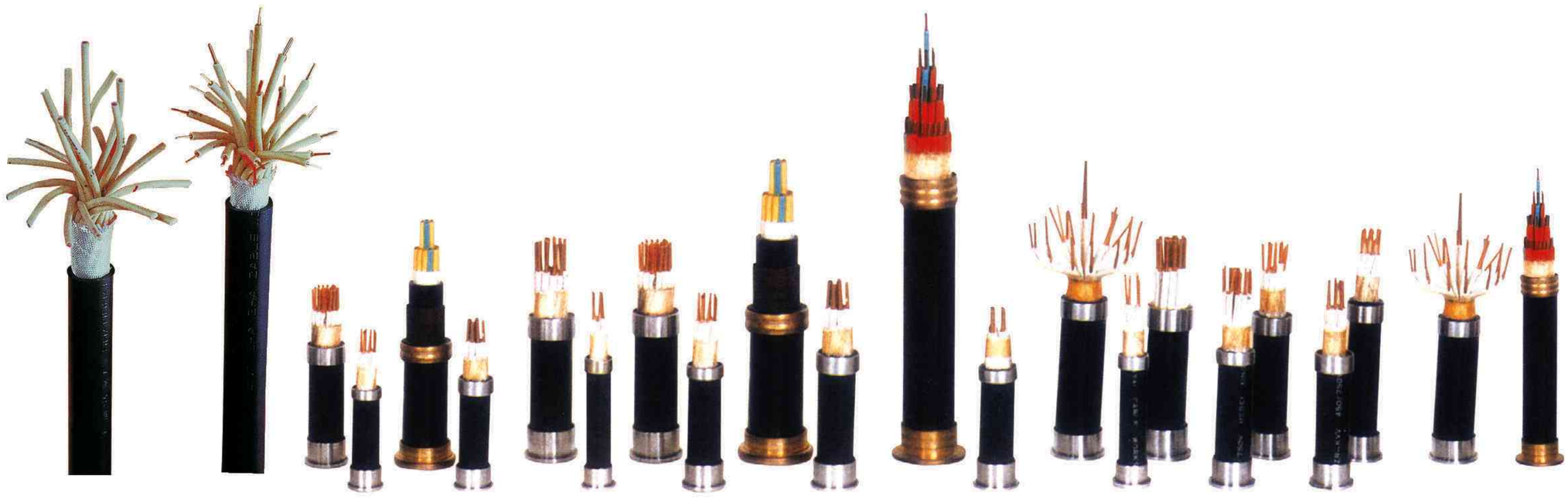
控制电缆(GB/T9330-2008)

CONTROL CABLES(GB/T9330-2008)

聚氯乙烯绝缘护套控制电缆
PVC Insulated Sheath Control Cable



1 型号、名称及使用范围（见表1） Model,name and application (see table 1)

表1 Table 1

型号 Model	名称 Name	主要使用范围 Main applications
KVV	铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆 Copper conductor PVC insulated and sheathed control cable	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 For laying indoors, in trenches and in ducts, for fixed installation
KVVP	铜芯聚氯乙烯绝缘聚氯乙烯护套编织屏蔽控制电缆 Copper conductor PVC insulated & sheathed copper wire braiding screened control cable	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 For laying indoors, in trenches and in ducts, for fixed installation
KVVP2	铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽控制电缆 Copper conductor PVC insulated and sheathed control cable with steel tape shield	敷设在室内、电缆沟、管道等要求屏蔽的固定场合 For laying indoors, in trenches and in ducts, for fixed installation
KVV22	铜芯聚氯乙烯绝缘聚氯乙烯护套钢带铠装控制电缆 Copper conductor PVC insulated and sheathed con–trol cable with steel tape armmour	敷设在室内、电缆沟、管道、直埋等承受较大机械外力的固定场合 For laying indoors, in trenches, in ducts and in ground, able to withstand heavier mechanical force, and for fixed installation
KVVR	铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆 Copper conductor PVC insulated flexible control cable	敷设在室内移动要求柔软等场合 For laying indoors, movable and flexible
ZR–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 conductor PVC insulated & sheathed copper wire braiding screened flexible control cable	敷设在室内移动要求柔软屏蔽等场合 Fixed laying indoors with capability of moving and screening
ZR–KVV	铜芯聚氯乙烯绝缘聚氯乙烯护套阻燃控制电缆 Copper conductor PVC insulated and sheathed flame retardant control cable	敷设在有阻燃要求的室内、电缆沟、管道等固定场合 For laying indoors, in trenches, in ducts and for fixed in–stallation, the cable should be flame retardance
ZR–KVVP2	铜芯聚氯乙烯绝缘聚氯乙烯护套铜带屏蔽阻燃控制电缆 Copper conductor PVC insulated and sheathed flame retardant control cable with steel tape shield	敷设在有阻燃要求的室内、电缆沟、管道等固定场合 For laying indoors, in trenches, in ducts and for fixed installation, the cable should be flame retardance
ZR–KVV22	铜芯聚氯乙烯绝缘聚氯乙烯护套钢带铠装阻燃控制电缆 Copper conductor PVC insulated and sheathed flame retardant control cable with steel tape armour	敷设在有阻燃要求的室内、电缆沟、管道、直埋等能承受较大机械外力固定场合 For laying indoors, in trenches, in ducts and underground, the cable should be flamerelardance and able to bear bea–vier extermal mechanical force, and for fixed installation
ZR–KVVR	铜芯聚氯乙烯绝缘聚氯乙烯护套阻燃控制软电缆 Copper conductor PVC insulated and sheathed flame retardant flexible control cable	敷设在有阻燃要求的室内可移动柔软等场合 For laying indoors, and the cable should be flame–retar–dant flexible and movable

