.15	1.2	12.4	15.0
2×10	2	0.7	0.2	1.5	14.4	17.4
3×0.75	1	0.6	0.15	1.2	8.1	9.7
3×0.75	2	0.6	0.15	1.2	8.3	10.0
3×1.0	1	0.6	0.15	1.2	8.4	10.1
3×1.0	2	0.6	0.15	1.2	8.6	10.4
3×1.5	1	0.6	0.15	1.2	8.9	10.7
3×1.5	2	0.6	0.15	1.2	9.1	11.0
3×2.5	1	0.7	0.15	1.2	10.1	12.2
3×2.5	2	0.7	0.15	1.2	10.3	12.5
3×4	1	0.7	0.15	1.2	11.1	13.4
3×4	2	0.7	0.15	1.2	11.4	13.7
3×6	1	0.7	0.15	1.2	12.7	15.3
3×6	2	0.7	0.15	1.2	13.1	15.8
3×10	2	0.7	0.2	1.5	15.2	18.4
4×0.75	1	0.6	0.15	1.2	8.6	10.4
4×0.75	2	0.6	0.15	1.2	8.8	10.7

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4 × 1.0	1	0.6	0.15	1.2	8.9	10.8
4 × 1.0	2	0.6	0.15	1.2	9.2	11.1
4 × 1.5	1	0.6	0.15	1.2	9.5	11.5
4 × 1.5	2	0.6	0.15	1.2	9.8	11.8
4 × 2.5	1	0.7	0.15	1.2	10.9	13.2
4 × 2.5	2	0.7	0.15	1.2	11.2	13.5
4 × 4	1	0.7	0.15	1.2	12.5	15.2
4 × 4	2	0.7	0.15	1.2	12.9	15.6
4 × 6	1	0.7	0.20	1.5	13.9	16.8
4 × 6	2	0.7	0.20	1.5	14.4	17.4
4 × 10	2	0.7	0.20	1.5	16.5	19.9
5 × 0.75	1	0.6	0.15	1.2	9.2	11.1
5 × 0.75	2	0.6	0.15	1.2	9.4	11.4
5 × 1.0	1	0.6	0.15	1.2	9.6	11.6
5 × 1.0	2	0.6	0.15	1.2	9.8	11.9
5 × 1.5	1	0.6	0.15	1.2	10.2	12.3
5 × 1.5	2	0.6	0.15	1.2	10.5	12.6
5 × 2.5	1	0.7	0.15	1.2	12.3	14.9
5 × 2.5	2	0.7	0.15	1.2	12.6	15.2
5 × 4	1	0.7	0.15	1.5	13.7	16.6
5 × 4	2	0.7	0.20	1.5	14.1	17.1
5 × 6	1	0.7	0.20	1.5	15.0	18.2
5 × 6	2	0.7	0.20	1.5	15.6	18.8
5 × 10	2	0.7	0.20	1.5	17.9	21.6
7 × 0.75	1	0.6	0.15	1.2	9.8	11.8
7 × 0.75	2	0.6	0.15	1.2	10.1	12.2
7 × 1.0	1	0.6	0.15	1.2	10.2	12.4
7 × 1.0	2	0.6	0.15	1.2	10.5	12.7
7 × 1.5	1	0.6	0.15	1.2	10.9	13.2
7 × 1.5	2	0.6	0.15	1.2	11.2	13.6
7 × 2.5	1	0.7	0.15	1.5	13.2	16.0
7 × 2.5	2	0.7	0.15	1.5	13.8	16.6
7 × 4	1	0.7	0.20	1.5	14.8	17.9
7 × 4	2	0.7	0.20	1.5	15.2	18.4
7 × 6	1	0.7	0.20	1.5	16.2	19.6
7 × 6	2	0.7	0.20	1.5	16.8	20.3
7 × 10	2	0.7	0.20	1.7	19.8	23.9
8 × 0.75	1	0.6	0.15	1.2	10.7	13.0
8 × 0.75	2	0.6	0.15	1.2	11.1	13.4
8 × 1.0	1	0.6	0.15	1.2	11.2	13.6
8 × 1.0	2	0.6	0.15	1.2	11.5	14.0
8 × 1.5	1	0.6	0.15	1.2	12.6	15.3

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称 直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
8×1.5	2	0.6	0.15	1.2	13.0	15.7
8×2.5	1	0.7	0.20	1.5	14.8	17.9
8×2.5	2	0.7	0.20	1.5	15.2	18.3
8×4	1	0.7	0.20	1.5	16.3	19.7
8×4	2	0.7	0.20	1.5	16.8	20.3
8×6	1	0.7	0.20	1.5	18.4	22.2
8×6	2	0.7	0.20	1.5	19.0	23.0
8×10	2	0.7	0.20	1.7	22.3	26.9
10×0.75	1	0.6	0.15	1.2	12.4	15.0
10×0.75	2	0.6	0.15	1.2	12.8	15.5
10×1.0	1	0.6	0.15	1.2	13.0	15.7
10×1.0	2	0.6	0.15	1.5	13.4	16.2
10×1.5	1	0.6	0.20	1.5	14.2	17.2
10×1.5	2	0.6	0.20	1.5	14.6	17.6
10×2.5	1	0.7	0.20	1.5	16.5	20.0
10×2.5	2	0.7	0.20	1.5	16.9	20.4
10×4	1	0.7	0.20	1.5	18.6	22.5
10×4	2	0.7	0.20	1.5	19.2	23.2
10×6	1	0.7	0.20	1.7	20.5	24.8
10×6	2	0.7	0.20	1.7	21.3	25.8
10×10	2	0.7	0.20	1.7	25.0	30.2
12×0.75	1	0.6	0.15	1.2	12.8	15.4
12×0.75	2	0.6	0.15	1.2	13.2	15.9
12×1.0	1	0.6	0.20	1.5	13.4	16.1
12×1.0	2	0.6	0.20	1.5	14.0	16.9
12×1.5	1	0.6	0.20	1.5	14.6	17.6
12×1.5	2	0.6	0.20	1.5	15.0	18.1
12×2.5	1	0.7	0.20	1.5	17.0	20.5
12×2.5	2	0.7	0.20	1.5	17.4	21.0
12×4	1	0.7	0.20	1.5	19.2	23.2
12×4	2	0.7	0.20	1.7	19.8	23.9
12×6	1	0.7	0.20	1.7	21.2	25.6
12×6	2	0.7	0.20	1.7	22.0	26.6
14×0.75	1	0.6	0.15	1.5	13.3	16.0
14×0.75	2	0.6	0.20	1.5	13.9	16.8
14×1.0	1	0.6	0.20	1.5	14.2	17.1
14×1.0	2	0.6	0.20	1.5	14.6	17.6
14×1.5	1	0.6	0.20	1.5	15.2	18.4
14×1.5	2	0.7	0.20	1.5	15.6	18.9
14×2.5	1	0.7	0.20	1.5	17.8	21.5
14×2.5	2	0.7	0.20	1.5	18.6	22.4
14×4	1	0.7	0.20	1.7	20.0	24.2

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
14×4	2	0.7	0.20	1.7	20.7	25.0
14×6	1	0.7	0.20	1.7	22.2	26.8
14×6	2	0.7	0.20	1.7	23.0	27.8
16×0.75	1	0.6	0.20	1.5	14.1	17.7
16×0.75	2	0.6	0.20	1.5	14.6	17.6
16×1.0	1	0.6	0.20	1.5	14.8	17.9
16×1.0	2	0.6	0.20	1.5	15.2	18.4
16×1.5	1	0.6	0.20	1.5	15.9	19.2
16×1.5	2	0.6	0.20	1.5	16.4	19.8
16×2.5	1	0.7	0.20	1.5	19.0	23.0
16×2.5	2	0.7	0.20	1.7	19.5	23.5
19×0.75	1	0.6	0.20	1.5	14.7	17.8
19×0.75	2	0.6	0.20	1.5	15.2	18.4
19×1.0	1	0.6	0.20	1.5	15.5	18.7
19×1.0	2	0.6	0.20	1.5	15.9	19.3
19×1.5	1	0.6	0.20	1.5	16.7	20.1
19×1.5	2	0.6	0.20	1.5	17.1	20.7
19×2.5	1	0.7	0.20	1.7	19.9	24.1
19×2.5	2	0.7	0.20	1.7	20.4	24.7
24×0.75	1	0.6	0.20	1.5	16.8	20.3
24×0.75	2	0.6	0.20	1.5	17.4	21.0
24×1.0	1	0.6	0.20	1.5	17.7	21.3
24×1.0	2	0.6	0.20	1.5	18.6	22.5
24×1.5	1	0.6	0.20	1.5	19.5	23.5
24×1.5	2	0.6	0.20	1.5	20.1	24.2
24×2.5	1	0.7	0.20	1.7	22.9	27.7
24×2.5	2	0.7	0.20	1.7	23.5	28.4
27×0.75	1	0.6	0.20	1.5	17.1	20.7
27×0.75	2	0.6	0.20	1.5	17.7	21.4
27×1.0	1	0.6	0.20	1.5	18.4	22.2
27×1.0	2	0.6	0.20	1.5	19.0	22.9
27×1.5	1	0.6	0.20	1.7	19.9	24.0
27×1.5	2	0.6	0.20	1.7	20.4	24.7
27×2.5	1	0.7	0.20	1.7	23.4	28.3
27×2.5	2	0.7	0.25	1.7	24.2	29.3
30×0.75	1	0.6	0.20	1.5	17.6	21.3
30×0.75	2	0.6	0.20	1.5	18.6	22.5
30×1.0	1	0.6	0.20	1.5	19.0	22.9
30×1.0	2	0.6	0.20	1.7	19.6	23.6
30×1.5	1	0.6	0.20	1.7	20.5	24.8
30×1.5	2	0.6	0.20	1.7	21.1	25.5
30×2.5	1	0.7	0.25	1.7	24.4	29.5

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽单线标称直径 mm Nominal Diameter of Shield, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
30×2.5	2	0.7	0.25	1.7	25.0	30.3
37×0.75	1	0.6	0.20	1.5	19.2	23.3
37×0.75	2	0.6	0.20	1.7	19.9	24.1
37×1.0	1	0.6	0.20	1.7	20.3	24.5
37×1.0	2	0.6	0.20	1.7	20.9	25.3
37×1.5	1	0.6	0.20	1.7	21.9	26.5
37×1.5	2	0.6	0.20	1.7	22.6	27.3
37×2.5	1	0.7	0.25	1.7	26.2	31.7
37×2.5	2	0.7	0.25	1.7	26.9	32.5

KYJVP2型450/750V铜芯交联聚乙烯绝缘聚氯乙烯护套铜带屏蔽控制电缆

KYJVP2 TYPE450/750V Copper-core XLPE insulated PVC sheathed copper shielded control cables

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Shielded Copper Tape Thickness, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4×0.75	1	0.6	0.05~0.10	1.2	8.1	9.7
4×1.0	1	0.6	0.05~0.10	1.2	8.4	10.2
4×1.5	1	0.6	0.05~0.10	1.2	9.0	10.9
4×2.5	1	0.7	0.05~0.10	1.2	10.4	12.6
4×4	1	0.7	0.05~0.10	1.2	11.4	13.8
4×6	1	0.7	0.05~0.10	1.5	13.2	15.9
4×10	2	0.7	0.05~0.10	1.5	15.7	19.0
5×0.75	1	0.6	0.05~0.10	1.2	8.6	10.4
5×1.0	1	0.6	0.05~0.10	1.2	9.0	10.9
5×1.5	1	0.6	0.05~0.10	1.2	9.7	11.7
5×2.5	1	0.7	0.05~0.10	1.2	11.2	13.6
5×4	1	0.7	0.05~0.10	1.5	13.0	15.7
5×6	1	0.7	0.05~0.10	1.5	14.3	17.2
5×10	2	0.7	0.05~0.10	1.5	17.1	20.7
7×0.75	1	0.6	0.05~0.10	1.2	9.3	11.2
7×1.0	1	0.6	0.05~0.10	1.2	9.7	11.7
7×1.5	1	0.6	0.05~0.10	1.2	10.4	12.6
7×2.5	1	0.7	0.05~0.10	1.2	12.7	15.4
7×4	1	0.7	0.05~0.10	1.5	14.0	16.9
7×6	1	0.7	0.05~0.10	1.5	15.5	18.7
7×10	2	0.7	0.05~0.10	1.5	19.0	23.0
8×0.75	1	0.6	0.05~0.10	1.2	10.2	12.3
8×1.0	1	0.6	0.05~0.10	1.2	10.7	12.9
8×1.5	1	0.6	0.05~0.10	1.2	11.5	13.9
8×2.5	1	0.7	0.05~0.10	1.5	14.1	17.0
8×4	1	0.7	0.05~0.10	1.5	15.6	18.8
8×6	1	0.7	0.05~0.10	1.5	17.2	20.8

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Shielded Copper Tape Thickness, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
8×10	2	0.7	0.05~0.10	1.5	21.3	25.7
10×0.75	1	0.6	0.05~0.10	1.2	11.3	13.7
10×1.0	1	0.6	0.05~0.10	1.2	12.5	15.1
10×1.5	1	0.6	0.05~0.10	1.5	13.4	16.2
10×2.5	1	0.7	0.05~0.10	1.5	15.7	19.0
10×4	1	0.7	0.05~0.10	1.5	17.5	21.1
10×6	1	0.7	0.05~0.10	1.5	19.8	23.9
10×10	2	0.7	0.05~0.10	1.5	24.0	29.0
12×0.75	1	0.6	0.05~0.10	1.2	12.2	14.8
12×1.0	1	0.6	0.05~0.10	1.2	12.8	15.5
12×1.5	1	0.6	0.05~0.10	1.5	13.8	16.7
12×2.5	1	0.7	0.05~0.10	1.5	16.2	19.6
12×4	1	0.7	0.05~0.10	1.5	18.4	22.3
12×6	1	0.7	0.05~0.10	1.5	20.4	24.7
14×0.75	1	0.6	0.05~0.10	1.2	12.8	15.4
14×1.0	1	0.6	0.05~0.10	1.5	13.4	16.2
14×1.5	1	0.6	0.05~0.10	1.5	14.4	17.5
14×2.5	1	0.7	0.05~0.10	1.5	17.0	20.5
14×4	1	0.7	0.05~0.10	1.5	19.3	23.3
14×6	1	0.7	0.05~0.10	1.5	21.4	25.8
16×0.75	1	0.6	0.05~0.10	1.5	13.3	16.1
16×1.0	1	0.6	0.05~0.10	1.5	14.0	16.9
16×1.5	1	0.6	0.05~0.10	1.5	15.2	18.3
16×2.5	1	0.7	0.05~0.10	1.5	17.9	21.6
19×0.75	1	0.6	0.05~0.10	1.5	14.0	16.9
19×1.0	1	0.6	0.05~0.10	1.5	14.7	17.7
19×1.5	1	0.6	0.05~0.10	1.5	15.9	19.2
19×2.5	1	0.7	0.05~0.10	1.5	19.2	23.1
24×0.75	1	0.6	0.05~0.10	1.5	16.0	19.4
24×1.0	1	0.6	0.05~0.10	1.5	16.9	20.4
24×1.5	1	0.6	0.05~0.10	1.5	18.7	22.6
24×2.5	1	0.7	0.05~0.10	1.7	22.2	26.8
27×0.75	1	0.6	0.05~0.10	1.5	16.3	19.7
27×1.0	1	0.6	0.05~0.10	1.5	17.2	20.8
27×1.5	1	0.6	0.05~0.10	1.7	19.1	23.1
27×2.5	1	0.7	0.05~0.10	1.7	22.6	27.3
30×0.75	1	0.6	0.05~0.10	1.5	16.9	20.4
30×1.0	1	0.6	0.05~0.10	1.5	17.8	21.5
30×1.5	1	0.6	0.05~0.10	1.7	19.7	23.8
30×2.5	1	0.7	0.05~0.10	1.7	23.4	28.3
37×0.75	1	0.6	0.05~0.10	1.5	18.5	22.3
37×1.0	1	0.6	0.05~0.10	1.5	19.5	23.5

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Shielded Copper Tape Thickness, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
37×1.5	1	0.6	0.05~0.10	1.7	21.2	25.6
37×2.5	1	0.7	0.05~0.10	1.7	25.2	30.5

KYJV22型450/750V铜芯交联聚乙烯绝缘聚氯乙烯护套钢带铠装控制电缆

KYJV22 TYPE450/750V Copper-core XLPE insulated PVC sheathed Steel Tape Armored control cables

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	钢带结构层×厚 mm Steel Tape Structure X Thickness, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
4×2.5	1	0.7	2×0.2	1.5	12.9	15.6
4×4	1	0.7	2×0.2	1.5	13.9	16.8
4×6	1	0.7	2×0.2	1.5	15.1	18.2
4×10	2	0.7	2×0.2	1.5	17.6	21.3
5×2.5	1	0.7	2×0.2	1.5	13.7	16.6
5×4	1	0.7	2×0.2	1.5	14.9	18.0
5×6	1	0.7	2×0.2	1.5	16.2	19.6
5×10	2	0.7	2×0.2	1.7	19.4	23.5
7×0.75	1	0.6	2×0.2	1.5	11.2	13.5
7×1.0	1	0.6	2×0.2	1.5	11.6	14.0
7×1.5	1	0.6	2×0.2	1.5	12.9	15.6
7×2.5	1	0.7	2×0.2	1.5	14.6	17.7
7×4	1	0.7	2×0.2	1.5	15.9	19.3
7×6	1	0.7	2×0.2	1.5	17.4	21.0
7×10	2	0.7	2×0.2	1.7	20.9	25.3
8×0.75	1	0.6	2×0.2	1.5	12.7	15.3
8×1.0	1	0.6	2×0.2	1.5	13.2	15.9
8×1.5	1	0.6	2×0.2	1.5	14.0	16.9
8×2.5	1	0.7	2×0.2	1.5	16.0	19.3
8×4	1	0.7	2×0.2	1.5	17.5	21.1
8×6	1	0.7	2×0.2	1.7	19.5	23.6
8×10	2	0.7	2×0.2	1.7	23.2	28.0
10×0.75	1	0.6	2×0.2	1.5	13.8	16.7
10×1.0	1	0.6	2×0.2	1.5	14.4	17.4
10×1.5	1	0.6	2×0.2	1.5	15.4	18.6
10×2.5	1	0.7	2×0.2	1.5	17.7	21.3
10×4	1	0.7	2×0.2	1.7	19.8	23.9
10×6	1	0.7	2×0.2	1.7	21.7	26.2
10×10	2	0.7	2×0.2	1.7	26.3	31.8
12×0.75	1	0.6	2×0.2	1.5	14.2	17.1
12×1.0	1	0.6	2×0.2	1.5	14.8	17.8
12×1.5	1	0.6	2×0.2	1.5	15.8	19.0
12×2.5	1	0.7	2×0.2	1.7	18.1	21.9

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	钢带结构层×厚 mm Steel Tape Structure X Thickness, mm	护套标称厚度 mm Nominal Sheath Thickness, mm	平均外径mm Average diameter mm	
					下限 Min	上限 Max
12×4	1	0.7	2×0.2	1.7	20.3	24.6
12×6	1	0.7	2×0.2	1.7	22.3	27.0
14×0.75	1	0.6	2×0.2	1.5	14.7	17.7
14×1.0	1	0.6	2×0.2	1.5	15.3	18.5
14×1.5	1	0.6	2×0.2	1.5	16.4	19.8
14×2.5	1	0.7	2×0.2	1.7	19.3	23.3
14×4	1	0.7	2×0.2	1.7	21.2	25.6
14×6	1	0.7	2×0.2	1.7	23.3	28.2
16×0.75	1	0.6	2×0.2	1.5	15.3	18.4
16×1.0	1	0.6	2×0.2	1.5	15.9	19.3
16×1.5	1	0.6	2×0.2	1.5	17.1	20.6
16×2.5	1	0.7	2×0.2	1.7	20.2	24.4
19×0.75	1	0.6	2×0.2	1.5	15.9	19.2
19×1.0	1	0.6	2×0.2	1.5	16.6	20.1
19×1.5	1	0.6	2×0.2	1.5	17.8	21.5
19×2.5	1	0.7	2×0.2	1.7	21.1	25.5
24×0.75	1	0.6	2×0.2	1.5	18.0	21.7
24×1.0	1	0.6	2×0.2	1.7	19.2	23.2
24×1.5	1	0.6	2×0.2	1.7	20.6	24.9
24×2.5	1	0.7	2×0.2	1.7	24.1	29.1
27×0.75	1	0.6	2×0.2	1.7	18.6	22.5
27×1.0	1	0.6	2×0.2	1.7	19.5	23.6
27×1.5	1	0.6	2×0.2	1.7	21.0	25.4
27×2.5	1	0.7	2×0.2	1.7	24.5	29.7
30×0.75	1	0.6	2×0.2	1.7	19.2	23.2
30×1.0	1	0.6	2×0.2	1.7	20.1	24.3
30×1.5	1	0.6	2×0.2	1.7	21.6	26.2
30×2.5	1	0.7	2×0.2	1.7	25.7	31.1
37×0.75	1	0.6	2×0.2	1.7	20.4	24.7
37×1.0	1	0.6	2×0.2	1.7	21.4	25.9
37×1.5	1	0.6	2×0.2	1.7	23.1	27.9
37×2.5	1	0.7	2×0.2	2.0	28.1	33.9

## KYJVP2-22型450/750V铜芯交联聚乙烯绝缘聚氯乙烯护套钢带铠装控制电缆

KYJVP2-22TYPE450/750V Copper-Core XLPE insulated PVC sheathed steel tape armored control cables

芯数 × 标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Copper tape shielding thickness mm	钢带结构层×厚 mm Steel Tape Structure X Thickness, mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
						下限 Min	上限 Max
4 × 2.5	1	0.7	0.05~0.10	2×0.2	1.5	13.7	16.5
4 × 4	1	0.7	0.05~0.10	2×0.2	1.5	14.7	17.8
4 × 6	1	0.7	0.05~0.10	2×0.2	1.5	15.9	19.2
4 × 10	2	0.7	0.05~0.10	2×0.2	1.5	18.8	22.7
5 × 2.5	1	0.7	0.05~0.10	2×0.2	1.5	14.5	17.5
5 × 4	1	0.7	0.05~0.10	2×0.2	1.5	15.7	18.9
5 × 6	1	0.7	0.05~0.10	2×0.2	1.5	17.0	20.5
5 × 10	2	0.7	0.05~0.10	2×0.2	1.7	20.2	24.4
7 × 0.75	1	0.6	0.05~0.10	2×0.2	1.5	12.5	15.1
7 × 1.0	1	0.6	0.05~0.10	2×0.2	1.5	13.0	15.7
7 × 1.5	1	0.6	0.05~0.10	2×0.2	1.5	13.7	16.5
7 × 2.5	1	0.7	0.05~0.10	2×0.2	1.5	15.4	18.6
7 × 4	1	0.7	0.05~0.10	2×0.2	1.5	16.7	20.2
7 × 6	1	0.7	0.05~0.10	2×0.2	1.5	18.1	21.9
7 × 10	2	0.7	0.05~0.10	2×0.2	1.7	21.7	26.2
8 × 0.75	1	0.6	0.05~0.10	2×0.2	1.5	13.5	16.3
8 × 1.0	1	0.6	0.05~0.10	2×0.2	1.5	14.0	16.9
8 × 1.5	1	0.6	0.05~0.10	2×0.2	1.5	14.8	17.9
8 × 2.5	1	0.7	0.05~0.10	2×0.2	1.5	16.8	20.3
8 × 4	1	0.7	0.05~0.10	2×0.2	1.5	18.6	22.5
8 × 6	1	0.7	0.05~0.10	2×0.2	1.7	20.3	24.5
8 × 10	2	0.7	0.05~0.10	2×0.2	1.7	13.9	28.9
10 × 0.75	1	0.6	0.05~0.10	2×0.2	1.5	14.6	17.6
10 × 1.0	1	0.6	0.05~0.10	2×0.2	1.5	15.2	18.3
10 × 1.5	1	0.6	0.05~0.10	2×0.2	1.5	16.1	19.5
10 × 2.5	1	0.7	0.05~0.10	2×0.2	1.5	18.8	22.7
10 × 4	1	0.7	0.05~0.10	2×0.2	1.7	20.5	24.8
10 × 6	1	0.7	0.05~0.10	2×0.2	1.7	22.5	27.1
10 × 10	2	0.7	0.05~0.10	2×0.2	1.7	27.1	32.7
12 × 0.75	1	0.6	0.05~0.10	2×0.2	1.5	14.9	18.0
12 × 1.0	1	0.6	0.05~0.10	2×0.2	1.5	15.5	18.8
12 × 1.5	1	0.6	0.05~0.10	2×0.2	1.5	16.5	20.0
12 × 2.5	1	0.7	0.05~0.10	2×0.2	1.7	19.3	23.3
12 × 4	1	0.7	0.05~0.10	2×0.2	1.7	21.1	25.5
12 × 6	1	0.7	0.05~0.10	2×0.2	1.7	23.1	27.9
14 × 0.75	1	0.6	0.05~0.10	2×0.2	1.5	15.4	18.7
14 × 1.0	1	0.6	0.05~0.10	2×0.2	1.5	16.1	19.4
14 × 1.5	1	0.6	0.05~0.10	2×0.2	1.5	17.1	20.7
14 × 2.5	1	0.7	0.05~0.10	2×0.2	1.7	20.1	24.2
14 × 4	1	0.7	0.05~0.10	2×0.2	1.7	22.0	26.5

芯数×标称截面mm <sup>2</sup> Core number × Nominal Cross sectional area mm <sup>2</sup>	导体种类 Conductor type	绝缘标称厚度 mm Insulation thickness mm	屏蔽铜带厚度 mm Copper tape shielding thickness mm	钢带结构层×厚 mm Steel Tape Structure X Thickness, mm	护套标称厚度 mm Sheath thickness mm	平均外径mm Average diameter mm	
						下限 Min	上限 Max
14×6	1	0.7	0.05~0.10	2×0.2	1.7	24.1	29.1
16×0.75	1	0.6	0.05~0.10	2×0.2	1.5	16.0	19.4
16×1.0	1	0.6	0.05~0.10	2×0.2	1.5	16.7	20.2
16×1.5	1	0.6	0.05~0.10	2×0.2	1.5	17.8	21.6
16×2.5	1	0.7	0.05~0.10	2×0.2	1.7	20.9	25.3
19×0.75	1	0.6	0.05~0.10	2×0.2	1.5	16.7	20.1
19×1.0	1	0.6	0.05~0.10	2×0.2	1.5	17.4	21.0
19×1.5	1	0.6	0.05~0.10	2×0.2	1.5	19.0	22.9
19×2.5	1	0.7	0.05~0.10	2×0.2	1.7	21.8	26.4
24×0.75	1	0.6	0.05~0.10	2×0.2	1.5	19.1	23.1
24×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.0	24.1
24×1.5	1	0.6	0.05~0.10	2×0.2	1.7	21.4	25.9
24×2.5	1	0.7	0.05~0.10	2×0.2	1.7	24.9	30.0
27×0.75	1	0.6	0.05~0.10	2×0.2	1.7	19.4	23.5
27×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.3	24.5
27×1.5	1	0.6	0.05~0.10	2×0.2	1.7	21.8	26.3
27×2.5	1	0.7	0.05~0.10	2×0.2	1.7	25.7	31.1
30×0.75	1	0.6	0.05~0.10	2×0.2	1.7	20.0	24.1
30×1.0	1	0.6	0.05~0.10	2×0.2	1.7	20.9	25.2
30×1.5	1	0.6	0.05~0.10	2×0.2	1.7	22.4	27.1
30×2.5	1	0.7	0.05~0.10	2×0.2	1.7	26.5	32.0
37×0.75	1	0.6	0.05~0.10	2×0.2	1.7	21.2	25.6
37×1.0	1	0.6	0.05~0.10	2×0.2	1.7	22.2	26.8
37×1.5	1	0.6	0.05~0.10	2×0.2	1.7	23.9	28.8
37×2.5	1	0.7	0.05~0.10	2×0.2	2.0	28.8	34.9

# 电力电缆 Power Cables

使用特性:

聚氯乙烯绝缘、聚乙烯绝缘: 导体的长期允许工作温度不超过70℃, 短路时(最长持续时间不超过5秒), 导体最高温度不超过160℃。交联聚乙烯绝缘: 导体的长期允许工作温度不超过90℃, 短路时(最长持续时间不超过5秒), 导体最高温度不超过250℃。敷设时环境温度应不低于0℃。

最小弯曲半径为:

单芯电缆: 无铠装: 20D; 有铠装: 15D

多芯电缆: 无铠装: 15D; 有铠装: 12D

其中: D—电缆的实际外径

Attribute:

PVC insulated、PE insulated: long-term service temperature of the cable conductor shall not exceed 77℃, When short circuit (max 5s), the temperature of cable conductor should not exceed 160℃. XLPE insulated: long-term service temperature of the cable conductor shall not exceed 90℃, When short circuit (max 5s), the temperature of cable conductor shall not exceed 250℃. The ambient temperature for laying cable shall not lower than 0℃.

Min. Allowable bending radius:

Single Core: non-armored: 20D; armored: 15D

Multi-Core: non-armored: 15D; armored: 12D

Where: D—Actual outer diameter of cable

生产范围说明:

公司还可生产橡胶或类似绝缘、聚乙烯护套、聚烯烃护套系列和阻燃、耐火系列。

Production scope statement:

Corporation can also produce rubber like insulated、PE sheath、PO sheath series and flame、retardant series.

## ◆ 额定电压1kV和3kV电力电缆: GB/T 12706.1—2008

用途: 用于额定电压1kV及以下输配电网线路固定敷设输送电能。

额定电压: U<sub>0</sub>/U: 0.6/1kV、1.8/3kV

规格: 芯数: 1~5芯; 标称截面: 1.5~1000mm<sup>2</sup>

型号: VV、VLV、VV22、VLV22、VV32、VLV32、VV62、VLV62、VV72、VLV72; YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72

其中YJV62、YJLV62、YJV72、YJLV72是采用非磁性金属铠装的单芯电缆。

## ◆ Rated voltage 1kV and 3kV power cables: GB/T 12706.1-2008

Purpose: For fixed laid in and power transmission of transmission and distribution lines of AC rated voltage 1kV and under 1kV.

Rated voltage: U<sub>0</sub>/U: 0.6/1kV、1.8/3kV

Specification: Core Number: 1~5 cores; Nominal cross sectional area: 1.5~1000mm<sup>2</sup>.

Type: VV、VLV、VV22、VLV22、VV32、VLV32、VV62、VLV62、VV72、VLV72; YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72

Among those, YJV62、YJLV62、YJV72、YJLV72 are single core cables which use non-magnetic metal armor.

## ◆ 额定电压6kV ~ 30kV电力电缆: GB/T 12706.2—2008

用途: 用于配电网或工业装置中, 固定安装敷设。

额定电压: U<sub>0</sub>/U: 3.6/6kV、6/6kV、6/10kV、8.7/10kV、8.7/15kV、12/20kV、18/30kV

规格: 芯数: 1、3芯; 标称截面: 10~1600mm<sup>2</sup>

型号: YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72

其中YJV62、YJLV62、YJV72、YJLV72是采用非磁性金属铠装的单芯电缆。

## ◆ Rated voltage 6kV to 30kV power cables: GB/T 12706.2-2008

Purpose: For fixed laying in the distribution line or industrial device.

Rated voltage: U<sub>0</sub>/U: 3.6/6kV、6/6kV、6/10kV、8.7/10kV、8.7/15kV、12/20kV、18/30kV.

Specification: Core Number :1、3 cores; Nominal cross sectional area: 10~1600mm<sup>2</sup>

Type: YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72.

Among those, YJV62、YJLV62、YJV72、YJLV72 are single core cables which use non-magnetic metal armor

## ◆ 额定电压35kV电力电缆: GB/T 12706.3—2008

用途: 用于配电网或工业装置中, 固定安装敷设。

电压等级: 21/35 kV、26/35 kV

规格: 芯数: 1、3芯; 标称截面: 50~1600mm<sup>2</sup>。

型号: YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72

其中YJV62、YJLV62、YJV72、YJLV72是采用非磁性金属铠装的单芯电缆。

◆Rated voltage 35kV power cables: GB/T 12706.3-2008

Purpose: For fixed laying in the distribution line or industrial device

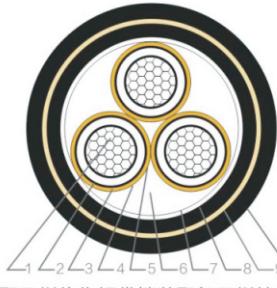
Voltage Grade: 21/35kV、26/35kV

Specification: Core Number: 1、3Cores; Nominal cross sectional area: 50~1600mm<sup>2</sup>

Type: YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32、YJV62、YJLV62、YJV72、YJLV72.

Among those, YJV62、YJLV62、YJV72、YJLV72 are single core cables which use non-magnetic metal armor.

