

额定电压 1kV及以下架空绝缘电缆（GB/T12527-2008）

Aerial Bundle Cables Of Rated Voltage 1kV and Below



用途 Application

- 1.1 本产品适用于交流额定电压U₀/U为0.6/1kV及以下架空电力线路用铜芯、铝芯或铝合金芯耐侯型聚氯乙烯（简称PVC）、聚乙烯（简称PE）和交联聚乙烯（简称XLPE）绝缘架空电缆。
- 1.1 This is a kind of climate bearable PVC, PE and XLPE insulated aerial cables of copper core, aluminum core or aluminum alloy core, suitable for overhead power line of AC rated voltage U₀/U 0.6/1kV and below.

使用条件 Conditions of usage

- 2.1 额定电压U为1kV及以下。
- 2.2 电缆导体的长期允许工作温度：聚氯乙烯、聚乙烯绝缘应不超过70℃；交联聚乙烯绝缘应不超过90℃。
- 2.3 电缆的敷设温度应不低于-20℃。
- 2.4 电缆的允许弯曲半径：电缆外径（D）小于25mm者，应不小于4D；电缆外径（D）为25mm及以上者，应不小于6D。
- 2.1 Rated voltage U: 1kV.
- 2.2 Long-term permissible working temperature of cable conductor: PVC and PE insulated cables can't exceed 70℃,and XLPE insulated cable shall not exceed 90℃.
- 2.3 The layout temperature of cable shall not be lower than -20℃.
- 2.4 Permissible bending radius of cable: The cable whose O.D. Is shorten than 25mm, its radius shall not be less than 4D; the cable whose O.D. Is 25mm or more than, its radius shall not be less than 6D;

型号，名称(见表1) Model and name(see table 1)

表1Table1

型号 Model	名称 Name	主要用途 Main usage
JKV-0.6/1	额定电压0.6/1kV铜芯聚氯乙烯绝缘架空电缆 Copper-core PVC insulated aerial cable of rated voltage 0.6/1kV	架空固定敷设、引户线等 Overhead fixed layout and wire conducting, etc.
JKLV-0.6/1	额定电压0.6/1kV铝芯聚氯乙烯绝缘架空电缆 Aluminum-core PVC insulated aerial cable of rated voltage 0.6/1kV	
JKLHV-0.6/1	额定电压0.6/1kV铝合金芯聚氯乙烯绝缘架空电缆 Aluminum alloy core PVC insulated aerial cable of rated voltage 0.6/1kV	
JKY-0.6/1	额定电压0.6/1kV铜芯聚乙烯绝缘架空电缆 Copper-core PE insulated aerial cable of rated voltage 0.6/1kV	
JKLY-0.6/1	额定电压0.6/1kV铝芯聚乙烯绝缘架空电缆 Aluminum-core PE insulated aerial cable of rated voltage 0.6/1kV	
JKLHY-0.6/1	额定电压0.6/1kV铝合金芯聚乙烯绝缘架空电缆 Aluminum-core PE insulated aerial cable of rated voltage 0.6/1kV	
JKYJ-0.6/1	额定电压0.6/1kV铜芯交联聚乙烯绝缘架空电缆 Copper-core XLPE insulated aerial cable of rated voltage 0.6/1kV	
JKLYJ-0.6/1	额定电压0.6/1kV铝芯交联聚乙烯绝缘架空电缆 Aluminum-core XLPE insulated aerial cable of rated voltage 0.6/1kV	
JKLHYJ-0.6/1	额定电压0.6/1kV铝合金芯交联聚乙烯绝缘架空电缆 Aluminum-core XLPE insulated aerial cable of rated voltage 0.6/1kV	

结构尺寸、技术参数(见表2、表3) Structure size and technology property(see table 2 、table3)