2 电缆结构材料及性能 Construction size and properties of cable

KVV型，ZR-KVV型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆
Type KVV, ZR-KVV 450/750V Copper conductor PVC insulated and sheathed control cable

表2 Table 2

芯数×标称截面 Cross×Nom cross–sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resis–tance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
			下限min	上限 max.			
2×0.75	0.6	1.2	6.7	8.1	0.012	24.5	59
2×1.0	0.6	1.2	7.0	8.5	0.011	18.1	67
2×1.5	0.7	1.2	7.9	9.5	0.011	12.1	86
2×2.5	0.8	1.2	9.0	10.9	0.010	7.41	120
2×4	0.8	1.2	9.9	11.9	0.0085	4.61	167
2×6	0.8	1.2	10.8	13.1	0.0070	3.08	220
3×0.75	0.6	1.2	7.1	8.5	0.012	24.5	71
3×1.0	0.6	1.2	7.4	8.9	0.011	18.1	82
3×1.5	0.7	1.2	8.3	10.0	0.011	12.1	108
3×2.5	0.8	1.2	9.5	11.5	0.010	7.41	154
3×4	0.8	1.2	10.5	12.4	0.0085	4.61	210
3×6	0.8	1.5	11.5	13.9	0.0070	3.08	310
4×0.75	0.6	1.2	7.6	9.2	0.012	24.5	846
4×1.0	0.6	1.2	7.9	9.6	0.011	18.1	100
4×1.5	0.7	1.2	9.0	10.9	0.011	12.1	132
4×2.5	0.8	1.2	10.4	12.5	0.010	7.41	193
4×4	0.8	1.5	11.4	13.8	0.0085	4.61	315
4×6	0.8	1.5	13.2	15.9	0.0070	3.08	413
5×0.75	0.6	1.2	8.2	9.9	0.012	24.5	99
5×1.0	0.6	1.2	8.6	10.3	0.011	18.1	116
5×1.5	0.7	1.2	9.7	11.7	0.011	12.1	154
5×2.5	0.8	1.5	11.3	13.6	0.010	7.41	243
5×4	0.8	1.5	13.0	15.7	0.0085	4.61	383
5×6	0.8	1.5	14.3	17.3	0.0070	3.08	505
7×0.75	0.6	1.2	8.8	10.6	0.012	24.5	123
7×1.0	0.6	1.2	9.2	11.1	0.011	18.1	146
7×1.5	0.7	1.2	10.5	12.7	0.011	12.1	196
7×2.5	0.8	1.5	12.8	15.5	0.010	7.41	211
7×4	0.8	1.5	14.1	17.1	0.0085	4.61	473
7×6	0.8	1.5	15.6	18.8	0.0070	3.08	652

KVV型，ZR-KVV型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆
Type KVV, ZR-KVV 450/750V Copper conductor PVC insulated and sheathed control cable

表2 Table 2

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resis-tance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
			下限min	上限 max.			
8×0.75	0.6	1.2	9.7	11.7	0.012	24.5	142
8×1.0	0.6	1.2	10.2	12.3	0.011	18.1	1168
8×1.5	0.7	1.5	11.7	14.1	0.011	12.1	243
8×2.5	0.8	1.5	14.3	17.2	0.010	7.41	360
8×4	0.8	1.5	15.8	19.0	0.0085	4.61	545
8×6	0.8	1.7	17.4	21.0	0.0070	3.08	748
10×0.75	0.6	1.2	10.8	13.1	0.012	24.5	187
10×1.0	0.6	1.5	11.4	13.8	0.011	18.1	221
10×1.5	0.7	1.5	13.7	16.6	0.011	12.1	296
10×2.5	0.8	1.5	16.0	19.4	0.010	7.41	440
10×4	0.8	1.7	17.8	21.5	0.0085	4.61	721
10×6	0.8	1.7	20.1	24.2	0.0070	3.08	956
12×0.75	0.6	1.5	11.2	13.5	0.012	24.5	211
12×1.0	0.6	1.5	11.8	14.2	0.011	18.1	250
12×1.5	0.7	1.5	14.2	17.1	0.011	12.1	338
12×2.5	0.8	1.5	16.5	20.0	0.010	7.41	507
12×4	0.8	1.7	18.7	22.6	0.0085	4.61	825
12×6	0.8	1.7	20.7	25.0	0.0070	3.08	1026
14×0.75	0.6	1.5	11.7	14.1	0.012	24.5	238
14×1.0	0.6	1.5	12.9	15.6	0.011	18.1	328
14×1.5	0.7	1.5	14.8	17.9	0.011	12.1	384
14×2.5	0.8	1.5	17.4	21.0	0.010	7.41	579
14×4	0.8	1.7	19.6	23.7	0.0085	4.61	959
14×6	0.8	1.7	21.8	26.3	0.0070	3.08	1246
16×0.75	0.6	1.5	12.9	15.5	0.012	24.5	2268
16×1.0	0.6	1.5	13.5	16.4	0.011	18.1	315
16×1.5	0.7	1.5	15.6	18.8	0.011	12.1	427
16×2.5	0.8	1.7	18.3	22.1	0.010	7.41	664
19×0.75	0.6	1.5	13.5	16.3	0.012	24.5	299
19×1.0	0.6	1.5	14.2	17.2	0.011	18.1	359