产品示意图 Product Sketch Map



1导体 2导体屏蔽 3绝缘 4外屏蔽  
5铜带屏蔽 6填充 7无纺布 8内护套  
9铜带装铠 10外护套

1. Conductor 2. Conduct Screen  
3. Insulation 4. Outer shield 5. copper  
tape shield 6. Filling 7. Non-woven  
fabrics 8. Inner Sheath 9. copper tape  
armor 10. Outer sheath

交联聚乙烯绝缘钢带铠装聚氯乙烯护套电力电缆

XLPE insulated, steel-tape armored and PVC sheathed power cable

### 电力电缆的导体 conductor of power cable

芯数*截面mm <sup>2</sup> Core Number X Nominal Cross Sectional area, mm <sup>2</sup>	导体中最小单线根数 Min. number of monofilament in a conductor						20℃ 导体直流电阻 ≤ Ω/km 20℃ DC. resistance Ω/km	
	非紧压圆形 Non-compacted round		紧压圆形 Compacted round		扇形 Sector		铜芯 Copper-core	铝芯 Aluminum-core
	铜芯 Copper-core	铝芯 Aluminum-core	铜芯 Copper-core	铝芯 Aluminum-core	铜芯 Copper-core	铝芯 Aluminum-core		
1.5	1	/	/	/	/	/	12.1	/
2.5	1	/	/	/	/	/	7.41	/
4.	1	/	/	/	/	/	4.61	/
6	1	/	/	/	/	/	3.08	/
10	7	7	6	/	/	/	1.83	3.08
16	7	7	6	6	/	/	1.15	1.91
25	7	7	6	6	6	6	0.727	1.20
35	7	7	6	6	6	6	0.524	0.868
50	19	19	6	6	6	6	0.387	0.641
70	19	19	12	12	12	12	0.268	0.443
95	19	19	15	15	15	15	0.193	0.320
120	37	37	18	15	18	15	0.153	0.253
150	37	37	18	15	18	15	0.124	0.206
185	37	37	30	30	30	30	0.0991	0.164
240	61	61	34	30	34	30	0.0754	0.125
300	61	61	34	30	34	30	0.0601	0.100
400	61	61	53	53	53	53	0.0470	0.0778
500	61	61	53	53	53	53	0.0366	0.0605
630	91	91	53	53	53	53	0.0283	0.0469
800	91	91	53	53	/	/	0.0221	0.0367

## 型号名称及敷设场合 Type、Name &amp; Laying occasion

型 号 Type	名 称 designation	敷设场合 Laying Occasion
VV	铜芯聚氯乙烯绝缘聚氯乙烯护套电力电缆 Copper-core PVC insulated PVC sheathed power cable	
VLV	铝芯聚氯乙烯绝缘聚氯乙烯护套电力电缆 Aluminum-core PVC Insulated PVC sheathed power cable	
YJV	铜芯交联聚乙烯绝缘聚氯乙烯护套电力电缆 Copper-core XLPE insulated PVC sheathed power cable	
YJLV	铝芯交联聚乙烯绝缘聚氯乙烯护套电力电缆 Aluminum-core XLPE insulated PVC sheathed power cable	
VV22	铜芯聚氯乙烯绝缘钢带铠装聚氯乙烯护套电力电缆 Copper-core PVC insulated PVC sheathed steel-tape armored power cable	室内、隧道、管道中、 不能承受机械外力。 In door, tunnel and pipe, unable to bear mechanical force.
VLV22	铝芯聚氯乙烯绝缘钢带铠装聚氯乙烯护套电力电缆 Aluminum-core PVC insulated PVC sheathed steel-tape armored power cable	
YJV22	铜芯交联聚乙烯绝缘钢带铠装聚氯乙烯护套电力电缆 Copper-core XLPE insulated steel tape armored PVC sheathed power cable	
YJLV22	铝芯交联聚乙烯绝缘钢带铠装聚氯乙烯护套电力电缆 Aluminum-core XLPE insulated steel tape armored PVC sheathed power cable	
VV32	铜芯聚氯乙烯绝缘钢丝铠装聚氯乙烯护套电力电缆 Copper-core PVC insulated PVC sheathed fine steel wire armored power cable	
VLV32	铝芯聚氯乙烯绝缘钢丝铠装聚氯乙烯护套电力电缆 Aluminum-core PVC insulated PVC sheathed fine steel wire armored power cable	高落差、竖井, 可承受 一定的机械拉力。 In vertical shaft with high drop, able to bear certain mechanical pulling force.
YJV32	铜芯交联聚乙烯绝缘钢丝铠装聚氯乙烯护套电力电缆 Copper-core XLPE insulated fine steel wire armored PVC sheathed power cable	
YJLV32	铝芯交联聚乙烯绝缘钢丝铠装聚氯乙烯护套电力电缆 Aluminum-core XLPE insulated fine steel wire armored PVC sheathed power cable	
VV62	铜芯聚氯乙烯绝缘无磁金属带铠装聚氯乙烯护套电力电缆 Copper-core PVC insulated PVC sheathed non-magnetic metallic tape armored power cable	
VLV62	铝芯聚氯乙烯绝缘无磁金属带铠装聚氯乙烯护套电力电缆 Aluminum-core PVC insulated PVC sheathed non-magnetic metallic tape armored power cable	室内、隧道中、电缆沟及地下， 可承受机械压力。 In door, tunnel, cable channel and underground, able to bear mechanical force
YJV62	铜芯交联聚乙烯绝缘无磁金属带铠装聚氯乙烯护套电力电缆 Copper-core XLPE insulated non-magnetic tape armored PVC sheathed power cable	
YJLV62	铝芯交联聚乙烯绝缘无磁金属带铠装聚氯乙烯护套电力电缆 Aluminum-core XLPE insulated non-magnetic metallic tape armored PVC sheathed power cable	
VV72	铜芯聚氯乙烯绝缘无磁金属丝铠装聚氯乙烯护套电力电缆 Copper-core PVC insulated PVC sheathed non-magnetic metallic wire armored power cable	
VLV72	铝芯聚氯乙烯绝缘无磁金属丝铠装聚氯乙烯护套电力电缆 Aluminum-core PVC insulated PVC sheathed non-magnetic metallic wire armored power cable	高落差、竖井， 可承受一定的机械拉力。 In vertical shaft with high drop able to bear certain mechanical pulling force
YJV72	铜芯交联聚乙烯绝缘无磁金属丝铠装聚氯乙烯护套电力电缆 Copper-core XLPE insulated non-magnetic metallic wire armored PVC sheathed power cable	
YJLV72	铝芯交联聚乙烯绝缘无磁金属丝铠装聚氯乙烯护套电力电缆 Aluminum-core XLPE insulated non-magnetic metallic wire armored PVC sheathed power cable	

## 1. 额定电压1kV和3kV电力电缆 ( GB/T 12706.1—2008 )

Rated voltage 1kV and 3kV power cables (GB/T 12706.1-2008)

## ● 绝缘标称厚度 Nominal insulation thickness

导体标称截面/mm <sup>2</sup> Nominal cross sectional area of conductor, mm <sup>2</sup>	额定电压U <sub>0</sub> /U ( U <sub>m</sub> ) 下的绝缘标称厚度/mm Nominal insulation thickness under rated Voltage U <sub>0</sub> /U ( U <sub>m</sub> ) mm <sup>2</sup>			
	0.6/1(1.2)kV		1.8/3(3.6)kV	
	聚氯乙烯 ( PVC ) 绝缘 1.PVC insulated	交联聚乙烯 ( XLPE ) 绝缘 XLPE insulated	聚氯乙烯 ( PVC ) 绝缘 1.PVC insulated	交联聚乙烯 ( XLPE ) 绝缘 XLPE insulated
1.5,2.5	0.8	0.7	/	/
4,6	1.0	0.7	/	/
10,16	1.0	0.7	2.2	2.0
25,35	1.2	0.9	2.2	2.0

导体标称截面/mm <sup>2</sup> Nominal cross sectional area of conductor, mm <sup>2</sup>	额定电压U <sub>0</sub> /U (U <sub>m</sub> ) 下的绝缘标称厚度/mm Nominal insulation thickness under rated Voltage U <sub>0</sub> /U (U <sub>m</sub> ) mm <sup>2</sup>			
	0.6/1(1.2)kV		1.8/3(3.6)kV	
	聚氯乙烯 (PVC) 绝缘 1.PVC insulated	交联聚乙烯 (XLPE) 绝缘 XLPE insulated	聚氯乙烯 (PVC) 绝缘 1.PVC insulated	交联聚乙烯 (XLPE) 绝缘 XLPE insulated
50	1.4	1.0	2.2	2.0
70	1.4	1.1	2.2	2.0
95	1.6	1.1	2.2	2.0
120	1.6	1.2	2.2	2.0
150	1.8	1.4	2.2	2.0
185	2.0	1.6	2.2	2.0
240	2.2	1.7	2.2	2.0
300	2.4	1.8	2.4	2.0
400	2.6	2.0	2.6	2.0
500	2.8	2.2	2.8	2.2
630	2.8	2.4	2.8	2.4
800	2.8	2.6	2.8	2.6
1 000	3.0	2.8	3.0	2.8

●电缆参考外径和近似重量 Reference outer diameters and approximate weights of cables:

0.6/1kV聚氯乙烯绝缘电力电缆 0.6/1kV PVC insulated power cables

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	VV系列 VV Series	VV22系列 VV22 Series	VV32系列 VV32Series	VV	VLV	VV22	VLV22	VV32	VLV32
1×1.5	6.0	/	/	51	/	/	/	/	/
1×2.5	6.4	/	/	64	49	/	/	/	/
1×4	7.3	/	/	88	63	/	/	/	/
1×6	7.8	/	/	111	76	/	/	/	/
1×10	8.6	11.9	13.7	162	100	264	202	421	359
1×16	9.6	12.9	14.7	226	128	333	235	510	411
1×25	11.4	14.2	16.9	324	171	445	291	657	505
1×35	12.5	15.3	18.0	422	210	553	341	779	567
1×50	14.1	17.3	19.6	566	271	749	454	956	672
1×70	15.8	19.0	21.3	770	352	974	556	1223	802
1×95	18.1	21.1	24.1	1051	462	1272	684	1670	1095
1×120	19.4	22.4	25.4	1287	546	1524	782	1942	1215
1×150	21.6	24.4	27.4	1542	675	1775	925	2295	1408
1×185	23.9	26.5	29.1	1973	829	2237	1093	2763	1630
1×240	26.7	29.3	32.0	2492	1044	2766	1338	3406	1930
1×300	29.0	31.4	36.1	3095	1277	3380	1599	4323	2494
1×400	33.1	35.7	39.7	3983	1588	4353	1960	5414	3018
1×500	36.8	40.6	43.8	4932	1972	5694	2734	6513	3553
1×630	40.3	43.9	47.9	6347	2486	7176	3315	8066	4205
2×1.5	9.8	11.8	14.7	111	/	202	/	380	/
2×2.5	10.6	12.6	15.5	140	109	238	207	433	402
2×4	12.4	14.4	17.3	196	147	312	263	544	495
2×6	13.4	15.4	18.3	248	176	373	302	620	548
2×10	16.0	18.0	20.3	365	241	516	392	810	685

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	VV系列 VV Series	VV22系列 VV22 Series	VV32系列 VV32 Series	VV	VLV	VV22	VLV22	VV32	VLV32
2×16	18.0	20.0	22.3	506	308	669	471	990	792
2×25	20.6	22.6	26.2	726	417	913	604	1443	1134
2×35	22.8	24.8	28.4	942	515	1149	722	1751	1325
2×50	20.8	23.1	26.3	1135	537	1372	775	1889	1292
2×70	22.9	25.7	29.7	1553	701	1819	968	2512	1716
2×95	26.7	30.5	33.3	2142	959	2655	1502	3239	2086
2×120	29.7	32.9	36.3	2631	1139	3186	1778	3857	2435
2×150	32.5	36.3	40.3	3182	1392	3833	2084	4850	3073
2×185	36.1	39.6	44.1	4010	1707	4796	2493	5905	3664
2×240	40.2	44.0	48.2	5132	2206	5977	3019	7245	4288
2×300	44.7	48.5	52.7	6364	2651	7341	3688	8746	5130
3×1.5	10.3	12.3	15.2	135	/	230	/	427	/
3×2.5	11.6	13.6	16.1	173	127	277	230	491	445
3×4	13.1	15.1	18.0	249	175	372	298	610	536
3×6	14.1	16.2	19.1	320	213	454	346	716	609
3×10	16.9	19.0	21.3	480	293	641	454	959	772
3×16	19.1	21.1	23.4	676	379	849	552	1185	889
3×25	22.4	23.9	27.5	985	522	1184	721	1757	1294
3×35	24.3	26.3	30.1	1291	651	1512	872	2152	1512
3×50	24.4	27.0	30.5	1663	767	1941	1045	2509	1654
3×70	27.3	29.9	33.9	2296	1019	2600	1323	3452	2225
3×95	31.8	35.6	38.9	3153	1379	3764	2074	4481	2791
3×120	35.1	38.3	42.1	3866	1628	4537	2351	5316	3456
3×150	38.6	42.1	46.6	4694	1983	5510	2830	6713	4047
3×185	42.7	46.7	50.7	5931	2477	6859	3405	8196	4796
3×240	48.0	52.0	56.4	7591	3173	8628	4192	10159	5723
3×300	53.5	57.2	61.6	9438	3940	10583	5110	12287	6790
3×400	59.4	63.6	70.7	12118	4930	13421	6220	16182	8980
4×1.5	11.5	13.1	16.0	163	/	266	/	469	/
4×2.5	12.5	14.5	16.9	213	151	325	263	548	486
4×4	14.2	16.2	19.1	309	210	442	344	705	606
4×6	15.4	17.4	20.3	401	257	546	403	832	689
4×10	18.5	20.6	22.8	608	358	784	535	1102	854
4×16	20.9	23.0	25.9	865	469	1055	660	1600	1205
4×25	24.6	26.1	29.9	1268	651	1487	870	2129	1512
4×35	26.7	29.0	32.2	1669	816	1926	1073	2639	1786
4×50	27.8	30.4	34.4	2179	984	2490	1295	3368	2174
4×70	31.4	34.9	38.4	3020	1317	3685	1981	4373	2670
4×95	36.7	40.7	44.5	4148	1782	4861	2569	6012	3706
4×120	39.3	44.1	48.3	5101	2116	5963	2978	7179	4251
4×150	44.1	47.5	52.3	6193	2602	7124	3547	8551	4964
4×185	49.1	53.3	57.3	7849	3299	8938	4332	10456	5907

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	Vv系列 VV Series	VV22系列 VV22 Series	VV32系列 VV32 Series	VV	VLV	VV22	VLV22	VV32	VLV32
4×240	55.5	59.1	63.5	10045	4143	11232	5317	12987	7223
4×300	61.1	65.0	69.4	12490	5160	13801	6506	15759	8429
4×400	68.4	73.8	78.9	16074	6475	18257	8655	20662	11060
5×1.5	12.4	14.4	16.8	192	/	303	/	527	/
5×2.5	13.5	15.5	17.9	255	177	376	299	615	537
5×4	15.4	17.4	20.3	371	249	516	394	803	680
5×6	16.8	18.8	21.5	486	307	645	466	956	784
5×10	20.3	22.3	25.2	740	429	933	622	1404	1093
5×16	23.0	25.0	27.9	1059	565	1268	774	1818	1324
5×25	27.0	28.7	32.5	1562	790	1816	1044	2530	1758
5×35	29.7	31.9	36.5	2073	1006	2357	1290	3388	2321
5×50	31.7	35.5	38.7	2722	1229	3379	1885	4048	2626
5×70	35.3	39.1	42.9	3761	1632	4443	2372	5235	3130
5×95	41.0	45.9	49.7	5090	2205	5988	3119	7306	4423
5×120	45.1	49.3	53.6	6288	2629	7249	3615	8697	5080
5×150	49.7	53.9	58.5	7711	3243	8794	4345	10414	5950
5×185	55.9	59.5	63.7	9792	4034	10934	5298	12715	7092
5×240	62.5	66.5	72.8	12500	5152	13844	6450	16633	9229
5×300	69.3	73.7	80.4	15545	6382	17099	7936	20235	11109
3×2.5+1.5	12.3	14.3	16.7	246	173	319	259	525	501
3×4+2.5	13.7	15.6	18.6	346	242	422	332	666	623
3×6+4	15.1	17.1	20.0	391	260	536	404	798	672
3×10+6	17.8	19.7	22.2	565	343	742	519	1031	809
3×16+10	20.4	22.3	25.3	809	449	1016	657	1513	1122
3×25+16	23.3	25.3	28.9	1185	625	1424	862	1994	1408
3×35+16	25.3	27.3	31.1	1480	743	1740	1001	2351	1595
3×50+25	27.8	30.2	34.2	1979	929	2278	1228	3139	2132
3×70+35	30.1	32.9	36.9	2702	1212	3052	1562	3958	2483
3×95+50	34.9	38.7	41.5	3675	1602	4346	2333	5122	3108
3×120+70	38.5	42.3	46.7	4577	1913	5381	2717	6601	3980
3×150+70	41.8	45.3	50.0	5399	2296	6283	3196	7619	4533
3×185+95	46.6	50.4	54.6	6948	2902	7902	3948	9353	5370
3×240+120	52.3	56.3	60.5	8817	3665	9945	4781	11591	6427
3×300+150	57.9	61.9	66.5	10938	4552	12183	5817	14033	7647
3×400+185	64.5	68.4	75.0	14197	5688	15425	7087	18305	9968
3×2.5+2×1.5	12.6	15.1	17.5	246	173	364	291	574	521
3×4+2×2.5	14.5	16.5	19.4	346	242	483	378	728	622
3×6+2×4	16.2	18.2	21.1	473	316	626	469	891	747
3×10+2×6	19.0	21.0	24.0	681	424	861	604	1295	1012
3×16+2×10	21.9	23.9	26.8	940	519	1197	701	1699	1230
3×25+2×16	25.2	27.2	30.3	1376	717	1586	929	2257	1555
3×35+2×16	27.1	29.3	32.2	1671	835	1910	1074	2578	1742

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	VV系列 VV Series	VV22系列 VV22 Series	VV32系列 VV32Series	VV	VLV	VV22	VLV22	VV32	VLV32
3×50+2×25	31.7	34.3	38.9	2284	1080	2637	1432	3646	2475
3×70+2×35	34.8	38.6	41.8	3110	1406	3841	2137	4605	2887
3×95+2×50	37.5	41.5	46.1	4110	1819	4901	2623	6107	3808
3×120+2×70	42.1	46.1	50.3	5239	2227	6136	3124	7483	4456
3×150+2×70	45.5	49.3	53.7	6105	2593	7066	3544	8512	5005
3×185+2×95	50.8	54.8	59.0	7919	3284	9026	4390	10628	6047
3×240+2×120	56.9	60.9	65.1	10009	4138	11235	5343	13056	7163
3×300+2×150	63.0	67.0	71.8	12409	5087	13764	6541	15812	8538
4×2.5+1.5	13.3	15.3	17.7	250	175	370	295	617	538
4×4+2.5	14.9	16.9	19.8	358	244	498	384	782	647
4×6+4	16.5	18.5	21.3	479	312	635	467	1924	770
4×10+6	19.6	21.6	24.6	710	425	896	611	1336	1054
4×16+10	22.5	24.5	27.4	1030	572	1234	777	1752	1294
4×25+16	25.8	27.8	31.6	1506	790	1741	1025	2407	1653
4×35+16	28.2	30.4	33.7	1903	950	2121	1171	2849	1899
4×50+25	29.7	32.5	36.5	2477	1129	2822	2137	3709	2439
4×70+35	33.5	37.0	40.1	3392	1476	4034	2825	4798	2946
4×95+50	38.7	43.3	47.1	4644	1982	5429	3368	6681	4096
4×120+70	42.9	47.1	50.9	5772	2431	6683	3952	8023	4688
4×150+70	46.7	50.9	54.9	7035	2914	7878	4822	9368	5393
4×185+95	52.0	56.0	60.2	8820	3624	9917	5840	11568	6450
4×240+120	58.3	62.3	66.5	11229	4597	12483	7153	14327	7684
4×300+150	64.6	768.8	75.1	13952	5641	15371		18250	10031

0.6/1kV交联聚乙烯绝缘电力电缆 0.6/1KV XLPE insulated power cables

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×1.5	5.8	/	/	46	/	/	/	/	/
1×2.5	6.2	/	/	59	43	/	/	/	/
1×4	6.7	/	/	76	51	/	/	/	/
1×6	7.2	/	/	97	63	/	/	/	/
1×10	8.0	11.3	14.2	146	84	242	180	446	384
1×16	9.0	12.4	15.2	207	109	315	217	544	446
1×25	10.8	13.6	16.7	301	147	421	267	679	527
1×35	11.9	14.7	17.4	396	183	527	315	781	568
1×50	13.3	16.5	18.8	529	233	695	400	961	666
1×70	15.2	18.4	20.7	732	314	921	503	1267	847
1×95	17.1	20.1	23.1	992	403	1194	605	1572	997
1×120	18.6	21.6	24.6	1229	488	1448	706	1861	1134
1×150	20.8	23.6	26.6	1526	605	1758	837	2186	1300

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×185	22.9	25.7	28.7	1880	737	2136	992	2642	1509
1×240	25.5	28.1	31.1	2370	926	2632	1196	3258	1782
1×300	27.6	30.2	33.2	2945	1130	3231	1426	3897	2068
1×400	31.7	34.3	38.7	3805	1410	4160	1793	5192	2797
1×500	35.4	39.4	42.2	4724	1764	5476	2516	6263	3303
1×630	39.5	43.1	46.5	6158	2297	6939	3079	7826	3966
2×1.5	9.5	11.5	15.0	102	/	189	/	418	/
2×2.5	10.3	12.3	15.8	127	96	223	192	481	451
2×4	11.2	13.2	16.6	171	122	275	226	538	489
2×6	12.2	14.2	17.6	216	145	330	260	579	519
2×10	14.8	16.8	19.7	327	202	466	341	773	649
2×16	16.9	18.9	21.8	467	269	626	428	964	766
2×25	19.4	21.4	25.0	671	362	855	546	1335	1076
2×35	21.6	23.6	27.2	876	449	1081	654	1598	1172
2×50	19.6	22.1	25.3	1055	458	1273	676	1724	1199
2×70	22.2	24.9	28.2	1460	608	1718	866	2236	1393
2×95	25.7	29.1	32.1	2006	823	2300	1117	3059	1906
2×120	29.0	32.1	35.7	2496	1003	3061	1625	3649	2193
2×150	31.8	34.9	38.1	3018	1232	3667	1892	4318	2541
2×185	35.2	38.6	43.2	3802	1499	4568	2319	5646	3417
2×240	39.0	42.8	47.2	4861	1931	5747	2811	6945	3988
2×300	43.1	47.1	51.3	6046	2339	7021	3356	8316	4695
3×1.5	9.9	11.9	15.5	120	/	212	/	457	/
3×2.5	10.8	12.8	16.3	159	113	259	213	530	484
3×4	11.8	13.8	17.2	212	139	322	249	584	528
3×6	12.9	14.9	18.3	279	173	400	295	667	618
3×10	15.7	17.7	20.6	429	242	577	390	900	713
3×16	18.0	20.0	22.8	621	325	791	495	1204	907
3×25	21.1	22.6	26.2	909	446	1104	641	1615	1154
3×35	23.6	25.0	28.6	1199	559	1418	778	1980	1341
3×50	23.0	25.8	29.0	1553	657	1822	926	2355	1544
3×70	26.5	29.2	33.2	2167	889	2474	1196	3284	2020
3×95	30.6	34.6	38.2	2951	1177	3581	1867	4233	2503
3×120	34.1	37.5	40.9	3665	1427	4387	2148	5092	2906
3×150	37.8	41.0	45.8	44639	1762	5330	2638	6437	3792
3×185	41.8	46.0	50.0	5644	2190	6574	3171	7853	4490
3×240	46.8	51.0	55.2	7212	2796	82940	3876	9729	5293
3×300	52.1	55.8	60.5	8966	3468	10158	4660	11763	6247
3×400	58.2	61.9	68.2	11585	4403	13106	5873	14893	7692
4×1.5	11.1	13.1	16.3	146	/	244	/	367	/
4×2.5	11.6	13.6	17.2	193	131	301	239	554	492
4×4	12.7	14.7	18.2	257	159	376	278	643	545

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
4×6	13.9	15.9	19.4	350	209	480	341	772	690
4×10	17.2	19.2	22.1	542	293	705	455	1109	860
4×16	19.7	21.7	24.5	792	397	979	583	1432	1036
4×25	22.7	24.7	28.3	1173	556	1389	772	1949	13834
4×35	25.3	27.3	31.1	1556	702	1797	944	2420	1569
4×50	27.0	29.4	32.7	2038	910	2340	1145	2999	1860
4×70	30.2	33.2	37.8	2855	1152	3211	1805	4147	2463
4×95	35.5	39.4	42.2	3839	1525	4652	2286	5370	3090
4×120	39.3	43.1	47.5	4843	1859	5667	2781	6881	3979
4×150	43.1	46.8	51.3	5872	2296	6850	3296	8181	4628
4×185	48.1	51.7	56.3	7477	2871	8545	3939	9981	5439
4×240	53.9	57.9	62.3	9553	3660	10792	4917	12445	6530
4×300	59.8	63.6	68.0	11877	4547	13242	5912	15094	7794
4×400	67.0	71.2	77.5	15348	5759	16936	7375	19795	10193
5×1.5	11.9	13.9	17.1	165	/	271	/	564	/
5×2.5	13.0	15.0	18.2	222	144	339	261	661	584
5×4	13.8	15.8	19.3	313	190	442	319	779	658
5×6	15.1	17.1	20.6	422	245	564	389	942	768
5×10	18.7	20.7	23.6	663	352	841	529	1265	954
5×16	21.5	23.5	26.3	973	478	1177	683	1665	1171
5×25	24.9	26.9	30.7	1444	673	1682	910	2293	1524
5×35	27.8	30.0	33.2	1921	855	2200	1133	2877	1813
5×50	30.7	33.1	37.7	2481	1042	2879	1386	3789	2412
5×70	34.6	38.6	41.9	3506	1428	4302	2173	5009	2904
5×95	40.0	44.5	48.5	4789	1888	5714	2756	6936	4061
5×120	44.2	48.5	52.5	5962	2308	6969	3296	8321	4707
5×150	48.7	53.0	57.0	7322	2864	8404	3948	9894	5449
5×185	54.5	58.5	62.9	9332	3575	10577	4870	12231	6594
5×240	61.3	65.3	70.3	11903	4554	13314	5920	15243	7849
5×300	67.9	72.3	78.4	14800	5638	16409	7246	19315	10152
3×2.5+1×1.5	11.4	13.4	17.0	181	/	287	/	573	/
3×4+1×2.5	12.4	14.4	18.0	245	155	360	271	672	583
3×6+1×4	13.6	15.6	19.1	328	198	455	327	791	662
3×10+1×6	16.4	18.4	21.3	496	274	651	428	990	768
3×16+1×10	19.0	21.0	23.9	732	373	912	553	1351	992
3×25+1×16	21.9	23.9	27.5	1080	518	1288	726	1814	1254
3×35+1×16	24.0	26.0	29.0	1375	636	1604	865	2172	14
3×50+1×25	26.8	29.4	32.4	1838	788	2128	1078	2803	1753
3×70+1×35	29.3	31.7	36.3	2548	1058	2882	1392	3782	2307
3×95+1×50	33.8	37.6	40.5	3391	1368	4109	2090	4845	2847
3×120+1×70	37.5	40.9	44.3	4357	1693	5123	2458	5897	3291
3×150+1×70	41.0	448	49.0	5131	2018	6081	2955	7285	4248

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
3×185+1×95	46.0	49.0	54.1	6598	2552	7565	3616	8976	5021
3×240+1×120	51.1	54.9	59.9	8379	3232	9594	4344	11129	6002
3×300+1×150	56.6	60.2	65.0	10396	4010	11634	5278	13400	7021
3×400+1×185	63.1	67.3	73.4	13369	5053	14836	6484	17559	9222
3×2.5+2×1.5	12.1	14.1	17.7	206	/	318	/	569	/
3×4+2×2.5	13.3	15.3	18.8	282	177	407	302	680	576
3×6+2×4	14.5	16.5	20.1	378	224	515	362	881	726
3×10+2×6	17.3	19.3	22.2	566	308	729	473	1085	879
3×16+2×10	20.4	22.4	25.2	849	427	1042	621	1504	1083
3×25+2×16	23.6	25.6	28.7	1257	597	1482	822	2043	1384
3×35+2×16	25.5	27.5	30.3	1545	707	1789	951	2381	15451
3×50+2×25	30.9	33.3	36.8	2140	936	2485	1280	3193	2032
3×70+2×35	34.0	36.6	41.0	2938	1233	3303	1616	4348	2661
3×95+2×50	36.6	40.4	43.9	3851	1557	4633	2324	5426	3157
3×120+2×70	41.3	45.1	49.5	5027	1944	5885	28714	7197	4114
3×150+2×70	44.5	48.3	52.7	5781	2273	6828	3282	8140	4661
3×185+2×95	49.8	53.6	57.8	7472	2873	8594	4009	10084	5543
3×240+2×120	55.7	59.7	64.1	9513	3638	10791	4876	12497	6617
3×300+2×150	61.6	65.6	70.0	11798	4523	13207	5932	15108	7795
4×2.5+1×1.5	12.8	14.8	18.0	218	/	333	/	648	/
4×4+1×2.5	13.5	15.5	19.0	299	185	425	311	760	648
4×6+1×4	14.8	16.8	20.3	402	237	542	378	902	756
4×10+1×6	18.0	20.0	23.0	613	328	784	499	1200	915
4×16+1×10	21.0	22.5	25.7	910	452	1110	652	1583	1125
4×25+1×16	24.3	26.3	29.5	1350	634	1582	866	2178	1462
4×35+1×16	26.7	28.9	31.9	1725	773	1993	1040	2644	1694
4×50+1×25	28.7	31.5	35.6	2239	945	2628	1280	3500	2255
4×70+1×35	32.9	36.4	39.7	4297	1295	3861	2003	4563	2666
4×95+1×50	37.5	41.3	44.7	5460	1707	5111	2512	5920	3329
4×120+1×70	41.9	46.1	50.0	6534	2126	6395	3045	7702	4408
4×150+1×70	45.8	49.8	53.8	8392	2563	9542	3558	8982	5007
4×185+1×95	51.0	55.0	59.4	10677	3196	11986	4411	11104	6008
4×240+1×120	57.1	61.1	65.5	13266	4061	14735	5343	13753	7110
4×300+1×150	63.2	67.2	73.5		5047		6488	17457	9238

## 2. 额定电压6kV到30kV电力电缆 ( GB/T 12706.2—2008 )

Rated voltage 6kV to 30kV power cables (GB/T 12706.2-2008)

●交联聚乙烯 (XLPE) 电缆的绝缘厚度 Insulation thickness of XLPE insulated power cables

导体标称截面mm <sup>2</sup> Nominal cross sectional area of conductor, mm <sup>2</sup>	额定电压kV Rated voltage kV				
	3.6/6	6/6,6/10	8.7/10,8.7/15	12/20	18/20,18/30
	绝缘标称厚度mm Nominal thickness of insulation				
1.5,2.5	/	/	/	/	/

导体标称截面mm <sup>2</sup> Nominal cross sectional area of conductor, mm <sup>2</sup>	额定电压kV Rated voltage kV				
	3.6/6	6/6,6/10	8.7/10,8.7/15	12/20	18/20,18/30
	绝缘标称厚度mm Nominal thickness of insulation				
4,6	/	/	/	/	/
10,16	/	/	/	/	/
25	2.5	3.4	4.5	5.5	/
35	2.5	3.4	4.5	5.5	8.0
50	2.5	3.4	4.5	5.5	8.0
70,95	2.5	3.4	4.5	5.5	8.0
120	2.5	3.4	4.5	5.5	8.0
150	2.5	3.4	4.5	5.5	8.0
185	2.5	3.4	4.5	5.5	8.0
240	2.6	3.4	4.5	5.5	8.0
300	2.8	3.4	4.5	5.5	8.0
400	3.0	3.4	4.5	5.5	8.0
500	3.2	3.4	4.5	5.5	8.0
630	3.2	3.4	4.5	5.5	8.0

● 3.6/6kV交联聚乙烯绝缘电缆参考外径和近似重量 Reference outer diameters and approximate weights of 3.6/6kV XLPE insulated power cables

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×25	17.5	20.4	24.4	507	353	707	554	1164	1010
1×35	18.6	21.5	25.4	617	405	829	617	1312	1100
1×50	19.8	22.7	26.7	762	467	988	693	1496	1201
1×70	21.5	24.4	28.4	985	567	1229	811	1792	1374
1×95	23.2	26.1	30.2	1260	671	1524	935	2137	1549
1×120	25.0	27.6	31.6	1508	767	1798	1057	2425	1684
1×150	26.6	29.2	33.4	1804	883	2112	1191	2793	1872
1×185	28.0	31.1	36.0	2175	1031	2506	1362	3456	2312
1×240	30.6	33.5	38.5	2747	1249	3094	1595	4149	2650
1×300	33.2	37.7	41.1	3365	1479	4109	2223	4884	2997
1×400	37.4	41.6	45.0	4309	1858	5105	2654	5920	3524
1×500	41.5	45.8	50.2	5276	2300	6165	3194	7481	4562
3×25	36.8	40.5	43.9	1632	1088	2394	1867	3255	2795
3×35	39.2	42.9	47.3	1991	1354	2804	2166	4131	3494
3×50	42.2	45.9	50.3	2434	1578	3278	2453	4714	3858
3×70	45.9	50.0	54.4	3173	1908	4154	2840	5701	4436
3×95	49.1	53.7	58.1	4052	2319	5069	3377	6789	5056
3×120	52.7	57.0	61.5	4854	2665	5961	3833	7800	5612
3×150	56.4	60.9	65.3	5739	3088	7027	4366	8920	6250
3×185	60.1	64.6	69.0	7007	3593	8370	4957	10361	6947
3×240	65.9	70.6	75.0	8782	4337	10312	5867	13376	8931
3×300	71.0	76.3	82.6	10750	5241	12399	6903	15667	10158
3×400	79.6	86.0	90.9	13692	6477	16424	9175	19267	12052
3×500	88.2	94.9	100.0	16857	7942	19882	10966	23072	14157

## ● 6/10kV交联聚乙烯绝缘电缆参考外径和近似重量

● Reference outer diameters and approximate weights of 6/10kV XLPE insulated power cables

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×25	19.3	22.2	26.2	565	412	786	632	1296	1143
1×35	20.4	23.3	27.2	678	466	911	699	1447	1235
1×50	21.6	24.5	28.5	827	532	1073	778	1635	1339
1×70	23.3	26.2	30.4	1054	636	1318	900	1932	1514
1×95	25.0	28.1	32.0	1334	745	1630	1041	2284	1695
1×120	26.8	29.4	33.6	1585	844	1896	1155	2802	2060
1×150	28.6	31.2	36.2	1896	975	2228	1307	3177	2256
1×185	29.8	32.9	37.8	2261	1118	2613	1469	3629	2539
1×240	32.7	36.5	40.3	2830	1332	3536	2037	4343	2867
1×300	34.6	38.9	42.5	3445	1559	4202	2315	5017	3207
1×400	38.2	42.5	46.9	4357	1907	5180	2730	6436	4040
1×500	41.9	46.2	50.6	5303	2327	6200	3229	7654	4670
3×25	40.9	44.9	49.3	1857	1397	2725	2265	4107	3647
3×35	43.3	46.7	51.6	2230	1593	3083	2444	4617	3980
3×50	46.1	52.4	54.8	2688	1833	3656	2840	5239	4384
3×70	50.0	54.5	58.7	3449	2184	4568	3302	6253	4987
3×95	53.4	58.0	62.4	4369	2636	5534	3801	7340	5607
3×120	57.0	61.4	65.8	5190	3001	6455	4266	8372	6184
3×150	60.7	65.0	69.4	6116	3445	7469	4793	9490	6820
3×185	64.3	68.9	73.3	7384	3970	8738	5433	11005	7592
3×240	69.5	74.4	80.7	9125	4680	8846	6234	13991	9545
3×300	74.2	79.3	85.6	11034	5525	10741	7290	16201	10693
3×400	81.3	87.8	92.7	13878	6663	16682	9420	19634	12419
3×500	89.1	95.7	101.0	16960	8045	20015	11071	23287	14372

## ● 8.7/15kV交联聚乙烯绝缘电缆参考外径和近似重量

● Reference outer diameters and approximate weights of 8.7/15kV XLPE insulated power cables:

