

0.6/1kV及以下聚氯乙烯绝缘及护套电力电缆

PVC Insulation & Sheath Power Cable of 0.6/1kv or Lower

本产品适用于交流额定电压0.6/1KV的线路中, 供输配电能用。

It is used to transmit and distribute power on the power line of A.C. rated voltage 0.6/1kv.

一、生产执行标准

GB/T12706.1-2008等同采用国际电工委员会IEC60502。

Executive standard:

Executive standard:GB/T12706.1-2008 (equal to the standard of IEC60502)

二、使用特点

- 1、电缆导体长期允许工作温度不超过70℃；
- 2、短路时（最长持续时间不超过5秒），电缆导体的最高温度不超过160℃；
- 3、敷设电缆时的环境温度应不低于0℃。

Working Condition

Long-term working temperature allowed by cable conductor shall be no more than 70℃.

Max. temperature of cable conductor shall be no more than 160℃ during short circuit (the longest lasting time shall be no more than 5 seconds).

Environment temperature for installation shall be no less than 0℃.

三、电缆基本型号名称

Type, Description and Application occasion

型号Type		名称 Description	适用场合 Application occasion
铜Cu	铝Al		
VV	VLV	聚氯乙烯绝缘聚氯乙烯护套电力电缆 Power cable with PVC insulation and sheath	敷设在室内、隧道、电缆沟及管道中, 电缆不能承受机械外力作用。 To be laid indoors, in the tunnel, cable furrow or pipe. The cable can not bear mechanical force from outside.
VV22	VLV22	聚氯乙烯绝缘聚氯乙烯护套 钢带铠装电力电缆 Power cable with PVC insulation, PVC sheath and steel tape armored	敷设在地下, 电缆能承受一定机械外力作用, 但不能承受大的拉力。 To be laid underground, the cable can bear certain mechanical force, but it can not bear great pulling force.

注：1、本公司可根据用户的需要提供阻燃型、耐火型电力电缆产品, 订货时在原型号前加“ZR-”表示阻燃型, 加“NH-”表示耐火型。
2、本公司也可根据用户的需要, 提供VV32型、VLV32型钢带铠装电力电缆, 单芯钢丝铠装电缆应采用隔磁措施。

Note:
1: We also produce flame-retardant fire resistant type power cable according to the requirement of the customer. Prefix “ZR” should be added to the original type of cable in ordering flame retardant cable; prefix “NH-” for fire resistant cable.
2: We also produce VV32, VLV32 type steel wire armored power cable according to the requirement of the customer. Magnetism-separated measure shall be adopted by single core steel wire armored cable.

四、生产范围

Production Scope

型号 Type		芯数 Core number	标称截面mm ² Nominal cross section area
铜Cu	铝Al		
VV	—	1	1.5~800
VV22	VLV22		2.5~800
VV	—	2	10~800
VV22	VLV22		1.5~185
VV	—	3	2.5~185
VV22	VLV22		4~185
VV	—	4	1.5~300
VV22	VLV22		2.5~300
VV	—	3+1	4~300
VV22	VLV22		2.5~300

注：①本公司可根据用户需要, 提供五芯结构电缆产品。
②用于交流系统的单芯铠装电缆的铠装层应采用非磁性金属带绕包。

Note:
1: We also produce cable with five cores according to the requirement of the customer.
2: Non-magnetic metal tape wrapping should be adopted as armored layer for single core armored cable for A.C. system.

五、电缆主要技术参数

1、20℃时导体最大直流电阻值应满足GB/T3956标准中的2类导体的规定。

2、工频交流耐压试验 A.C. Voltage Test

单芯无屏蔽电缆应将其浸入水中1h, 在导体和水之间施加试验电压3.5kV/5 min; 多芯电缆应依次在每一根绝缘导体对其余导体之间施加试验电压3.5kV/5 min, 绝缘均应无击穿。

Main Technical parameter of cable

Max value of conductor DC resistance shall meet the requirement of conductor of category 2 stipulated in GB/T3956 standard at 20℃.

For single core cable without shielding, voltage test of 3.5kV under power frequency is put on for 5 minutes between conductor and water when be immersed in the water for one hour. For multi-core cable, between each insulated conductor and other conductor, voltage test of 3.5kV under power frequency is put on for 5 minutes without puncture of insulation.