铜芯架空绝缘电缆技术要求

表2Table2

导体标称 截面mm ² Nominal cross section area of conductor (mm ²)	导体中最少 单根线根数 Single wire Min. number of conductor	导体外径 (参考值) /mm Conductor O.D (reference value) /mm	绝缘标称 厚度/mm Nominal thickness of insulation (mm)	电缆平均外径 最大值/mm Cable Maixmum average outer diameter (mm)	20℃时最大 导体电阻/Ω/km The maximum resistance of conductor at 20℃(Ω/km)		额定工作 温度时最 小绝缘 电阻/MΩ·km		单芯 电缆 拉断力 /N
					硬铜 Hard copper	软铜 Soft copper	70℃	90℃	硬铜 Hard copper
10	6	3.8	1.0	6.5	1.906	1.83	0.0067	0.67	3471
16	6	4.8	1.2	8.0	1.198	1.15	0.0065	0.65	5486
25	6	6.0	1.2	9.4	0.749	0.727	0.0054	0.54	8465
35	6	7.0	1.4	11.0	0.540	0.524	0.0054	0.54	11731
50	6	8.4	1.4	12.3	0.399	0.387	0.0046	0.46	16502
70	12	10.0	1.4	14.1	0.276	0.268	0.0040	0.40	23461
95	15	11.6	1.6	16.5	0.199	0.193	0.0039	0.39	31759
120	18	13.0	1.6	18.1	0.158	0.153	0.0035	0.35	39911
150	18	14.6	1.8	20.2	0.128	0.124	0.0035	0.35	49505
185	30	16.2	2.0	22.5	0.1021	0.0991	0.0035	0.35	61846
240	34	18.4	2.2	25.6	0.0777	0.0754	0.0034	0.34	79823

铝芯、铝合金芯架空绝缘电缆技术要求

表3Table3

导体标称 截面mm ² Nominal cross section area of conductor (mm ²)	导体中最少 单根线根数 Single wire Min. number of conductor	导体外径 (参考值) /mm Conductor O.D (reference value) /mm	绝缘标称 厚度/mm Nominal thickness of insulation (mm)	单根线芯 标称 平均外径 最大 值 /mm	20℃时最大 导体电阻/Ω/km The maximum resistance of conductor at 20℃(Ω/km)		额定工作 温度时最 小绝缘 电阻/MΩ·km		单芯 电缆 拉断力 /N	
					铝芯 Aluminum core	铝合金 Aluminum alloy	70℃	90℃	铝芯 Aluminum core	铝合金芯 Aluminum alloy core
10	6	3.8	1.0	6.5	3.08	3.574	0.0067	0.67	1650	2514
16	6	4.8	1.2	8.0	1.91	2.217	0.0065	0.65	2517	4022
25	6	6.0	1.2	9.4	1.20	1.393	0.0054	0.54	3762	6284
35	6	7.0	1.4	11.0	0.868	1.007	0.0054	0.54	5177	8800
50	6	8.4	1.4	12.3	0.641	0.744	0.0046	0.46	7011	12569
70	12	10.0	1.4	14.1	0.443	0.514	0.0040	0.40	10354	17596
95	15	11.6	1.6	16.5	0.320	0.371	0.0039	0.39	13727	23880
120	15	13.0	1.6	18.1	0.253	0.294	0.0035	0.35	17339	30164
150	15	14.6	1.8	20.2	0.206	0.239	0.0035	0.35	21033	37706
185	30	16.2	2.0	22.5	0.164	0.190	0.0035	0.35	26732	46503
240	30	18.4	2.2	25.6	0.125	0.145	0.0034	0.34	34679	60329
300	30	20.8	2.2	27.2	0.100	0.116	0.0033	0.33	43349	75411
400	53	23.2	2.2	30.7	0.0778	0.0904	0.0032	0.32	55707	100548

交货要求 Delivery requirements

- 3.1 根据双方的协议以任意长度交货。
- 3.2 电缆应整齐卷绕在交货盘上，端头应密封良好，露出电缆盘外面的长度应满足测试要求，一只交货盘上只允许卷绕同一型号规格的电缆。
- 3.3 当双方无协议时，执行GB12527-90标准之规定。
- 3.1 The length of cables should be in accordance with mutual agreements.
- 3.2 Cables delivery should be coiled orderly. Cable tip should be closely. Wrapped and sealed. Exposed cable tip for AC testing should be long enough to meet the needs. The coiled cable must be in the same model and the same specification.
- 3.3 If there is no agreement, execute the stipulation of GB12527-90 standard.

10kV交联聚乙烯绝缘架空电缆 (GB/T 14049-2008)
10kV XLPE Insulation Aerial Bundle Cable(GB/T 14049-2008)



用途 Application

本标准适用于交流额定电压U(Um)为KV的架空电力线路用铜芯、铝芯、铝合金芯交联聚乙烯 (XLPE)和高密度聚乙烯 (HDPE)绝缘架空电缆。
This is a kind of climate bearable XLPE and HDPE insulated aerial cable of copper core、aluminum core or aluminum alloy core, suitable for overhead power line of rated AC voltage U(Um) is KV and below.