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×25	21.5	24.4	28.4	643	490	888	735	1450	1297
1×35	22.6	25.5	29.6	760	548	1017	805	1618	1406
1×50	23.8	26.7	30.9	912	617	1183	887	1809	1514
1×70	26.0	28.6	32.8	1145	727	1446	1028	2114	1696
1×95	27.4	30.3	35.2	1441	852	1751	1162	2692	2176
1×120	29.2	31.8	36.8	1697	956	2036	1295	3067	2341
1×150	31.0	33.4	38.4	2015	1094	2360	1439	3415	2544
1×185	32.2	36.5	40.2	2386	1242	3092	1948	3848	2759
1×240	35.1	38.9	42.7	2964	1465	3720	2222	4536	3097
1×300	37.0	41.2	44.7	3588	1757	4386	2499	5254	3444
1×400	40.6	44.9	49.3	4511	2061	5385	2935	6728	4333

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×500	43.7	48.8	53.2	5474	2495	6444	3471	7918	4917
3×25	45.9	50.0	54.4	2177	1717	3158	2697	4705	4245
3×35	47.8	52.4	56.8	2566	1929	3596	2958	5191	4554
3×50	51.2	55.6	59.8	3045	2189	4166	3311	5900	5045
3×70	55.1	58.9	63.6	3833	2568	5026	3761	6921	5655
3×95	58.8	63.3	67.7	4756	3024	6089	4357	8059	6327
3×120	62.0	66.7	71.7	5599	3410	7036	4848	9117	8436
3×150	65.6	70.4	76.7	6547	3876	8049	5400	11107	9290
3×185	69.3	74.1	80.4	7841	4428	9452	6038	12704	10495
3×240	74.7	79.7	86.0	9645	5200	11421	6976	14880	11651
3×300	79.4	85.4	80.7	11587	6079	14264	8770	17160	13332
3×400	86.3	92.9	98.0	14480	7265	17449	10223	20548	15405
3×500	94.2	101.1	106.2	17615	8700	20895	11980		

● 12/20kV交联聚乙烯绝缘电缆参考外径和近似重量 Reference Outside Diameter and Approximate Weight of 12/20kV XLPE Insulated Cable

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×25	23.5	26.4	30.6	720	567	987	834	1586	1433
1×35	24.6	27.7	31.6	840	628	1131	919	1758	1546
1×50	26.3	28.9	33.1	996	701	1301	1006	1983	1688
1×70	28.2	30.8	35.8	1244	826	1571	1153	2523	2105
1×95	29.4	32.5	37.4	1535	947	1882	1293	2937	2286
1×120	31.4	34.0	39.0	1808	1066	2172	1431	3272	2469
1×150	33.0	37.0	40.6	2118	1197	2847	1926	3607	2686
1×185	34.4	38.7	42.4	2508	1364	3260	2116	4108	2910
1×240	37.3	41.5	44.7	3094	1596	3888	2389	4798	3235
1×300	39.0	43.5	48.2	3711	1824	4581	2694	5898	4011
1×400	42.6	47.1	51.5	4644	2193	5581	3131	6974	4524
1×500	45.7	51.0	55.4	5620	2638	6655	3681	8218	5217
3×25	50.6	54.9	59.1	2373	1910	3516	3053	5133	4671
3×35	52.5	57.1	61.5	2885	2248	4052	3415	5832	5194
3×50	55.8	60.3	64.7	3384	2528	4648	3792	6501	5645
3×70	59.6	64.2	68.6	4192	2927	5545	4279	7543	6278
3×95	63.5	68.0	72.4	5164	3431	6607	4874	8709	6976
3×120	66.7	71.3	77.8	6027	3839	7561	5372	10645	8456
3×150	70.4	75.0	81.5	6999	4329	8581	5933	11906	9236
3×185	74.0	79.1	85.4	8315	4902	10075	6662	13481	60068
3×240	79.4	85.8	90.7	10154	5709	12846	8400	15729	11282
3×300	83.9	90.2	95.4	12091	6583	14973	9453	18042	12533
3×400	90.8	97.8	102.9	15027	7811	18225	11015	21543	14328
3×500	98.8	105.9	111.0	18210	9295	21701	12785	25297	16372

● 18/30kV交联聚乙烯绝缘电缆参考外径和近似重量 Reference Outside Diameter and Approximate Weight of 18/30kV XLPE Insulated Cable

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×35	30.4	33.5	38.4	1113	901	1471	1259	2509	2297
1×50	32.3	35.3	39.9	1292	997	1667	1371	2751	2507
1×70	33.7	38.0	41.6	1558	1140	2295	1877	3065	2647
1×95	35.4	39.7	43.4	1865	1276	2638	2049	3467	2942
1×120	36.9	41.6	44.8	2152	1410	2947	2206	3868	3141
1×150	39.0	43.3	47.4	2477	1556	3317	2396	4600	3748
1×185	40.3	44.7	49.8	2885	1741	3765	2622	5163	4030
1×240	43.1	47.6	52.0	3477	1978	4425	2927	5850	4419
1×300	44.9	49.5	54.2	4131	2308	5134	3247	6641	4838
1×400	48.0	52.8	57.5	5093	2642	6132	3736	7747	5383
1×500	51.7	57.0	61.2	6112	3121	7280	4301	9091	6100
3×35	65.6	70.4	74.8	3824	3185	5359	4720	7441	6802
3×50	68.7	73.5	79.8	4519	3664	6115	5260	9281	8425
3×70	72.5	77.4	83.7	5395	4130	7083	5817	10484	9219
3×95	76.2	81.2	87.7	6405	4673	8950	7217	11752	10019
3×120	79.6	86.0	90.9	7356	5167	10054	7865	12930	10742
3×150	83.3	89.5	94.6	8392	5721	11155	8526	14199	11529
3×185	86.7	93.4	98.5	9771	6538	12744	9331	15907	12494
3×240	91.9	98.9	104.0	11667	7222	14909	10464	18259	13813
3×300	96.6	103.1	108.6	13721	8212	17109	11601	20645	15137
3×400	103.7	110.1	116.1	16780	9565	20498	13282	24219	17003
3×500	111.7	119.2	124.1	20145	11187	24167	15252	28199	19284

### 3.额定电压35kV电力电缆 ( GB/T 12706.3—2008) 35kV Rated Voltage Power Cable (GB/T 12706.3--2008)

● 电缆的绝缘厚度 Insulation Thickness of Cables

绝缘混合料 Insulation mixture	导体标称截面 Nominal cross section of conductor	额定电压下标称绝缘厚度/mm Nominal thickness of insulation under rated voltage	
		21/35(40.5)kV	26/35(40.5)kV
交联聚乙烯(XLPE) XLPE	50~500	9.3	10.5

● 21/35kV交联聚乙烯绝缘电缆参考外径和近似重量 Reference Outside Diameter and Approximate Weight of 21/35kV XLPE Insulated Cable

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×35	33.2	37.7	41.2	1262	1049	2005	1793	2780	2568
1×50	35.1	38.9	42.7	1447	1152	2203	1908	3070	2786
1×70	36.8	41.2	44.4	1707	1289	2508	2090	3398	2978
1×95	38.2	42.5	47.3	2035	1447	2869	2280	4209	3634
1×120	40.0	44.5	48.9	2313	1571	3194	2452	4597	3870
1×150	41.8	46.1	50.5	2661	1740	3561	2639	5001	4114
1×185	43.4	47.7	52.5	3060	1968	4041	2897	5558	4425

芯数 × 截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×240	45.3	50.6	55.0	3678	2180	4712	3214	6215	4717
1×300	47.7	52.3	57.0	4342	2523	5407	3520	6995	5108
1×400	50.8	56.1	60.3	5317	2867	6477	4026	8138	5688
1×500	56.0	61.3	65.5	6613	3550	7912	4849	9795	6732
3×35	71.7	76.5	82.8	4320	3681	6061	5422	9273	8634
3×50	74.7	79.7	86.0	5120	4264	6896	6040	10388	9533
3×70	78.5	85.0	90.1	6026	4761	8690	7424	11562	10297
3×95	82.2	88.6	93.7	7066	5334	9873	8141	12831	11098
3×120	85.4	92.1	97.2	8009	5821	10972	8783	14040	11851
3×150	89.1	95.9	101.0	9110	6439	12210	9540	15440	12770
3×185	92.7	99.6	104.7	10519	7106	13746	10333	17080	13667
3×240	97.9	105.0	110.1	12455	8010	15913	11468	19458	15013
3×300	102.6	109.8	114.9	14548	9039	18178	12669	21910	16402
3×400	109.7	117.3	122.2	17664	10449	21656	14440	25629	18394
3×500	120.0	128.6	132.7	21407	12183	25939	16714	30239	21014

● 26/35kV交联聚乙烯绝缘电缆参考外径和近似重量 Reference Outside Diameter and Approximate Weight of 26/35kV XLPE Insulated Cable

芯数 × 截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm			电缆近似重量kg/km Approximate weight, kg/km					
	YJV系列 YJV Series	YJV22系列 YJV22 Series	YJV32系列 YJV32Series	YJV	YJLV	YJV22	YJLV22	YJV32	YJLV32
1×35	35.8	40.2	43.8	1411	1199	2193	1980	3015	2803
1×50	37.7	42.0	46.4	1602	1306	2414	2119	3677	3448
1×70	39.4	43.9	48.3	1868	1450	2736	2318	4114	3694
1×95	41.2	45.1	49.9	2204	1616	3094	2505	4519	3944
1×120	42.6	47.1	51.1	2487	1796	3425	2683	4873	4147
1×150	43.8	48.9	53.3	2842	1973	3821	2900	5344	4458
1×185	45.5	50.3	55.1	3248	2159	4286	3143	5889	4756
1×240	47.9	53.0	57.4	3876	2431	4945	3446	6602	5126
1×300	50.3	55.1	59.6	4549	2733	5698	3811	7394	5565
1×400	53.4	58.5	62.9	5537	3139	6729	4279	8551	6156
1×500	58.4	63.9	67.9	6817	3755	8196	5134	10097	7035
3×35	77.2	83.5	88.6	4872	4232	7558	6919	10273	9634
3×50	80.3	86.7	91.6	5723	4867	8445	7589	11368	10512
3×70	84.1	90.6	95.7	6658	5393	9535	8270	12612	11346
3×95	87.6	94.2	99.5	7725	5993	10728	8995	13909	12176
3×120	90.8	97.8	102.9	8692	6504	11896	9707	15208	13020
3×150	94.5	101.6	106.7	9785	7114	13143	10473	16556	13885
3×185	98.3	105.3	110.4	11259	7846	14684	11271	18224	14811
3×240	103.5	110.8	115.9	13233	8788	16943	12498	20669	16224
3×300	108.2	115.5	120.6	15362	9853	19246	13737	23113	17604
3×400	115.3	122.8	127.9	18531	11315	22759	15543	26918	19702
3×500	125.5	134.2	138.3	22300	13076	27076	17851	31563	22339

## 架空绝缘电缆 Aerial Insulated Cable

### 使用特性:

聚氯乙烯绝缘：导体的长期允许工作温度不超过70℃，短路时（最长持续时间不超过5s），导体的最高温度不超过160℃。

聚乙烯绝缘：导体的长期允许工作温度不超过75℃，短路时（最长持续时间不超过5s），导体的最高温度不超过150℃。

交联聚乙烯绝缘：导体的长期允许工作温度不超过90℃，短路时（最长持续时间不超过5s），导体的最高温度不超过250℃。

电缆敷设时环境温度不低于-20℃

### Operational performance:

PVC insulated: The conductor's allowable long-term working temperature does not exceed 70 °C. When short-circuited (the longest duration is no more than 5s), the conductor's highest temperature does not exceed 160°C.

PE insulated: The conductor's allowable long-term working temperature does not exceed 75 °C. When short-circuited (the longest duration is no more than 5s), the conductor's highest temperature does not exceed 150°C.

XLPE insulated: The conductor's allowable long-term working temperature does not exceed 90 °C. When short-circuited (the longest duration is no more than 5s), the conductor's highest temperature does not exceed 250°C. while laying cables, the environmental temperature shouldn't lower than -20°C.

1kV架空电缆弯曲半径：电缆外径（D）小于25mm时，电缆允许弯曲半径不小于4D；大于或等于25mm的电缆，允许弯曲半径不小于6D。

10kV、35kV架空电缆弯曲半径：单芯时，电缆允许弯曲半径不小于电缆外径的20倍；多芯时不小于15倍。

Bending radius of 1kV aerial cable: When the outside diameter (D) of Cables is less than 25mm, the allowance bending radius shouldn't less than 4D. While more than or equal to 25mm, the allowance bending radius is no less than 6D.

Bending radius of 10kV、35kV aerial cable: When the cable is single core, the allowance bending radius shouldn't less than 20 times outside diameter. When the cable is multi-core, the allowance bending radius shouldn't less than 15 times outside diameter.

当电缆使用于交流系统时，电缆的额定电压至少应等于该系统的额定电压，当电缆使用于直流系统时，该系统的额定电压至少应不大于电缆额定电压的1.5倍。

When cables use AC system, rated voltage of cables should at least be equal to rated voltage of the system. When cables use DC system, rated voltage of the system should at least be no higher than 1.5 times rated voltage of cables.

### ◆额定电压1kV及以下架空绝缘电缆: GB/T 12527—2008

用途：用于额定电压U<sub>0</sub>/U为1kV及以下架空电力线路。

型号：JKV、JKY、JKLV、JKYJ、JKLYJ、JKLY

### ◆额定电压10kV架空绝缘电缆: GB/T 14049—2008

用途：用于额定电压10kV架空电力线路。

型号：JKYJ、JKTRYJ、JKLYJ、JKY、JKTRY、JKLY、JKLYJ/B、JKLYJ/Q、JKLY/Q

### ◆钢芯铝绞线芯架空绝缘电缆，执行标准: Q/9150600708951661R-021-2017

用途：分别用于额定电压1kV、10kV、35kV架空电力线路。

型号：JKLGV、JKLGYJ、JKLGY、JKLGY/Q、JKLGYJ/Q等

### ◆Aerial insulated cables with 1kV or less than 1kV rated voltage: GB/T 12527—2008

Application: for aerial power lines with rated voltage U<sub>0</sub>/U which is 1kV or less than 1kV.

Type: JKV、JKY、JKLV、JKYJ、JKLYJ、JKLY

### ◆Aerial insulated cables with 10kV rated voltage: GB/T 14049—2008

Application: for aerial power lines with 10kV rated voltage

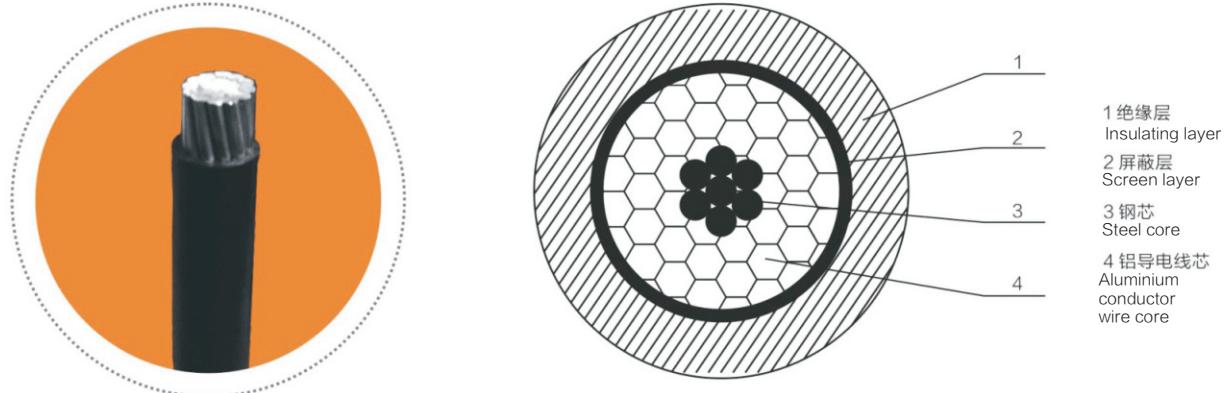
Type: JKYJ、JKTRYJ、JKLYJ、JKY、JKTRY、JKLY、JKLYJ/BJKLYJ/Q、JKLY/Q

### ◆Aerial insulated cables with ACSR core: Q/9150600708951661R-021-2017

Application: for aerial power lines with 1kV、10kV、35kV rated voltage

Type: JKLGV、JKLGYJ、JKLGY、JKLGY/Q、JKLGYJ/Q and so on.

产品结构图 Map of Products



铝芯带钢芯架空绝缘电缆结构示意图 (1kV没有屏蔽层)  
Structural sketch map of aerial insulated cables with ACSR core (cables lower than 1kV don't have screen layer).

## 1. 额定电压1kV及以下架空绝缘电缆 ( GB/T 12527—2008 ) Aerial Insulated Cables With Rated Voltage 1kV and under 1kV (12527—2008)

### ●型号名称 Type & Name

型 号 Type	名 称 Name	用 途 Application
JKV	额定电压1kV铜芯聚氯乙烯绝缘架空电缆 Copper-core PVC aerial insulated cable with rated voltage 1kV	
JKY	额定电压1kV铜芯聚乙烯绝缘架空电缆 Copper-core PE aerial insulated cable with rated voltage 1kV	
JKYJ	额定电压1kV铜芯交联聚乙烯绝缘架空电缆 Copper-core XLPE aerial insulated cable with rated voltage 1kV	
JKLV	额定电压1kV铝芯聚氯乙烯绝缘架空电缆 Aluminum-core PVC aerial insulated cable with rated voltage 1kV	架空固定敷设、引户线 For aerial and fixed laying, and wire conducting, etc.
JKLYJ	额定电压1kV铝芯交联聚乙烯绝缘架空电缆 Aluminum-core XLPE aerial insulated cable with rated voltage 1kV	
JKLY	额定电压1kV铝芯聚乙烯绝缘架空电缆 Aluminum-core PE aerial insulated cable with rated voltage 1kV	

### ●电缆参考外径和重量 1kV及以下架空绝缘电缆

### ●Reference Outer Diameter and Approximate Weights of 1kV and under 1kV aerial insulated Cables

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm	电缆近似重量kg/km Approximate weight, kg/km			
		JKV	JKLV	JKYJ	JKLYJ
1×16	7.2	170	76	164	64
1×25	8.4	255	105	249	92
1×35	9.8	356	146	353	128
1×50	11.2	474	187	467	173
1×70	12.8	662	258	663	233
1×95	14.8	914	346	911	315
1×120	16.2	1148	420	1130	388
1×150	1.80	1427	526	1420	485
1×185	20.1	1771	642	1758	598
2×16	14.6	352	154	332	135
2×25	16.8	528	213	505	191
2×35	19.6	746	295	714	263

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm	电缆近似重量kg/km Approximate weight, kg/km			
		JKV	JKLV	JKYJ	JKLYJ
2×50	22.4	982	379	946	343
2×70	25.6	1386	521	1342	478
2×95	29.6	1903	700	1845	642
2×120	32.4	2352	851	2288	787
4×16	17.9	705	309	664	268
4×25	20.6	1055	427	1009	380
4×35	24.0	1492	589	1427	525
4×50	26.9	1965	759	1891	685
4×70	31.0	2771	1043	2685	956
4×95	35.8	3806	1401	3690	1285
4×120	39.2	4704	1701	4526	1573

另外JKLV、JKLYJ还有3+K系列，K为承载的中性导体，根据配电网工程要求，用户可任选其中截面与主线芯搭配。

In addition to JKLV and JKLYJ, 3+K series are also available, of which K refers to neutral conductor bearing load. Users can select any sectional area listed above for main core based on the requirements of power distribution.

## 2. 额定电压10kV架空绝缘电缆 ( GB/T 14049—2008 )

Aerial Insulated Cables with Rated Voltage 10kV (GB/T 14049-2008)

### ●型号名称 Type & Name

型 号 Type	名 称 Name	用 途 Application
JKYJ	铜芯交联聚乙烯绝缘架空电缆 Copper-core XLPE aerial insulated cable	架空固定敷设，软铜芯产品用于变压器引下线。电缆架设时，应考虑电缆和树木保持一定距离。电缆运行时，允许电缆和树木频繁接触。
JKTRYJ	软铜芯交联聚乙烯绝缘架空电缆 Flexible copper-core XLPE aerial insulated cable	架空固定敷设。电缆架设时，应考虑电缆和树木保持一定距离。电缆运行时，允许电缆和树木短时接触。
JKLYJ	铝芯交联聚乙烯绝缘架空电缆 Aluminum-core XLPE aerial insulated cable with rated voltage 1kV	For aerial and fixed laying; and flexible copper-core product for conducting down-led conductor for transformer. When laying cable, cable shall be kept in certain distance to trees. When cable is in operation, frequent contacts between cable and trees are allowed.
JKLYJ/B	铝芯本色交联聚乙烯绝缘架空电缆 Aluminum-core natural color XLPE aerial insulated cable	For aerial and fixed laying, when laying cables,cable shall be kept in certain distance to trees. When cable is in operation, short-time contacts between cable and trees are allowed.
JKLYJ/Q	铝芯轻型交联聚乙烯薄绝缘架空电缆 Aluminum-core light thin XLPE aerial insulated cable	

### ●电缆参考外径和重量 10kV架空绝缘电缆

●Reference Outer Diameter and Approximate Weights of 10kV aerial insulated Cables:

芯数×截面mm <sup>2</sup> Core Number X cross Sectional area, mm <sup>2</sup>	电缆参考外径mm Reference outer diameter, mm	电缆近似重量kg/km Approximate weight, kg/km			
		JKYJ、JKTRYJ、JKLYJ	JKLYJ/Q	JKYJ、JKTRYJ	JKLYJ
1×25	14.0	10.9	342	188	132
1×35	15.0	12.0	440	228	166
1×50	16.3	13.2	572	277	210
1×70	17.9	14.9	763	358	282
1×95	19.5	16.6	1012	444	360
1×120	21.0	17.9	1255	525	435
1×150	22.4	19.5	1524	624	526
1×185	24.1	20.8	1864	728	624
1×240	26.2	23.4	2375	913	797
1×300	28.5	25.6	2953	1108	980

### 3. 钢芯铝绞线芯架空绝缘电缆 ( Q/9150600708951661R-021-2017 )

Aerial insulated cables with ACSR core (Q/9150600708951661R-021-2017)

●型号名称 Type & Name

型 号 Type	名 称 Name
JKLGV	钢芯铝绞线聚氯乙烯绝缘架空电缆 ACSR PVC aerial insulated cable
JKLGY	钢芯铝绞线聚乙烯绝缘架空电缆 ACSR PE aerial insulated cable
JKLGYJ	钢芯铝绞线交联聚乙烯绝缘架空电缆 ACSR XLPE aerial insulated cable
JKLGY/Q	钢芯铝绞线轻型聚乙烯绝缘架空电缆 ACSR light thin PE aerial insulated cable
JKLGYJ/Q	钢芯铝绞线轻型交联聚乙烯绝缘架空电缆 ACSR light thin XLPE aerial insulated cable

●电缆参考外径和重量 Reference Outer Diameter and Weight

导体标称截面mm <sup>2</sup> 铝/钢 Nominal cross section area of conductors mm <sup>2</sup> Aluminum/stee	电缆参考外径mm Reference outer diameter, mm				电缆近似重量kg/km Approximate weight, kg/km			
	1kV		10kV		1kV		10kV	
	JKLGV、JKLGYJ、JKLGY	JKLGYJ	JKLGYJ/Q	JKLGV	JKLGYJ、JKLGY	JKLGYJ	JKLGYJ/Q	
16/3	7.5	13.2	10.2	99	94	178	126	
25/4	8.9	14.6	11.6	144	138	233	174	
35/6	10.4	15.7	12.7	198	188	286	221	
50/8	11.7	17.0	14.0	260	249	356	286	
50/30	13.8	19.1	16.1	453	439	562	482	
70/10	13.6	18.9	15.9	353	340	460	381	
70/40	15.8	21.1	18.1	607	591	728	639	
95/15	15.7	20.6	17.6	484	466	589	502	
95/20	16.2	21.1	18.1	516	498	623	533	
95/55	18.6	23.5	20.5	836	815	956	856	
120/7	16.5	21.4	18.4	489	470	598	507	
120/20	17.2	22.1	18.8	580	562	691	598	
120/25	18.0	22.9	19.9	647	625	764	666	
120/70	20.4	25.3	22.3	1039	1015	1169	1060	
150/8	18.2	22.7	19.7	597	574	697	600	
150/20	19.1	23.6	20.6	692	667	796	695	
150/25	19.2	23.7	20.7	745	721	849	752	
150/35	19.9	24.4	21.4	827	800	934	833	
185/10	20.6	24.7	21.7	755	725	845	744	
185/25	21.5	25.6	22.6	885	853	979	873	
185/30	21.3	25.4	22.4	910	878	1003	898	
185/45	22.3	26.4	23.4	1036	1002	1132	1017	
240/30	24.8	28.5	25.5	1148	1105	1230	1104	
240/40	24.6	28.3	25.3	1188	1147	1269	1145	
240/55	25.3	29.0	26.0	1338	1296	1422	1295	

## 计算机与仪表电缆 Computer and Instrument Cables

用途：适于电子计算机系统、监控回路、自动化控制系统的信号传输及检测仪器、仪表连接用连接线。

Application: They applies to signal transmission of computer system, monitoring circuits and automation control system, and also detect instrument, meters connecting lines.

型号：DJYPV、DJYP2V、DJYP3V、DJYVP、DJYVP2、DJYVP3、DJYPVP、DJYP2VP2、DJYP3VP3、DJYPVR、DJYP2VR、DJYP3VR、DJYVPR、DJYVP2R、DJYVP3R、DJYPVPR、DJYP2VP2R、DJYP3VP3R、DJYPV22、DJYP2V22、DJYP3V22、DJYVP22、DJYVP2-22、DJYVP3-22、DJYPVP22、DJYPVP2-22、DJYPVP3-22等及阻燃耐火系列。

Type: DJYPV, DJYP2V, DJYP3V, DJYVP, DJYVP2, DJYVP3, DJYPVP, DJYP2VP2, DJYP3VP3, DJYPVR, DJYP2VR, DJYP3VR, DJYVPR, DJYVP2R, DJYVP3R, DJYPVPR, DJYP2VP2R, DJYP3VP3R, DJYPV22, DJYP2V22, DJYP3V22, DJYVP22, DJYVP2-22, DJYVP3-22, DJYPVP22, DJYPVP2-22, DJYPVP3-22 and ZR-NH series.

规格：0.5~2.5mm<sup>2</sup>, 2线组或3线组或4线组，线对数：2~37对。

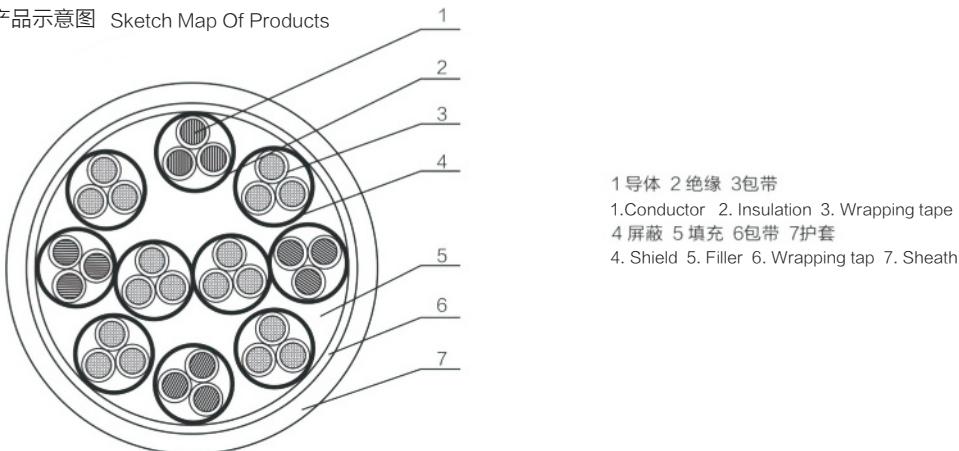
Specification: 0.5~2.5mm<sup>2</sup>, 2 lines group or 3 lines group or 4 lines group, pairs number of lines: 2~37 pairs.

电缆长期最高工作温度：

聚乙烯绝缘电缆	+70°C	PE Insulated Cables	+70°C
聚氯乙烯绝缘电缆	+70°C	PVC Insulated Cables	+70°C
无卤低烟聚烯烃绝缘电缆	+70°C	LSZH PO Insulated Cables	+70°C
交联聚乙烯绝缘电缆	+90°C	XLPE Insulated Cables	+90°C
硅橡胶绝缘电缆	+180°C	Silicone Rubber Insulated Cables	+180°C
氟塑料绝缘电缆	+200°C	Fluoroplastic Insulated Cables	+200°C



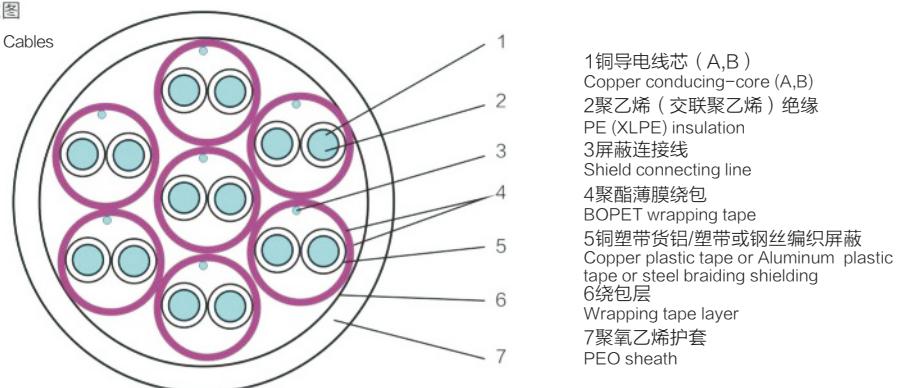
产品示意图 Sketch Map Of Products



1 导体 2 绝缘 3 包带  
1.Conductor 2. Insulation 3. Wrapping tape  
4 屏蔽 5 填充 6 包带 7 护套  
4. Shield 5. Filler 6. Wrapping tap 7. Sheath

计算机电缆结构示意图

Structure Sketch Map of Computer Cables



1 铜导电线芯 (A,B)  
Copper conducting-core (A,B)  
2 聚乙烯 (交联聚乙烯) 绝缘  
PE (XLPE) insulation  
3 屏蔽连接线  
Shield connecting line  
4 聚酯薄膜绕包  
BOPET wrapping tape  
5 铜塑带货带/塑带或钢丝编织屏蔽  
Copper plastic tape or Aluminum plastic tape or steel braiding shielding  
6 绕包层  
Wrapping tape layer  
7 聚氧乙烯护套  
PEO sheath

## 阻燃电线电缆 Flame-retardant Wires and Cables

执行标准: GB/T 19666—2005/ GB/T × × × ×

执行标准中“GB/T × × × ×”为非阻燃电缆对应的执行标准。

Executive standard: GB/T 19666—2005/ GB/T × × × ×

“GB/T × × × ×” is the standard of non flame-retardant cables.

用途: 广泛用于大型建筑、隧道、石油化工行业、发电站、矿山等对防火有较高要求的场合。

规格: 阻燃聚氯乙烯绝缘电线、阻燃控制电缆、阻燃电力电缆等, 交联型阻燃电缆的电压等级为35kV及以下。

产品表示方法: 在常规产品型号前增加代号ZA、ZB、ZC、WDZ、WDZA、WDAB、WDZC。

特点: 在火灾发生时, 阻燃电缆具有阻止火势在电缆线路蔓延的功能, 可避免火灾事故扩大。

Application: Widely used in fields where high-level fire prevention is required such as large building, tunnel, petroleum and chemical industry, power plant and mine, etc.

Type: PVC flame-retardant insulated cables, flame-retardant control cables, flame-retardant power cables etc., and XLPE flame-retardant cables are with voltage 35kV and under 35kV.

The method of describing products: Add ZA, ZB, ZC, WDZ, WDZA, WDAB, WDZC before types of conventional products.

Characteristics: Flame-retardant cables are able to prevent the spreading of fire along line, which helps to stop further expansion of fire and to reduce loss.

产品示意图 Sketch Map Of Products



# 耐火电线电缆 Fire-resistant Wires and Cables

执行标准: GB/T 19666—2005/ GB/T × × × ×

执行标准中“GB/T × × × ×”为非阻燃电缆对应的执行标准。

Executive standard: GB/T 19666—2005/ GB/T × × × ×

“GB/T × × × ×” is the standard of non flame-retardant cables.

用途:主要用于高层建筑、地铁、隧道、石油化工行业、发电站及重要工矿企业等与防火安全和消防救生密切相关的重要场所。

规格:耐火聚氯乙烯电线、耐火控制电缆、耐火计算机电缆、耐火电力电缆等,耐火电力电缆的电压等级为35kV及以下。

产品表示方法:在常规产品型号前增加代号N、ZAN、ZBN、ZCN、WDZN、WDZAN、WDABN、WDZCN。

使用特性:与对应的非耐火电缆相同。

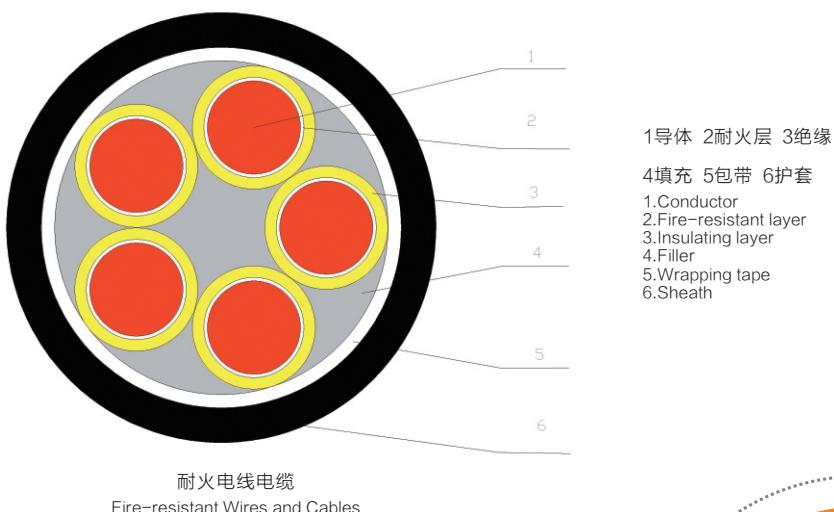
Application: Widely used in fields where fire control and fire rescue is highly required, such as high-rise building, subway, tunnel, petroleum and chemical industry, power plant and important industrial and mining enterprises, etc.

Type: fire-resistant PVC wires, fire-resistant control cables, fire-resistant computer cables, fire-resistant power cables etc., fire-resistant power cables are with voltage 35kV and under 35kV.

The method of describing products: Add N, ZAN, ZBN, ZCN, WDZN, WDZAN, WDABN, WDZCN before types of conventional products.

operational performance: The same to that of non fire-resistant cables.

