

# 铝绞线及钢芯铝绞线

## 选型样本

**Aluminum Stranded Conductor & Aluminum-Steel Conductor**



# 铝绞线及钢芯铝绞线

## 铝绞线、钢芯铝绞线

# Aluminum Stranded Conductor & Aluminum-Steel Conductor

### 一、适用范围

本产品适用于架空电力线路。

### Application

The cable is used in aerial power circuitry.

### 二、执行标准

GB/T1179-1999圆线同心绞架空导线  
GB/T17048-1997架空绞线用硬铝线  
GB/T3428-2002架空绞线用镀锌钢线

### Executive Standard

round wire concentric stranded aerial lead  
hard aluminum wire for aerial stranding wire  
(idtIEC60888:1987) galvanized steel wire for aerial stranding wire

### 三、型号名称

### type & name

型号type	名称name	型号说明 type description
JL	铝绞线aluminum stranded wire	J-同心绞合 concentric stranding F-防腐 corrosive proof L-硬圆铝线 (LY9型) hard round aluminum wire(LY9 type) G-绞线用镀锌钢线 (G1A型、G1B型、G2A型、G2B型, 其中: 1-普通强度, 2-高强度, A-普通镀层厚度, B-加厚镀层厚度) Letter G standards for Galvanized steel wire for stranding wire purpose (G1A type, G1B type, G2A type, G2B type. Among these types, number 1 stands for common tension; number 2 stands for high tension; letter A stands for common coated layer thickness; letter B stands for higher coated layer thickness.)
JL/G1A	A型普通强度钢芯铝绞线 A type common intension aluminum-steel conductor	
JL/G1B	B型普通强度钢芯铝绞线 B type common intension aluminum-steel conductor	
JL/G2A	A型高强度钢芯铝绞线 A type high intension aluminum-steel conductor	
JL/G2B	B型高强度钢芯铝绞线 B type high intension aluminum-steel conductor	
JL/G1AF	普通强度防腐钢芯铝绞线 Common intension corrosive proof aluminum-steel conductor	
JL/G2AF	高强度防腐钢芯铝绞线 High intension corrosive proof aluminum-steel conductor	

### 四、规格

### Specification

JL型铝绞线

JL type aluminum stranded wire

面积area (mm <sup>2</sup> )	根数/单丝直径 (Φ mm) Pieces/ single silk diameter	外径 (mm) Outer diameter	重量 (kg/km) weight	额定抗拉力 (kN) rated pull resist	20℃直流电阻值 (Ω/km) DC resistance at 20℃
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
40	7/2.70	8.09	109.4	6.80	0.7158
63	7/3.39	10.2	172.3	10.39	0.4545
100	19/2.59	12.9	274.8	17.00	0.2877
125	19/2.89	14.5	343.6	21.25	0.2302
160	19/3.27	16.4	439.8	26.40	0.1798
200	19/3.66	18.3	549.7	32.00	0.1439
250	19/4.09	20.5	687.1	40.00	0.1151
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

# 铝绞线及钢芯铝绞线

JL/G1A、JL/G1B、JL/G2A、JL/G2B型钢芯铝绞线

JL/G1A type, JL/G1B type, JL/G2A type, JL/G2B type aluminum-steel conductor

面积 铝/钢 (mm <sup>2</sup> ) area aluminum/steel	根数/单丝直径 Φ mm Pieces/ single silk diameter		外径 (mm) OD	重量 (kg/km) weight	额定抗拉力(kN) rated pull resist				20℃直流电 阻值 (Ω/km) DC resistance at 20℃
	铝	钢			JL/G1A	JL/G1B	JL/G2A	JL/G2B	
16/2.67	6/1.84	1/1.84	5.53	64.6	6.08	5.89	6.45	6.27	1.7934
25/4.17	6/2.30	1/2.30	6.91	100.9	9.13	8.83	9.71	9.42	1.1478
40/6.67	6/2.91	1/2.91	8.74	161.5	14.4	13.93	15.33	14.87	0.7174
63/10.5	6/3.66	1/3.36	11.0	254.4	21.63	20.58	22.37	21.63	0.4555
100/16.7	6/4.61	1/4.61	13.8	403.8	34.33	32.67	35.50	34.33	0.2869
125/6.94	18/2.97	1/2.97	14.9	397.9	29.17	28.68	30.14	29.65	0.2304
125/20.4	26/2.47	7/1.92	15.7	503.9	45.69	44.27	48.54	47.12	0.2310
160/8.89	18/3.36	1/3.36	16.8	509.3	36.18	35.29	37.42	36.80	0.1800
160/26.1	26/2.80	7/2.18	17.7	644.9	57.69	55.86	61.34	59.51	0.1805
200/11.1	18/3.76	1/3.76	18.8	636.7	44.22	43.11	45.00	44.22	0.1440
200/32.6	26/3.13	7/2.43	19.8	806.2	70.13	67.85	74.69	72.41	0.1444
250/24.6	22/3.80	7/2.11	21.6	880.6	68.72	67.01	72.16	70.44	0.1154
250/40.7	26/3.50	7/2.72	22.2	1007.7	87.67	84.82	93.37	90.52	0.1155
315/21.8	45/2.99	7/1.99	23.9	1039.6	79.03	77.51	82.08	80.55	0.0917
315/51.3	26/3.93	7/3.05	24.9	1269.7	106.83	101.70	114.02	110.43	0.0917
400/27.7	45/3.36	7/2.24	26.9	1320.1	98.36	96.42	102.23	100.29	0.0722
400/51.9	54/3.07	7/3.07	27.6	1510.3	123.04	117.85	130.30	126.67	0.0723
450/31.1	45/3.57	7/2.38	28.5	1485.2	107.47	105.29	111.82	109.64	0.0642
450/58.3	54/3.26	7/3.26	29.3	1699.1	138.42	132.58	146.58	142.50	0.0643
500/34.6	45/3.76	7/2.51	30.1	1650.2	119.41	116.99	124.25	121.83	0.0578
500/64.8	54/3.43	7/3.43	30.9	1887.9	153.80	147.31	162.87	158.33	0.0578
560/38.7	45/3.98	7/2.65	31.8	1848.2	133.74	131.03	139.16	136.45	0.0516
560/70.9	54/3.63	19/2.18	32.7	2103.4	172.59	167.63	182.52	177.56	0.0516
630/43.6	45/4.22	7/2.81	33.8	2079.2	150.45	147.40	156.55	153.50	0.0459
630/79.8	54/3.85	19/2.31	34.7	2366.3	191.77	186.19	202.94	197.36	0.0459