使用条件 Conditions of usage

- 1、使用特性
1.1 额定电压为10KV。
1.2 电缆敷设温度不低于-20℃。
1.3 短路时 (最长持续时间不超过5s)电缆的最高温度：
交联聚乙烯绝缘 250℃
高密度聚乙烯绝缘 150℃
1.4 电缆导体的最高长期允许工作温度：
a) 有承载结构电缆 由绝缘的最高长期允许工作温度决定。
交联聚乙烯绝缘 90℃
高密度聚乙烯绝缘 75℃
b) 无承载线结构电缆 (在考虑中)
1.5 电缆的允许弯曲半径应不小于电缆弯曲试验用圆柱体直径。
- 1、Operating characteristic
1.1、Rated voltage 10KV.
1.2、The layout temperature of cable shall not be lower than -20℃.
1.3、Max. temperature of cable when shorted-circuit (the longest time of short circuits no more than 5s) :
XLPE insulation 250℃
HDPE insulation 150℃
1.4、Permissible Max. temperature of cable conductor in long-term working:
a) Cable with bearing structure, depend on the permissible Max. temperature of insulation in long-term working.
XLPE insulation 90℃
HDPE insulation 75℃
b) Cable without bearing structure (under consideration)
1.5、permissible bending radius shall not be less than the cylinder diameter in flexure test.

型号规格(见表1) Model and specification(see table 1)

架空电缆的型号 Model of aerial bundle cable

表1Table1

型号 Model	名称 Name		主要用途 Main usage
JKYJ JKTRYJ JKLYJ JKLHYJ JKY JKTRY JKLY JKLHY	铜芯交联聚乙烯绝缘架空电缆 软铜芯交联聚乙烯绝缘架空电缆 铝芯交联聚乙烯绝缘架空电缆 铝合金芯交联聚乙烯绝缘架空电缆 铜芯聚乙烯绝缘架空电缆 软铜芯聚乙烯绝缘架空电缆 铜芯聚乙烯绝缘架空电缆 铝合金芯聚乙烯绝缘架空电缆	Copper core XLPE insulated aerial bundle cable Flexible copper core XLPE insulated aerial bundle cable Aluminum core XLPE insulated aerial bundle cable Aluminum alloy core XLPE insulated aerial bundle cable Copper core PE insulated aerial bundle cable Flexible steel core PE insulated aerial bundle cable Copper core PE insulated aerial bundle cable Aluminum alloy core PE insulated aerial bundle cable	架空固定敷设，软铜芯产品是用于变压器引下线。 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。 Overhead fixed layout, product with flexible steel core is used to transformer down-lead. To extend cables, it shall be taken into consid-eration to keep a certain space between cable and tree, and it is permitted to frequent contacts between cable and tree while the cable is in operation.
JKLYJ/B JKLHYJ/B	铝芯本色交联聚乙烯绝缘架空电缆 Nature color aluminum core XLPE insulated aerial bundle Cable 铝合金本色交联聚乙烯绝缘架空电缆 Nature color aluminum alloy core XLPE insulated aerial bundle 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，允许电缆和树木频繁接触。 Overhead fixed layout To extend cables, it shall be taken into consid-eration to keep a certain space between cable and tree, and it is permitted to frequent contacts between cable and tree while the cable is in operation.
JKLYJ/Q JKLHYJ/Q JKLY/Q JKLHY/Q	铝芯轻型交联聚乙烯可绝缘架空电缆 Light-duty lead core XLPE insulated aerial bundle cable 铝合金芯轻型交联聚乙烯绝缘架空电缆 Light-duty aluminum alloy core XLPE insulated aerial bundle cable 铝芯轻型聚乙烯绝缘架空电缆 Light-duty aluminum core XLPE insulated aerial bundle cable 铝合金轻型聚乙烯绝缘架空电缆 Light-duty aluminum alloy core PE insulated aerial bundle 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，只允许电缆和树木作短时接触。 Overhead fixed layout To extend cables, it shall be taken into consid-eration to keep a certain space between cable and tree, and it is permitted to short-time contacts between cable and tree while the cable is in operation.