产品示意图 Sketch Map Of Products



1导体 2耐火层 3绝缘

4填充 5包带 6护套

1.Conductor

2.Fire-resistant layer

3.Insulating layer

4.Filler

5.Wrapping tape

6.Sheath



## 电磁线 Magnet Wire

### 1. 电工用铜扁线 Copper Flat Wire for Electrical Engineering

#### ● 产品特点 Characteristics

产品主要用于各类变压器、电焊机、发电机、电动机、电抗器等绕组线的导体。产品选用优良的高纯铜板，在高温炉中熔化提纯后用上引法制成铜杆，再采用先进的挤压方法生产而成，产品具有光洁的表面，R角过度圆滑，无毛刺、凹坑、突起，无氧化层等缺陷。

Widely used for winding wires of transformers, electric welder, electric generator, electromotor, reactor etc. The product selects excellent high purity copper which is melted and purified into copper rods with the lead method in the high-temperature furnace, and then uses advance extrusion to production. The products are with smooth surface, R angle over smooth, no glitches, no pits, no projections, no oxide layer and other defects.

技术参数 Technical Data Sheet

型号 Type	代号 Code name	代号含义 Meaning of code name	规格范围 ( mm) Specification range	代号含义 mm Meaning of code name	主要性能指标 ( 括弧内代表半硬态产品的指标 ) Main performance indicators (content in the brackets represents indicators of half-hard products)		
					伸长率% ≥ Extensibility % ≥	抗拉强度 ( N/mm <sup>2</sup> ) ≤ Tensile strength N/mm <sup>2</sup> ≤	电阻率 ρ ( 20Ω.mm <sup>2</sup> /m ) ≤ Resistivity ρ ( 20Ω.mm <sup>2</sup> /m ) ≤
	TBR	软铜扁线 Flexible copper flat wire	1.00 ≤ a ≤ 5.60	a代表扁线的窄边尺寸 "a" represents Narrow side dimensions of flat wire	30.0	275	0.017241
	Tb ( 半硬 ) Tb(half-hard)	半硬态软铜扁线 Half-hard flexible copper flat wire	1.40 ≤ a ≤ 4.00		15.0	80.2=120~160	0.01754

### 2. 电工用铝扁线 Aluminum Flat Wire for Electrical Engineering

#### ● 产品特点 Characteristics

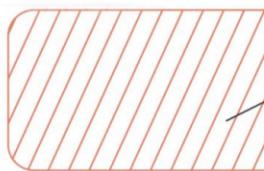
产品主要用于各类变压器、电焊机、发电机、电动机、电抗器等绕组线的导体。产品采用优质铝锭，经过高温炉熔化提纯后用连铸连轧方法制成铝杆，再把铝杆采用先进的挤压工艺生产而成。产品具有十分光洁的表面，R角过度圆滑，无毛刺、凹坑、突起等缺陷。

Widely used for winding wires of transformers, electric welder, electric generator, electromotor, reactor etc. The product selects excellent aluminium ingot which is melted and purified into aluminum rods with the lead method in the high-temperature furnace, and then uses advance extrusion to production. The products are with smooth surface, R angle over smooth, no glitches, no pits, no projections and other defects.

技术参数 Technical Data Sheet

型号 Type	代号 Code name	代号含义 Meaning of code name	规格范围 ( mm) Specification range	代号含义 mm Meaning of code name	主要性能指标 ( 括弧内代表半硬态产品的指标 ) Main performance indicators (content in the brackets represents indicators of half-hard products)			
					伸长率% ≥ Extensibility % ≥	抗拉强度 ( N/mm <sup>2</sup> ) ≤ Tensile strength N/mm <sup>2</sup> ≤	电阻率 ρ ( 20Ω.mm <sup>2</sup> /m ) ≤ Resistivity ρ ( 20Ω.mm <sup>2</sup> /m ) ≤	
	LBR	软铝扁线 Flexible aluminum flat wire	a(b) ≤ 3.15 3.15 < a(b) ≤ 6.30 6.30 < a(b) ≤ 12.5 12.5 < b ≤ 20.00	a代表扁线a边尺寸， 即扁线的窄边尺寸； b代表扁线b边尺寸， 即宽边尺寸 "a" represents Narrow side dimensions of flat wire a; "b" represents Narrow side dimensions of flat wire b;	20.0	60.0	95.0	0.02800
	LBY2	H2状态硬铝扁线 H2 hard aluminum flat wire			6	75.0	115	0.028264

产品示意图 Sketch Map Of Products

电工用铜扁线  
Copper Flat Wire电工用铝扁线  
Aluminum Flat Wire for Electrical Engineering

### 3. 纸包绕组线 Paper Winding Wires

#### ●产品特点 Characteristics

产品主要适用于500kV及以下的油浸式变压器及其他类似电器设备用的绕组。产品采用国内最先进的绕包设备生产，具有低电阻、耐高温、耐老化等优点，可作为变压器及电器类设备的绕组长期稳定的运行。

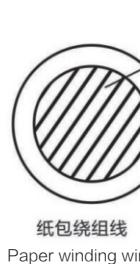
Widely used for winding wires of transformers, electric welder, electric generator, electromotor, reactor etc. The product selects excellent high purity copper which is melted and purified into copper rods with the lead method in the high-temperature furnace, and then uses advance extrusion to production. The products are with smooth surface, R angle over smooth, no glitches, no pits, no projections, no oxide layer and other defects.

#### 技术参数 Technical Data Sheet

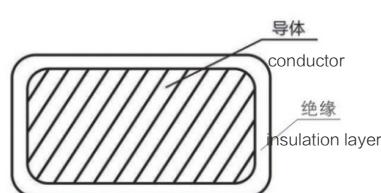
型号 Type	代号 Code name	代号含义 Meaning of code name	主要性能指标 Main performance indicators				
			绝缘厚度 (mm) Insulation thickness mm	绝缘偏差 (mm) Insulation deviation mm	绕包方式 Way of wrapping	弯曲直径 (mm) Bending diameter mm	耐温指数 Temperature resistance index
Z	普通纸包铜圆线 Ordinary paper wrapped round copper wire						90°C (电缆纸、 500kV变压器匝间绝缘纸漫 变变压器油后耐温指数为105)
ZA	高密度纸包铜圆线 High density paper wrapped round copper wire	0.30	± 0.05			100	
NOMEX	NOMEX纸包铜圆线 NOMEX paper wrapped round copper wire	0.45	± 0.05	三层及以下 纸带全部重叠绕包；		100	
ZL	普通纸包铝圆线 Ordinary paper wrapped round aluminum wire	0.80	± 0.10			100	
ZAL	高密度纸包铝圆线 High density paper wrapped round aluminum wire	1.20	± 0.12			150	
NOMEXL	NOMEX纸包铝圆线 NOMEX paper wrapped round aluminum wire	1.80	± 0.15			150	
		4.25	± 0.30			150	
ZB	普通纸包铜扁线 Ordinary paper wrapped flat copper wire			四层以上纸带，最内、最外层重叠 绕包，其它层一般采用间隙绕包		150	180°C (MONEX 聚酰胺纤维纸)
ZAB	高密度纸包铜扁线 High density paper wrapped flat copper wire	0.45	-0.05 ~ +0.12			150	120°C (绝缘可 采用经特殊氯化 处理的耐温纸)
NOMEXB	NOMEX纸包铜扁线 NOMEX paper wrapped flat copper wire	0.60	-0.07 ~ +0.14			150	160°C (绝缘采 用专用的耐热绝 缘纸)
ZLB	普通纸包铝扁线 Ordinary paper wrapped flat aluminum wire	0.95	-0.10 ~ +0.19			150	90 °C (Cable paper, after insulation paper between transformer turns immersed transformer oil the temperature- resistant index is 105)
ZALB	高密度纸包铝扁线 High density paper wrapped flat aluminum wire	1.35	-0.15 ~ +0.21			150	
NOMEXLB	NOMEX纸包铝扁线 NOMEX paper wrapped flat aluminum wire	1.60	-0.15 ~ +0.24			200	
		1.95	-0.15 ~ +0.28			200	
ZFB	普通纸包复合导线 Ordinary paper wrapped compound conductor	2.45	-0.15 ~ +0.32			200	180°C (MONEX PA)
		2.95	-0.02 ~ +0.37			200	
ZFAB	高密度纸包复合导线 High density paper wrapped compound conductor	0.95	-0.10 ~ +0.19			500	120°C (insulation paper can use temperature- resistant paper after being treated with a special oxidation)
		1.35	-0.15 ~ +0.21				
		1.60	-0.15 ~ +0.24				
		1.95	-0.15 ~ +0.28				
		2.45	-0.15 ~ +0.32				
		2.95	-0.02 ~ +0.37				

注：可根据客户的需求进行设计生产特殊规格的产品。Note: According to customer needs, we can design and produce products of special specifications.

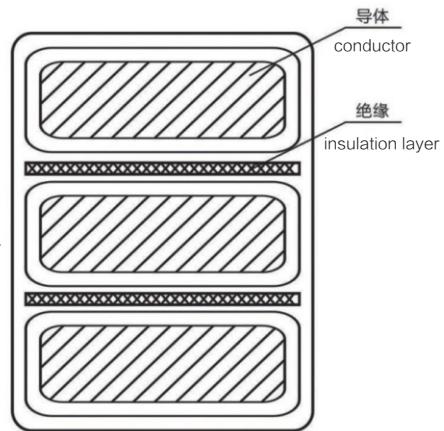
#### 产品示意图 Sketch Map Of Products



纸包绕组线  
Paper winding wire



纸包绕组线  
Paper winding wire



纸包绕组线  
Paper winding wire

## 4. 丝包绕组线 Wire Winding Wire

### ●产品特点 Characteristics

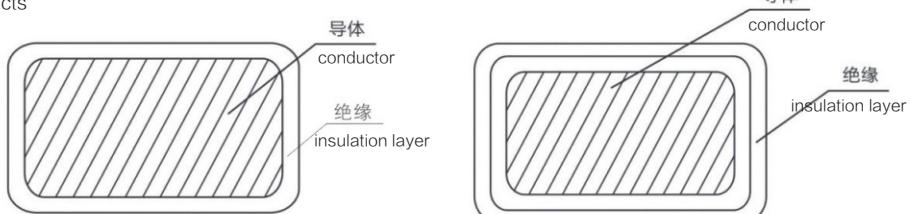
产品主要用于各类型电机、电焊机、发电机等绕组的制造。产品采用优质的原材料，使用中国内最先进的绕包设备生产，具有高强的耐磨、耐电压、防腐蚀、耐高温等优良性能，可作为变压器及电器类设备的绕组长期稳定的运行。

Widely used for all kinds of electrical machineries, electric welder, electric generator,etc. The product uses excellent raw materials, and the most advanced wrapping equipment in china to produce. The wire has properties of high wear-resistance, voltage-resistance, anti-corrosion, high temperature-resistance, which can be used as wrapping wire of transformer and other electric equipments for long-term operation.

### 技术参数 Technical Data Sheet

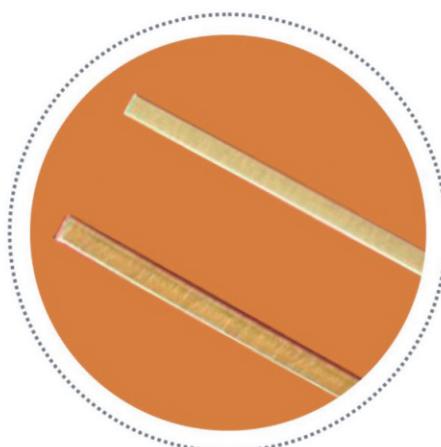
型号 Type	代号 Code name	代号含义 Meaning of code name	主要性能指标 Main performance indicators					
			绝缘厚度 ( mm ) insulation thicknessmm	绝缘厚度偏差% deviation of Insulation thickness%	温度指数 ( 可长期运行的最高温度 ) Temperature indicators(highest temperature for long-term operation)	耐电压V Withstand voltage v		
GLEB	GLEB	双玻璃丝包铜扁线 Double-glass and wire-winding copper flat wire	0.20	-20	180°C 150°C	300 ~ 500 2500 ~ 5000		
	GLELB	双玻璃丝包铝扁线 Double-glass and wire-winding aluminum flat wire	0.30					
	GLEEB	双涤玻丝绕包烧结铜扁线 Double polyester and glass wire wrapped and sintered into copper flat wire	0.40					
	GLMB	单玻璃丝薄膜绕包铜扁线 Copper flat wire with single glass wire film wrapped	0.50					
	GLMLB	单玻璃丝薄膜绕包铝扁线 Aluminum flat wire with single glass wire film wrapped	0.50	-15				
	GLEMB	双玻璃丝薄膜绕包铜扁线 Copper flat wire with double glass wire film wrapped	0.60					
	GLEMLB	双玻璃丝薄膜绕包铝扁线 Aluminum flat wire with double glass wire film wrapped	0.30					

产品示意图 Sketch Map Of Products



玻璃丝包绕组线  
Glass wire winding wire

玻璃丝薄膜绕阻线  
Glass wire film winding wire



## 5. 200级聚酰亚胺-F46复合薄膜绕包铜扁线

### 200-level Polyimide-F46 Copper Flat Wire of Composite Film

#### ●产品特点 Characteristics

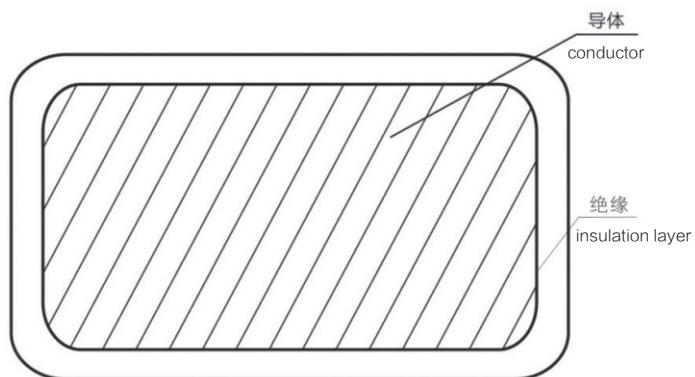
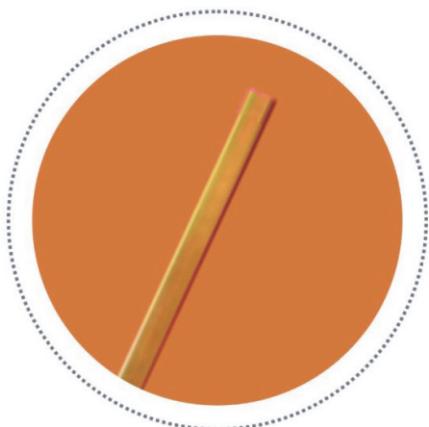
产品主要用于牵引电机及直流电机线圈的制造。产品采用专用的复合薄膜，绕包在导体上后通过高频加温的方法进行烧结，再进行保温后急速冷却，让绝缘紧密牢固的包覆在导体上。产品具有优良的耐高温、耐磨、防水、防腐蚀的性能。

The products are mainly used for manufacturing of traction motors and DC coil. And they use special-made composite film, then are sintered by high-frequency heating method after wrapping the conductor, and go raid cooling after holding heat which can make insulation layer cover the conductor closely and firmly. The products have good performances of high temperature-resistance, wear-resistance, water-proofing, anti-corrosion.

#### 技术参数 Technical Data Sheet

型号 Type	代号 Code name	代号含义 Meaning of code name	主要性能指标 Main performance indicators					
			最小绝缘厚度A-a (mm) Min. insulation thickness A-a mm		最大绝缘厚度A-a (mm) Max. insulation thickness A-a mm		弯曲后击穿电压V Breakdown voltage after bending V	
			A为成品窄边尺寸；a为导体窄边尺寸 "A" is the narrow dimension of finished products; "a" is the narrow size of conductors					
MYFB 耐温等级：200 Temperature-resistant level:200	200-level Polyimide-F46 Copper Flat Wire of Composite Film	耐温等级为200级的聚酰亚胺-氟-46复合薄膜绕包铜扁线 200-level Polyimide-F46 Copper Flat Wire of Composite Film	单层 Single layer	双层 Double layer	单层 Single layer	双层 Double layer	a≤3.00	3.00<a≤5.60
			0.100	0.200	0.140	0.280	2000	1500
			0.130	0.260	0.180	0.350	2500	2000
			0.170	0.340	0.230	0.460	3000	2300
			0.210	0.430	0.290	0.570	3500	2600
			0.260	0.510	0.340	0.680	4000	3000

#### 产品示意图 Sketch Map Of Products



F46复合薄膜绕包铜扁线  
F46 Copper Flat Wire of Composite Film

## 额定电压450/750V及以下橡皮绝缘电缆

### Rated voltage 450/750V and under 450/750VRubber Cables

用途：用于额定电压450/750V及以下动力装置用硫化橡皮绝缘和护套（若有）的硬和软电缆。

Purpose: For rated voltage 450/750V and under 450/750V power device with vulcanized rubber insulation and sheath (if there are) hard and flexible cables.

◆耐热硅橡胶绝缘电缆，GB/T 5013.3—2008/IEC 60245-3 : 1994

型号：60245 IEC 03(YG)。

◆ Heat resistant silicone rubber insulated cables, GB/T 5013.3

-2008/IEC 60245-3:1994

Type: 60245 IEC 03(YG).

◆软线和软电缆，GB/T 5013.4—2008/IEC 60245-4 : 2004

▽普通强度橡套软线，型号：60245 IEC 53(YZ)

▽普通氯丁或其他相当的合成弹性体橡套软线，型号：60245 IEC 57(YZW)

▽重型氯丁或其他相当的合成弹性体橡套软线，型号：60245 IEC 66(YCW)

◆ Flexible wires and cables, GB/T 5013.4-2008/IEC 60245-4:2004

▽ The general strength of soft rubber sheathed wires, type: 60245 IEC 53(YZ)

▽ The ordinary neoprene or other equivalent synthetic elastomer rubber sheathed wires, type: 60245 IEC57 (YZW)

▽ Heavy neoprene or other equivalent synthetic elastomer rubber sheathed flexible wires, type: 60245 IEC66 (YCW)

◆电梯电缆，GB/T 5013.5—2008/IEC 60245-5 : 1994

用途：一般用途编织、高强度橡皮、氯丁橡胶或其他相当的合成弹性体橡套软线

型号：编织电梯电缆：60245 IEC 70(YTB)

高强度橡套电梯电缆：60245 IEC 74(YT)

氯丁橡胶或其他相当的合成弹性体电梯电缆：60245 IEC 75(YTF)

◆ Elevator cables, GB/T 5013.5-2008/IEC 60245-5:1994

Purpose: General using braid、high strength rubber、neoprene or other equivalent synthetic elastomer rubber sheathed flexible wires.

Type: Braid elevator cables: 60245 IEC 70(YTB)、High strength rubber sheathed elevator cables: 60245 IEC 74(YT)、Neoprene or other equivalent synthetic elastomer elevator cables : 60245 IEC 75(YTF)

◆电焊机电缆，GB/T 5013.6—2008/IEC 60245-6 : 1994

型号：橡套电焊机电缆：60245 IEC 81(YH)

氯丁橡胶或其他相当的合成弹性体电焊机电缆：60245 IEC 82(YHF)

◆ Electric welding cables, GB/T 5013.6-2008/IEC 60245-6:1994

Type: Rubber sheathed welding cables: 60245 IEC 81(YH)、Neoprene or other equivalent synthetic elastomer electric welding cables : 60245 IEC 82(YHF)

◆耐热乙烯-乙酸乙烯酯橡皮绝缘电缆，GB/T 5013.7—2008/IEC 60245-7 : 1994

▽导体最高温度110℃耐热乙烯-乙酸乙烯酯橡皮或其他相当的合成弹性体绝缘单芯、无护套750V电缆，

型号：实心或绞合导体：60245 IEC 04(YYY)

软导体：60245 IEC 05(YRYY)

▽导体最高温度110℃耐热乙烯-乙酸乙烯酯橡皮或其他相当的合成弹性体绝缘单芯、无护套500V电缆

型号：实心或绞合导体：60245 IEC 06(YYY)

软导体：60245 IEC 07(YRYY)

◆ Heat resistant ethylene vinyl acetate rubber insulated cables, GB/T 5013.7-2008/IEC 60245-7:1994

▽ Heat resistant ethylene with 110°C maximum temperature of conductor-Vinyl acetate rubber or other equivalent synthetic elastomer insulated single-core、non sheathed 750V cables

Type: Solid or stranded conductor: 60245 IEC 04(YYY), soft conductor: 60245 IEC 05(YRYY)

▽ Heat resistant ethylene with 110°C maximum temperature of conductor-Vinyl acetate rubber or other equivalent synthetic elastomer insulated single-core、non sheathed 500V cables

Type: Solid or stranded conductor: 60245 IEC 06(YYY), soft conductor: 60245 IEC 07(YRYY)

◆通用橡套软电缆，JB/T 8735.2—2011

用途：用于额定电压450/750V及以下家用电器、电动工具和各种移动式电器设备。

额定电压：450/750V、300/500V、300/300V

型号：轻型橡套软电缆：YQ、YQW

中型橡套软电缆：YZ、YZW

中型橡套扁形软电缆：YZB、YZWB

重型橡套软电缆：YC、YCW

◆ Universal rubber sheathed flexible cables, JB/T 8735.2-2011

Purpose: For power units, household apparatuses and various movable field electric equipment of rated 450/750V and under 450/750V.

Rated voltage: 450/750V、300/500V、300/300V

Type: Light-sized rubber sheathed flexible cables: YQ、YQW

Medium-sized rubber sheathed flexible cables: YZ、YZW

Medium-sized rubber sheathed flat flexible cables: YZB、YZWB

Heavy rubber sheathed flexible cables: YC、YCW

◆额定电压300/500V橡皮绝缘固定敷设电线，JB/T 1601—1993

用途：用于额定电压300/500V及以下的电气设备及照明装置用固定敷设的铜芯或铝芯橡皮绝缘电线。

型号：BXF、BLXF、BXY、BLXY、BX、BLX、BXR

规格：芯数：1芯；标称截面：0.75~630mm<sup>2</sup>

◆ Rated voltage 300/500V rubber insulated fixed-laid cables, JB/T 1601-1993

Purpose: For fixed-laid copper-core or aluminum-core insulated wires for electric equipment and lighting devices with rated 300/500V and under 300/500V.

Type: BXF、BLXF、BXY、BLXY、BX、BLX、BXR

Specification: Core number: 1 core; Nominal cross sectional area: 0.75~630mm<sup>2</sup>

## 1、耐热硅橡胶绝缘电缆 ( GB/T 5013.3—2008/IEC 60245-3 : 1994)

Heat resistant silicone rubber insulated cables

型号及额定电压 Type and rated voltage	标称截面mm <sup>2</sup> Nominal cross sectional area (mm <sup>2</sup> )	绝缘标称厚度mm Nominal insulation thickness (mm)	平均外径mm Average outerdiameter(mm)	
			下限 Lower limits	上限 Upper limits
60245 IEC 03(YG) 300/500V	0.5	0.6	2.6	3.3
	0.75	0.6	2.8	3.5
	1.0	0.6	2.9	3.7
	1.5	0.7	3.4	4.2
	2.5	0.8	4.0	5.0
	4	0.8	4.5	5.6
	6	0.8	5.0	6.2
	10	1.0	6.2	7.8
	16	1.0	7.3	9.1

## 2、软线和软电缆 ( GB/T 5013.4—2008/IEC 60245-4 : 2004)

Size of 300/500V 60245 IEC 53(YZ), 60245 IEC 57(YZW) type cables

- 300/500V 60245 IEC 53(YZ), 60245 IEC 57(YZW)型电缆的尺寸
- 300/500V 60245 IEC 53(YZ), 60245 IEC 57(YZW) type cables size

芯数×标称截面mm <sup>2</sup> Core Number × Nominal cross sectional area(mm <sup>2</sup> )	绝缘厚度mm Insulation thickness(mm)	护套厚度mm Sheath thickness(mm)	平均外径mm Average outer diameter(mm)	
			下限 Lower limits	上限 Upper limits
2×0.75	0.6	0.8	5.7	7.4
2×1.0	0.6	0.9	6.1	8.0
2×1.5	0.8	1.0	7.6	9.8
2×2.5	0.9	1.4	9.0	11.6
3×0.75	0.6	0.9	6.2	8.1
3×1.0	0.6	0.9	6.5	8.5
3×1.5	0.8	1.0	8.0	10.4
3×2.5	0.9	1.0	9.6	12.4
4×0.75	0.6	0.9	6.8	8.8
4×1.0	0.6	0.9	7.1	9.3
4×1.5	0.8	1.1	9.0	11.6
4×2.5	0.9	1.2	10.7	13.8
5×0.75	0.6	1.0	7.6	9.9
5×1.0	0.6	1.0	8.0	10.3
5×1.5	0.8	1.1	9.8	12.7
5×2.5	0.9	1.3	11.9	15.3

●450/750V 60245 IEC 66(YCW)型电缆的尺寸  
Size of 450/750V 60245 IEC 66(YCW) type cables

芯数 × 标称截面( $\text{mm}^2$ ) Core number × nominal cross sectional area( $\text{mm}^2$ )	绝缘标称厚度mm Insulation nominal thickness(mm)	护套标称厚度mm (单层) Sheath nominal thickness (single layer)(mm)	电缆平均外径mm Average outer diameter(mm)	
			下限 Lower limits	上限 Upper limits
1×1.5	0.8	1.4	5.7	7.1
1×2.5	0.9	1.4	6.3	7.9
1×4	1.0	1.5	7.2	9.0
1×6	1.0	1.6	7.9	9.8
1×10	1.2	1.8	9.5	11.9
1×16	1.2	1.9	10.8	13.4
1×25	1.4	2.0	12.7	15.8
1×35	1.4	2.2	14.3	17.9
1×50	1.6	2.4	16.5	20.6
1×70	1.6	2.6	18.6	23.3
1×95	1.8	2.8	20.8	26.0
1×120	1.8	3.0	22.8	28.6
1×150	2.0	3.2	25.2	31.4
1×185	2.2	3.4	27.6	34.4
1×240	2.4	3.5	30.6	38.3
1×300	2.6	3.6	33.5	41.9
1×400	2.8	3.8	37.4	46.8
2×1.0	0.8	1.3	7.7	10.0
2×1.5	0.8	1.5	8.5	11.0
2×2.5	0.9	1.7	10.2	13.1
2×4	1.0	1.8	11.8	15.1
2×6	1.0	2.0	13.1	16.8
2×10	1.2	3.1	17.7	22.5
2×16	1.2	3.3	20.2	25.7
2×25	1.4	3.6	24.3	30.7
3×1.0	0.8	1.4	8.3	10.7
3×1.5	0.8	1.6	9.2	11.9
3×2.5	0.9	1.8	10.9	14.0
3×4	1.0	1.9	12.7	16.2
3×6	1.0	2.1	14.1	18.0
3×10	1.2	3.3	19.1	24.2
3×16	1.2	3.5	21.8	27.6
3×25	1.4	3.8	26.1	33.0
3×35	1.4	4.1	29.3	37.1
3×50	1.6	4.5	34.1	42.9
3×70	1.6	4.8	38.4	48.3
3×95	1.8	5.3	43.3	54.0
4×1.0	0.8	1.5	9.2	11.9
4×1.5	0.8	1.7	10.2	13.1
4×2.5	0.9	1.9	12.1	15.5

芯数 × 标称截面( $\text{mm}^2$ ) Core number × nominal cross sectional area( $\text{mm}^2$ )	绝缘标称厚度mm Insulation nominal thickness(mm)	护套标称厚度mm (单层) Sheath nominal thickness (single layer)(mm)	电缆平均外径mm Average outer diameter(mm)	
			下限 Lower limits	上限 Upper limits
4 × 4	1.0	2.0	14.0	17.9
4 × 6	1.0	2.3	15.7	20.0
4 × 10	1.2	3.4	20.9	26.5
4 × 16	1.2	3.6	23.8	30.1
4 × 25	1.4	4.1	28.9	36.6
4 × 35	1.4	4.4	32.5	41.1
4 × 50	1.6	4.8	37.7	47.5
4 × 70	1.6	5.2	42.7	54.0
4 × 95	1.8	5.9	48.4	61.0
4 × 120	1.8	6.0	53.0	66.0
4 × 150	2.0	6.5	58.0	73.0
5 × 1.0	0.8	1.6	10.2	13.1
5 × 1.5	0.8	1.8	11.2	14.4
5 × 2.5	0.9	2.0	13.3	17.0
5 × 4	1.0	2.2	15.6	19.9
5 × 6	1.0	2.5	17.5	22.2
5 × 10	1.2	3.6	22.9	29.1
5 × 16	1.2	3.9	26.4	33.3
5 × 25	1.4	4.4	32.0	40.4

### 3. 电梯电缆 (GB/T 5013.5—2008/IEC 60245-5 : 1994) Elevator Cables (GB/T 5013.5-2008/IEC 60245-5: 1994)

- 300/500V 60245 IEC 70(YTB)、60245 IEC 74(YT)和60245 IEC 75(YTF)型电缆的尺寸
- Dimensions of 300/500V 60245 IEC 70(YTB)、60245 IEC 74(YT) and 60245 IEC 75(YTF) cables.

芯数 × 标称截面mm <sup>2</sup> Core number × nominal cross sectional area( $\text{mm}^2$ )	绝缘标称厚度mm Insulation nominal thickness ( mm )	护套标称厚度mm Sheath nominal thickness(single layer) (mm)	护套标称厚度mm Sheath nominal thickness(single layer) (mm)	
			下限 Lower limits	上限 Upper limits
6 × 0.75	0.8	1.5		
6 × 1	0.8	1.5		

### 4、电焊机电缆 (GB/T 5013.6—2008/IEC 60245-6 : 1994) YH Cables (GB/T 5013.6-2008/IEC 60245-6: 1994)

- 60245 IEC 81 (YH)、60245 IEC 82(YHF)型电缆综合数据
- Comprehensive Data of 60245 IEC 81 (YH)、60245 IEC 82 (YHF) cables

标称截面mm <sup>2</sup> Nominal cross sectional area( $\text{mm}^2$ )	单线最大直径mm Max. Diameter of single wire(mm)	护套厚度mm Sheath thickness (mm)	平均外径mm Average outer diameter(mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
			下限 Lower limits	上限 Upper limits	镀锡铜线 tinned copper wire	铜线 Copper wire
16	0.21	2.0	8.8	11.0	1.19	1.16
25	0.21	2.0	10.1	12.7	0.780	0.758
35	0.21	2.0	11.4	14.2	0.552	0.536
50	0.21	2.2	13.2	16.5	0.390	0.379
70	0.21	2.4	15.3	19.2	0.276	0.268
95	0.21	2.6	17.1	21.4	0.204	0.198

## 5. 耐热乙烯-乙酸乙烯酯橡皮绝缘电缆 (GB/T 5013.7—2008/IEC 60245-7 : 1994) Heat-resistant Ethylene-vinyl Acetate Rubber Insulated Cables

- 450/750V 60245 IEC 04(YYY)、60245 IEC 05(YRYY)型电缆综合数据
- Comprehensive data of 450/750V 60245 IEC 04(YYY)、60245 IEC 05(YRYY) cables

导体标称截面mm <sup>2</sup> Nominal cross sectional area(mm <sup>2</sup> )	导体种类 Types	绝缘标称厚度mm Insulation Nominal thickness(mm)	电缆平均外径mm Average outer diameter(mm)		110℃空气中的最小绝缘电阻MΩ · km Minimum insulation resistance at 110°C atmosphere(MΩ · km)
			下限 Lower limits	上限 Upper limits	
0.5	1	0.8	2.3	2.9	0.018
0.75	1	0.8	2.4	3.1	0.016
1.0	1	0.8	2.6	3.2	0.014
1.5	1	0.8	2.8	3.5	0.012
2.5	1	0.9	3.4	4.3	0.011
4	1	1.0	4.0	5.0	0.010
6	1	1.0	4.5	5.6	0.009
10	1	1.2	5.7	7.1	0.008
1.5	2	0.8	2.9	3.7	0.012
2.5	2	0.9	3.5	4.4	0.011
4	2	1.0	4.2	5.2	0.010
6	2	1.0	4.7	5.9	0.008
10	2	1.2	6.0	7.4	0.008
16	2	1.2	6.8	8.5	0.006
25	2	1.4	8.4	10.6	0.006
35	2	1.4	9.4	11.8	0.005
50	2	1.6	10.9	13.7	0.005
70	2	1.6	12.5	15.6	0.004
95	2	1.8	14.5	18.1	0.004
0.5	5	0.8	2.4	3.1	0.016
0.75	5	0.8	2.6	3.2	0.015
1.0	5	0.8	2.7	3.4	0.013
1.5	5	0.8	3.0	3.7	0.012
2.5	5	0.9	3.6	4.5	0.011
4	5	1.0	4.3	5.4	0.010
6	5	1.0	4.8	6.0	0.008
10	5	1.2	6.0	7.6	0.008
16	5	1.2	7.1	8.9	0.006
25	5	1.4	8.8	11.0	0.005
35	5	1.4	10.1	12.6	0.005
50	5	1.6	11.9	14.9	0.004
70	5	1.6	13.6	17.0	0.004
95	5	1.8	15.5	19.3	0.004

- 300/500V 60245 IEC 06(YYY)、60245 IEC 07(YRYY)型电缆综合数据
- Comprehensive data of 300/500V 60245 IEC 04(YYY)、60245 IEC 05(YRYY) cables

导体标称截面mm <sup>2</sup> Nominal cross sectional area(mm <sup>2</sup> )	导体种类 Types	绝缘标称厚度mm Insulation Nominal thickness(mm)	电缆平均外径mm Average outer diameter(mm)		110℃空气中的最小绝缘电阻MΩ·km Minimum insulation resistance at 110℃ atmosphere(MΩ · km)
			下限 Lower limits	上限 Upper limits	
0.5	1	0.6	1.9	2.4	0.015
0.75	1	0.6	2.1	2.6	0.013
1.0	1	0.6	2.2	2.8	0.012
0.5	5	0.6	2.1	2.6	0.014
0.75	5	0.6	2.2	2.8	0.012
1.0	5	0.6	2.4	2.9	0.011

## 6. 通用橡套软电缆 ( JB/T 8735.2—2011 ) General Rubber Flexible Cables (JB/T 8735.2—2011)

- 300/500V YZ、YZW中型橡套软电缆
- 300/500V YZ、YZW medium rubber flexible cables

芯数×标称截面mm <sup>2</sup> Core number × nominal sectional area(mm <sup>2</sup> )	导体中单线最大直径mm Max. Diameter of conductor of single wire(mm)	绝缘厚度规定值mm Value of insulation thickness(mm)	护套厚度mm Sheath thickness (mm)	平均外径mm Average outer diameter(mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
2×4	0.31	1.0	1.2	10.6	13.7	4.95	5.09
2×6	0.31	1.0	1.3	11.8	15.1	3.30	3.39
3×4	0.31	1.0	1.2	11.3	14.5	4.95	5.09
3×6	0.31	1.0	1.3	12.6	16.1	3.30	3.39
4×4	0.31	1.0	1.3	12.7	16.2	4.95	5.09
4×6	0.31	1.0	1.4	14.0	17.9	3.30	3.39
3×1.5+1×1.0	0.26 /0.21	0.8/0.6	1.1	8.6	11.2	13.3	13.7
3×2.5+1×1.5	0.26/ 0.26	0.9/0.8	1.2	10.4	13.3	7.98	8.21
3×4+1×2.5	0.31/ 0.26	1.0/0.9	1.3	12.3	15.7	4.95	5.09
3×6+1×4	0.31/ 0.31	1.0/1.0	1.4	13.7	17.5	3.30	3.39
5×4	0.31	1.0	1.4	14.1	17.9	4.95	5.09
5×6	0.31	1.0	1.6	15.7	20.0	3.3	3.39
3×1.5+2×1.0	0.26 /0.21	0.8/0.6	1.1	9.1	11.8	13.3	13.7
3×2.5+2×1.5	0.26/ 0.26	0.9/0.8	1.3	11.2	14.4	7.98	8.21
3×4+2×2.5	0.31/ 0.26	1.0/0.9	1.4	13.3	17.0	4.95	5.09
3×6+2×4	0.31/ 0.31	1.0/1.0	1.6	15.2	19.4	3.30	3.39
4×1.5+1×1.0	0.26 /0.21	0.8/0.6	1.1	9.5	12.2	13.3	13.7
4×2.5+1×1.5	0.26/ 0.26	0.9/0.8	1.3	11.6	14.8	7.98	8.21
4×4+1×2.5	0.31/ 0.26	1.0/0.9	1.5	13.9	17.7	4.95	5.09
4×6+1×4	0.31/ 0.31	1.0/1.0	1.6	15.5	19.7	3.30	3.39
6×0.75	0.21	0.6	1.0	8.2	10.7	26.0	26.7
6×1.0	0.21	0.6	1.1	8.7	11.5	19.5	20.0
6×1.5	0.26	0.8	1.2	10.9	14.0	13.3	13.7
6×2.5	0.26	0.9	1.4	13.2	16.9	7.98	8.21
6×4	0.31	1.0	1.6	15.5	19.8	4.95	5.09
6×6	0.31	1.0	1.7	17.4	22.1	3.30	3.39

注：直流电阻为主线芯导体电阻率；四芯三大一小结构中接地线芯的直流电阻与同型号相济截面主线芯相同。  
DC resistance is the resistivity of main core conductors.Among four cores(three big ones and one small one),DC resistance of earthing core is the same as main core of economic section with the same type.