六、电缆近似外径及近似重量(表1~表5) Table 1

Approximate outer diameter and weight of cable (from table 1 to table 5) table 1

芯数×标称截面mm ² core number x nominal cross section area	电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable		电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable	
		VV	VLV		VV22*	VLV22*
1×1.5	5.8	50	/	/	/	/
1×2.5	6.2	62	47	/	/	/
1×4	7.1	87	63	/	/	/
1×6	7.6	110	75	/	/	/
1×10	8.9	166	96	12.4	346	270
1×16	9.9	234	133	13.4	432	331
1×25	11.7	345	186	15.2	574	414
1×35	12.6	450	229	16.2	692	475
1×50	14.6	585	276	18.1	863	553
1×70	16.3	800	366	19.8	1133	700
1×95	18.5	1065	475	22.0	1432	844
1×120	20.2	1328	586	23.7	1705	962
1×150	22.5	1600	702	26.0	2044	1120
1×185	24.8	1990	850	28.3	2438	1296
1×240	27.8	2546	1060	31.5	3057	1570
1×300	30.7	3140	1292	34.2	3926	2070
1×400	34.7	4127	1651	38.0	5084	2608
1×500	39.0	5259	2016	43.0	6295	2936
1×630	42.4	6708	2642	47.0	7803	3723
1×800	47.0	8410	3190	51.7	9670	4458

*用于交流系统的单芯铠装电缆的铠装层应采用非磁性金属带绕包; 单芯钢丝铠装电缆应采用隔磁措施。

*Non-magnetic metal tape wrapping should be adopted as armored layer for single core armored cable for A.C. system. Magnetic separation measure should be adopted for cable with single conductor and steel wire armor.

Table 2

芯数×标称截面mm ² core number x nominal cross section area	电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable		电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable	
		VV	VLV		VV22	VLV22
2×1.5	10.4	118	/	/	/	/
2×2.5	11.3	151	118	/	/	/
2×4	13.0	210	159	16.0	424	374
2×6	13.9	263	192	17.1	494	425
2×10	16.5	394	242	19.8	665	497
2×16	18.6	541	334	21.8	845	638
2×25	22.0	794	468	25.3	1154	827
2×35	24.2	1037	585	27.5	1436	982
2×50	20.3	1236	592	23.6	1580	940
2×70	22.7	1647	745	26.0	2210	1302
2×95	26.2	2189	966	29.1	2800	1530
2×120	28.8	2640	1144	32.6	3400	1850
2×150	32.2	3280	1410	36.2	4150	2198
2×185	35.8	4006	1703	39.5	5025	2592

Table 3

芯数×标称截面mm ² core number x nominal cross section area	电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable		电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable	
		VV	VLV		VV22	VLV22
3×1.5	10.6	142	/	/	/	/
3×2.5	11.7	187	139	/	/	/
3×4	13.6	264	189	16.6	489	413
3×6	14.7	335	226	17.7	578	472
3×10	17.4	514	290	20.4	801	560
3×16	19.7	729	418	22.7	1058	743
3×25	23.4	1085	596	26.4	1470	979
3×35	25.8	1430	748	28.8	2148	1370
3×50	25.5	1820	839	28.5	2457	1489
3×70	28.4	2400	1080	31.7	3122	1768
3×95	32.8	3155	1418	36.7	4055	2218
3×120	35.7	3982	1747	39.6	4925	2606
3×150	40.0	4950	2135	44.0	6050	3154
3×185	44.4	6156	2610	48.6	7299	3721
3×240	49.7	7886	3308	53.9	9223	4584
3×300	54.3	9647	4059	58.7	11022	5423

Table 4

芯数×标称截面mm ² core number x nominal cross section area	电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable		电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable	
		VV	VLV		VV22	VLV22
4×2.5	12.2	225	166	/	/	/
4×4	15.0	332	231	18.0	581	480
4×6	16.2	430	270	19.2	703	551
4×10	19.7	641	393	22.7	891	637
4×16	22.0	902	499	25.0	1175	771
4×25	26.0	1438	766	29.0	1998	1347
4×35	28.7	1815	919	31.7	2585	1660
4×50	30.4	2380	1091	33.4	3100	1819
4×70	33.8	3202	1398	37.0	4039	2228
4×95	38.2	4300	1860	41.5	5200	2800
4×120	42.0	5269	2186	45.5	6400	3320
4×150	46.4	6554	2748	49.9	7806	3958
4×185	51.2	8090	3325	54.9	9442	4700
4×240	55.3	10355	4056	59.0	11887	5734
4×300	64.5	12776	4950	68.2	14356	6995

Table 5

芯数×标称截面 mm ² core number x nominal cross section area	电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable		电缆近似外径mm approximate outer diameter of cable	电缆近似重量kg/km approximate weight of cable	
		VV	VLV		VV22	VLV22
3×4+1×2.5	14.5	310	215	17.5	543	447
3×6+1×4	16.1	403	268	19.1	661	526
3×10+1×6	18.9	600	363	21.9	894	625
3×16+1×10	21.6	858	505	24.6	1195	807
3×25+1×16	25.0	1315	693	28.0	1679	1082
3×35+1×16	27.6	1645	834	30.6	2243	1458
3×50+1×25	29.6	2124	996	32.6	2867	1736
3×70+1×50	33.2	2867	1285	36.2	3698	2099
3×95+1×50	38.0	3824	1664	42.1	4796	2636
3×120+1×70	41.5	4784	2060	45.5	5900	3129
3×150+1×70	44.6	5790	2473	48.4	6921	3623
3×185+1×95	49.7	7164	3050	54.2	8437	4369
3×240+1×120	55.9	9414	3842	60.3	11163	5586
3×300+1×150	61.6	11749	4920	66.0	13465	6445