架空电缆的规格 Specification of aerial bundle cable

表2Table2

型号 Model	芯数 Number core	标称截面 Nominal section(mm2)
JKYJ JKTRYJ JKLYJ JKLHYJ	1	10 ~ 400
	3	25 ~ 400
	3+K(A) 或3+K(B)	25 ~ 400 其中 K25 ~ 120
	1	10 ~ 400
JKY,JKTRY TKLY,JKLHY JKLYJ/Q,JKLHYJ/Q JKLY/Q,JKLHY/Q	1	10 ~ 400
JKLYJ/B JKLHYJ/B	3	25 ~ 400
	3+K(A) 或3+K(B)	25 ~ 400 其中 K25 ~ 120

注1：其中K为承载绞线，按工程设计要求，可任选表2中规定截面与相应导体截面相匹配，如杆塔跨距更大采用外加承载索时，该承载索不包括在电缆结构内。
注2：其中 (A)表示钢承载绞线， (B)为铝合金承载绞线。

Note 1:K is load bearing stranded conductor， we can choices any cross section which in line with table 2 to match with conductor section.

Note 2:A-Steel load bearing stranded conductor

B-Aluminum alloy load bearing stranded conductor

架空绝缘电缆的结构和技术参数如表3规定，承载绞线拉断力要求如表4规定。

Structure and technology property of insulated aerial bundle cable in line with table 3,

The requires of cable tensile breaking force in line with table 4

表3Table3

导体标称截面 Nominal cross section area of conductor (mm²)	导体最少单线根数 Single wire Min. number of conductor	导体直径 (参考值) /mm Conductor diameter (reference value) /mm	导体屏蔽层最小厚度 (近似值)/mm Min. thickness of conductor shields (approximate value) /mm	绝缘标称厚度/mm Nominal thickness of insulation (mm)		绝缘屏蔽层标称厚度 /mm Nominal thickness of insulation shields (mm)	20℃时导体电阻不大于/Ω/km Conductor resistance no more than Ω/km at 20℃				导体拉断力不小于/N Conductor tensile breaking force no more than N		
				薄绝缘 Thin insula-tion	普通绝缘 Ordinary insulation		硬铜芯 Hard copper core	软铜芯 Soft copper core	铝芯 Alum-inum core	铝合金芯 Aluminum alloy core	硬铜芯 Hard copper core	铝芯 Alum-inum core	铝合金芯 Aluminum alloy core
10	6	3.8	0.5	—	3.4	—	—	1.830	3.080	3.574	—	—	—
16	6	4.8	0.5	—	3.4	—	—	1.150	1.910	2.217	—	—	—
25	6	6.0	0.5	2.5	3.4	1.0	0.749	0.727	1.200	1.393	8465	3762	6284
35	6	7.0	0.5	2.5	3.4	1.0	0.540	0.524	0.868	1.007	11731	5177	8800
50	6	8.3	0.5	2.5	3.4	1.0	0.399	0.387	0.641	0.744	16502	7011	12569
70	12	10.0	0.5	2.5	3.4	1.0	0.276	0.268	0.443	0.514	23461	10354	17596
95	15	11.6	0.6	2.5	3.4	1.0	0.199	0.193	0.320	0.371	31759	13727	23880
120	18	13.0	0.6	2.5	3.4	1.0	0.158	0.153	0.253	0.294	39911	17339	30164
150	18	14.6	0.6	2.5	3.4	1.0	0.128	—	0.206	0.239	49505	21033	37706
185	30	16.2	0.6	2.5	3.4	1.0	0.1021	—	0.164	0.190	61846	26732	46503
240	34	18.4	0.6	2.5	3.4	1.0	0.0777	—	0.125	0.145	79823	34579	60329
300	34	20.6	0.6	2.5	3.4	1.0	0.0619	—	0.100	0.116	99788	43349	75411
400	53	23.8	0.6	2.5	3.4	1.0	0.04844	—	0.0778	0.0904	133040	55707	100548

a. 轻型薄绝缘结构架空电缆无内半导体电屏蔽层：

b. 近似值是既不要验证又不要检查的数值，但在设计与工艺制造上需予充分考虑。

a. Light-duty thin insulation aerial bundle cable without inner conductive shield layer:

b. approximate value is a value which neither needs proving nor checking, but it should be took into account in design and manufacture.

表4Table4

承载绞线截面/mm² Cross section area of load bearing stranded conductor (mm²)	钢承载绞线拉断力不小于/N Steel load bearing stranded conductor tensile breaking force not less than N	铝合金承载绞线拉断力不小于/N Aluminum alloy load bearing stranded conductor tensile breaking force not less than N
25	30000	6284
35	42000	8800
50	56550	12569
70	81150	17596
95	110150	23880
120	—	30164