- 300/500V YZB、YZWB中型橡套扁形软电缆
- 300/500V YZB、YZBW Middle rubber set flat flexible cable

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section (mm <sup>2</sup> )	导体中单线 最大直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规 定值mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
2×0.75	0.21	0.6	0.8	3.9×6.3	4.9×7.8	26.0	26.7
2×1.0	0.21	0.6	0.9	4.2×6.7	5.3×8.4	19.5	20.0
2×1.5	0.26	0.8	1.0	5.1×8.2	6.3×10.2	13.3	13.7
2×2.5	0.26	0.9	1.1	5.9×9.6	7.3×12.0	7.98	8.21
2×4	0.31	1.0	1.2	6.8×11.3	8.5×14.1	4.95	5.09
2×6	0.31	1.0	1.3	7.5×12.4	9.3×15.5	3.30	3.39
3×0.75	0.21	0.6	0.9	4.1×8.8	5.1×11.0	26.0	26.7
3×1.0	0.21	0.6	0.9	4.2×9.2	5.3×11.6	19.5	20.0
3×1.5	0.26	0.8	1.0	5.0×11.3	6.3×14.1	13.3	13.7
3×2.5	0.26	0.9	1.1	5.9×13.4	7.3×16.7	7.98	8.21
3×4	0.31	1.0	1.2	6.8×15.7	8.5×19.7	4.95	5.09
3×6	0.31	1.0	1.3	7.5×17.4	9.3×21.7	3.30	3.39
4×0.75	0.21	0.6	0.9	4.1×11.2	5.1×14.0	26.0	26.7
4×1.0	0.21	0.6	0.9	4.2×11.8	5.3×14.7	19.5	20.0
4×1.5	0.26	0.8	1.0	5.2×14.6	6.6×18.3	13.3	13.7
4×2.5	0.26	0.9	1.1	6.1×17.3	7.6×21.6	7.98	8.21
4×4	0.31	1.0	1.2	7.0×20.4	8.7×25.5	4.95	5.09
4×6	0.31	1.0	1.3	7.6×22.5	9.6×28.1	3.30	3.39
5×0.75	0.21	0.6	1.0	4.3×13.7	5.4×17.2	26.0	26.7
5×1.0	0.21	0.6	1.0	4.4×14.5	5.5×18.1	19.5	20.0
5×1.5	0.26	0.8	1.1	5.2×17.8	6.6×22.2	13.3	13.7
5×2.5	0.26	0.9	1.3	6.3×21.3	7.8×26.6	7.98	8.21
5×4	0.31	1.0	1.4	7.2×25.1	9.0×31.3	4.95	5.09
5×6	0.31	1.0	1.6	8.0×17.8	10.0×34.8	3.30	3.39
6×0.75	0.21	0.6	1.0	4.3×16.1	5.4×20.1	26.0	26.7
6×1.0	0.21	0.6	1.1	4.6×17.1	5.8×21.4	19.5	20.0
6×1.5	0.26	0.8	1.2	5.4×21.1	6.8×26.4	13.3	13.7
6×2.5	0.26	0.9	1.4	6.4×25.2	8.1×31.5	7.98	8.21
6×4	0.31	1.0	1.5	7.4×29.7	9.2×37.2	4.95	5.09
6×6	0.31	1.0	1.7	8.2×33.0	10.1×41.2	3.30	3.39

- 450/750V YC重型橡套软电缆  
 ●450/750V YC Heavy rubber set flexible cable

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
1×1.5	0.26	0.8	1.4	5.7	7.1	13.3	13.7
1×2.5	0.26	0.9	1.4	6.3	7.9	7.98	8.21
1×4	0.31	1.0	1.5	7.2	9.0	4.95	5.09
1×6	0.31	1.0	1.6	7.9	9.8	3.30	3.39
1×10	0.41	1.2	1.8	9.5	11.9	1.91	1.95
1×16	0.41	1.2	1.9	10.8	13.4	1.21	1.24
1×25	0.41	1.4	2.0	12.7	15.8	0.780	0.795
1×35	0.41	1.4	2.2	14.3	17.9	0.554	0.565
1×50	0.41	1.6	2.4	16.5	20.6	0.386	0.393
1×70	0.51	1.6	2.6	18.6	23.3	0.272	0.277
1×95	0.51	1.8	2.8	20.8	26.0	0.206	0.210
1×120	0.51	1.8	3.0	22.8	28.6	0.161	0.164
1×150	0.51	2.0	3.2	25.2	31.4	0.129	0.132
1×185	0.51	2.2	3.4	27.6	34.4	0.106	0.108
1×240	0.51	2.4	3.5	30.6	38.3	0.0801	0.0817
1×300	0.51	2.6	3.6	33.5	41.9	0.0641	0.0654
1×400	0.51	2.8	3.8	37.4	46.8	0.0486	0.0495
2×1.5	0.26	0.8	1.5	8.5	11.0	13.3	13.7
2×2.5	0.26	0.9	1.7	10.2	13.1	7.98	8.21
2×4	0.31	1.0	1.8	11.8	15.1	4.95	5.09
2×6	0.31	1.0	2.0	13.1	16.8	3.30	3.39
2×10	0.41	1.2	3.1	17.7	22.6	1.91	1.95
2×16	0.41	1.2	3.3	20.2	25.7	1.21	1.24
2×25	0.41	1.4	3.6	24.3	30.7	0.780	0.795
2×35	0.41	1.4	3.9	27.3	34.6	0.554	0.565
2×50	0.41	1.6	4.3	31.8	40.1	0.386	0.393
2×70	0.51	1.6	4.6	35.8	45.1	0.272	0.277
2×95	0.51	1.8	5.0	40.2	51.0	0.206	0.210
3×1.5	0.26	0.8	1.6	9.2	11.9	13.3	13.7
3×2.5	0.26	0.9	1.8	10.9	14.0	7.98	8.21
3×4	0.31	1.0	1.9	12.7	16.2	4.95	5.09
3×6	0.31	1.0	2.1	14.1	18.0	3.30	3.39
3×10	0.41	1.2	3.3	19.1	24.2	1.91	1.95
3×16	0.41	1.2	3.5	21.8	27.6	1.21	1.24
3×25	0.41	1.4	3.8	26.1	33.0	0.780	0.795
3×35	0.41	1.4	4.1	29.3	37.1	0.554	0.565
3×50	0.41	1.6	4.5	34.1	42.9	0.386	0.393
3×70	0.51	1.6	4.8	38.4	48.3	0.272	0.277

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
3×95	0.51	1.8	5.3	43.3	54.0	0.206	0.210
3×120	0.51	1.8	5.6	47.3	60.0	0.161	0.164
3×150	0.51	2.0	6.0	52.0	66.0	0.129	0.132
4×1.5	0.26	0.8	1.7	10.2	13.1	13.3	13.7
4×2.5	0.26	0.9	1.9	12.1	15.5	7.98	8.21
4×4	0.31	1.0	2.0	14.0	17.9	4.95	5.09
4×6	0.31	1.0	2.3	15.7	20.0	3.30	3.39
4×10	0.41	1.2	3.4	20.9	26.5	1.91	1.95
4×16	0.41	1.2	3.6	23.8	30.1	1.21	1.24
4×25	0.41	1.4	4.1	28.9	36.6	0.780	0.795
4×35	0.41	1.4	4.4	32.5	41.1	0.554	0.565
4×50	0.41	1.6	4.8	37.7	47.5	0.386	0.393
4×70	0.51	1.6	5.2	42.7	54.0	0.272	0.277
4×95	0.51	1.8	5.9	48.4	61.0	0.206	0.210
4×120	0.51	1.8	6.0	53.0	66.0	0.161	0.164
4×150	0.51	2.0	6.5	58.0	73.0	0.129	0.132
5×1.5	0.26	0.8	1.8	11.2	14.4	13.3	13.7
5×2.5	0.26	0.9	2.0	13.3	17.0	7.98	8.21
5×4	0.31	1.0	2.2	15.6	19.9	4.95	5.09
5×6	0.31	1.0	2.5	17.5	22.2	3.30	3.39
5×10	0.41	1.2	3.6	22.9	29.1	1.91	1.95
5×16	0.41	1.2	3.9	26.4	33.3	1.21	1.24
5×25	0.41	1.4	4.4	32.0	40.4	0.780	0.795
5×35	0.41	1.4	4.6	35.7	45.1	0.554	0.565
5×50	0.41	1.6	5.1	41.6	52.4	0.386	0.393
5×70	0.51	1.6	5.5	47.1	59.2	0.272	0.277
5×95	0.51	1.8	6.1	53.1	66.8	0.206	0.210
5×120	0.51	1.8	6.6	58.5	73.5	0.161	0.164
5×150	0.51	2.0	7.1	64.7	81.2	0.129	0.132
3×2.5+1×1.5	0.26/0.26	0.9/0.8	1.8	11.5	14.7	7.98	8.21
3×4+1×2.5	0.31/0.26	1.0/0.9	2.0	13.6	17.3	4.95	5.09
3×6+1×4	0.31/0.31	1.0/1.0	2.2	15.2	19.4	3.30	3.39
3×10+1×6	0.41/0.31	1.2/1.0	3.3	19.9	25.3	1.91	1.95
3×16+1×6	0.41/0.31	1.2/1.0	3.5	22.2	28.1	1.21	1.24
3×25+1×10	0.41/0.41	1.4/1.2	3.9	26.9	34.0	0.780	0.795
3×35+1×10	0.41/0.41	1.4/1.2	4.1	29.5	37.3	0.554	0.565
3×50+1×16	0.41/0.41	1.6/1.2	4.5	34.2	43.2	0.386	0.393
3×70+1×25	0.51/0.41	1.6/1.4	4.9	39.2	49.4	0.272	0.277
3×95+1×35	0.51/0.41	1.8/1.4	5.3	44.0	55.4	0.206	0.210
3×120+1×35	0.51/0.41	1.8/1.4	5.6	47.6	59.8	0.161	0.164

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
3×150+1×50	0.51/0.41	2.0/1.6	6.1	53.1	66.8	0.129	0.132
3×2.5+2×1.5	0.26/0.26	0.9/0.8	1.9	12.4	15.9	7.98	8.21
3×4+2×2.5	0.31/0.26	1.0/0.9	2.2	16.7	18.9	4.95	5.09
3×6+2×4	0.31/0.31	1.0/1.0	2.4	21.4	21.3	3.30	3.39
3×10+2×6	0.41/0.31	1.2/1.0	3.4	21.2	26.9	1.91	1.95
3×16+2×6	0.41/0.31	1.2/1.0	3.6	23.3	29.5	1.21	1.24
3×25+2×10	0.41/0.41	1.4/1.2	4.0	28.2	35.6	0.780	0.795
3×35+2×10	0.41/0.41	1.4/1.2	4.2	30.6	38.7	0.554	0.565
3×50+2×16	0.41/0.41	1.6/1.2	4.6	35.5	44.7	0.386	0.393
3×70+2×25	0.51/0.41	1.6/1.4	5.0	40.9	51.5	0.272	0.277
3×95+2×35	0.51/0.41	1.8/1.4	5.5	46.2	58.1	0.206	0.210
3×120+2×35	0.51/0.41	1.8/1.4	5.8	49.4	62.1	0.161	0.164
3×150+2×50	0.51/0.41	2.0/1.6	6.3	55.4	69.7	0.129	0.132
4×2.5+1×1.5	0.26/0.26	0.9/0.8	2.0	12.9	16.5	7.98	8.21
4×4+1×2.5	0.31/0.26	1.0/0.9	2.2	15.2	19.4	4.95	5.09
4×6+1×4	0.31/0.31	1.0/1.0	2.4	17.0	21.6	3.30	3.39
4×10+1×6	0.41/0.31	1.2/1.0	3.5	22.1	28.0	1.91	1.95
4×16+1×6	0.41/0.31	1.2/1.0	3.7	24.7	31.3	1.21	1.24
4×25+1×10	0.41/0.41	1.4/1.2	4.2	30.1	38.0	0.780	0.795
4×35+1×10	0.41/0.41	1.4/1.2	4.4	33.2	41.9	0.554	0.565
4×50+1×16	0.41/0.41	1.6/1.2	4.9	38.7	48.7	0.386	0.393
4×70+1×25	0.51/0.41	1.6/1.4	5.3	44.1	55.5	0.272	0.277
4×95+1×35	0.51/0.41	1.8/1.4	5.8	49.7	62.5	0.206	0.210
4×120+1×35	0.51/0.41	1.8/1.4	6.2	54.0	67.8	0.161	0.164
4×150+1×50	0.51/0.41	2.0/1.6	6.7	60.0	75.4	0.129	0.132

●450/750V YCW重型橡套软电缆

●450/750V YCW Heavy rubber set flexible cable

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
2×35	0.41	1.4	3.9	27.3	34.6	0.554	0.565
2×50	0.41	1.6	4.3	31.8	40.1	0.386	0.393
2×70	0.51	1.6	4.6	35.8	45.1	0.272	0.277
2×95	0.51	1.8	5.0	40.2	51.0	0.206	0.210
3×120	0.51	1.8	5.6	47.3	60.0	0.161	0.164
3×150	0.51	2.0	6.0	52	66.0	0.129	0.132
5×35	0.41	1.4	4.6	35.7	45.1	0.554	0.565
5×50	0.41	1.6	5.1	41.6	52.4	0.386	0.393

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
3×95	0.51	1.8	5.3	43.3	54.0	0.206	0.210
3×120	0.51	1.8	5.6	47.3	60.0	0.161	0.164
3×150	0.51	2.0	6.0	52	66.0	0.129	0.132
4×1.5	0.26	0.8	1.7	10.2	13.1	13.3	13.7
4×2.5	0.26	0.9	1.9	12.1	15.5	7.98	8.21
4×4	0.31	1.0	2.0	14	17.9	4.95	5.09
4×6	0.31	1.0	2.3	15.9	20.0	3.30	3.39
4×10	0.41	1.2	3.4	20.9	26.5	1.91	1.95
4×16	0.41	1.2	3.6	23.8	30.1	1.21	1.24
4×25	0.41	1.4	4.1	28.9	36.6	0.780	0.795
4×35	0.41	1.4	4.4	32.5	41.1	0.554	0.565
4×50	0.41	1.6	4.8	37.7	47.5	0.386	0.393
4×70	0.51	1.6	5.2	42.7	54.0	0.272	0.277
4×95	0.51	1.8	5.9	48.4	61.0	0.206	0.210
4×120	0.51	1.8	6.0	53.0	66.0	0.161	0.164
4×150	0.51	2.0	6.5	58.0	73.0	0.129	0.132
5×1.5	0.26	0.8	1.8	11.2	14.4	13.3	13.7
5×2.5	0.26	0.9	2.0	13.3	17.0	7.98	8.21
5×4	0.31	1.0	2.2	15.6	19.9	4.95	5.09
5×6	0.31	1.0	2.5	17.5	22.2	3.30	3.39
5×10	0.41	1.2	3.6	22.9	29.1	1.91	1.95
5×16	0.41	1.2	3.9	26.4	33.3	1.21	1.24
5×25	0.41	1.4	4.4	32.0	40.4	0.780	0.795
5×35	0.41	1.4	4.7	35.7	45.1	0.554	0.565
5×50	0.41	1.6	5.1	41.6	52.4	0.386	0.393
5×70	0.51	1.6	5.5	47.1	59.2	0.272	0.277
5×95	0.51	1.8	6.1	53.1	66.8	0.206	0.210
5×120	0.51	1.8	6.6	58.5	73.5	0.161	0.164
5×150	0.51	2.0	7.1	64.7	81.2	0.129	0.132
3×2.5+1×1.5	0.26/0.26	0.9/0.8	1.8	11.5	14.7	7.98	8.21
3×4+1×2.5	0.31/0.26	1.0/0.9	2.0	13.6	17.3	4.95	5.09
3×6+1×4	0.31/0.31	1.0/1.0	2.2	15.2	19.4	3.30	3.39
3×10+1×6	0.41/0.31	1.2/1.0	3.3	19.9	25.3	1.91	1.95
3×16+1×6	0.41/0.31	1.2/1.0	3.5	22.2	28.1	1.21	1.24
3×25+1×10	0.41/0.41	1.4/1.2	3.9	26.9	34.0	0.780	0.795
3×35+1×10	0.41/0.41	1.4/1.2	4.1	29.5	37.3	0.554	0.565
3×50+1×16	0.41/0.41	1.6/1.2	4.5	34.2	43.2	0.386	0.393
3×70+1×25	0.51/0.41	1.6/1.4	4.9	39.2	49.4	0.272	0.277
3×95+1×35	0.51/0.41	1.8/1.4	5.3	44.0	55.4	0.206	0.210
3×120+1×35	0.51/0.41	1.8/1.4	5.6	47.6	59.8	0.161	0.164

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
3×150+1×50	0.51/0.41	2.0/1.6	6.1	53.1	66.8	0.129	0.132
3×2.5+2×1.5	0.26/0.26	0.9/0.8	1.9	12.4	15.9	7.98	8.21
3×4+2×2.5	0.31/0.26	1.0/0.9	2.2	14.8	18.9	4.95	5.09
3×6+2×4	0.31/0.31	1.0/1.0	2.4	16.7	21.3	3.30	3.39
3×10+2×6	0.41/0.31	1.2/1.0	3.4	21.2	26.9	1.91	1.95
3×16+2×6	0.41/0.31	1.2/1.0	3.6	23.3	29.5	1.21	1.24
3×25+2×10	0.41/0.41	1.4/1.2	4.0	28.2	35.6	0.780	0.795
3×35+2×10	0.41/0.41	1.4/1.2	4.2	30.6	38.7	0.554	0.565
3×50+2×16	0.41/0.41	1.6/1.2	4.6	35.5	44.7	0.386	0.393
3×70+2×25	0.51/0.41	1.6/1.4	5.0	40.9	51.5	0.272	0.277
3×95+2×35	0.51/0.41	1.8/1.4	5.5	46.2	58.1	0.206	0.210
3×120+2×35	0.51/0.41	1.8/1.4	5.8	49.4	62.1	0.161	0.164
3×150+2×50	0.51/0.41	2.0/1.6	6.3	55.4	69.7	0.129	0.132
4×2.5+1×1.5	0.26/0.26	0.9/0.8	2.0	12.9	16.5	7.98	8.21
4×4+1×2.5	0.31/0.26	1.0/0.9	2.2	15.2	19.4	4.95	5.09
4×6+1×4	0.31/0.31	1.0/1.0	2.4	17.0	21.6	3.30	3.39
4×10+1×6	0.41/0.31	1.2/1.0	3.5	22.1	28.0	1.91	1.95
4×16+1×6	0.41/0.31	1.2/1.0	3.7	24.7	31.3	1.21	1.24
4×25+1×10	0.41/0.41	1.4/1.2	4.2	30.1	38.0	0.780	0.795
4×35+1×10	0.41/0.41	1.4/1.2	4.4	33.2	41.9	0.554	0.565
4×50+1×16	0.41/0.41	1.6/1.2	4.9	38.7	48.7	0.386	0.393
4×70+1×25	0.51/0.41	1.6/1.4	5.3	44.1	55.5	0.272	0.277
4×95+1×35	0.51/0.41	1.8/1.4	5.8	49.7	62.5	0.206	0.210
4×120+1×35	0.51/0.41	1.8/1.4	6.2	54.0	67.8	0.161	0.164
4×150+1×50	0.51/0.41	2.0/1.6	6.7	60.0	75.4	0.129	0.132

●450/750V YCW重型橡套软电缆

●450/750V YCW Heavy rubber set flexible cable

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
2×35	0.41	1.4	3.9	27.3	34.6	0.554	0.565
2×50	0.41	1.6	4.3	31.8	40.1	0.386	0.393
2×70	0.51	1.6	4.6	35.8	45.1	0.272	0.277
2×95	0.51	1.8	5.0	40.2	51.0	0.206	0.210
3×120	0.51	1.8	5.6	47.3	60.0	0.161	0.164
3×150	0.51	2.0	6.0	52	66.0	0.129	0.132
5×35	0.41	1.4	4.6	35.7	45.1	0.554	0.565
5×50	0.41	1.6	5.1	41.6	52.4	0.386	0.393

芯数×标称截面 mm <sup>2</sup> Number of cores × Nominal cross section mm <sup>2</sup>	导体中单线最大 直径mm Maximum diameter of the single wire in conductor (mm)	绝缘厚度规定值 mm specified value of insulation thickness (mm)	护套厚度mm Sleeve thickness (mm)	平均外径mm Mean outside diameter (mm)		20℃时导体电阻最大值Ω/km Maximum value of conductor resistance at 20℃ (Ω/km)	
				下限 Lower limits	上限 Upper limits	铜芯 Copper core	镀锡铜芯 Tinned copper core
5×70	0.51	1.6	5.5	47.1	59.2	0.272	0.277
5×95	0.51	1.8	6.1	53.1	66.8	0.206	0.210
5×120	0.51	1.8	6.6	58.5	73.5	0.161	0.164
5×150	0.51	2.0	7.1	64.7	81.2	0.129	0.132
3×2.5+1×1.5	0.26/0.26	0.9/0.8	1.8	11.5	14.7	7.98	8.21
3×4+1×2.5	0.31/0.26	1.0/0.9	2.0	13.6	17.3	4.95	5.09
3×6+1×4	0.31/0.31	1.0/1.0	2.2	15.2	19.4	3.30	3.39
3×10+1×6	0.41/0.31	1.2/1.0	3.3	19.9	25.3	1.91	1.95
3×16+1×6	0.41/0.31	1.2/1.0	3.6	22.2	28.1	1.21	1.24
3×25+1×10	0.41/0.41	1.4/1.2	3.9	26.9	34.0	0.780	0.795
3×35+1×10	0.41/0.41	1.4/1.2	4.1	29.5	37.3	0.554	0.565
3×50+1×16	0.41/0.41	1.6/1.2	4.5	34.2	43.2	0.386	0.393
3×70+1×25	0.51/0.41	1.6/1.4	4.9	39.2	49.4	0.272	0.277
3×95+1×35	0.51/0.41	1.8/1.4	5.3	44.0	55.4	0.206	0.210
3×120+1×35	0.51/0.41	1.8/1.4	5.6	47.6	59.8	0.161	0.164
3×150+1×50	0.51/0.41	2.0/1.6	6.1	53.1	66.8	0.129	0.132
3×2.5+2×1.5	0.26/0.26	0.9/0.8	1.9	12.4	15.9	7.98	8.21
3×4+2×2.5	0.31/0.26	1.0/0.9	2.2	14.8	18.9	4.95	5.09
3×6+2×4	0.31/0.31	1.0/1.0	2.4	16.7	21.3	3.30	3.39
3×10+2×6	0.41/0.31	1.2/1.0	3.4	21.2	26.9	1.91	1.95
3×16+2×6	0.41/0.31	1.2/1.0	3.6	23.3	29.5	1.21	1.24
3×25+2×10	0.41/0.41	1.4/1.2	4.0	28.2	35.6	0.780	0.795
3×35+2×10	0.41/0.41	1.4/1.2	4.2	30.6	38.7	0.554	0.565
3×50+2×16	0.41/0.41	1.6/1.2	4.6	35.5	44.7	0.386	0.393
3×70+2×25	0.51/0.41	1.6/1.4	5.0	40.9	51.5	0.272	0.277
3×95+2×35	0.51/0.41	1.8/1.4	5.5	46.2	58.1	0.206	0.210
3×120+2×35	0.51/0.41	1.8/1.4	5.8	49.4	62.1	0.161	0.164
3×150+2×50	0.51/0.41	2.0/1.6	6.3	55.4	69.7	0.129	0.132
4×2.5+1×1.5	0.26/0.26	0.9/0.8	2.0	12.9	16.5	7.98	8.21
4×4+1×2.5	0.31/0.26	1.0/0.9	2.2	15.2	19.4	4.95	5.09
4×6+1×4	0.31/0.31	1.0/1.0	2.4	17.0	21.6	3.30	3.39
4×10+1×6	0.41/0.31	1.2/1.0	3.5	22.1	28.0	1.91	1.95
4×16+1×6	0.41/0.31	1.2/1.0	3.7	24.7	31.3	1.21	1.24
4×25+1×10	0.41/0.41	1.4/1.2	4.2	30.1	38.0	0.780	0.795
4×35+1×10	0.41/0.41	1.4/1.2	4.4	33.2	41.9	0.554	0.565
4×50+1×16	0.41/0.41	1.6/1.2	4.9	38.7	48.7	0.386	0.393
4×70+1×25	0.51/0.41	1.6/1.4	5.3	44.1	55.5	0.272	0.277
4×95+1×35	0.51/0.41	1.8/1.4	5.8	49.7	62.5	0.206	0.210
4×120+1×35	0.51/0.41	1.8/1.4	6.2	54.0	67.8	0.161	0.164
4×150+1×50	0.51/0.41	2.0/1.6	6.7	60.0	75.4	0.129	0.132

## 7. 额定电压300/500V橡皮绝缘固定敷设电线(JB/T 1601—1993)

### Rated voltage 300/500V Rubber insulation fixed laying wire

#### ●型号 Type

型号 Type	名称 Designation	主要用途 The main use
BXF	铜芯橡皮绝缘氯丁或其它相当的合成胶混合物护套电线 Copper core rubber insulation neoprene or other equivalent synthetic compound rubber sleeve wire	适用于户内明敷和户外特别寒冷地区 Suitable for indoor exposed laying and outdoor special cold area
BLXF	铝芯橡皮绝缘氯丁或其它相当的合成胶混合物护套电线 Aluminum core rubber insulation neoprene or other equivalent synthetic compound rubber sleeve wire	
BXY	铜芯橡皮绝缘黑色聚乙烯护套电线 Copper core rubber insulation black PVC sleeve wire	适用于户内穿管和户外特别寒冷地区 Suitable for indoor wiring through wire conduit and outdoor special cold area
BLXY	铝芯橡皮绝缘黑色聚乙烯护套电线 Aluminum core rubber insulation black PVC sleeve wire	
BX	铜芯橡皮绝缘棉纱或其它相当纤维编织电线 Copper core rubber insulation cotton yarn or other equivalent fiber braided wire	固定敷设用,可明敷设,暗敷设 Used in fixed laying, concealed laying or exposed laying
BLX	铝芯橡皮绝缘棉纱或其它相当纤维编织电线 Aluminum core rubber insulation cotton yarn or other equivalent fiber braided wire	
BXR	铜芯橡皮绝缘棉纱或其它相当纤维编织软电线 Copper core rubber insulation cotton yarn or other equivalent fiber braided flexible wire	室内安装,要求较柔软时用 Indoor installation, used in requirement of flexible wire

#### ●规格 Specification

型号 Type	额定电压(V) Rated voltage V	芯 数 Number of cores	标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )
BXF	300/500	1	0.75~240
BLXF	300/500	1	2.5~240
BXY	300/500	1	0.75~240
BLXY	300/500	1	2.5~240
BX	300/500	1	0.75~630
BLX	300/500	1	2.5~630
BXR	300/500	1	0.75~400

#### ●参数 Parameters

BXF, BLXF, BXY, BLXY型300/500V橡皮绝缘电线 BXF, BLXF, BXY, BLXY 300/500V rubber insulation wire

导体标称截面 mm <sup>2</sup> Nominal cross section of conductor (mm <sup>2</sup> )	导电线芯结构根数/ 单线标称直径mm Core number of conductor/nominal diameter of single core (mm)	绝缘与护套厚度 之和标称值mm Nominal sum of insulation and sleeve thickness (mm)	绝缘最薄点 厚度≥mm Thickness of thinnest point of insulation ≥(mm)	护套最薄点 厚度≥mm Thickness of thinnest point of sleeve ≥ mm	平均外径上限 mm Upper limit of mean outside diameter (mm)	20℃时导体电阻≤Ω/km Conductor Resistance ≤(Ω/km)		
						铜芯 Copper core	镀锡铜芯 Tinned copper core	铝芯 Aluminum core
0.75	0.75	1.0	0.4	0.2	3.9	24.5	24.7	/
1.0	1.0	1.0	0.4	0.2	4.1	18.1	18.2	/
1.5	1.5	1.0	0.4	0.2	4.4	12.1	12.2	/
2.5	2.5	1.0	0.6	0.2	5.0	7.41	7.56	/
4	4	1.0	0.6	0.2	5.6	4.61	4.7	/
6	6	1.2	0.6	0.25	6.8	3.08	3.11	
10	10	1.2	0.75	0.25	8.3	1.83	1.84	3.08
16	16	1.4	0.75	0.25	10.1	1.15	1.16	1.91
25	25	1.4	0.9	0.30	11.8	0.727	0.734	1.2
35	35	1.6	0.9	0.30	13.8	0.524	0.529	0.868
50	50	1.6	1.0	0.30	15.4	0.387	0.391	0.641
70	70	1.8	1.0	0.35	18.2	0.263	0.270	0.443
95	95	1.8	1.1	0.35	20.6	0.193	0.195	0.320
120	120	2.0	1.2	0.40	23.0	0.153	0.154	0.253
150	150	2.0	1.3	0.40	25.0	0.124	0.126	0.206
185	185	2.2	1.3	0.40	27.9	0.0991	0.100	0.164
240	240	2.4	1.4	0.40	31.4	0.0754	0.0762	0.125

## BX, BLX型300/500V橡皮绝缘电线 BX, BLX 300/500V Rubber insulation wire

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	导电线芯结构根数/ 单线标称直径mm Core number of conductor/ nominal diameter of single core (mm)	绝缘标称厚度mm Nominal thickness of insulation (mm)	平均外径上限mm Upper limit of mean outside diameter (mm)	20℃时导体电阻≤Ω/km 20℃ Conductor Resistance ≤(Ω/km)	
				铜芯 Copper core	铝芯 Aluminum core
0.75	1/0.97	1.0	4.4	24.5	/
1.0	1/1.13	1.0	4.5	18.1	/
1.5	1/1.38	1.0	4.8	12.1	/
2.5	1/1.78	1.0	5.2	7.41	/
4	1/2.25	1.0	5.8	4.61	/
6	1/2.76	1.0	6.3	3.08	/
10	7/1.35	1.2	8.2	1.83	3.08
16	7/1.70	1.2	9.4	1.15	1.91
25	7/2.14	1.4	11.2	0.727	1.20
35	7/2.52	1.4	12.5	0.524	0.868
50	19/1.78	1.6	14.4	0.387	0.641
70	19/2.14	1.6	16.4	0.263	0.443
95	19/2.52	1.8	18.9	0.193	0.320
120	37/2.03	1.8	19.8	0.153	0.253
150	37/2.25	2.0	21.8	0.124	0.206
185	37/2.52	2.2	24.2	0.0991	0.164
240	61/2.25	2.4	27.4	0.0754	0.125
300	61/2.52	2.6	30.3	0.0601	0.100
400	61/2.85	2.8	33.9	0.0470	0.0778
500	91/2.65	3.0	38.0	0.0366	0.0605
630	127/2.52	3.2	42.2	0.0283	0.0469

## BXR型300/500V橡皮绝缘电线 BXR 300/500V Rubber insulation wire

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	导电线芯结构根数/ 单线标称直径mm Core number of conductor/ nominal diameter of single core (mm)	绝缘标称厚度mm Nominal thickness of insulation (mm)	平均外径上限mm Upper limit of mean outside diameter (mm)	20℃时导体电阻≤Ω/km 20℃ Conductor Resistance ≤(Ω/km)	
				铜芯 Copper core	铝芯 Aluminum core
0.75	7/0.37	1.0	4.5	24.5	
1.0	7/0.43	1.0	4.7	18.1	
1.5	7/0.52	1.0	5.0	12.1	
2.5	19/0.41	1.0	5.6	7.41	
4	19/0.52	1.0	6.2	4.61	
6	19/0.64	1.0	6.8	3.08	
10	49/0.52	1.2	8.9	1.83	
16	49/0.64	1.2	10.1	1.15	
25	98/0.58	1.4	12.6	0.727	
35	133/0.58	1.4	13.8	0.524	
50	133/0.68	1.6	15.8	0.387	
70	189/0.68	1.6	18.4	0.263	
95	259/0.68	1.8	20.8	0.193	
120	259/0.76	1.8	21.6	0.153	
150	336/0.74	2.0	25.9	0.124	
185	427/0.74	2.2	26.6	0.0991	
240	427/0.85	2.4	30.2	0.0754	
300	513/0.85	2.6	33.3	0.0601	
400	700/0.85	2.8	38.2	0.0470	

# 油浸式变压器 Oil Immersed Transformer

## 1. 10kV配电变压器 10kV Distribution Transformer

### ●产品特点 Product features

公司批量生产80多个规格的10kV级配电变压器，包括油浸自冷、无励磁调压及有载调压、全密封等，产品具有损耗低、噪音低、免吊芯、温升低、结构紧凑、外形美观等特点，产品广泛用于城市、农村电网新建及改造项目，并大量出口欧、亚、非等多个国家。

The Company products batch of 10kV distribution transformers of more than 80 specifications, including immersed natural cooling, no excitation for pressure regulating, pressure regulating, omniseal and so on. The products have the feathers of low noise, free hanging core, low temperature, compact structure, beautiful appearance, and they are widely used in city and rural power grid construction and renovation projects, and exported to Europe, Asia, and other countries in a large number.