七、电缆载流量 (0.6/1kV)

Current-loading capacity of cable

不同空气温度下的载流量修正系数
Current-loading capacity correcting coefficient under different air temperature

空气温度℃ Air temperature	20	25	30	35	40	45	50
修正系数 Correcting coefficient	1.29	1.22	1.15	1.08	1.00	0.91	0.81

空气中 in the air

标称截面 mm ² nominal cross section area	长期连续负载流量 (A) Long-term and continual current-loading capacity							
	铜 芯Cu				铝 芯Al			
	单芯single core		两芯 2cores	三~五芯 3~5cores	单芯single core		两芯 2cores	三~五芯 3~5cores
	○○○	○○			○○○	○○		
2.5	31	24	25	21	24	19	19	17
4	41	32	33	28	32	25	26	22
6	52	40	42	36	43	33	34	29
10	70	55	58	49	55	42	44	38
16	97	74	76	66	75	58	59	51
25	120	95	98	84	96	74	76	65
35	150	115	120	100	115	90	93	80
50	180	140	145	125	140	110	115	98
70	230	180	185	160	180	140	145	120
95	280	220	230	195	215	170	170	150
120	325	255	265	235	255	200	205	180
150	375	295	305	260	290	230	235	200
185	430	340	350	305	335	265	275	235
240	515	405	—	360	400	320	—	280
300	595	470	—	410	465	370	—	320
400	700	550	—	—	550	435	—	—
500	810	635	—	—	640	510	—	—
630	950	735	—	—	760	600	—	—
800	1090	830	—	—	880	695	—	—
导体工作温度 70℃ Conductor working temperature 70℃								
环境温度40℃ Environment temperature 40℃								

注: 1) 平面排列时,电缆中心间距为2倍的电缆外径。

Rows of cable, O.C. is two times than outer diameter

2) 单根电缆分离敷设(即邻近电缆对该电缆没有热效应)。

Single cable should be separated Installation (there is no pyrometric effect of neighboring cable)

3) 铠装型电缆的载流量可参照非铠装电缆的载流量选用。

Current-loading capacity of armored cable can refer to unarmored cable

不同土壤温度下的载流量修正系数
Current-loading capacity correcting coefficient under different soil temperature

土壤温度℃ Soil temperature	15	20	25	30	35
修正系数 Correcting coefficient	1.11	1.05	1.00	0.94	0.88

(土壤中)

标称截面 mm ² nominal cross section area	长期连续负荷载流量 (A) Long-term and continual current-loading capacity							
	铜 芯Cu				铝 芯Al			
	单 芯single core		两 芯 2cores	三~五 芯 3~5cores	单 芯single core		两 芯 2cores	三~五 芯 3~5cores
	○ ○ ○	⊞			○ ○ ○	⊞		
10	79	75	84	71	60	58	65	54
16	100	98	110	91	79	76	85	71
25	130	120	140	115	100	96	105	90
35	155	145	165	140	120	115	130	105
50	180	170	195	165	140	135	150	130
70	220	210	240	200	170	165	190	155
95	265	250	290	240	205	195	225	190
120	300	285	330	280	235	220	255	215
150	340	320	370	310	260	250	290	240
185	385	360	420	350	300	280	325	270
240	445	420	—	405	345	325	—	315
300	505	470	—	455	390	370	—	355
400	575	530	—	—	450	420	—	—
500	655	600	—	—	515	480	—	—
630	745	670	—	—	595	550	—	—
800	835	735	—	—	675	610	—	—
导体工作温度 70℃ Conductor working temperature 70℃								
环境温度 25℃ Environment temperature 25℃								

注: 1) 平面排列时, 电缆中心间距为2倍的电缆外径。

Rows of cable, O.C. is two times than outer diameter

2) 单根电缆分离敷设(即邻近电缆对该电缆没有热效应)。

Single cable should be separated Installation (there is no pyrometric effect of neighboring cable)

3) 土壤热阻系数: 2.0k.m/w, 埋地深度: 0.7m。

Heat-resistant coefficient of soil is 2.0k.m/w, depth of burying is 0.7m

4) 铠装型电缆的载流量可参照非铠装电缆的载流量选用。

Current-loading capacity of armored cable can refer to unarmored cable

八、交货长度

按合同要求长度交货, 长度计量误差为±0.5%。

Delivery Length

The goods will be delivered according to the contract with length error of ±0.5%.