注：表中性能同样适用于JL/G1AF、JL/G2AF防腐型钢芯铝绞线，但单位长度重量应按GB/T1179-1999标准中附录C的计算方法计算，如有用户需要可单独提供。  
 Note: the parameter listed in the table is also suitable for JL/G1AF type & JL/G2AF type corrosive proof aluminum-steel conductor. But unit length and weight shall be calculated in accordance with attachment C stipulated in GB/T1179-1999 standard. We can offer separately if customer requires.

## 五、导线绞合节径比

## lay ration of lead stranding

结构元件 structure element	绞层 Stranding layer	节径比 Lay ratio
钢芯 steel core	6根层 6 pieces layer	16~26
	12根层 12 pieces layer	14~22
铝绞层 aluminum stranding layer	内层 inner layer	10~17
	邻外层 near outer layer	10~16
	外层 outer layer	10~14

## 六、铝绞线、钢芯铝绞线的弹性系数和线膨胀系数 (数据来源: GB1179-83, 供参考。)

## Elasticity coefficient and wire expansion coefficient of aluminum stranding conductor & aluminum-steel conductor (data origin: GB1179-83, only for reference)

# 铝绞线及钢芯铝绞线

产品名称 product name	单线根数piece of single silk	最终弹性系数（实际值） Final elasticity coefficient (actual value)		线膨胀系数（计算值） wire expansion Coefficient(calculated value)
		N/mm2	kgf/mm2	1/°C
铝绞线aluminum stranding conductor	7	59000	6000	23.0×10-6
	19	56000	5700	
	37	56000	5700	
	61	54000	5500	

产品名称product name	结构 structure		铝钢 截面比section ratio of aluminum and steel	最终弹性系数 （实际值） Final elasticity coefficient (actual value)		线膨胀系数(计算值) wire expansion Coefficient (calculated value)
	铝Aluminum	钢steel		N/mm2	kgf/mm2	
钢芯铝绞线 aluminum-steel conductor	6	1	6.00	79000	8100	19.1×10-6
	7	7	5.06	76000	7700	18.5×10-6
	12	7	1.71	105000	10700	15.3×10-6
	18	1	18.00	66000	6700	21.2×10-6
	24	7	7.71	73000	7400	19.6×10-6
	26	7	6.13	76000	7700	18.9×10-6
	30	7	4.29	80000	8200	17.8×10-6
	30	19	4.37	78000	8000	18.0×10-6
	42	7	19.44	61000	6200	21.4×10-6
	45	7	14.46	63000	6400	20.9×10-6
	48	7	11.34	65000	6600	20.5×10-6
	54	7	7.71	69000	7000	19.3×10-6
	54	19	7.90	67000	6800	19.4×10-6

## 七、订货及交货注意事项

- 1、询价或订货时应明确向生产厂至少提供：产品数量、产品的型号、面积（钢芯铝绞线应注明铝钢面积比）、绞制结构根数。
- 2、交货长度偏差±5%。
- 3、生产中不可避免地出现短段导线，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%。
- 4、根据双方协议，允许以任何长度的绞线交货。

## Notes for order and delivery

Buyer shall at least provide manufacturer product quantity, type, section area(section ratio of steel and aluminum for aluminum-steel conductor) and pieces of stranding structure when enquiring or ordering.

Delivery length error is ±5%.

It is inevitable to have short leads during manufacturing. Length of short leads shall be no less than 50% of manufacturing length stipulated in the contract. And the quantity shall be no more than 5% of total delivery quantity.

Delivery length of cable depends on both agreements.