KVV型，ZR-KVV型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制电缆
Type KVV, ZR-KVV 450/750V Copper conductor PVC insulated and sheathed control cable

表2 Table 2

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resis-tance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
			下限min	上限 max.			
19×1.5	0.7	1.5	16.4	19.8	0.011	12.1	490
19×2.5	0.8	1.7	19.6	23.7	0.010	7.41	765
24×0.75	0.6	1.5	15.6	18.8	0.012	24.5	373
24×1.0	0.6	1.5	16.4	19.8	0.011	18.1	447
24×1.5	0.7	1.7	19.4	23.4	0.011	12.1	632
24×2.5	0.8	1.7	22.8	27.6	0.010	7.41	961
27×0.75	0.6	1.5	15.9	19.2	0.012	24.5	407
27×1.0	0.6	1.5	16.7	20.2	0.011	18.1	491
27×1.5	0.7	1.7	19.8	23.9	0.011	12.1	674
27×2.5	0.8	1.7	23.3	28.2	0.010	7.41	1061
30×0.75	0.6	1.5	16.4	19.8	0.012	24.5	445
30×1.0	0.6	1.7	17.5	20.5	0.011	18.1	554
30×1.5	0.7	1.7	20.0	23.0	0.011	12.1	761
30×2.5	0.8	1.7	24.0	27.0	0.010	7.41	1167
37×0.75	0.6	1.7	17.5	20.5	0.012	24.5	544
37×1.0	0.6	1.7	19.0	23.0	0.011	18.1	658
37×1.5	0.7	1.7	22.0	26.6	0.011	12.1	908
37×2.5	0.8	1.7	26.1	31.5	0.010	7.41	1401
44×0.75	0.6	1.7	20.1	24.2	0.012	24.5	642
44×1.0	0.6	1.7	21.2	25.6	0.011	18.1	777
44×1.5	0.7	1.7	24.7	29.8	0.011	12.1	1074
44×2.5	0.8	2.0	29.9	36.1	0.010	7.41	1702
52×0.75	0.6	1.7	20.9	25.3	0.012	24.5	737
52×1.0	0.6	1.7	22.1	26.7	0.011	18.1	896
52×1.5	0.7	1.7	25.8	31.1	0.011	12.1	1243
52×2.5	0.8	2.0	31.2	37.7	0.010	7.41	1973
61×0.75	0.6	1.7	21.9	26.5	0.012	24.5	843
61×1.0	0.6	1.7	23.2	28.0	0.011	18.1	1027
61×1.5	0.7	2.0	27.0	32.7	0.011	12.1	1468
61×2.5	0.8	2.2	33.1	40.0	0.010	7.41	2306

KVVP2型，KVVP3型，ZR-KVVP2型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套铜带(铝塑复合带)屏蔽控制电缆

Type KVVP2,KVVP3,ZR-KVVP2 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield(Aluminum-plastic composite belt)