### 10kV电压等级11型全密封双绕组无励磁调压配电变压器

10kV 11,Omni-seal, Duplex Winding, no Excitation for Pressure of Regulating Distribution Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L × W × H) Physical dimensions	
30	6 6.3 10 10.5	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Dyn11 Yzn11 Yyn0	4	0.10	0.63/0.60	1.5	735 × 475 × 900	
50						0.13	0.91/0.87	1.3	805 × 515 × 950	
63						0.15	1.09/1.04	1.2	815 × 565 × 980	
80						0.18	1.31/1.25	1.2	845 × 560 × 1030	
100						0.20	1.58/1.50	1.1	860 × 645 × 1060	
125						0.24	1.89/1.80	1.1	915 × 770 × 1090	
160						0.28	2.31/2.20	1.0	960 × 780 × 1120	
200						0.34	2.73/2.60	1.0	1250 × 710 × 1160	
250				Dyn11 Yyn0	4.5	0.40	3.2/3.05	0.90	1360 × 780 × 1210	
315						0.48	3.83/3.65	0.90	1340 × 760 × 1310	
400						0.57	4.52/4.30	0.80	1450 × 790 × 1350	
500						0.68	5.41/5.15	0.80	1530 × 865 × 1385	
630						0.81	6.20	0.60	1635 × 920 × 1515	
800						0.98	7.50	0.60	2015 × 1055 × 2050	
1000						1.15	10.30	0.60	2180 × 1110 × 2095	
1250						1.36	12.00	0.50	2195 × 1130 × 2195	
1600				5.0		1.64	14.50	0.50	2360 × 1235 × 2255	
2000						1.94	18.3	0.40	2430 × 1405 × 2400	
2500						2.29	21.2	0.40	2550 × 1500 × 2800	

1.对于额定容量为500kVA及以下的变压器，表中斜线上方的负载损耗值适用于Dyn11或Yzn11联结组，斜线下方的负载损耗值适用于Yyn0联结组。

For the transformers of the rated capacity of 500kVA and below, the load loss value above the diagonal in the table compliant with connection Dyn11 or Yzn11, the load loss value below the diagonal compliant with connection Yyn0.

2.根据用户需要，可提供低压为0.69kV的变压器。

According to users' needs, the transformers can be provided with low-voltage 0.69kV.

3.表内损耗值为变压器年平均负载率介于35%~40%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于40%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The internal loss value of the transformer is the average annual load rate between 35% ~ 40% when the highest operating efficiency value. When the transformer is actually operated, taking economic operation into account, when the average load rate of transformer is more than 40%, the load loss can be reduced properly. When the average load rate of transformer is less than 35%, the no-load loss can be reduced.

## 10kV电压等级13型全密封双绕组无励磁调压配电变压器

10kV 13, Omnisel, Duplex Winding, no Excitation for Pressure of Regulating Distribution Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
30	6 6.3 10 10.5	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Dyn11 Yzn11 Yyn0	4	0.08	0.63/0.6	1.5	835×575×950
50						0.10	0.91/0.87	1.3	905×615×1000
63						0.11	1.09/1.04	1.2	915×665×1030
80						0.13	1.31/1.25	1.2	945×660×1080
100						0.15	1.58/1.50	1.1	960×745×1110
125						0.17	1.89/1.8	1.1	1015×870×1140
160						0.20	2.31/2.20	1.0	1060×880×1170
200						0.24	2.73/2.60	1.0	1350×810×1210
250						0.29	3.2/3.05	0.90	1460×880×1260
315						0.34	3.83/3.65	0.90	1440×860×1360
400						0.41	4.52/4.30	0.80	1550×890×1400
500						0.48	5.41/5.15	0.80	1630×965×1435
630						0.57	6.20	0.60	1735×1020×1565
800						0.70	7.50	0.60	2115×1155×2100
1000				Dyn11 Yyn0	4.5	0.83	10.30	0.60	2280×1210×2145
1250						0.97	12.00	0.50	2295×1230×2245
1600					5.0	1.17	14.50	0.50	2460×1335×2305
2000						1.55	18.3	0.40	2530×1505×2450
2500						1.83	21.2	0.40	2650×1600×2850

1.对于额定容量为500kVA及以下的变压器，表中斜线上方的负载损耗值适用于Dyn11或Yzn11联结组，斜线下方的负载损耗值适用于Yyn0联结组。

For the transformers of the rated capacity of 500kVA and below, the load loss value above the diagonal in the table compliant with connection Dyn11 or Yzn11, the load loss value below the diagonal compliant with connection Yyn0.

2.根据用户需要，可提供低压为0.69kV的变压器。

According to users' needs, the transformers can be provided with low-voltage 0.69kV.

3.表内损耗值为变压器年平均负载率介于35%~40%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于40%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The internal loss value of the transformer is the average annual load rate between 35%~40% when the highest operating efficiency value. When the transformer is actually operated, taking economic operation into account, when the average load rate of transformer is more than 40%, the load loss can be reduced properly. When the average load rate of transformer is less than 35%, the no-load loss can be reduced.

10kV电压等级11全密封双绕组有载调压配电变压器  
10kV 11, Omnisal, Duplex Winding, Load Voltage Regulation Distribution Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
200	6 6.3 10 10.5	$\pm 4 \times 2.5$	0.4	Dyn11 Yyn0	4.0	0.380	2.90	1.0
250						0.440	3.42	0.90
315						0.530	4.10	0.90
400						0.640	4.95	0.80
500						0.760	5.89	0.80
630					4.5	0.960	7.26	0.60
800						1.12	8.89	0.60
1000						1.36	10.4	0.60
1250						1.56	12.3	0.50
1600					5.0	1.92	14.7	0.50
2000						2.27	18.6	0.40
2500						2.68	21.6	0.40

1. 用户需要，可提供低压电压为0.69kV的变压器。

According to users' needs, the transformers can be provided with low-voltage 0.69kV.

2. 表内损耗值为变压器年平均负载率介于35%~40%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于40%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The internal loss value of the transformer is the average annual load rate between 35%~40% when the highest operating efficiency value. When the transformer is actually operated, taking economic operation into account, when the average load rate of transformer is more than 40%, the load loss can be reduced properly. When the average load rate of transformer is less than 35%, the no-load loss can be reduced.

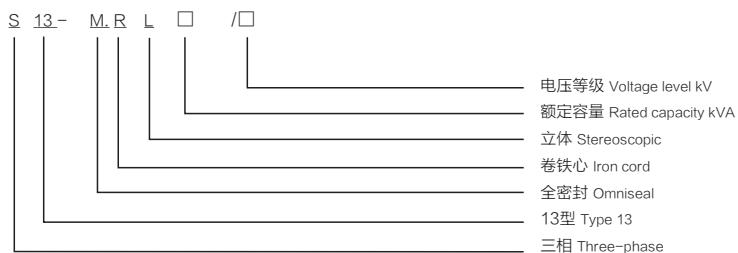
## 2. 立体卷铁心变压器 Stereoscopic Iron Cord Transformer

### ● 产品特点 Product features

三维立体卷铁芯变压器是近年来发展起来的新型节能配电变压器，该变压器采用传统冷轧硅钢片材料，在磁路结构上进行了特殊布置，使硅钢带的高导磁方向与磁路完全一致，三个心柱呈等边三角形立体排列，三相磁路长度相同，使其具有降低空载损耗、节省材料、减少噪声、抗短路能力强等优点，比S11型同容量变压器，空载损耗平均降低30%，空载电流下降70%，噪声下降10~25dB。

Stereoscopic iron cord transformer is a new energy-saving distribution transformer developed in recent years. The transformer adopts the traditional cold-rolled silicon steel sheet material, and a special arrangement in the magnetic circuit structure lets high magnetic direction of the silicon steel strip and magnetic circuit completely consistent. The three columns arrange as three equilateral angle and three magnetic circuit length is the same. The design can reduce the load loss, save material, reduce noise, and has anti-short circuit ability. Comparing with the type S11 transformer with the same capacity, the average no-load loss reducing 30%, no-load current decreased 70%, noise decreased 10~25dB.

### ● 型号说明 Model Description



## 10kV电压等级13型立体卷铁心无励磁调压配电变压器

10kV 13, Stereoscopic Iron Cord, non Excitation Voltage Regulating Distribution Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
30	6	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Yyn0 Dyn11	4	0.08	0.63/0.6	0.30	1020×650×1220
50						0.10	0.91/0.87	0.24	1040×690×1250
63						0.11	1.09/1.04	0.23	1050×690×1280
80						0.13	1.31/1.25	0.22	1060×700×1300
100						0.15	1.58/1.50	0.21	1080×710×1320
125						0.17	1.89/1.8	0.2	1080×810×1440
160						0.20	2.31/2.20	0.19	1090×910×1510
200						0.24	2.73/2.60	0.18	1100×950×1520
250					4.5	0.29	3.2/3.05	0.17	1130×980×1570
315						0.34	3.83/3.65	0.16	1140×990×1610
400						0.41	4.52/4.30	0.16	1240×1080×1710
500						0.48	5.41/5.15	0.16	1310×1140×1710
630						0.57	6.20	0.15	1360×1180×1830
800						0.70	7.50	0.15	1420×1230×1960
1000						0.83	10.30	0.14	1610×1390×1890
1250						0.97	12.00	0.13	1650×1430×1990
1600					5.0	1.17	14.50	0.12	1820×1570×2100
2000						1.55	18.3	0.12	1930×1605×2200
2500						1.83	21.2	0.12	2050×1700×2300

1.对于额定容量为500kVA及以下的变压器，表中斜线上方的负载损耗值适用于Dyn11或Yzn11联结组，斜线下方的负载损耗值适用于Yyn0联结组。

For the transformers of the rated capacity of 500kVA and below, the load loss value above the diagonal in the table compliant with connection Dyn11 or Yzn11, the load loss value below the diagonal compliant with connection Yyn0.

2.根据用户需要，可以提供高压分接范围为 $\pm 2 \times 2.5$ 的变压器。

According to users' needs, the transformer can be provided with a high voltage tap range between  $\pm 2 \times 2.5$ .

3.根据用户需要，可提供低压为0.69kV的变压器。

According to users' needs, the transformers can be provided with low-voltage 0.69kV.

4.根据用户需要，也可选用其他损耗值。

According to users' needs, other loss values may also be used.

### 3. 非晶合金配电变压器 Amorphous Alloy Distribution Transformer

#### ●产品特点 Product features

非晶合金配电变压器是采用非晶合金作为导磁材料所制造的一种配电变压器，可取代硅钢片铁芯的变压器而广泛用于配电系统，空载损耗比S9型变压器降低75%左右，是目前节能效果最理想的配电变压器。本产品特别适用于电能不足、负荷波动大以及难以进行日常维护的地区，本产品采用全密封结构，绝缘油不受外界大气的污染，是城乡广大配电网络中理想的配电设备。

The amorphous alloy distribution transformer uses amorphous alloy as magnetic material and can replace the silicon steel core transformer silicon, so it is widely used in power distribution system, its no-load loss ratio was reduced by about 75% than type S9. The amorphous alloy distribution transformer is the energy saving transformer of the most ideal in the current. This product is especially suitable for the electric power shortage, big load fluctuation and the area of difficult to carry out routine maintenance, and it adopts fully sealed structure, so its insulating oil is not affected by external air pollution. The product is the ideal power distribution equipment in distribution network widespread.

10kV电压等级SH15型油浸式非晶合金铁芯配电变压器  
10kV SH15, Oil immersed, Amorphous Alloy Distribution Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
30	6	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Dyn11	4	33	630/600	1.5	990×860×810
50						43	910/870	1.2	1020×810×840
63						50	1090/1040	1.1	1060×820×865
80						60	1310/1250	1.0	1050×865×865
100						75	1580/1500	0.9	1110×880×825
125						85	1890/1800	0.8	1150×880×950
160						100	2310/2200	0.6	1210×880×985
200						120	2730/2600	0.6	1270×895×1015
250						140	3200/3050	0.6	1310×895×1060
315						170	3830/3650	0.5	1365×835×1105
400					4.5	200	4520/4300	0.5	1310×1030×1195
500						240	5410/5150	0.5	1385×1125×1195
630						320	6200	0.3	1505×1305×1295
800						380	7500	0.3	1900×1175×1395
1000						450	10300	0.3	2115×1275×1420
1250						530	12000	0.2	2140×1490×1440
1600						630	14500	0.2	2310×1560×1530

1. 当铁心为三相三柱时,根据需要也可采用Yyn0联结组。

When the iron core is the structure of three-phase and three column, the transformer can use adopt Yyn0 group under necessity.

2. 对于额定容量为500kVA及以下的变压器, 表中斜线上方的负载损耗值适用于Dyn11联结组, 斜线下方的负载损耗值适用于Yyn0联结组。

For the transformers of the rated capacity of 500kVA and below, the load loss value above the diagonal in the table compliant with connection Dyn11 , the load loss value below the diagonal compliant with connection Yyn0.

3. 如果用户需要, 也可选用其他损耗值。

According to users' needs, other loss values may also be used.

4. 根据用户需要, 可提供其他高压分接范围的三相变压器。

According to users' needs, other three-phase transformer of tapping range of high voltage can be provided.

#### 4. 高燃点变压器 Transformer with High Ignition Point

##### ●产品特点 Product features

高燃点绝缘油变压器是目前世界广泛应用的城网专用变压器, 适用于城镇住宅区、宾馆商厦、医院、实验室、学校、剧院、石油化工、车站地铁、机场、矿井等要求安全防火性高、噪声低等重要场所, 属于新型安全、防火、环保节能型变压器。兼顾了油浸式变压器和干式变压器的共同优点, 比普通油浸式变压器更安全, 比干式变压器更实惠, 成为继普通油变、干变之后的又一新型变压器, 高燃点绝缘油变压器的推广应用将成为中国变压器技术领域的又一次产业革命。

High-ignition insulating oil transformer is widely used in the world of special network transformer for urban residential areas, hotels, shopping malls, hospitals, laboratories, schools, theaters, petrochemicals, railway stations, airports, mines and other requirements of high fire safety, Low noise and other important places, belonging to the new security, fire prevention, environmental protection and energy-saving transformers. Taking into account the common advantages of oil-immersed transformers and dry-type transformers, safer than ordinary oil-immersed transformers, more affordable than dry-type transformers, as another ordinary transformer, dry-type transformers after another new transformer. The promotion and application of high-ignition insulating oil transformer will become China's transformer technology in the field of another industrial revolution.

## 10kV电压等级11型双绕组无励磁调压高燃点油变压器

10kV 11 Double-winding non-excitation voltage Regulator High-ignition Oil Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
30	6 6.3 10 10.5	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Dyn11 Yzn11 Yyn0	4	0.10	0.63/0.60	1.5	785×575×950
50						0.13	0.91/0.87	1.3	855×595×980
63						0.15	1.09/1.04	1.2	875×665×1000
80						0.18	1.31/1.25	1.2	895×680×1050
100						0.20	1.58/1.50	1.1	950×745×1080
125						0.24	1.89/1.80	1.1	1020×790×1120
160						0.28	2.31/2.20	1.0	1120×820×1180
200						0.34	2.73/2.60	1.0	1350×890×1200
250				Dyn11 Yyn0	4.5	0.40	3.2/3.05	0.90	1460×920×1270
315						0.48	3.83/3.65	0.90	1500×960×1310
400						0.57	4.52/4.30	0.80	1570×990×1350
500						0.68	5.41/5.15	0.80	1630×1050×1385
630				Dyn11 Yyn0	5.0	0.81	6.20	0.60	1735×1120×1515
800						0.98	7.50	0.60	2085×1155×2060
1000						1.15	10.30	0.60	2260×1190×2105
1250						1.36	12.00	0.50	2295×1260×2205
1600						1.64	14.50	0.50	2460×1335×2265
2000						1.94	18.3	0.40	2600×1505×2400
2500						2.29	21.2	0.40	2750×1700×2800

1.对于额定容量为500kVA及以下的变压器，表中斜线上方的负载损耗值适用于Dyn11或Yzn11联结组，斜线下方的负载损耗值适用于Yyn0联结组。

For transformers with rated capacity of 500 kVA and below, the load loss values above the slash in the table apply to Dyn11 or Yzn11 junction groups. The load loss values below the slash apply to the Yyn0 junction group.

2.根据用户需要，可提供低压为0.69kV的变压器。

According to users' needs, we can provide low voltage of 0.69 kV transformer.

3.表内损耗值为变压器年平均负载率介于35%~40%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于40%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The annual average loss values in the table for transformer load rate is between 35% ~ 40% efficiency peak value. In actual use, taking into account the economic operation, when the average annual load factor of the transformer is greater than 40%, the load loss can be appropriately reduced. When the average annual load factor of the transformer is less than 35%, the no-load loss can be reduced appropriately.

## 5. 整流变压器 Rectifier Transformer

## ●产品特点 Product features

公司生产的ZS系列整流变压器用作整流装置的电源变压器，其作用是向整流器提供交流电源，整流器再将交流电变换为直流电，从而进行直流供电。主要应用于冶金、化工、机车牵引与传动等行业。产品具有节能、低损耗、低噪声、抗冲击和抗短路能力强、过载能力强、结构紧凑、体积小、供电可靠等优点，并能满足用户各种特殊要求。

ZS series rectifier transformer is used as the power transformer of rectifier device, and its function is to supply the AC power to the rectifier. The rectifier then converts the alternating current into direct current and thus DC power supply. It is used in metallurgy, chemical, locomotive traction and transmission ,etc. The product has the advantages of energy saving, low loss, low noise, impact resistance and short circuit resistance, strong overload capacity, compact structure, small size, reliable power supply and so on, and can meet the special requirements of users.

## 10kV无励磁调压（分裂式）整流变压器

10kV Non-excitation Voltage Regulator (split type) Rectifier Transformer

型号 Type	额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
ZS-440/10	2×220	6 6.3 10 10.5 11	$\pm 5$ 或 $\pm 2 \times 2.5$	2×0.4 2×0.6	Dd0-Dy11 Dd0-Dy5	6	0.95	6.5	1.4
ZS-1270/10	2×635					6	1.9	14.1	1.2
ZS-1350/10	2×675					6	2.06	14.5	1.1
ZS-1600/10	2×800					6	2.2	15.5	1.1
ZS-3200/10	2×1600					7	3.2	29	0.7
ZS-3500/10	2×1750					7	4.4	29.5	0.7

## 10kV无励磁调压整流变压器

10kV Non-excitation Voltage Regulator (split type) Rectifier Transformer

型号 Type	额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
ZS-1200/10	1200	6 6.3 10 10.5 11	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4 0.6	Yyn0 Yd11 Dd0 Dy5 Dy11	6	1.69	12.7	1.1
ZS-1250/10	1250					6	1.8	13.8	1.1
ZS-1500/10	1500					6	2.4	14.5	1
ZS-1600/10	1600					7	2.5	15	0.9
ZS-1900/10	1900					8	2.52	16.48	0.9
ZS-2000/10	2000					6	2.6	18.2	0.85
ZS-2500/10	2500					6	3.1	23	0.8
ZS-2700/10	2700					8	3.45	23.55	0.75
ZS-3000/10	3000					7	4.07	28.2	0.7
ZS-3600/10	3600					7	4.10	28.5	0.68
ZS-3700/10	3700					7	4.15	28.8	0.62

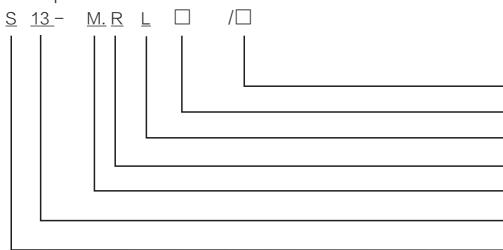
## 6. 智能有载调容配电变压器 Intelligent On-load Dispensing Distribution Transformer

## ●产品特点 Product features

智能型有载调容变压器，主要由变压器、有载调容开关和有载调容控制器的控制箱组成。变压器具有大小两个容量档位，可以根据负载的变化在不停电的情况下自动调整容量运行，当负荷较轻时，变压器由大容量自动调为小容量运行，当需要大负荷运行时，变压器由小容量自动调为大容量运行，降低了变压器的空载损耗，又克服了无载调容需停电人工操作的麻烦，真正达到节能、智能化的目的。适用于农网改造以及白天和晚上用电负荷差异较大的住宅小区、路灯变、城市商业区、非全日制工业区、油田等。

Intelligent on-load capacity of the transformer, mainly by the transformer, with the capacity of the switch and the capacity of the controller control box composition. Transformer has the size of two capacity stalls, according to the load changes in the case of non-power automatically adjust the capacity of the operation. When the need for heavy load operation, the transformer from the small capacity automatically adjusted to large capacity operation, reducing the transformer no-load loss, but also to overcome the no-load capacity to be power failure manual operation of the trouble, really achieve energy saving, intelligent purpose. Apply to the transformation of rural power grid and the daytime and night load difference between the larger residential quarters, street lights, urban commercial areas, part-time industrial areas, oil fields, etc.

## ●型号说明 Model Description



电压等级 Voltage level kV  
额定小容量 Rated small capacity kVA  
额定大容量 Rated large capacity kVA  
调容 Adjustable capacity  
有载 On-Load  
全密封 Omniselal  
11型 Type 11  
三相 Three-phase

## 10kV电压等级S11-M-ZT系列智能型有载调容变压器技术参数

10kV S11-M-ZT series of Intelligent on-load Converter Transformer Technical Parameters

型号 Type	电压组合 (kV) Voltage combination	高压分接 范围(%) High voltage tapping range	连接组 标号 Connection sets label	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	短路阻抗 (%) Short- circuit impedance	空载电流 (%) No-load current
S11-M.ZT-160(50)	10/0.4	$\pm 5$	Dyn11 Yyn0	280(130)	2310(870)	4.0	0.8 (1.6)
S11-M.ZT-200(63)				340(150)	2730(1040)	4.0	0.7 (1.5)
S11-M.ZT-250(80)				400(180)	3200(1250)	4.0	0.7 (1.4)
S11-M.ZT-315(100)				480(200)	3830(1500)	4.0	0.7 (1.4)
S11-M.ZT-400(125)				570(240)	4520(1800)	4.0	0.6 (1.3)
S11-M.ZT-500(160)				680(280)	5410(2200)	4.0	0.6 (1.2)
S11-M.ZT-630(200)				810(340)	6200(2600)	4.5	0.5 (1.1)

1.括号内为小容量时的参数。  
The parameters in the brackets are small capacity  
2.对于其他联接组别及相应技术参数为非优选参数，由用户与制造厂协商。  
For other connection sets and the corresponding technical parameters for the non-preferred parameters, the user consults with the manufacturer  
3.根据用户需要，可以提供高压分接范围为 $\pm 2 \times 2.5$ 或其他分接范围配电变压器。  
According to users' needs, we can provide high voltage tap range of  $\pm 2 \times 2.5$  or other tap range distribution transformer

## 7. 油田专用变压器 Oil Field Special Transformer

油田专用变压器是油田抽油机专用节能变压器，它是根据油田抽油机机械工作特性，为降低用电单耗而开发的新型节能变压器。

Oil field special transformer is oil field pumping unit dedicated energy-saving transformer. It is based on oil field pumping machine mechanical characteristics to reduce the consumption of electricity and the development of new energy-saving transformers.

由于油田用抽油机工作时负荷冲击比较大，其起动负荷最大达到起动后正常工作负荷的两倍；企业用水泵由于启动运行特殊性致使其冲击负荷较大。我公司开发的油田专用变压器具有很强的过载能力，过载50%可以长期运行，过载100%可以运行4小时，过载150%可以运行2小时，过载200%可以运行10分钟。解决了抽油机及企业用水泵启动过载容量的需求，从而改变了使用普通变压器大马拉小车的不合理现象。现在一台单井配用的变压器只是过去所配容量的一半。所以，从电网的角度看，大大降低了电网的占有率；从节能的角度看，解决了变损和线损比不合理的现象，空载损耗比同容量配电变压器降低了50%以上，负载损耗比同容量配电变压器下降35~50%，从而节约了大量能源；从其它方面看，还可以节约大量的增容费及基本费等项用电投资。

Because oil fields with pumping unit work load impact is relatively large, its biggest starting load reach as twice as the normal working load after starting. Enterprise water pump due to the special operation of the start of its impact load larger. My company developed oilfield dedicated transformer has a strong overload capacity, 50% overload can run for a long time, 100% overload can run 4 hours, 150% overload can run 2 hours, 200% overload can run for 10 minutes. To solve the pumping unit and enterprise water pump to start the capacity of the demand, thus changing the use of ordinary transformer big horse to pull the car the unreasonable phenomenon. And now a single well with the transformer is only half of the past capacity. Therefore, from the grid point of view, greatly reducing the power grid share; from the energy point of view, to solve the loss and loss of line loss is unreasonable phenomenon, no-load loss than the same capacity distribution transformer reduced by 50% Load loss than the same capacity distribution transformer down 35 ~ 50%, thus saving a lot of energy, from other aspects, you can also save a lot of capacity fees and basic fees and other investment in electricity.

主要适用于电源频率为50赫兹，电源电压6~10千伏，海拔高度1000米及以下地区的输配变，适合冲击负荷比较大的油田抽油机、水泵和季节负载差异很大的农田使用，也适合其他具有类似负载的地方及企业做动力电源。

Mainly applicable to the power frequency of 50 Hz, the power supply voltage 6~10 kV, 1000 meters above sea level and below the transmission and distribution, suitable for the impact of relatively large oil field pumping units, pumps and seasonal load vary widely farmland use , But also for other places with similar loads and enterprises to do power supply.

●产品型号含义 Meaning of the product mode



S11型油田专用变压器 S11 Oil Field Special Transformer

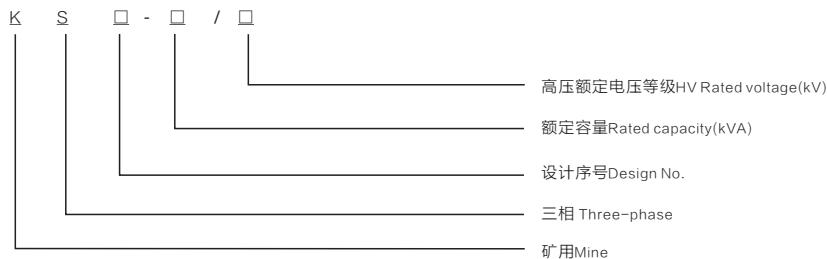
额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short- circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
30						0.11	0.31	2.2
40						0.13	0.39	2.1
50						0.15	0.47	2.0
63						0.17	0.57	1.9
80	10	±5或 ±2×2.5	0.4	Yyn0	2.5	0.20	0.67	1.8
100	6.3					0.25	0.78	1.7
125	6					0.29	0.99	1.6
160						0.35	1.20	1.5
200						0.42	1.42	1.4
250						0.49	1.67	1.3

8. 矿用变压器 Mine Transformer

矿用变压器，作为矿井的配电设备，该产品具有体积小、易下井、结构合理、损耗低、散热性能好等特点。本系列产品采用优质的晶粒取向优质高导磁性能硅钢片叠装而成，铁芯为芯式铁芯，全斜接缝叠积式铁芯，其铁芯为多级圆截面，确保低噪音低损耗。油箱结构坚固，箱壁两侧焊有高、低压电缆接线盒，高压线圈须有额定电压±5%的分接电压。此类型矿用变压器是一般型油浸变压器，并无防爆要求，主要作为矿井配电时的矿用照明或电力拖动的电源。

Mine transformer, as a mine power distribution equipment, the product has a small size, easy to go down, reasonable structure, low loss, good heat dissipation and other characteristics. This series of products are made of high quality grain and high magnetic conductivity silicon steel sheet, with full inclined joint laminated core. The core is a multistage circular section to ensure low noise and low loss. Tank structure is strong, the wall on both sides of the wall welded with high and low voltage cable junction box, high voltage coil must have a rated voltage ± 5% of the tap voltage. This type of mine transformer is a general type of oil-immersed transformers, no explosion-proof requirements, mainly as a mine when the mine lighting or power of electric drive.

●产品型号含义 Meaning of the product mode



KS11系列矿用变压器 KS11 series of Mine Transformers

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
100	10	$\pm 5$ 或 $\pm 2 \times 2.5$	0.69 0.4	Yy0 Yd11 Yy0/Yd11	4	0.2	1.5	1.6	1367×925×1066
200						0.34	2.6	1.3	1760×1120×1166
250						0.4	3.05	1.2	1674×1084×1151
315						0.48	3.65	1.1	1608×982×1218
400						0.57	4.3	1.0	1640×1050×1241
500						0.68	5.1	1.0	1850×1220×1391
630						4.5	0.81	6.2	1968×1288×1472

## 9. 35kV电力变压器 35kV Power Transformer

### ●产品特点 Product features

35kV级系列变压器产品主要应用于城乡工农业电网及各工矿企业输配电。产品包括油浸自冷、无励磁调压及有载调压、全密封等多系列、多品种，产品器身采用可靠牢固的定位，能确保变压器长途运输和长期运行后器身位移、绕组不变形，可不吊芯直接联网使用，同时产品具有性能稳定、可靠性高、结构紧凑、外形美观、节能降耗等特点。

35kV series transformer products are mainly used in urban and rural industrial and agricultural power grids, and mining enterprises transmission and distribution. Include oil self-cooling, non-excitation voltage regulator and on-load pressure, sealed and other multi-series. The body of the product adopts a reliable and firm positioning, which can ensure no displacement of the body and no winding deformation after a long run, and can be directly connected with the hanging core. At the same time products with stable performance, high reliability, compact structure, beautiful appearance, energy saving and so on.

10kV电压等级11型双绕组无励磁调压高燃点油变压器

10kV 11 Double-winding non-excitation voltage Regulator High-ignition Oil Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
50	35	$\pm 5$ 或 $\pm 2 \times 2.5$	0.4	Dyn11 Yyn0	6.5	0.160	1.20/1.14	1.3	1035×1000×1315
100						0.230	2.01/1.91	1.1	1125×965×1700
125						0.270	2.37/2.26	1.1	1160×1180×1730
160						0.280	2.82/2.68	1.0	1200×1260×1810
200						0.340	3.32/3.16	1.0	1240×1380×1870
250						0.400	3.95/3.76	0.95	1310×1400×1600
315						0.480	4.75/4.53	0.95	1380×1430×1650
400						0.580	5.74/5.47	0.85	1560×1490×1930
500						0.680	6.91/6.58	0.85	1840×1640×2040
630						0.830	7.86	0.65	2115×1980×2120
800						0.980	9.40	0.65	2100×1670×2260
1000						1.15	11.5	0.65	2290×1780×2410
1250						1.40	13.9	0.60	2310×2000×2480
1600						1.69	16.6	0.60	2415×2150×2490
2000						1.99	19.7	0.55	2500×2350×2600
2500						2.36	23.2	0.55	2550×2420×2650

1. 对于额定容量为500kVA及以下的变压器，表中斜线上方的负载损耗值适用于Dyn11联结组，斜线下方的负载损耗值适用于Yyn0联结组。

For transformers with a rated capacity of 500 kVA and below, the load loss values above the slash in the table apply to the Dyn11 connection group. The load loss value below the slash applies to the Yyn0 junction group.

2. 表内损耗值为变压器年平均负载率介于33%~36%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于36%时，可适当降低负载损耗；当变压器年平均负载率小于33%时，可适当降低空载损耗。

The numerical value of loss in the table is the value of the average annual load rate between 33% – 36%. The actual operation, when the average load rate of transformer is more than 36%, the load loss can be reduced properly. When the average load rate of transformer is less than 33%, the no-load loss can be reduced.

### 35kV电压等级11型双绕组无励磁调压电力变压器

### 35kV 11 Double Winding non Excitation Voltage Regulating Power Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L×W×H) Physical dimensions
630	35	$\pm 5$ 或 $\pm 2 \times 2.5$	3.15 6.3 10.5	Yd11	6.5	0.830	7.86	0.65	2100×1610×2170
800						0.980	9.40	0.65	2100×1670×2260
1000						1.15	11.5	0.65	2290×1780×2410
1250						1.40	13.9	0.55	2310×2000×2480
1600						1.69	16.6	0.45	2350×2250×2520
2000						2.17	18.3	0.45	2500×2350×2600
2500						2.56	19.6	0.45	2550×2420×2650
3150	35~38.5	$\pm 5$ 或 $\pm 2 \times 2.5$	3.15 6.3 10.5	Ynd11	7.0	3.04	23.0	0.45	2650×2480×2700
4000						3.61	27.3	0.45	2700×2530×2880
5000						4.32	31.3	0.45	2800×2650×2980
6300						5.24	35.0	0.45	2900×2950×3150
8000	35~38.5	$\pm 2 \times 2.5$	3.15 3.3 6.3 6.6 10.5	Ynd11	8.0	7.20	38.4	0.35	3550×3350×3770
10000						8.70	45.3	0.35	3950×3450×3850
12500						10.0	53.8	0.30	4000×3700×4050
16000						12.1	65.8	0.30	4200×4000×4150
20000						14.4	79.5	0.30	4400×4200×4300
25000					10.0	17.0	94.0	0.25	4600×4800×4400
31500						20.2	112	0.25	5000×4900×4600

1.对于低压电压为10.5kV的变压器，可提供联结组标号为Dyn11的产品。

For low voltage 10.5kV transformer, we can provide the connection group label for Dyn11 products.

2.额定容量为3150kVA及以上的变压器，-5%分接位置为最大电流分接。

Transformers of 3150kVA and above rated capacity, -5% tap position is the maximum current tap.

3.表内损耗值为变压器年平均负载率介于35%~45%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于45%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The numerical value of loss in the table is the value of the average annual load rate between 35% – 45%. The actual operation, when the average load rate of transformer is more than 45%, the load loss can be reduced properly. When the average load rate of transformer is less than 35%, the no-load loss can be reduced.

## 35kV电压等级11型双绕组无励磁调压电力变压器

35kV 11 Double Winding non Excitation Voltage Regulating Power Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L × W × H) Physical dimensions
2000	35	35~38.5	6.3	Yd11	6.5	2.30	19.2	0.50	2900×2420×2550
2500			10.5		7.0	2.72	20.6	0.50	2950×2490×2580
3150			6.3		7.0	3.23	24.7	0.50	3060×2870×2670
4000			10.5		7.0	3.87	29.1	0.50	3410×3060×2860
5000			6.3		7.0	4.64	34.2	0.50	3550×3100×3000
6300			10.5		7.0	5.63	36.7	0.50	3710×3170×3060
8000			6.3		8.0	7.87	40.6	0.40	4010×3600×3450
10000			6.3		8.0	9.28	48.0	0.40	4300×3600×3500
12500			6.6		8.0	10.9	56.8	0.35	4900×3700×3900
16000			10.5		8.0	13.1	70.3	0.35	5100×4200×4000
20000			6.3		8.0	15.5	82.7	0.35	5300×4300×4100
25000			6.6		10.0	18.3	97.8	0.30	5500×4500×4200
31500			10.5		10.0	21.8	116	0.30	5700×4600×4300

1.对于低压电压为10.5kV的变压器，可提供联结组标号为Dyn11的产品。

For low voltage 10.5kV transformer, we can provide the connection group label for Dyn11 products.