表3 Table 3

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	铜带厚度(铝塑复合带) Nom thickness of copper tape (Aluminum-plastic composite belt) mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
4×0.75	0.6	0.05–0.10	1.2	8.1	9.7	0.012	24.5	144
4×1.0	0.6	0.05–0.10	1.2	8.4	10.2	0.011	18.1	153
4×1.5	0.7	0.05–0.10	1.2	9.5	11.4	0.011	12.1	190
4×2.5	0.8	0.05–0.10	1.5	10.9	13.1	0.010	7.41	276
4×4	0.8	0.05–0.10	1.5	12.5	15.1	0.0085	4.61	367
4×6	0.8	0.05–0.10	1.5	13.6	16.5	0.0070	3.08	467
4×10	1.0	0.05–0.10	1.7	17.1	20.7	0.0065	1.83	728
5×0.75	0.6	0.05–0.10	1.2	8.6	10.4	0.012	24.5	153
5×1.0	0.6	0.05–0.10	1.2	9.0	10.9	0.011	18.1	173
5×1.5	0.7	0.05–0.10	1.5	10.2	12.3	0.011	12.1	226
5×2.5	0.8	0.05–0.10	1.5	11.8	14.2	0.010	7.41	325
5×4	0.8	0.05–0.10	1.5	13.5	16.3	0.0085	4.61	437
5×6	0.8	0.05–0.10	1.5	14.8	17.9	0.0070	3.08	576
5×10	1.0	0.05–0.10	1.7	19.1	23.0	0.0065	1.83	924
7×0.75	0.6	0.05–0.10	1.2	9.3	11.2	0.012	24.5	178
7×1.0	0.6	0.05–0.10	1.2	9.7	11.7	0.011	18.1	209
7×1.5	0.7	0.05–0.10	1.5	11.0	13.3	0.011	12.1	239
7×2.5	0.8	0.05–0.10	1.5	13.3	16.1	0.010	7.41	398
7×4	0.8	0.05–0.10	1.5	14.6	17.6	0.0085	4.61	528
7×6	0.8	0.05–0.10	1.5	16.0	19.4	0.0070	3.08	717
7×10	1.0	0.05–0.10	1.7	20.7	25.1	0.0065	1.83	1145
8×0.75	0.6	0.05–0.10	1.5	10.2	12.3	0.012	24.5	206
8×1.0	0.6	0.05–0.10	1.5	10.7	12.9	0.011	18.1	230
8×1.5	0.7	0.05–0.10	1.5	12.8	15.4	0.011	12.1	312
8×2.5	0.8	0.05–0.10	1.5	14.7	17.8	0.010	7.41	486
8×4	0.8	0.05–0.10	1.7	16.2	19.6	0.0085	4.61	589
8×6	0.8	0.05–0.10	1.7	17.9	21.6	0.0070	3.08	790
8×10	1.0	0.05–0.10	1.7	23.2	28.1	0.0065	1.83	1236
10×0.75	0.6	0.05–0.10	1.5	11.3	13.7	0.012	24.5	214
10×1.0	0.6	0.05–0.10	1.5	12.5	15.1	0.011	18.1	300

KVVP2型，KVVP3型，ZR-KVVP2型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套铜带(铝塑复合带)屏蔽控制电缆

Type KVVP2,KVVP3,ZR-KVVP2 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield(Aluminum-plastic composite belt)

续表3 Table 3

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	铜带厚度(铝塑复合带) Nom thickness of copper tape (Aluminum-plastic composite belt) mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
10×1.5	0.7	0.05–0.10	1.5	14.2	17.2	0.011	12.1	367
10×2.5	0.8	0.05–0.10	1.7	16.5	20.0	0.010	7.41	572
10×4	0.8	0.05–0.10	1.7	18.6	22.5	0.0085	4.61	787
10×6	0.8	0.05–0.10	1.7	20.5	24.8	0.0070	3.08	992
10×10	1.0	0.05–0.10	1.7	26.3	31.8	0.0065	1.83	1590
12×0.75	0.6	0.05–0.10	1.5	11.7	14.1	0.012	24.5	280
12×1.0	0.6	0.05–0.10	1.5	12.8	15.5	0.011	18.1	315
12×1.5	0.7	0.05–0.10	1.5	14.6	17.7	0.011	12.1	423
12×2.5	0.8	0.05–0.10	1.7	17.0	20.6	0.010	7.41	654
12×4	0.8	0.05–0.10	1.7	19.2	23.2	0.0085	4.61	887
12×6	0.8	0.05–0.10	1.7	21.2	25.6	0.0070	3.08	1198
14×0.75	0.6	0.05–0.10	1.5	12.2	14.7	0.012	24.5	312
14×1.0	0.6	0.05–0.10	1.5	13.4	16.2	0.011	18.1	398
14×1.5	0.7	0.05–0.10	1.5	15.3	18.5	0.011	12.1	492
14×2.5	0.8	0.05–0.10	1.7	17.8	21.5	0.010	7.41	721
14×4	0.8	0.05–0.10	1.7	20.1	24.3	0.0085	4.61	973
14×6	0.8	0.05–0.10	1.7	22.2	26.9	0.0070	3.08	1203
16×0.75	0.6	0.05–0.10	1.5	13.3	16.1	0.012	24.5	340
16×1.0	0.6	0.05–0.10	1.5	14.0	16.9	0.011	18.1	389
16×1.5	0.7	0.05–0.10	1.5	16.1	19.4	0.011	12.1	489
16×2.5	0.8	0.05–0.10	1.7	19.1	23.1	0.010	7.41	789
19×0.75	0.6	0.05–0.10	1.5	14.0	16.9	0.012	24.5	386
19×1.0	0.6	0.05–0.10	1.5	14.7	17.7	0.011	18.1	413
19×1.5	0.7	0.05–0.10	1.7	16.8	20.4	0.011	12.1	612
19×2.5	0.8	0.05–0.10	1.7	20.1	24.3	0.010	7.41	986
24×0.75	0.6	0.05–0.10	1.5	16.0	19.4	0.012	24.5	476
24×1.0	0.6	0.05–0.10	1.7	16.9	20.4	0.011	18.1	580
24×1.5	0.7	0.05–0.10	1.7	19.9	24.0	0.011	12.1	792
24×2.5	0.8	0.05–0.10	1.7	23.3	28.2	0.010	7.41	1179
27×0.75	0.6	0.05–0.10	1.7	16.3	19.1	0.012	24.5	503

KVVP²型，KVVP³型，ZR-KVVP²型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套铜带（铝塑复合带）屏蔽控制电缆

Type KVVP², KVVP³, ZR-KVVP² 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield (Aluminum-plastic composite belt)

续表3 Table 3

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	铜带厚度（铝塑复合带） Nom thickness of copper tape (Aluminum-plastic composite belt) mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
27×1.0	0.6	0.05–0.10	1.7	17.2	20.8	0.011	18.1	612
27×1.5	0.7	0.05–0.10	1.7	20.3	24.5	0.011	12.1	886
27×2.5	0.8	0.05–0.10	1.7	23.8	28.8	0.010	7.41	1286
30×0.75	0.6	0.05–0.10	1.7	16.9	20.4	0.012	24.5	600
30×1.0	0.6	0.05–0.10	1.7	17.8	21.5	0.011	18.1	725
30×1.5	0.7	0.05–0.10	1.7	21.0	25.3	0.011	12.1	891
30×2.5	0.8	0.05–0.10	1.7	24.6	28.8	0.010	7.41	1384
37×0.75	0.6	0.05–0.10	1.7	18.1	21.9	0.012	24.5	688
37×1.0	0.6	0.05–0.10	1.7	19.5	23.5	0.011	18.1	887
37×1.5	0.7	0.05–0.10	1.7	22.5	27.2	0.011	12.1	1105
37×2.5	0.8	0.05–0.10	2.0	26.5	32.1	0.010	7.41	1681
44×0.75	0.6	0.05–0.10	1.7	20.5	24.8	0.012	24.5	809
44×1.0	0.6	0.05–0.10	1.7	21.7	26.2	0.011	18.1	987
44×1.5	0.7	0.05–0.10	1.7	25.2	30.4	0.011	12.1	1315
44×2.5	0.8	0.05–0.10	2.0	30.3	36.7	0.010	7.41	2018
48×0.75	0.6	0.05–0.10	1.7	20.9	25.2	0.012	24.5	910
48×1.0	0.6	0.05–0.10	1.7	22.0	26.6	0.011	18.1	1028
48×1.5	0.7	0.05–0.10	1.7	25.5	30.9	0.011	12.1	1307
48×2.5	0.8	0.05–0.10	2.0	30.8	37.2	0.010	7.41	2097
52×0.75	0.6	0.05–0.10	1.7	21.4	25.8	0.012	24.5	935
52×1.0	0.6	0.05–0.10	1.7	22.6	27.3	0.011	18.1	1113
52×1.5	0.7	0.05–0.10	2.0	26.2	31.7	0.011	12.1	1493
52×2.5	0.8	0.05–0.10	2.2	31.7	38.2	0.010	7.41	2298
61×0.75	0.6	0.05–0.10	1.7	22.6	27.3	0.012	24.5	1025
61×1.0	0.6	0.05–0.10	1.7	23.9	28.9	0.011	18.1	1250
61×1.5	0.7	0.05–0.10	2.0	28.4	34.3	0.011	12.1	1745
61×2.5	0.8	0.05–0.10	2.2	33.9	41.0	0.010	7.41	2599

KVV²²型，ZR-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

Type KVV²², ZR-KVV²² 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield

表4 Table 4

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	钢带层数×厚度 Nom thickness of copper tape mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
4×2.5	0.8	2×0.2(0.3)	1.5	13.4	16.1	0.010	7.41	
4×4	0.8	2×0.2(0.3)	1.5	14.4	17.4	0.0085	4.61	505
4×6	0.8	2×0.2(0.3)	1.5	15.6	18.8	0.0070	3.08	619
4×10	1.0	2×0.2(0.3)	1.7	19.4	23.5	0.0065	1.83	947
5×2.5	0.8	2×0.2(0.3)	1.5	14.3	17.2	0.010	7.41	
5×4	0.8	2×0.2(0.3)	1.5	15.4	18.6	0.0085	4.61	586
5×6	0.8	2×0.2(0.3)	1.7	16.7	20.2	0.0070	3.08	737
5×10	1.0	2×0.2(0.3)	1.7	21.0	25.4	0.0065	1.83	1125
7×0.75	0.6	2×0.2(0.3)	1.5	11.8	14.2	0.012	24.5	317
7×1.0	0.6	2×0.2(0.3)	1.5	12.2	14.7	0.011	18.1	354
7×1.5	0.7	2×0.2(0.3)	1.5	13.5	16.3	0.011	12.1	425
7×2.5	0.8	2×0.2(0.3)	1.5	15.2	18.4	0.010	7.41	554
7×4	0.8	2×0.2(0.3)	1.5	16.5	20.0	0.0085	4.61	701
7×6	0.8	2×0.2(0.3)	1.7	18.0	21.7	0.0070	3.08	900
7×10	1.0	2×0.2(0.3)	1.7	22.7	27.4	0.0065	1.83	1397
8×0.75	0.6	2×0.2(0.3)	1.5	12.5	15.3	0.012	24.5	344
8×1.0	0.6	2×0.2(0.3)	1.5	13.2	15.9	0.011	18.1	378
8×1.5	0.7	2×0.2(0.3)	1.5	14.7	17.7	0.011	12.1	467
8×2.5	0.8	2×0.2(0.3)	1.5	16.7	20.1	0.010	7.41	614
8×4	0.8	2×0.2(0.3)	1.7	18.2	21.9	0.0085	4.61	789
8×6	0.8	2×0.2(0.3)	1.7	20.2	24.4	0.0070	3.08	989
8×10	1.0	2×0.2(0.3)	1.7	25.2	30.4	0.0065	1.83	1540
10×0.75	0.6	2×0.2(0.3)	1.5	13.8	16.7	0.012	24.5	449
10×1.0	0.6	2×0.2(0.3)	1.5	14.4	17.4	0.011	18.1	558
10×1.5	0.7	2×0.2(0.3)	1.5	16.1	19.5	0.011	12.1	753
10×2.5	0.8	2×0.2(0.3)	1.7	18.8	22.7	0.010	7.41	956
10×4	0.8	2×0.2(0.3)	1.7	20.5	24.8	0.0085	4.61	1203
10×6	0.8	2×0.2(0.3)	1.7	22.5	27.1	0.0070	3.08	
10×10	1.0	2×0.2(0.3)	2.0	29.2	35.3	0.0065	1.83	
12×0.75	0.6	2×0.2(0.3)	1.5	14.1	17.1	0.012	24.5	