2.最大电流分接为-7.5%分接位置。

Maximum current tap is -7.5% tap position.

3.表内损耗值为变压器年平均负载率介于35% ~ 45%之间运行效率最高时的值。实际选用时，考虑到经济运行，当变压器年平均负载率大于45%时，可适当降低负载损耗；当变压器年平均负载率小于35%时，可适当降低空载损耗。

The numerical value of loss in the table is the value of the average annual load rate between 35% – 45%. The actual operation, when the average load rate of transformer is more than 45%, the load loss can be reduced properly. When the average load rate of transformer is less than 35%, the no-load loss can be reduced.

## 10. 风电用组合式变压器 Wind Power Combined Transformer

## ● 产品概述 Product Profile

风力发电作为一种清洁的能源生产方式，在我国得到了迅猛的发展。ZGS□-□F型风力发电用组合式变压器是将风电机组发出的电能电压0.69KV升高至35kV或10kV，并网后输出的专用变电设备，其结构是将变压器器身、高压负荷开关、熔断器及高低压连线放置在全密封的油箱内，用变压器油作为绝缘介质，具有结构合理紧凑，安装灵活，操作方便等优点。

As a kind of clean energy production, wind power has developed rapidly in China. The combined transformer for wind power generation is a special transformer device which can increase the power voltage 0.69KV of the wind turbine to 35kV or 10kV, and then output the grid. Its structure is the transformer body, high pressure load switch, fuse and high and low voltage connections all connected in the sealed tank, transformer oil as insulation medium. It is a reasonable and compact structure, flexible installation, convenient operation.

## ● 型号说明 Model Description



## 10kV S11风力发电用组合式变压器 10kV S11 Wind Power Combined Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
630	10	$\pm 5$ 或 $\pm 2 \times 2.5$	0.69	Yyn0 Dyn11	4	0.81	6.2	0.60
800						0.98	7.5	0.60
1000						1.15	10.3	0.60
1250						1.36	12	0.50
1600						1.64	14.5	0.50
2000						2.01	16.93	0.40
2500						2.38	19.67	0.40

## 35kV S11风力发电用组合式变压器 35 kV S11 wind power combined transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current
630	35	$\pm 5$ 或 $\pm 2 \times 2.5$	0.69	Yyn0 Dyn11	6.5	0.83	7.8	0.65
800						0.98	9.4	0.65
1000						1.15	11.54	0.65
1250						1.41	13.94	0.60
1600						1.65	16.67	0.60
2000						2.18	18.4	0.55
2500						2.5	19.66	0.55
2700						2.65	20.83	0.5
3200						3.01	23.66	0.5

## 11. 光伏发电用组合式变压器 Photovoltaic Combined Transformer

## ●产品概述 Product Profile

光伏发电作为一种清洁的能源生产方式，在国内外得到迅速的发展，光伏发电用组合式变压器正是为满足日益增长的光伏发电的供电要求，我公司生产10kV、35 kV组合式变压器基础上，消化吸收国内外的先进技术结合国内需求自行开发的系列产品，该产品是将变压器，负荷开关，高压熔断器安装在变压器的箱体内，利用变压器的绝缘液体作为整个产品的绝缘和散热介质，采用全密封结构，外壳具有超常规产品的防腐性、耐厚性、防紫外线性能，产品具有体积小，重量轻、安装方便等优点。

Photovoltaic power, as a way to produce clean energy, get rapid development both at home and abroad, and photovoltaic power combined transformer is to meet the requirements of the increasing of photovoltaic power generation. Our self-developed series of transformers, such as 10 kV, 35 kV combined transformers, on the basis of digesting and absorbing advanced technology both at home and abroad is combined with domestic demands. This product has the transformer, load switch, high-voltage fuse installed in the casing of transformer, and uses transformer insulation liquid as insulation and cooling medium, adopts full sealed structure. This makes its shell extraordinary anticorrosion, thick resistance, and ultraviolet-proof protection, and itself with small size, light weight, easy installation, etc.

## ●型号说明 Model Description



35kV S11光伏发电用组合式变压器  
35kV S11 Photovoltaic Power Combined Transformer

额定容量(kVA) Rated capacity	高压电压(kV) High voltage	分接范围(%) Tapping range	低压电压(kV) Low voltage	连接组标号 Connection sets label	短路阻抗(%) Short-circuit impedance	空载损耗(kW) No-load loss	负载损耗(kW) Load loss	空载电流(%) No-load current	外形尺寸(mm)(L×W×H) Physical dimensions
1000	35~38.5	±2×2.5	0.315~0.315 0.27~0.27	Dy11-y11 Yd11-d11	6.5	1.4	12.5	5	2620×2440×2250
1250						1.66	14.78	6.5	2620×2480×2250

## 干式变压器 Dry-type Transformer

### 1. F级干式变压器 F-Grade Dry-type Transformer

#### ●产品特点 Product features

该系列产品按照中国国家标准执行，满足中国国家标准GB/T10228-2008《干式电力变压器技术参数和要求》和中国国家标准GB1094.11-2007《干式电力变压器》的规定。并通过中国国家质量监督检验中心依据国际标准IEC60076-11规定的C2、E2、F1特殊实验。具有低损耗、低局放、低噪声、防盐雾、防凝露、防火、抗短路能力强等特点。

These series of products, in accordance with China's national standards, meet the Chinese national standard GB/T10228-2008 "dry-type power transformer technical parameters and requirements" and China's national standard GB1094.11-2007 "dry-type power transformer" regulation. They pass special experiment of China's quality supervision, inspection center according to the international standard of IEC60076-11 about C2, E2, and F1. They have the features of low discharge, low noise, low loss, low salt fog and condensation prevention, fire prevention, anti-short circuit etc.

### 2. 10kV级干式配电变压器 10 kV Dry-type Distribution Transformer

SC(B) 10型10kV级干式配电变压器 SC(B) 10 Type10kV Dry-type Distribution Transformer

额定容量(kVA) Rated capacity	高压电压(kV) High voltage	分接范围(%) Tapping range	低压电压(kV) Low voltage	连接组标号 Connection sets label	短路阻抗(%) Short-circuit impedance	空载损耗(kW) No-load loss	负载损耗(kW) Load loss	空载电流(%) No-load current	外形尺寸(mm)(L×W×H) Physical dimensions
30					4	190	610	1.8	910×600×880
50						270	860	1.5	975×700×960
80						360	1200	1.2	1090×900×1010
100						400	1370	1.0	1070×900×1010
125						470	1610	1.0	1080×900×1030
160						540	1850	1.0	1220×840×1200
200						620	2200	0.8	1220×840×1210
250						720	2400	0.8	1220×900×1390
315	6	±5或 ±2×2.5	0.4	Dyn11 YYn0		880	3030	0.7	1320×900×1390
400	6.3					970	3480	0.7	1330×900×1410
500	6.6					1160	4260	0.6	1350×900×1530
630	10					1340	5130	0.6	1420×1070×1665
680	10.5					1290	5200	0.6	1430×1000×1540
800	11					1520	6070	0.5	1530×1080×1625
1000						1760	7100	0.5	1570×1010×1690
1250						2080	8460	0.5	1620×1030×1790
1600						2440	10240	0.5	1740×1070×1885
2000						3320	12620	0.4	1980×1350×1910
2500						4000	14900	0.4	2060×1600×1970

### 3. 10kV级干式电力变压器 10kV Dry-type Power Transformer

#### ●产品特点 Product Features

特变电工自主研发的SC10型10kV干式电力变压器，高低压绕组均采用环氧树脂真空浇注，广泛应用于电网之间的电力转换。

Our independent research and development as SC10 type 10kv dry-type power transformer produced by TBEA ourselves, whose high and low voltage winding adopts vacuum epoxy resin, is widely used in electric power conversion between the power grid.

SC10型10kV干式电力变压器 SC10 Type 10kV Dry-Type Power Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L × W × H) Physical dimensions			
630	6	$\pm 5$ 或 $\pm 2 \times 2.5$	3	Yd11	6	1400	5520	0.6	1630 × 1070 × 1600			
800						1600	6460	0.5	1680 × 1070 × 1780			
1000						1920	7640	0.5	1720 × 1070 × 1950			
1250						2240	9130	0.5	1930 × 1070 × 2000			
1600						2640	11060	0.5	1980 × 1070 × 2050			
2000						3600	13210	0.4	2070 × 1070 × 2180			
2500					7	4240	15590	0.4	2190 × 1070 × 2250			
3150						5040	18180	0.4	2290 × 1380 × 2150			
4000						6000	21900	0.3	2470 × 1380 × 2400			
5000						7120	25900	0.3	2700 × 1380 × 2440			
6300	10.5				8	8400	30730	0.3	2940 × 1780 × 2550			
8000						9800	37750	0.3	3010 × 1780 × 2650			
10000						11100	42500	0.3	3240 × 1780 × 2700			

### 4. 35kV级干式电力变压器 35kV Dry-type Power Transformer

SC10型35kV干式电力变压器 SC10 Type 35kV Dry-Type Power Transformer

额定容量 (kVA) Rated capacity	高压电压 (kV) High voltage	分接范围 (%) Tapping range	低压电压 (kV) Low voltage	连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	外形尺寸(mm) (L × W × H) Physical dimensions
800	35	$\pm 5$ 或 $\pm 2 \times 2.5$	3.15	Yd11	6	2.22	8.17	0.8	2150 × 1350 × 2100
1000						2.64	9.5	0.7	2280 × 1350 × 2250
1250						3.1	12.1	0.7	2400 × 1400 × 2350
1600						3.65	13.41	0.7	2650 × 1400 × 2450
2000				Yyn0	7	4.2	15.81	0.6	2740 × 1400 × 2480
2500						4.8	18.93	0.6	2850 × 1400 × 2540
3150				Yyn0	8	6	21.31	0.6	2950 × 1500 × 2350
4000						6.96	25.62	0.5	2950 × 1500 × 2500
5000						8.32	30.37	0.5	2950 × 1700 × 2650
6300						9.84	35.48	0.5	3550 × 1800 × 2880
8000					9	11.2	39.34	0.4	3600 × 1500 × 2920
10000						12.8	48.25	0.4	3620 × 1800 × 3180
12500						16.8	5.1	0.4	4250 × 1800 × 3290
16000						20	55.8	0.4	4420 × 1900 × 3380
20000						23.75	60.8	0.4	4450 × 1900 × 3520

## 5. 35kV级干式配电变压器 Class 35kV Dry-type Distribution Transformer

SC10型35kV干式配电变压器 Sc10 Class 35kV Dry-type Distribution Transformer

额定容量(kVA) Rated capacity	高压电压(kV) High voltage	分接范围(%) Tapping range	低压电压(kV) Low voltage	连接组标号 Connection sets label	短路阻抗(%) Short-circuit impedance	空载损耗(kW) No-load loss	负载损耗(kW) Load loss	空载电流(%) No-load current	外形尺寸(mm)(L×W×H) Physical dimensions
50						0.4	1.24	2.2	1550×950×1380
80						0.46	1.66	1.8	1580×950×1400
100						0.57	1.91	1.6	1610×950×1470
125						0.67	2.33	1.4	1660×950×1450
160						0.76	2.66	1.4	1720×950×1530
200						0.85	2.91	1.2	1780×950×1850
250						0.95	3.32	1.2	1810×950×1760
315	35	±5 或 ±2×2.5	0.4	Dd11	6	1.16	3.63	0.8	1840×950×1950
400	38.5			Yyn0		1.36	4.67	0.8	1870×1100×1810
500						1.6	5.75	0.8	1950×1100×1960
630						1.84	6.7	0.7	2120×1200×2050
800						2.16	7.94	0.7	2180×1200×2100
1000						2.4	9.13	0.6	2240×1200×2180
1250						2.8	11.06	0.6	2300×1400×2350
1600						3.2	13.43	0.6	2470×1500×2340
2000						3.76	15.81	0.5	2490×1600×2450
2500						4.4	18.93	0.5	2780×1600×2410

## 6. DKSC系列接地变压器 DKSC Grounding Transformer

### ●产品特点 Product Features

接地变压器用于中性点绝缘的三相电力系统中,用来为这种系统提供一个人为中性点,该中性点可直接接地,也可经过电抗器、电阻器或消弧线圈接地。该变压器一般采用Zn接法,二次绕组可以带也可以不带,其中Zn接法的两部分绕组可以采用交错式也可以采用径向分布。

Grounding transformer used in neutral point insulation of three-phase power system, the system used to provide an artificial neutral point, the neutral point can be directly grounding, also can through the reactor, resistor or arc suppression coil grounding. The transformer generally used Zn connection, take secondary winding or not, and two winding in the Zn connection can be the staggered type also can be radial distribution.

SC10型35kV干式配电变压器 Sc10 Class 35kV Dry-type Distribution Transformer

额定容量(kVA) Rated capacity	电压等级(kV) Voltage Level	零序阻抗(Zn) Zero-sequence impedance	阻抗电压(%) Impedance voltage	空载损耗(kW) No-load Loss	负载损耗(kW) Load loss	中性点电流(A) Neutral-point Current	长×宽×高(mm) (L×W×H) Length x Width x Height
100		44.1		420		15	1190×790×970
200		22.1		680		30	1280×790×1275
350		8.75		960		55	1320×790×1325
400	10.5	11		1080		65	1360×790×1285
500		8.82		1280		80	1420×920×1485
700		7.0		1480		115	1480×920×1505
160/80		27.6	4	590	1160	12	1225×790×1210
200/80		22.1	4	680	1160	20	1320×790×1260
315/100		7.7	4	960	1900	35	1350×790×1290
400/80		12.7	4	1080	2200	50	1500×870×1389
400/200		5.51	4	1080	2200	30	1560×870×1450
500/100		12.6	4	1280	2640	65	1500×870×1490
500/160		7.5	4	1280	2640	55	1640×870×1410
500/200		5.51	4	1280	2640	50	1850×1100×1560
700/160		4.38	2.5	1480	2850	90	1980×850×1620

## 7. 环氧树脂浇注干式消弧线圈 Epoxy Cast Dry-type Arc Suppression Coil

### ●产品特点 Product Features

消弧线圈是一个具有铁心的可调电感绕组，它装设于发电机、变压器或接地变压器的中性点上，当发生单项接地故障时，可形成一个与接地电流的大小接近但方向相反地电感电流，这个电流与电容电流相互补偿，消弧线圈的存在可以显著减小故障相电压的恢复速度，从而减小了电弧重燃的可能性。

Arc suppression coil is a core of adjustable inductance winding. It is installed on the neutral point of the generator, transformer or grounding transformer. When the single earth fault occurs, the arc suppression coil can form an inductor current which is close but opposite direction to the direction of the ground current. This current and capacitance current compensate each other. The existence of the arc suppression coil can significantly reduce the recovery rate of the fault phase voltage, thus reducing the possibility of arc Re-ignition.

**环氧树脂浇注干式消弧线圈 Epoxy cast Dry-type Arc Suppression Coil**

产品型号 Product Type	系统电压(kV) System voltage	额定电压(kV) Rated voltage	电流范围(A) Range of current	级数 Series	调节方式 Accommodation mode	长×宽×高(mm) (L×W×H) Length x Width x Height
XHDCR-270/10.5	10.5	6.062	10—45	32	等差 Equal difference	960×1500×1363
XHDCR-315/10.5	10.5	6.062	10—52	32	等比 Equal Ratio	980×1390×1528
XHDCR-400/10.5	10.5	6.062	10—66	32	等比 Equal Ratio	980×1500×1380
XHDCR-420/10.5	10.5	6.062	10—70	32	等差 Equal difference	980×1500×1630
XHDCR-450/10.5	10.5	6.062	10—75	32	等差 Equal difference	980×1500×1630
XHDCR-500/10.5	10.5	6.062	10—82	32	等差 Equal difference	1125×1480×1748
XHDCR-600/10.5	10.5	6.062	10—100	32	等差 Equal difference	980×1500×1690
XHDCR-630/10.5	10.5	6.062	10—104	32	等差 Equal difference	980×1500×1690
XHDCR-900/10.5	10.5	6.062	10—150	32	等差 Equal difference	1140×1800×1903
XHDCR-1100/10.5	35	22.2	10—50	16	等差 Equal difference	1480×1900×2173
XHDCR-1600/10.5	35	22.2	10—72	32	等差 Equal difference	1580×1900×2173
XHDC-150/10.5	10.5	6.062	12.5—25	9	等差 Equal difference	850×1500×1270
XHDC-175/10.5	10.5	6.062	15—29	9	等比 Equal Ratio	900×700×1430
XHDC-300/10.5	10.5	6.062	25—50	9	等比 Equal Ratio	980×720×1556
XHDC-450/10.5	10.5	6.062	38—75	9	等比 Equal Ratio	1050×1480×1748
XHDC-480/10.5	10.5	6.062	40—80	9	等比 Equal Ratio	980×1500×1645
XHDC-600/10.5	10.5	6.062	50—100	9	等比 Equal Ratio	1320×1550×1920
XHDC-630/10.5	10.5	6.062	50—104	14	等差 Equal difference	1140×1550×1878
XHDC-1000/10.5	10.5	6.062	80—165	25	等差 Equal difference	1200×880×1780
XHDC-1200/10.5	10.5	6.062	100—200	5	等比 Equal Ratio	1300×1600×2020
XHDC-1600/10.5	10.5	6.062	139—265	5	等比 Equal Ratio	1450×1600×2100
XHDC-2400/10.5	10.5	6.062	200—400	5	等比 Equal Ratio	1770×1600×2210

## 8. CKSC树脂浇注干式铁芯串联电抗器 CKSC Dry-type Iron Core Series Reactor(Resin Casting)

### ●产品特点 Product Features

串联电抗器是在电网中有两种用途，第一种是串联在电容器或电容器回路中，以达到抑制电网电压波形畸变和控制电容器谐波分量及限制电容器组合闸涌流为目的；第二种是用作滤波器中，使电容器回路的综合阻抗呈感性，避免容性阻抗高次谐波放大。

Series reactor has two purposes in the grid. One is a series in a capacitor or capacitor circuit,in order to achieve control grid voltage waveform distortion and capacitor harmonic component and limit capacitor combination lock flow. The other one is used in a filter to make the composite impedance of capacitor circuit perceptual, avoiding capacitive impedance higher harmonic amplification.

CKSC树脂浇注干式铁芯串联电抗器 Dry-type Iron Core Series Reactor(Resin Casting)

产品型号 Product Type	并联电容器 容量(kVar) Parallel capacitor capacity	电容额定 电压(kV) Capacitor Rated voltage	额定电抗率 (%) Rated reactance ratio	额定电流 (A) Rated current	额定容量 (kVar) Rated capacity	损耗(kW) Loss	外形尺寸(mm) (L×W×H) Physical dimensions
CKSC-72/10-6	1200	11/ $\sqrt{3}$	6	63	72	0.85	940×540×1030
CKSC-144/10-12		12/ $\sqrt{3}$	12	57.8	144	1.52	1240×740×1090
CKSC-144/10-6	2400	11/ $\sqrt{3}$	6	126	144	1.52	990×540×1155
CKSC-288/10-12		12/ $\sqrt{3}$	12	115.5	288	2.64	990×850×1340
CKSC-180/10-6	3000	11/ $\sqrt{3}$	6	157.3	180	1.82	1270×840×1340
CKSC-360/10-12		12/ $\sqrt{3}$	12	144.3	360	3.08	1340×850×1340
CKSC-216/10-6	3600	11/ $\sqrt{3}$	6	189	216	2.08	1120×740×1515
CKSC-432/10-12		12/ $\sqrt{3}$	12	173.2	432	3.73	1370×850×1520
CKSC-288/10-6	4800	11/ $\sqrt{3}$	6	252	288	2.62	1130×740×1565
CKSC-576/10-12		12/ $\sqrt{3}$	12	231	576	4.5	1540×850×1485
CKSC-300/10-6	5000	11/ $\sqrt{3}$	6	262	300	2.71	1350×850×1295
CKSC-600/10-12		12/ $\sqrt{3}$	12	241	600	4.64	1540×850×1595
CKSC-324/10-6	5400	11/ $\sqrt{3}$	6	283	324	2.83	1350×850×1295
CKSC-628/10-12		12/ $\sqrt{3}$	12	260	648	4.95	1540×850×1595
CKSC-360/10-6	6000	11/ $\sqrt{3}$	6	315	360	3.07	1380×850×1365
CKSC-720/10-12		12/ $\sqrt{3}$	12	289	720	5.4	1670×540×1720
CKSC-432/10-6	7200	11/ $\sqrt{3}$	6	378	432	3.72	1350×540×1620
CKSC-864/10-12		12/ $\sqrt{3}$	12	346	864	6.32	1600×540×1350
CKSC-480/10-6	8000	11/ $\sqrt{3}$	6	419	480	3.92	1350×540×1630
CKSC-960/10-12		12/ $\sqrt{3}$	12	385	960	6.84	1530×540×1353

## 9. BKSC树脂浇注干式铁芯并联电抗器

### CKSC Dry-type Iron Core Series Reactor(Resin Casting)

#### ●产品特点 Product Features

并联电抗器是并联于电网上用于吸收无功功率的一种线性电抗器。主要优点是结构简单、维护方便、运行可靠、损耗小。树脂浇注干式铁芯并联电抗器，依靠铁芯作为传导介质，磁路限制在设备内，对周围设备无影响，占地小，绝缘介质采用树脂浇注，适用于户内安装。

Shunt reactor is a linear reactor that is parallel to the grid to absorb reactive power. Its main advantages are simple structure, convenient maintenance, reliable operation and low loss. Resin casting dry-type core shunt reactor relies on the iron core as conductive medium, limiting magnetic circuit within the equipment, having no impact on the surrounding equipments, covering a small area, adopting resin casting, and it is suitable for indoor installation.

环氧树脂浇注干式消弧线圈 Epoxy cast Dry-type Arc Suppression Coil

产品型号 Product Type	电容额定电压 (kV) Capacitor Rated voltage	额定容量 (kVar) Rated capacity	额定电流 (A) Rated current	额定电抗 (Ω) Rated reactance	损耗(75℃) (kW) Loss	外形尺寸(mm) (L×W×H) Physical dimensions
BKSC-4000/10	10	4000	230.9	25	28.9	2260×1070×2250
BKSC-5000/10	10	5000	288.7	23	33.3	2410×1320×2330
BKSC-6000/10	10	6000	346.4	16.67	37	2770×1320×2390
BKSC-8000/10	10	8000	461.9	12.5	43	2770×1320×2430
BKSC-10000/10	10	10000	577.4	10	50.7	2900×1780×2530
BKSC-6000/35	35	6000	99	204.1	38.5	3030×1780×2370
BKSC-8000/35	35	8000	132	153.1	44.3	3250×1780×2440
BKSC-10000/35	35	10000	165	122.5	52.2	3360×1780×2660
BKSC-16000/35	35	16000	263.9	76.6	76.5	3750×1780×2890

## 10. H级干式变压器 Class H Dry-type Transformer

### ●产品特点 Product Features

特变电工与美国杜邦公司合作研制开发的H级干式变压器是一种敞开通风型干式变压器，产品采用NOMEX纸为主体绝缘，采用真空VPI浸漆高温固化工艺。在正常180℃的温度下，长期满载运行30年。在750℃的温度下熔化也不会放出有毒气体或腐蚀性物质。产品具有绝缘等级高、过载能力强、安全可靠、环保节能等优异特点。适用于城市电网建设和机场、地铁、石油化工、高层建筑等特殊场合的配电系统。

TBEA, with the United States DuPont developed class H dry-type transformer which is a kind of open, ventilated dry-type transformer. It adopts NOMEX paper as the main insulation and the vacuum VPI varnished high temperature curing process. Under the normal temperature of 180 °C, it can run for 30 years with full load. What's more, under the temperature of 750 °C melting, it will not release toxic gases or corrosive substances. The transformer has high insulation level, strong overload capacity, excellent features such as safety, environmental protection and energy saving. The transformer is suitable for urban power grid construction and airport, subway, petrochemical industry, the power distribution system of high-rise buildings and other special occasions.

SC(B) 10型10kV级干式配电变压器 SC (B) 10 10 kV Dry-type Distribution Transformer

额定容量 (kVA) Rated capacity	电压组合及分接范围		连接组 标号 Connection sets label	短路阻抗 (%) Short-circuit impedance	标准 (10型)			外形尺寸(mm) (L×W×H) Physical dimensions
	高压电压 (kV) High voltage	低压电压 (kV) Low voltage			空载损耗 (kW) No-load loss	负载损耗 (kW) Load loss	空载电流 (%) No-load current	
30	6 × ± 5% 6.3 ± 5% 10 ± 5% 10.5 ± 5%	0.4	Yyn0	4	224	800	2	1100 × 950 × 1100
50					288	1180	2	1100 × 950 × 1100
80					368	1750	1.8	1100 × 1050 × 1200
100					408	2050	1.6	1200 × 1050 × 1200
125					480	2450	1.6	1200 × 1200 × 1300
160					560	2950	1.6	1300 × 1200 × 1400
200					656	3780	1.6	1400 × 1200 × 1500
250			Dyn11	6	760	4450	1.4	1500 × 1200 × 1500
315					880	5350	1.4	1600 × 1300 × 1600
400					1040	6300	1.2	1700 × 1300 × 1600
500					1200	7550	1.2	1800 × 1300 × 1700
630					1330	8800	1.0	1800 × 1400 × 1800
680					1280	9300	1.0	1900 × 1400 × 1800
800					1600	11000	1.0	1900 × 1400 × 1900
1000					1880	12680	0.8	2000 × 1400 × 2000
1250					2250	14850	0.8	2100 × 1500 × 2000
1600					2600	17200	0.8	2200 × 1500 × 2100
2000					3150	20200	0.6	2300 × 1600 × 2200
2500					3800	23500	0.6	2400 × 1600 × 2200

## 附录一 电线电缆连续负荷载流量(供参考)

Appendix I The ampacity of the wire and cable in continuous load  
(For reference)

### 1. 铝绞线及钢芯铝绞线

Aluminium stranded conductor and aluminium conductor steel reinforced

(1) 铝绞线JL (LJ) 连续负荷载流量 The ampacity of aluminium stranded conductor JL(LJ) in continuous load

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	不同工作温度下的载流量A The ampacity in different work temperatures		
	70℃	80℃	90℃
16	85	100	110
25	110	135	150
35	135	160	185
50	170	200	230
70	210	255	290
95	250	305	345
120	290	355	405
150	325	400	460
185	370	455	525
210	400	495	575
240	435	540	620
300	495	620	715
400	590	740	860
500	675	850	995
630	770	980	1140
800	880	1130	1330

注：环境温度40℃，垂直导线的风速0.5m/s，日照强度1000W/m<sup>2</sup>。

Note: Environment temperature 40 °C, Wind speed vertical wires 0.5 (m/s), Sunlight intensity 1000(W/m<sup>2</sup>)

### (2) 钢芯铝绞线JL/G1A (LGJ) 连续负荷载流量

The ampacity of aluminium conductor steel reinforced JL/G1A(LGJ) in continuous load

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	不同工作温度下的载流量A The ampacity in different work temperatures		
	70℃	80℃	90℃
10/2	66	78	87
16/3	85	100	115
25/4	110	130	150
35/6	135	160	180
50/8	160	190	220
50/30	165	195	220
70/10	195	230	265
70/40	195	230	255
95/15	250	305	350
95/20	235	275	320
95/55	230	270	300
120/7	265	315	365
120/20	285	350	400

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	不同工作温度下的载流量A The ampacity in different work temperatures		
	70℃	80℃	90℃
120/25	285	350	400
120/70	265	355	405
150/8	325	395	455
150/20	325	400	460
150/25	330	405	470
150/35	330	405	470
185/10	370	460	530
185/25	380	470	540
185/35	375	460	530
185/45	380	470	540
210/10	395	490	565
210/25	405	500	580
210/25	410	505	585
210/50	410	505	585
240/30	445	550	640
240/30	440	545	635
240/55	445	555	635
300/15	495	615	710
300/20	500	625	720
300/25	505	630	725
300/40	505	630	730
300/50	505	630	730
300/70	510	640	745
400/20	595	745	865
400/25	585	730	845
400/35	585	740	855
400/50	590	740	855
400/65	595	750	875
400/95	610	765	895
500/35	670	840	975
500/45	665	835	965
500/65	675	850	980
630/45	765	965	1120
630/55	775	980	1130
630/80	775	975	1130

注：环境温度40℃，垂直导线的风速0.5m/s，日照强度1000W/m<sup>2</sup>。  
 Note: Environment temperature 40 °C, Wind speed vertical wires 0.5 (m/s) , Sunlight intensity 1000 (W/m<sup>2</sup>)

## 2. 固定敷设用电线 Wire for fixed laying

(1) BV、BLV 450/750V型的连续负载流量 BV、BLV 450/750V The ampacity in continuous load

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	电线在不同敷设方式下的载流量A The ampacity of wire in different laying A							
	○○ 两线接触 Two line contact		○○○ 三线接触 Three line contact		○○○ 三线接触 Three line contact		○○○ 三线分开,间距为电线外径 Three lines apart, the spacing is the outside diameter of wire	
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium
1.5	19	/	14	/	14	/	20	/
2.5	26	20	19	15	20	16	27	21
4	34	28	26	20	27	21	36	28
6	44	35	33	26	34	27	46	36
10	62	48	48	36	49	37	64	49
16	85	65	65	50	67	52	86	66
25	110	87	88	69	91	71	115	90
35	135	105	110	86	115	89	140	110
50	170	130	135	105	140	110	175	135
70	220	165	175	135	180	140	225	175
95	270	210	220	170	225	175	275	215
120	320	245	260	200	265	205	325	250
150	360	285	305	230	310	240	370	290
185	425	325	355	270	360	280	430	335
240	510	390	420	325	435	340	515	400
300	570	455	490	380	510	395	600	465
400	690	540	580	445	600	470	700	550
工作温度 Work temperature	70°C							
环境温度 Environment temperature	40°C							

(2) BVV、BVVB 300/500V型的连续负载流量 (A)

BVV、BVVB 300/500V The ampacity in continuous load (A)

标称截面mm <sup>2</sup> Nominal cross section(mm <sup>2</sup> )	一芯 One core	二芯 Two cores	三芯 Three cores	四芯 Four cores	五芯 Five cores
0.75	15	/	9	/	/
1.0	17	/	11	/	/
1.5	22	18	16	14	13
2.5	30	25	21	20	28
4	39	33	28	26	24
6	50	43	36	33	31
10	69	59	51	46	43
16	/	105	68	61	57
25	/	125	91	82	77
35	/	/	110	100	95

注：四芯、五芯电缆用于三相交流系统用，按三芯选择载流量。

Note: four cores and five cores cables are suitable for the three-phase AC system and choose the ampacity according to the three cores.