KVV22型，ZR-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

Type KVV22,ZR-KVV22 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield

续表4 Table 4

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	钢带层数×厚度 Nom thickness of copper tape mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
12×1.0	0.6	2×0.2(0.3)	1.5	14.8	17.8	0.011	18.1	
12×1.5	0.7	2×0.2(0.3)	1.5	16.6	20.0	0.011	12.1	485
12×2.5	0.8	2×0.2(0.3)	1.7	19.3	23.4	0.010	7.41	609
12×4	0.8	2×0.2(0.3)	1.7	21.1	25.5	0.0085	4.61	829
12×6	0.8	2×0.2(0.3)	1.7	23.1	27.9	0.0070	3.08	1061
14×0.75	0.6	2×0.2(0.3)	1.5	14.7	17.7	0.012	24.5	412
14×1.0	0.6	2×0.2(0.3)	1.5	15.3	18.5	0.011	18.1	530
14×1.5	0.7	2×0.2(0.3)	1.7	17.2	20.8	0.011	12.1	684
14×2.5	0.8	2×0.2(0.3)	1.7	20.1	24.3	0.010	7.41	913
14×4	0.8	2×0.2(0.3)	1.7	22.0	26.6	0.0085	4.61	1171
14×6	0.8	2×0.2(0.3)	1.7	24.2	29.2	0.0070	3.08	1508
16×0.75	0.6	2×0.2(0.3)	1.5	15.3	18.5	0.012	24.5	576
16×1.0	0.6	2×0.2(0.3)	1.5	16.0	19.3	0.011	18.1	745
16×1.5	0.7	2×0.2(0.3)	1.7	18.0	21.7	0.011	12.1	1005
16×2.5	0.8	2×0.2(0.3)	1.7	21.1	25.5	0.010	7.41	1350
19×0.75	0.6	2×0.2(0.3)	1.5	15.9	19.2	0.012	24.5	646
19×1.0	0.6	2×0.2(0.3)	1.7	16.6	20.1	0.011	18.1	824
19×1.5	0.7	2×0.2(0.3)	1.7	19.2	23.1	0.011	12.1	1199
19×2.5	0.8	2×0.2(0.3)	1.7	22.0	26.6	0.010	7.41	1480
24×0.75	0.6	2×0.2(0.3)	1.7	18.0	21.7	0.012	24.5	776
24×1.0	0.6	2×0.2(0.3)	1.7	19.2	23.2	0.011	18.1	1001
24×1.5	0.7	2×0.2(0.3)	1.7	21.8	26.3	0.011	12.1	1376
24×2.5	0.8	2×0.2(0.3)	1.7	25.6	31.0	0.010	7.41	1590
27×0.75	0.6	2×0.2(0.3)	1.7	18.7	22.5	0.012	24.5	821
27×1.0	0.6	2×0.2(0.3)	1.7	19.5	23.6	0.011	18.1	1063
27×1.5	0.7	2×0.2(0.3)	1.7	22.2	26.8	0.011	12.1	1480
27×2.5	0.8	2×0.2(0.3	1.7	26.1	31.6	0.010	7.41	1730
30×0.75	0.6	2×0.2(0.3)	1.7	19.2	23.2	0.012	24.5	833
30×1.0	0.6	2×0.2(0.3)	1.7	20.1	24.3	0.011	18.1	1550
30×1.5	0.7	2×0.2(0.3)	1.7	22.9	27.6	0.011	12.1	1808
30×2.5	0.8	2×0.2(0.3)	1.7	27.0	32.6	0.010	7.41	2050