(3)BV-105 450/750V型的连续负载流量 BV-105 450/750V The ampacity in continuous load

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	电线在不同敷设方式下的载流量A The ampacity of wire in different laying A				
	○○ 两线接触 Two line contact	○○○ 三线接触 Three line contact	○○○ 三线接触 Three line contact	○○○ 三线分开,间距为电线外径 Three lines apart, the spacing is the outside diameter of wire	
0.5	15	11	11	16	
0.75	19	13	14	20	
1.0	23	16	17	24	
1.5	29	21	22	30	
2.5	40	29	30	41	
4	53	39	40	54	
6	67	51	52	70	
工作温度 Work temperature		105℃			
环境温度 Environment temperature		40℃			

### 3.电力电缆 Power cable

(1)单芯VV、 VLV 0.6/1kV型的连续负载流量(A) The ampacity in continuous load of the single core VV、 VLV 0.6/1kV cable (A)

表1 Table 1

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 三角形 (相互接触) Laying way : triangle (contact with each other)											
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移) ρD (Water migration)		1.0		2.5		3.0	
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium		
1.5	19	/	27	/	25	/	23	/	19	/		
2.5	25	19	36	27	33	25	30	21	25	17		
4	33	26	47	35	43	32	39	28	33	23		
6	41	34	58	46	53	41	48	36	41	29		
10	57	44	78	58	71	52	65	46	55	38		
16	76	59	100	76	92	68	84	60	72	49		
25	98	76	130	98	115	87	105	77	93	64		
35	115	90	155	115	140	105	125	93	110	77		
50	145	110	185	140	165	125	150	110	135	93		
70	180	140	225	170	200	150	185	135	165	115		
95	225	175	270	205	240	180	225	165	200	140		
120	260	200	310	235	275	205	255	190	230	160		
150	300	230	350	265	310	235	290	215	260	185		
185	345	270	395	300	350	265	325	245	295	210		
240	410	320	455	350	405	310	380	280	340	245		
300	475	370	515	395	455	350	430	320	385	280		
400	555	440	585	455	515	400	485	370	440	320		
500	640	510	660	520	580	455	550	420	495	365		
630	730	595	740	590	650	520	615	475	555	415		
工作温度 Work temperature					70℃							
环境温度 Environment temperature	40℃				25℃							

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移空气使土壤干枯时土壤的热阻系数。

Note: ρ w is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

表2 Table 2

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式：扁平形（相邻间距等于电缆外径） Laying way : flat (the adjacent spacing is equal to the outside diameter of wire)												
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)										
			ρw		ρD (水分迁移)		ρD (Water migration)		3.0		3.5		
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
1.5	24	/	29	/	28	/	28	/	28	/	28	/	
2.5	31	24	38	30	37	29	36	28	36	28	36	28	
4	41	32	49	39	47	37	47	37	47	47	47	37	
6	52	42	61	50	58	48	58	47	57	57	47	47	
10	72	55	83	64	78	60	77	59	76	76	59	59	
16	95	73	105	83	100	77	99	76	98	76	98	76	
25	120	96	135	105	125	99	125	98	125	97	125	97	
35	150	115	160	125	150	115	150	115	145	145	115	115	
50	180	140	195	150	175	135	175	135	175	175	135	135	
70	230	175	240	185	215	170	215	165	210	210	165	165	
95	280	215	285	220	260	200	255	200	255	255	195	195	
120	325	250	325	250	290	230	290	225	290	225	225	225	
150	375	290	365	285	330	255	325	255	325	325	250	250	
185	430	335	415	320	375	290	370	285	360	360	285	285	
240	510	395	480	375	435	340	430	335	425	425	330	330	
300	585	455	545	425	495	385	485	385	480	480	375	375	
400	690	540	625	490	565	440	555	435	550	550	430	430	
500	800	630	710	560	640	505	630	500	625	625	495	495	
630	920	740	810	645	730	580	715	570	710	710	565	565	
工作温度 Work temperature	70°C												
环境温度 Environment temperature	40°C		25°C										

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ;

ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (2)二芯 VV、VLV、VV22、VLV22 0.6/1kV型连续负载流量(A)

The ampacity in continuous load of the two cores VV、VLV、VV22、VLV22 0.6/1kV cable (A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移)		ρD (Water migration)		3.0		3.5	
			1.0		2.5		3.0		3.5		3.5	
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium
1.5	17	/	26	/	*	*	*	*	*	*	*	*
2.5	23	18	34	26	*	*	*	*	*	*	*	*
4	31	24	44	35	*	*	*	*	*	*	*	*
6	38	32	56	45	*	*	*	*	*	*	*	*
10	53	42	75	59	*	*	*	*	*	*	*	*
16	71	55	100	77	100	75	95	76	95	95	76	76
25	90	70	125	100	120	95	120	95	120	95	120	95

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移)		ρD (Water migration)					
			1.0		2.5		3.0		3.5			
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium		
35	110	86	155	120	150	115	150	115	150	115		
50	135	105	185	145	180	135	175	135	175	135		
70	165	130	230	175	215	165	215	165	210	165		
95	210	165	275	210	260	205	255	200	255	200		
120	245	190	310	245	295	230	295	225	290	225		
150	280	215	350	275	330	255	330	250	325	250		
185	320	250	395	310	375	295	370	290	365	285		
工作温度 Work temperature	70℃											
环境温度 Environment temperature	40℃		25℃									

注: ρ w 是没发生水份迁移时土壤的热阻系数; ρ D 是水份迁移使土壤干枯时土壤的热阻系数;

\* 表示电缆表面温度≤50℃, 不发生水份迁移。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.  
\* means that the water migration won't occur when the surface temperature of cable ≤50℃

### (3)三芯VV、 VLV、 VV22、 VLV22、 W32、 VLV32 0.6/1kV型的连续负荷载流量(A)

The ampacity in continuous load of the three cores VV、 VLV、 VV22、 VLV22、 W32、 VLV32 0.6/1kV cable (A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移)		ρD (Water migration)					
			1.0		2.5		3.0		3.5			
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium		
1.5	15	/	22	/	*	*	*	*	*	*		
2.5	19	15	29	23	*	*	*	*	*	*		
4	26	20	38	30	*	*	*	*	*	*		
6	32	26	47	39	*	*	*	*	*	*		
10	46	35	65	50	64	49	63	49	63	49		
16	60	47	84	65	82	64	82	64	81	63		
25	77	60	110	84	105	81	105	80	105	80		
35	95	74	130	100	120	95	120	95	120	95		
50	115	90	155	120	160	115	145	115	145	115		
70	145	115	195	150	180	140	185	140	185	140		
95	185	140	230	185	215	165	215	165	210	165		
120	210	165	260	205	250	190	245	190	245	190		
150	245	190	300	230	275	215	275	215	270	210		
185	280	215	335	260	310	245	310	245	305	240		
240	335	260	390	300	360	285	360	285	355	280		
300	375	295	435	340	405	315	400	315	395	315		
工作温度 Work temperature	70℃											
环境温度 Environment temperature	40℃		25℃									

注: ρ w 是没发生水份迁移时土壤的热阻系数; ρ D 是水份迁移使土壤干枯时土壤的热阻系数;

\* 表示电缆表面温度≤50℃, 不发生水份迁移。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.  
\* means that the water migration won't occur when the surface temperature of cable ≤50℃

## (4) 单芯YJV、YJLV 0.6/1kV型的连续负载流量(A)

The ampacity in continuous load of the single core YJV、YJLV 0.6/1kV cable (A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 三角形(相互接触) Laying way : triangle (contact with each other)										
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)								
			ρw		ρD (水分迁移)		ρD (Water migration)				
			1.0		2.5		3.0		3.5		
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
1.5	26	/	33	/	28	/	25	/	21	/	
2.5	34	26	43	32	36	27	32	23	27	18	
4	44	35	56	43	47	35	42	30	35	24	
6	56	45	70	54	58	45	52	39	43	31	
10	77	59	94	69	77	57	69	49	58	40	
16	100	78	120	90	100	74	89	64	76	52	
25	130	100	155	115	125	95	115	83	98	68	
35	160	125	185	135	150	110	135	99	115	82	
50	195	150	220	165	180	135	160	115	140	98	
70	245	190	270	200	220	165	200	145	175	120	
95	300	230	320	240	260	195	240	175	210	145	
120	350	270	365	275	300	225	275	200	240	170	
150	400	310	410	310	335	255	310	225	275	195	
185	465	360	465	355	380	285	350	260	310	220	
240	550	430	540	410	440	335	405	300	360	260	
300	635	495	610	465	495	375	460	340	410	295	
400	745	590	695	535	560	435	520	395	465	340	
工作温度 Work temperature	90℃										
环境温度 Environment temperature	40℃		25℃								

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (5) 单芯YJV、YJLV、YJY、YJLY 0.6/1kV型的连续负载流量(A)

The ampacity in continuous load of the single core YJV、YJLV、YJY、YJLY 0.6/1kV cable (A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 扁平形(相邻间距等于电缆外径) Laying way : flat (the adjacent spacing is equal to the outside diameter of wire)									
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)							
			ρw		ρD (水分迁移)		ρD (Water migration)			
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium
1.5	32	/	45	/	44	/	44	/	44	/
2.5	42	33	59	46	57	45	57	44	57	44
4	56	44	77	61	74	58	73	58	73	57
6	70	57	97	79	92	75	91	74	91	74
10	97	75	130	100	120	95	120	94	120	93
16	125	99	170	135	160	120	155	120	155	120
25	165	125	220	170	200	155	200	155	195	150
35	200	155	265	205	240	185	240	185	235	180

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式：扁平形（相邻间距等于电缆外径） Laying way : flat (the adjacent spacing is equal to the outside diameter of wire)											
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移) ρD (Water migration)		1.0		2.5		3.0	
	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum		
50	245	190	320	245	285	220	280	220	275	215		
70	305	240	395	305	350	270	345	265	340	265		
95	375	290	475	370	420	325	410	320	405	315		
120	435	340	545	420	480	370	470	365	460	355		
150	500	390	610	475	535	415	525	405	515	400		
185	580	450	695	540	605	470	595	460	585	455		
240	685	535	810	630	705	545	690	535	675	525		
300	795	615	910	710	795	620	780	605	765	595		
400	930	730	1050	820	910	710	890	695	870	685		
500	1080	850	1190	940	1030	815	1010	795	990	780		
630	1250	1000	1350	1080	1170	930	1140	910	1120	895		
工作温度 Work temperature	90℃											
环境温度 Environment temperature	40℃		25℃									

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

#### (6)三芯YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32 0.6/1kV型的连续负荷流量(A)

The ampacity in continuous load of the three cores YJV、YJLV、YJV22、YJLV22、YJV32、YJLV 32 0.6/1kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移) ρD (Water migration)		1.0		2.5		3.0	
	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum
	1.5	20	/	27	/	25	/	25	/	24	/	
2.5	26	20	35	27	32	25	32	25	32	24		
4	34	27	45	36	41	32	41	32	41	32		
6	43	35	57	46	52	42	51	41	51	41		
10	60	47	77	59	69	53	68	52	68	52		
16	83	64	105	80	90	70	89	68	87	68		
25	105	82	125	100	115	89	115	87	110	86		
35	125	100	155	120	135	105	135	105	130	100		
50	160	125	185	145	165	125	160	125	155	125		
70	200	155	225	175	200	155	195	150	190	150		
95	245	200	270	210	235	185	230	180	225	175		
120	285	220	310	240	270	210	260	205	255	200		
150	325	250	345	270	300	235	295	230	290	225		
185	375	295	390	305	345	265	335	260	330	255		
240	440	345	450	355	390	305	385	300	380	300		
300	505	395	515	400	440	345	435	340	425	335		
工作温度 Work temperature	90℃											
环境温度 Environment temperature	40℃		25℃									

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (7)单芯 YJV、YJLV 3.6/6-12/20kV连续负载流量(A)

The ampacity in continuous load of the single core YJV、YJLV 3.6/6-12/20kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 三角形 ( 相互接触 ) Laying way: triangle (contact with each other)										
	空气中 In the air		土壤 ( K.m/W )		Thermal resistivity of soil ( Km/W )						
			ρw		ρD ( 水分迁移 )		ρD ( Water migration )				
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
25	140	110	150	115	130	99	120	89	105	75	
35	170	135	180	135	155	115	140	105	125	90	
50	205	160	215	160	180	135	170	125	150	105	
70	260	200	265	200	220	165	205	150	180	130	
95	315	245	315	240	265	200	245	180	215	155	
120	360	280	360	270	300	225	275	205	245	175	
150	410	320	405	305	335	255	310	230	275	195	
185	470	365	455	345	380	285	350	260	310	220	
240	555	435	530	400	440	330	405	300	360	255	
300	640	500	595	455	495	375	455	340	405	290	
400	745	585	680	520	560	430	515	385	460	330	
500	855	680	765	595	630	490	585	440	520	375	
工作温度 Work temperature	90℃										
环境温度 Environment temperature	40℃		25℃								

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (8)单芯 YJV、YJLV 3.6/6-12/20kV连续负载流量(A)

The ampacity in continuous load of the single core YJV、YJLV 3.6/6-12/20kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 扁平形 ( 相邻间距等于电缆外径 ) Laying way: flat (the adjacent spacing is equal to the outside diameter of wire)										
	空气中 In the air		土壤 ( K.m/W )		Thermal resistivity of soil ( Km/W )						
			ρw		ρD ( 水分迁移 )		ρD ( Water migration )				
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
25	165	130	160	120	140	110	135	105	135	105	
35	205	155	190	145	165	130	160	125	160	125	
50	245	190	225	175	195	150	190	150	190	145	
70	305	235	275	215	240	185	235	180	230	180	
95	370	290	330	555	285	220	280	215	275	210	
120	430	335	375	290	325	250	315	245	310	240	
150	490	380	425	330	365	280	355	275	345	270	
185	560	435	480	370	410	320	400	310	390	305	
240	665	515	555	435	475	370	460	360	455	350	
300	765	595	630	490	535	415	520	405	510	400	
400	890	695	725	565	610	480	595	465	585	455	
500	1030	810	825	650	695	550	680	535	665	525	
工作温度 Work temperature	90℃										
环境温度 Environment temperature	40℃		25℃								

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (9)三芯 YJV、YJLV、YJV22、YJLV22 3.6/6-12/20kV 型连续负载流量(A)

The ampacity in continuous load of the three cores YJV、YJLV、YJV22、YJLV22 3.6/6-12/20kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移) ρD (Water migration)		1.0		2.5		3.0	
	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum
25	120	90	125	100	120	90	120	90	115	90		
35	140	110	155	120	140	110	140	110	135	105		
50	165	130	180	140	165	125	165	125	165	125		
70	210	165	220	170	205	160	200	155	195	155		
95	255	200	265	210	240	185	235	185	235	180		
120	290	225	300	235	270	210	265	210	260	205		
150	330	255	340	260	300	235	300	235	295	230		
185	375	295	380	300	345	265	335	260	330	255		
240	435	345	435	345	390	305	385	305	380	300		
300	495	390	485	390	435	345	430	340	420	335		
工作温度 Work temperature	90°C											
环境温度 Environment temperature	40°C		25°C									

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (10)单芯YJV、YJLV 18/20-26/35kV 型连续负载流量(A)

The ampacity in continuous load of the single core YJV、YJLV 18/20-26/35kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 三角形 (相互接触) Laying way : triangle (contact with each other)											
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)									
			ρw		ρD (水分迁移) ρD (Water migration)		1.0		2.5		3.0	
铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	铜 copper	铝 aluminum	
35	174	130	170	125	155	105	140	100	135	85		
50	220	170	215	165	190	140	175	130	160	110		
70	270	210	265	200	230	175	215	160	190	135		
95	330	255	315	240	275	205	255	190	230	160		
120	375	290	360	270	310	235	290	215	260	185		
150	425	330	400	305	345	260	320	240	290	205		
185	485	380	455	345	390	295	360	270	325	230		
240	560	435	525	400	450	340	420	310	375	265		
300	650	510	595	455	505	385	470	350	420	300		
400	760	595	680	525	580	440	535	400	480	345		
500	875	690	775	600	655	505	605	455	540	390		
工作温度 Work temperature	90°C											
环境温度 Environment temperature	40°C		25°C									

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (11)单芯 YJV、YJLV 18/20~26/35kV 型连续负荷载流量(A)

The ampacity in continuous load of the single core YJV、YJLV 18/20~26/35kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	敷设方式: 扁平形(相邻间距等于电缆外径) Laying way : flat (the adjacent spacing is equal to the outside diameter of wire)										
	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)								
			ρw		ρD (水分迁移)		ρD (Water migration)				
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
35	195	145	180	135	160	120	160	120	155	115	
50	245	190	225	175	200	155	200	155	195	150	
70	305	235	275	215	245	190	240	185	240	185	
95	370	285	330	255	295	225	290	225	285	220	
120	425	330	375	290	335	260	325	255	320	250	
150	485	375	420	325	375	290	365	285	360	280	
185	555	430	475	370	420	325	410	320	405	315	
240	650	505	555	430	485	380	485	370	470	365	
300	745	580	630	490	550	425	535	415	530	410	
400	870	680	720	565	630	490	615	480	605	470	
500	1000	790	825	645	715	560	700	550	685	540	
工作温度 Work temperature	90°C										
环境温度 Environment temperature	40°C		25°C								

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (12)三芯YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32 18/20~26/35kV型连续负荷载流量 (A)

The ampacity in continuous load of the three cores YJV、YJLV、YJV22、YJLV22、YJV32、YJLV32 18/20~26/35kV cable(A)

标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	空气中 In the air		土壤 (K.m/W) Thermal resistivity of soil (Km/W)								
			ρw		ρD (水分迁移)		ρD (Water migration)				
	1.0		2.5		3.0		3.5				
	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	铜 copper	铝 aluminium	
35	139	101	141	101	138	95	134	94	141	90	
50	176	136	179	137	172	126	168	125	171	118	
70	216	168	220	166	208	158	207	154	203	145	
95	264	204	262	200	248	185	245	183	246	171	
120	299	232	299	200	280	212	279	207	278	198	
150	339	264	333	254	311	235	308	231	311	220	
185	387	303	378	287	352	266	346	260	348	246	
240	447	347	437	333	406	307	404	298	402	284	
300	519	407	495	378	456	348	452	336	450	321	
400	607	475	565	437	524	397	514	384	514	369	
500	699	551	644	499	591	456	582	437	578	418	
工作温度 Work temperature	90°C										
环境温度 Environment temperature	40°C		25°C								

注: ρ w是没发生水份迁移时土壤的热阻系数; ρ D是水份迁移使土壤干枯时土壤的热阻系数。

Note: ρ W is the thermal resistivity of soil without water migration ; ρ D is the thermal resistivity of soil when the air makes the soil dry because of the water migration.

## (13) 低压单根架空绝缘电缆在空气温度为30OC时的长期允许载流量(A)

The long-term allowable ampacity of the single low voltage aerial insulated cable when the temperature of air is 30°C (A)

导体标称截面mm <sup>2</sup> Nominal cross section (mm <sup>2</sup> )	铜导体 Copper conductor		铝导体 Aluminium conductor		铝合金导体 Aluminum alloy conductor	
	PVC	PE	PVC	PE	PVC	PE
16	102	104	79	81	73	75
25	138	142	107	111	99	102
35	170	175	132	136	122	125
50	209	216	162	168	149	154
70	266	275	207	214	191	198
95	332	344	257	267	238	247
120	384	400	299	311	276	287
150	442	459	342	356	320	329
185	515	536	399	416	369	384
240	615	641	476	497	440	459

注：低压集束架空绝缘电缆的长期允许载流量为同截面同材料单根架空绝缘电缆长期允许载流量的0.7倍。

Note :The long-term allowable ampacity of the low voltage aerial bunched insulated cable is 0.7 time of the long-term allowable ampacity of the single aerial insulated cable with the same corss section et the same material

## (14) 10kV 交联聚乙烯架空绝缘电缆（绝缘厚度3.4mm）在空气温度为30℃时的长期允许载流量 ( A)

The long-term allowable ampacity of the 10 kV cross-linked polyethylene insulation aerial cable(thickness of insulation 3.4 mm) when the temperature of air is 30°C ( A)

导体标称截面mm <sup>2</sup> Nominal crosssection of conductor mm <sup>2</sup>	铜导体 Copper conductor	铝导体 Aluminium conductor	铝合金导体 Aluminum alloy conductor	导体标称截面mm <sup>2</sup> Nominal crosssection of conductor mm <sup>2</sup>	铜导体 Copper conductor	铝导体 Aluminium conductor	铝合金导体 Aluminum alloy conductor
25	174	134	124	120	454	352	326
35	211	164	153	150	520	403	374
50	255	198	183	185	600	465	432
70	320	249	225	240	712	553	513
95	393	304	282	300	824	639	608

注：1)10kV交联聚乙烯薄绝缘架空电缆（绝缘厚度2.5mm）在空气温度为30℃时的长期允许载流量参照绝缘厚度3.4mm，10kV交联聚乙烯架空绝缘电缆长期允许载流量。

2)10kV集束架空绝缘电缆的长期允许载流量为同截面同材料单根架空绝缘电缆长期允许载流量的0.7倍。

Note :1)The long-term allowable ampacity of the 10 kV cross-linked polyethylene thin insulation aerial cable(thickness of insulation 2.5 mm) when the temperature of air is 30°C, refer to the long-term allowable ampacity of the 10 kV cross-linked polyethylene insulation aerial cable(thickness of insulation 3.4mm)

2) The long-term allowable ampacity of the 10 kV aerial bunched insulated cable is 0.7 time of the long-term allowable ampacity of the single aerial insulated cable with the same corss section et the same material

## 附录二常用线规号码与线径对照表

Appendix II Common comparison table of the wire gauge number et the wire diameter

线规 Wire gauge	SWG		BWG		BG		AWG	
	英寸 inch	毫米 milimeter	英寸 inch	毫米 milimeter	英寸 inch	毫米 milimeter	英寸 inch	毫米 milimeter
7/0	0. 500	12. 700	/	/	0. 6666	16. 932	/	/
6/0	0. 464	11. 786	/	/	0. 6250	15. 875	0. 5800	14. 732
5/0	0. 432	10. 973	0. 500	12. 700	0. 5883	14. 943	0. 5165	13. 119
4/0	0. 400	10. 160	0. 454	11. 532	0. 5416	13. 757	0. 4600	11. 684
3/0	0. 372	9. 449	0. 425	10. 795	0. 5000	12. 700	0. 4096	10. 404
2/0	0. 348	8. 839	0. 330	9. 652	0. 4152	11. 308	0. 3648	9. 266
0	0. 324	8. 230	0. 340	8. 639	0. 3954	10. 069	0. 3249	8. 252
1	0. 300	7. 620	0. 300	7. 620	0. 3532	8. 971	0. 2893	7. 348
2	0. 276	7. 010	0. 284	7. 214	0. 3147	7. 993	0. 2576	6. 544
3	0. 252	6. 401	0. 259	6. 579	0. 2804	7. 122	0. 2294	5. 827
4	0. 232	5. 893	0. 238	6. 045	0. 2500	6. 350	0. 2043	5. 189
5	0. 212	5. 385	0. 220	5. 588	0. 2225	5. 652	0. 1819	4. 621
6	0. 192	4. 877	0. 203	5. 156	0. 1981	5. 032	0. 1620	4. 115
7	0. 176	4. 470	0. 180	4. 572	0. 1764	4. 481	0. 1443	3. 665
8	0. 160	4. 046	0. 165	4. 191	0. 1570	3. 988	0. 1285	3. 264
9	0. 144	3. 658	0. 148	3. 759	0. 1398	3. 551	0. 1144	2. 906
10	0. 128	3. 251	0. 134	3. 404	0. 1250	3. 175	0. 1019	2. 588
11	0. 116	2. 946	0. 120	3. 048	0. 1313	2. 827	0. 0907	2. 305
12	0. 104	2. 642	0. 109	2. 769	0. 0991	2. 517	0. 0808	2. 053
13	0. 092	2. 337	0. 095	2. 413	0. 0882	2. 240	0. 0720	1. 828
14	0. 080	2. 032	0. 083	2. 108	0. 0785	1. 994	0. 0648	1. 628
15	0. 072	1. 829	0. 072	1. 829	0. 0699	1. 775	0. 0571	1. 450
16	0. 064	1. 626	0. 065	1. 651	0. 0625	1. 588	0. 0508	1. 291
17	0. 056	1. 422	0. 058	1. 473	0. 0556	1. 412	0. 0453	1. 150
18	0. 048	1. 219	0. 049	1. 245	0. 0495	1. 257	0. 0403	1. 024
19	0. 040	1. 016	0. 042	1. 067	0. 0440	1. 118	0. 0359	0. 912
20	0. 036	0. 914	0. 035	0. 839	0. 0392	0. 996	0. 0320	0. 812
21	0. 032	0. 813	0. 032	0. 813	0. 0349	0. 887	0. 0285	0. 723
22	0. 0280	0. 711	0. 028	0. 711	0. 03125	0. 794	0. 02535	0. 644
23	0. 0240	0. 610	0. 025	0. 635	0. 02782	0. 707	0. 02010	0. 573
24	0. 0220	0. 559	0. 022	0. 559	0. 02476	0. 629	0. 01790	0. 511
25	0. 0200	0. 508	0. 020	0. 508	0. 02204	0. 560	0. 01594	0. 455
26	0. 0180	0. 457	0. 018	0. 457	0. 01961	0. 498	0. 01420	0. 405
27	0. 0164	0. 417	0. 016	0. 406	0. 1745	0. 443	0. 01420	0. 361
28	0. 0149	0. 376	0. 014	0. 356	0. 01562	0. 397	0. 01264	0. 321
29	0. 0136	0. 345	0. 013	0. 330	0. 01390	0. 353	0. 01126	0. 286
30	0. 0124	0. 315	0. 012	0. 305	0. 01230	0. 312	0. 01003	0. 255
31	0. 0116	0. 295	0. 010	0. 254	0. 01100	0. 270	0. 00893	0. 227
32	0. 0109	0. 274	0. 009	0. 229	0. 00980	0. 249	0. 00795	0. 202

线规 Wire gauge 号码 Number	SWG		BWG		BG		AWG	
	英寸 inch	毫米 millimeter	英寸 inch	毫米 millimeter	英寸 inch	毫米 millimeter	英寸 inch	毫米 millimeter
33	0. 0100	0. 254	0. 008	0. 203	0. 00870	0. 221	0. 00708	0. 180
34	0. 0092	0. 234	0. 007	0. 178	0. 00770	0. 196	0. 00630	0. 160
35	0. 0084	0. 213	0. 005	0. 127	0. 00690	0. 175	0. 00561	0. 143
36	0. 0076	0. 193	0. 004	0. 102	0. 00610	0. 155	0. 00500	0. 127
37	0. 0068	0. 173			0. 00540	0. 137	0. 00445	0. 113
38	0. 0060	0. 152			0. 00480	0. 122	0. 00396	0. 101
39	0. 0052	0. 132			0. 00430	0. 109	0. 00353	0. 090
40	0. 0048	0. 122			0. 00386	0. 098	0. 00314	0. 080
41	0. 0044	0. 112			0. 00343	0. 087	0. 00280	0. 071
42	0. 0040	0. 102			0. 00306	0. 078	0. 00249	0. 063
43	0. 0036	0. 091			0. 00272	0. 069	0. 00222	0. 056
44	0. 0032	0. 081			0. 00242	0. 061	0. 00198	0. 050
45	0. 0028	0. 071			0. 00215	0. 055	0. 00176	0. 048
46	0. 0024	0. 061			0. 00192	0. 049	0. 00157	0. 046
47	0. 0020	0. 051			0. 00170	0. 043	0. 00140	0. 035
48	0. 0016	0. 041			0. 00152	0. 039	0. 00124	0. 032
49	0. 0012	0. 030			0. 00135	0. 034	0. 00111	0. 028
50	0. 0010	0. 025			0. 00120	0. 030	0. 00099	0.

注: A.W.G美国线规 ( 英文是American wire gauge) , 又被称为B.S线规 ( Brown (布朗) & Sharpe (夏普)线规)。

B.W.G伯明翰线规

S.W.G 英国线规

B.G 伯明翰线规

Note : A.W.G wire gauge of USA (American wire gauge), also called B.S wire gauge (Brown & Sharpe wire gauge)

B.W.G Birmingham wire gauge

S.W.G wire gauge of UK

B.G Birmingham wire gauge

## 附录三常用计量单位换算

### Appendix III Common conversion table

#### 公制重量单位表 Metric weight unit table

单位名称 Unit designation	旧名称 Old designation	代号 Code	对主单位的比 Divide main unit
毫克 miligram	公丝 miligram	mg	0.000001公斤(kg)
厘克 centigram	公毫 centigram	cg	0.00001公斤 (kg)
分克 decigram	公厘 decigram	dg	0.0001公斤 (kg)
克 gram	公分 gram	g	0.001公斤 (kg)
十克 decagram	公钱 decagram	dag	0.01公斤 (kg)
百克 hectogram	公两 hectogram	hg	0.1公斤 (kg)
公斤 kilogram	公斤, 干克 kilogram	kg	主单位 Main unit
公担 hundredweight	公担 hundredweight	q	100公斤 (kg)
吨 ton	公吨 Metric ton	t	1000公斤 (kg)

#### 常用重量单位换算表 Common weight unit conversion table

	吨 Ton	公斤 Kg	市担 dan (a unit of weight, =50kilograms)	市斤 jin (a unit of weight, =0.5 kilogram)	英吨 British tons	美吨 US tons	磅 Pounds
吨 Ton	1	1000	20	2000	0.98421	1.1023	2204.6
公斤 Kg	0.001	1	0.02	2	0.000984	0.001102	2.2046
市担 dan (a unit of weight, =50kilograms)	0.05	50	1	100	0.04921	0.0551	110.231
市斤 jin (a unit of weight, =0.5 kilogram)	0.0005	0.5	0.01	1	0.000492	0.000551	1.1023
英吨 British tons	1.01605	1016.05	20.3209	2032.09	1	1.1200	2240
美吨 US tons	0.90719	907.19	18.1437	1814.37	0.8929	1	2000
磅 Pounds	0.000454	0.4536	0.009072	0.9072	0.000446	0.0005	1

#### 压力单位换算表 Pressure unit conversion table

	公斤/厘米 <sup>2</sup> Kg/cm <sup>2</sup>	大气压 Atmospheric pressure	水银柱高度(毫米) Mercury column height(mm)	水柱高度(米) Water column height(m)	毫巴 Millibar	磅/寸 <sup>2</sup> Pounds/inch <sup>2</sup>	英寸水柱 Water column inch
公斤/厘米 <sup>2</sup> Kg/cm <sup>2</sup>	1	0.9678	735.56	10.00	981.00	14.223	395.00
大气压 Atmospheric pressure	1.0333	1	760.00	10.3333	1013.25	14.696	407.5
水银柱高度(毫米) Mercury column height(mm)	0.00136	0.00131	1	0.0136	1.3332	0.0193	0.535
水柱高度(米) Water column height(m)	0.10	0.0968	73.556	1	98.10	1.4223	39.40
毫巴 Millibar	0.00102	0.000987	0.76863	0.0102	1	0.01451	0.402
磅/寸 <sup>2</sup> Pounds/inch <sup>2</sup>	0.0703	0.0680	51.715	0.703	68.95	1	27.72
英寸水柱 Water column inch	0.00254	0.00246	1.87	0.0254	2.49	0.0361	1

## 常用长度单位换算表 Common length unit conversion table

	米 m	厘米 cm	毫米 mm	市尺 chi (a unit of length, =13 metre)	英尺 Foot	英寸 Inch
米 m	1	100	1000	3	3.28084	39.3701
厘米 cm	0.01	1	10	0.03	0.03281	0.3937
毫米 mm	0.001	0.1	1	0.003	0.003281	0.03937
市尺 chi (a unit of length, =13 metre)	0.33333	33.333	333.33	1	1.0936	13.1234
英尺 Foot	0.3048	30.48	304.8	0.9144	1	12
英寸 Inch	0.0254	2.54	25.4	0.0762	0.08333	1

## 英寸与毫米对照表 Inche and milimeter comparison table

寸 Inch	毫米 millimeter										
1/16	1.588	9/16	14.29	17/16	26.99	25/16	39.69	17/8	53.98	25/8	79.38
1/8	3.175	5/8	15.88	9/8	28.58	13/8	41.28	9/4	57.15	13/4	82.55
3/16	4.763	11/16	17.46	19/16	30.16	27/16	42.86	19/8	60.33	27/8	85.73
1/4	6.350	3/4	19.05	5/4	31.75	7/4	44.45	5/2	63.5	7/2	88.9
5/16	7.938	13/16	20.64	21/16	33.34	29/16	46.04	21/8	66.68	29/8	92.08
3/8	9.525	7/8	22.23	11/8	34.93	15/8	47.63	11/4	69.85	15/4	95.25
7/16	11.113	15/16	23.81	23/16	36.51	31/16	49.21	23/8	73.03	31/8	98.43
1/2	12.700	1	25.4	3/2	38.10	2	50.80	3	76.2	4	101.6

## 常用容量单位换算表 Common capacity unit conversion table

	升 (市升) litre	立方英寸 Inch <sup>3</sup>	英加仑 imperial gallon	美加仑 (液量) US gallon (liquid)	美加仑 (干量) US gallon (dry)
升 (市升) litre	1	61.0237	0.2200	0.2642	0.2270
立方英寸 Inch	0.0164	1	0.0036	0.0043	0.0037
英加仑 imperial gallon	4.5460	277.274	1	1.2009	1.0321
美加仑 (液量) US gallon (liquid)	3.7853	231	0.8327	1	0.8594
美加仑 (干量) US gallon (dry)	4.4048	268.803	0.9689	101636	1

## 附录四产品使用说明

### Appendix IV Operation Instruction

尊敬的客户，感谢您使用本公司的产品，为保障产品安全运行，请您在运输、安装和使用时注意如下事项：

Dear customers, Thank you for using our products, please bear in mind the following precautions on transportation, installation and use of our products in order to ensure the safety of products :

#### 导线类 Conductor

1. 使用前请仔细核对产品合格证上产品的型号规格、长度、重量和盘号等信息。
2. 装卸时，请小心轻放，严禁从高处扔下装有导线的电缆盘；避免机械损伤导线，吊装包装件时须逐盘进行，严禁几盘同时吊装。
3. 运输时，电缆盘必须放稳，并用合适方法固定，防止互撞或翻转。
4. 放线时，请用放线带张力匀速放线，切勿猛拉猛拽，以防止放线时的张力急剧变化使导线勒入下层，造成压线；同时，严禁导线在地面拖动，或与其他物体摩擦，以免擦伤导线。
5. 施工时，注意保护好导线，以防外力造成机械损伤。
6. 使用前如对产品的长度或重量有疑义，请务必提供产品未经使用的物证。
  1. Before using, please carefully check the type, specification, length, weight and coil No., etc. on the product certificate.
  2. When loading/unloading, please handle carefully. It's forbidden to throw the cable coil equipped with conductor wires from high place; for avoiding mechanical damage to the conductor, lift the package one by one and it's strictly forbidden to lift several packages at the same time.
  3. When transporting, keep cable coils stable and fix them by suitable means to prevent the collision or rollover.
  4. During pay-off of the wires, the payoff stand shall be used and operated at a regular tensioning force. It's prohibited to pull wires violently in order to prevent conductor being pressed into the lower layer by varied force. Meanwhile, it is prohibited to drag conductor against ground or have them rub with other articles, to avoid damage to conductor.
  5. During construction, cables shall be well protected to keep from damage caused by external or mechanical force.
  6. If you have any doubt on the length or weight of our products before use, please provide substantial evidence to prove that the product

#### 电缆类 Cable

1. 使用前请仔细核对产品合格证上产品的型号规格、长度和盘号等信息。
2. 装卸时，请小心轻放，严禁从高处扔下装有导线的电缆盘；避免机械损伤导线，吊装包装件时须逐盘进行，严禁几盘同时吊装。
3. 运输时，电缆盘必须放稳，并用合适方法固定，防止互撞或翻转。
4. 在进行验收电气试验时，要对端头进行必要的处理，有外屏蔽层要将外屏蔽层切削足够的长度，端头间要保持足够的距离，以防止晕放电，导致试验失败。
5. 放线时，请用放线带张力匀速放线，切勿猛拉猛拽。
6. 施工时，注意保护好电缆，以防外力造成机械损伤。
7. 电缆应注意防潮，避免露天存放；未使用完的电缆即时密封端头，以防止水分侵入电缆内部。
8. 使用前如对产品的长度有疑义，请务必提供产品未经使用的物证。
9. 常用电缆使用特性：
  1. Before use, please carefully check the type, specification, length, weight and coil No., etc. on the product certificate.
  2. When loading/unloading, please handle carefully. It's forbidden to throw the cable coil equipped with conductor wires from high place; for avoiding mechanical damage to the conductor, lift the package one by one and it's strictly forbidden to lift several packages at the same time.
  3. When transporting, keep cable coils stable and fix them by suitable means to prevent the collision or rollover.
  4. When conducting electric acceptance test, cable ends must be treated at first. For cable with outer shielding layer, the shielding layer shall be cut off with enough length. Distance between ends must be enough to prevent corona discharge that may result in failure of test.
  5. During pay-off of the wires, the payoff stand shall be used and operated at a regular tensioning force. It's prohibited to pull wires violently.
  6. During construction, cables shall be well protected to keep from damage caused by external or mechanical force.
  7. Cables shall be kept from damp and shall not be stored in open air. Unused cables shall have ends sealed to prevent water entering into cables.
  8. If you have any doubts about the length or weight of our products before use, please provide substantial evidence to prove that the

电缆 Cable	项目 Item	安装时的最小弯曲半径 Min.bending radius for installation		最低敷设温度 °C Lowest laying temperature	工作时最高额定温度 °C Highest rated working temperature
		单芯 One core	多芯 Multi cores		
聚氯乙烯绝缘电力电缆 PVC insulation power cable	无铠装 Non-armored	20D	15D	0	70
	有铠装 armored	15D	12D		
交联聚乙烯绝缘电力电缆 XLPE insulation power cable	无铠装 Non-armored	20D	15D	0	90
	有铠装 armored	15D	12D		
聚氯乙烯绝缘控制电缆 PVC insulation control cable	无铠装 Non-armored	6D		0	70
	有铠装 armored	12D			
交联聚乙烯绝缘控制电缆 XLPE insulation control cable	无铠装 Non-armored	8D		0	90
	有铠装 armored	12D			
1kV交联聚乙烯架空电缆 1kV XLPE aerial cable		6D		-20	90
10kV交联聚乙烯架空电缆 10kV XLPE aerial cable		12D		-20	90

注：D为电缆外径。

Notes: D refers to outer diameter of cable

### 电缆装卸与翻盘注意事项

Precautions for loading/unloading of cables and turnning over the coil