KVV22型，ZR-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

Type KVV22,ZR-KVV22 450/750V Copper conductor PVC insulated and sheathed control cable with copper tape shield

续表4 Table 4

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	钢带层数×厚度 Nom thickness of copper tape mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km	近似重量 Approx weight (kg/km)
				下限min	上限max.			
37×0.75	0.6	2×0.2(0.3)	1.7	20.4	24.7	0.012	24.5	1013
37×1.0	0.6	2×0.2(0.3)	1.7	21.4	25.9	0.011	18.1	1331
37×1.5	0.7	2×0.2(0.3)	1.7	24.4	29.5	0.011	12.1	2139
37×2.5	0.8	2×0.2(0.3)	2.0	29.4	35.6	0.010	7.41	2370
44×0.75	0.6	2×0.2(0.3)	1.7	22.5	27.1	0.012	24.5	1120
44×1.0	0.6	2×0.2(0.3)	1.7	23.6	28.5	0.011	18.1	1584
44×1.5	0.7	2×0.2(0.3)	2.0	28.0	33.9	0.011	12.1	2320
44×2.5	0.8	2×0.5	2.0	33.0	39.9	0.010	7.41	2532
48×0.75	0.6	2×0.2(0.3)	1.7	22.8	27.5	0.012	24.5	1160
48×1.0	0.6	2×0.2(0.3)	1.7	24.0	28.9	0.011	18.1	1630
48×1.5	0.7	2×0.5	2.0	28.4	34.4	0.011	12.1	2530
48×2.5	0.8	2×0.5	2.2	33.5	40.5	0.010	7.41	2662
52×0.75	0.6	2×0.2(0.3)	1.7	23.3	28.2	0.012	24.5	1210
52×1.0	0.6	2×0.2(0.3)	1.7	24.5	29.6	0.011	18.1	1750
52×1.5	0.7	2×0.5	2.0	29.1	35.2	0.011	12.1	2580
52×2.5	0.8	2×0.5	2.2	35.5	42.9	0.010	7.41	2710
61×0.75	0.6	2×0.2(0.3)	1.7	24.5	29.6	0.012	24.5	1280
61×1.0	0.6	2×0.2(0.3)	1.7	26.2	31.7	0.011	18.1	1930
61×1.5	0.7	2×0.5	2.0	30.7	37.1	0.011	12.1	2770
61×2.5	0.8	2×0.5	2.2	37.4	45.2	0.010	7.41	3175

KVVR型，ZR-KVVR型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆

Type KVVR, ZR-KVVR 450/750V Copper conductor PVC insulated and sheathed flexible control cable

表5 Table 5

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km
			下限min	上限max.		
4×0.5	0.6	1.2	7.3	9.2	0.013	39.0
4×0.75	0.6	1.2	7.6	9.6	0.011	26.0
4×1.0	0.6	1.2	8.0	10.0	0.010	19.5
4×1.5	0.7	1.2	9.0	11.3	0.010	13.3

KVVR型，ZR-KVVR型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆

Type KVVR, ZR-KVVR 450/750V Copper conductor PVC insulated and sheathed flexible control cable

续表5 Table 5

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resis-tance of at 20℃ MΩ/km
			下限min	上限max.		
4×2.5	0.8	1.2	10.5	13.1	0.009	7.98
5×0.5	0.6	1.2	7.9	9.9	0.013	39.0
5×0.75	0.6	1.2	8.3	10.3	0.011	26.0
5×1.0	0.6	1.2	8.6	10.8	0.010	19.5
5×1.5	0.7	1.2	9.8	12.2	0.010	13.3
5×2.5	0.8	1.5	11.5	14.3	0.009	7.98
7×0.5	0.6	1.2	8.5	10.6	0.013	39.0
7×0.75	0.6	1.2	8.9	11.1	0.011	26.0
7×1.0	0.6	1.2	9.3	11.7	0.010	19.5
7×1.5	0.7	1.2	10.6	13.2	0.010	13.3
7×2.5	0.8	1.5	13.1	16.2	0.009	7.98
8×0.5	0.6	1.2	9.4	11.7	0.013	39.0
8×0.75	0.6	1.2	9.9	12.3	0.011	26.0
8×1.0	0.6	1.2	10.4	12.9	0.010	19.5
8×1.5	0.7	1.5	12.5	15.4	0.010	13.3
8×2.5	0.8	1.5	14.6	18.0	0.009	7.98
10×0.5	0.6	1.2	10.5	13.1	0.013	39.0
10×0.75	0.6	1.2	11.1	13.8	0.011	26.0
10×1.0	0.6	1.5	12.3	15.2	0.010	19.5
10×1.5	0.7	1.5	14.0	17.3	0.010	13.3
10×2.5	0.8	1.5	16.5	20.3	0.009	7.98
12×0.5	0.6	1.2	10.9	13.5	0.013	39.0
12×0.75	0.6	1.5	11.5	14.2	0.011	26.0
12×1.0	0.6	1.5	12.7	15.7	0.010	19.5
12×1.5	0.7	1.5	14.4	17.8	0.010	13.3
12×2.5	0.8	1.5	17.0	21.0	0.009	7.98
14×0.5	0.6	1.2	11.4	14.1	0.013	39.0
14×0.75	0.6	1.5	12.6	15.6	0.011	26.0
14×1.0	0.6	1.5	13.2	16.4	0.010	19.5
14×1.5	0.7	1.5	15.1	18.7	0.010	13.3

KVVR型，ZR-KVVR型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆

Type KVVR, ZR-KVVR 450/750V Copper conductor PVC insulated and sheathed flexible control cable

续表5 Table 5

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resis-tance of at 20℃ MΩ/km
			下限min	上限max.		
14×2.5	0.8	1.5	17.9	22.0	0.009	7.98
16×0.5	0.6	1.5	12.6	15.5	0.013	39.0
16×0.75	0.6	1.5	13.2	16.4	0.011	26.0
16×1.0	0.6	1.5	13.9	17.2	0.010	19.5
16×1.5	0.7	1.5	16.0	19.6	0.010	13.3
16×2.5	0.8	1.7	19.3	23.6	0.009	7.98
19×0.5	0.6	1.5	13.2	16.3	0.013	39.0
19×0.75	0.6	1.5	13.9	17.2	0.011	26.0
19×1.0	0.6	1.5	14.6	18.0	0.010	19.5
19×1.5	0.7	1.5	16.8	20.6	0.010	13.3
19×2.5	0.8	1.7	20.3	24.9	0.009	7.98
24×0.5	0.6	1.5	15.3	18.8	0.013	39.0
24×0.75	0.6	1.5	16.1	19.8	0.011	26.0
24×1.0	0.6	1.5	17.0	20.9	0.010	19.5
24×1.5	0.7	1.7	20.0	24.5	0.010	13.3
24×2.5	0.8	1.7	23.7	29.0	0.009	7.98
27×0.5	0.6	1.5	15.6	19.2	0.013	39.0
27×0.75	0.6	1.5	16.4	20.2	0.011	26.0
27×1.0	0.6	1.5	17.3	21.3	0.010	19.5
27×1.5	0.7	1.7	20.4	25.0	0.010	13.3
27×2.5	0.8	1.7	24.2	29.6	0.009	7.98
30×0.5	0.6	1.5	16.1	19.8	0.013	39.0
30×0.75	0.6	1.5	17.0	20.9	0.011	26.0
30×1.0	0.6	1.7	17.9	22.0	0.010	19.5
30×1.5	0.7	1.7	21.1	25.9	0.010	13.3
30×2.5	0.8	1.7	25.1	30.7	0.009	7.98
37×0.5	0.6	1.5	17.3	21.3	0.013	39.0
37×0.75	0.6	1.7	18.7	23.0	0.011	26.0
37×1.0	0.6	1.7	19.7	24.2	0.010	19.5
37×1.5	0.7	1.7	22.7	27.8	0.010	13.3

KVVR型，ZR-KVVR型450/750V铜芯聚氯乙烯绝缘聚氯乙烯护套控制软电缆

Type KVVR, ZR-KVVR 450/750V Copper conductor PVC insulated and sheathed flexible control cable

续表5 Table 5

芯数×标称截面 Cross×Nom cross-sectional area mm²	绝缘标称厚度 Nom thickness of insulation mm	护套标称厚度 Nom thickness of sheath mm	平均外径 Pitch diameter mm		最小绝缘电阻 Min resistance of insulation at 70℃ MΩ/.km	最大直流电阻 Max.D.C resistance of at 20℃ MΩ/km
			下限min	上限max.		
37×2.5	0.8	1.7	27.7	33.8	0.009	7.98
44×0.5	0.6	1.7	19.8	24.2	0.013	39.0
44×0.75	0.6	1.7	20.9	25.6	0.011	26.0
44×1.0	0.6	1.7	22.1	27.0	0.010	19.5
44×1.5	0.7	1.7	25.5	31.2	0.010	13.3
44×2.5	0.8	2.0	31.1	37.9	0.009	7.98
48×0.5	0.6	1.7	20.1	24.6	0.013	39.0
48×0.75	0.6	1.7	21.2	26.0	0.011	26.0
48×1.0	0.6	1.7	22.4	27.5	0.010	19.5
48×1.5	0.7	1.7	25.9	31.7	0.010	13.3
48×2.5	0.8	2.0	31.6	38.5	0.009	7.98
52×0.5	0.6	1.7	20.6	25.3	0.013	39.0
52×0.75	0.6	1.7	21.8	26.7	0.011	26.0
52×1.0	0.6	1.7	23.0	28.2	0.010	19.5
52×1.5	0.7	1.7	26.7	32.6	0.010	13.3
52×2.5	0.8	2.0	32.9	40.1	0.009	7.98
61×0.5	0.6	1.7	21.8	26.7	0.013	39.0
61×0.75	0.6	1.7	23.1	28.3	0.011	26.0
61×1.0	0.6	1.7	24.4	29.9	0.010	19.5
61×1.5	0.7	2.0	28.9	35.3	0.010	13.3
61×2.5	0.8	2.2	34.9	42.5	0.009	7.98