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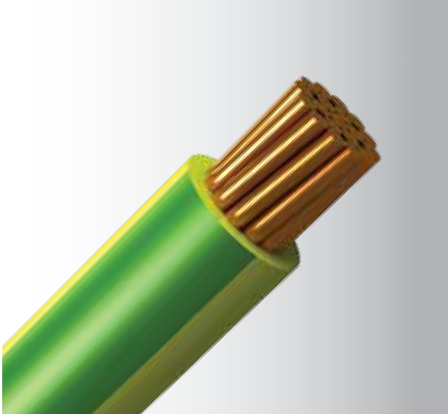
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PVC Insulated, Non-Sheathed Cable

## PVC-Insulated Cables

450/750V Single-Core



Application :	This cable is used in light fitting, and in switching and control equipment. It can be installed in conduit, in cable trunking and on cable trays
Voltage rating :	450/750V
Construction :	Plain annealed copper, PVC insulated cable
Insulation colour :	Brown, Black, Grey, Blue, Green/Yellow (other colour upon request)
Specification :	SS358-3, IEC60227-3, BS EN 50525-2-31
Operating temperature:	70°C

Nominal Area (mm <sup>2</sup> )	Conductor		Insulation	Approx. Overall Diam. (mm)	Approx. Weight (kg/km)
	No./Diam. of Strand (no./mm)	Approx. Diam. (mm)	Thickness (mm)		
1.5	7/0.53	1.59	0.7	3.1	22
2.5	7/0.67	2.01	0.8	3.7	34
4	7/0.85	2.55	0.8	4.3	50
6	7/1.04	3.12	0.8	4.8	70
10	7/1.35	4.05	1.0	6.2	124
16	7/1.70	5.10	1.0	7.2	183
25	7/2.14	6.42	1.2	9.0	280
35	19/1.53	7.65	1.2	10.0	380
50	19/1.78	8.90	1.4	12.0	500
70	19/2.14	10.70	1.4	13.7	715
95	19/2.52	12.60	1.6	16.0	990
120	37/2.03	14.21	1.6	17.5	1,220
150	37/2.25	15.75	1.8	19.5	1,500
185	37/2.52	17.64	2.0	22.0	1,890
240	61/2.25	20.25	2.2	25.0	2,460
300	61/2.52	22.68	2.4	28.0	3,080
400	61/2.85	25.65	2.6	31.5	3,920
500	61/3.20	28.80	2.8	35.0	4,920



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630

127/2.52

32.76

2.8

39.0

6,260

## Current Rating and Voltage Drop

PVC Insulated Cables  
Single-Core, Unarmoured

Single-Core Cables with PVC Insulation, Unarmoured, with or without Sheath 450/750V or 600/1000V

**Table 2 : Current-Carrying Capacities (Amp) [CU/PVC or CU/PVC/PVC Cables]**

BS EN 50525-2-31 (BS 6004)

IEC 60502 (BS 6346)

SS 358

Conductor Operating Temperature : 70°C

Ambient Temperature : 30°C

Conductor cross-sectional area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc.)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc.)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray horizontal or vertical)		Reference Method 12 (free air)		
	2 cables, single-phase a.c. or d.c.	3 or 4 cables, three phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, three-phase a.c.	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, three-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or flat and touching	3 or 4 cable three-phase a.c. flat and touching or trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil
									2 cables, single-phase a.c. or d.c. or 3 cables three-phase a.c.	2 cables, single-phase a.c. or d.c. or 3 cables three phase a.c.	3 cables, trefoil three phase a.c.
1 mm <sup>2</sup>	2	3	4	5	6	7	8	9	10	11	12
<b>BS 6004</b>											
1	11	10,5	13,5	12	15,5	14	-	-	-	-	-
1,5	14,5	13,5	17,5	15,5	20	18	-	-	-	-	-
2,5	19,5	18	24	21	27	25	-	-	-	-	-
4	26	24	32	28	37	33	-	-	-	-	-
6	34	31	41	36	47	43	-	-	-	-	-
10	46	42	57	50	65	59	-	-	-	-	-
16	61	56	76	68	87	79	-	-	-	-	-
25	80	73	101	89	114	104	126	112	146	130	110
35	99	89	125	110	141	129	156	141	181	162	137
<b>BS 6346</b>											
50	119	108	151	134	182	167	191	172	219	197	167
70	151	136	192	171	234	214	246	223	281	254	216
95	182	164	232	207	284	261	300	273	341	311	264
120	210	188	269	239	330	303	349	318	396	362	308
150	240	216	300	262	381	349	404	369	456	419	356
185	273	245	341	296	436	400	463	424	521	480	409
240	320	286	400	346	515	472	549	504	615	569	485
300	367	328	458	394	594	545	635	584	709	659	561
400	-	-	546	467	694	634	732	679	852	795	656
500	-	-	626	533	792	723	835	778	982	920	749
630	-	-	720	611	904	826	953	892	1138	1070	855
800	-	-	-	-	1030	943	1086	1020	1265	1188	971
1000	-	-	-	-	1154	1058	1216	1149	1420	1337	1079

Note : For rating factors of ambient temperature other than 30°C please refer to Table 25

**Table 3 : Voltage Drop (Per Amp, Per Meter) [CU/PVC or CU/PVC/PVC Cables]**

BS EN 50525-2-31 (BS 6004)



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Conductor Operating Temperature : 70°C  
Ambient Temperature : 30°C

IEC60502-1 (BS6346)  
SS 358

Conductor cross-sectional area	2 cables d.c.	2 cables single-phase a.c.			3 or 4 cables three-phase a.c.																	
		Reference Methods 3 & 4 (enclosed in conduit etc, in or on a wall)	Reference Methods 1 & 11 (clipped direct or on trays, touching)	Reference Method 12 (space)	Reference Methods 3 & 4 (enclosed in conduit etc, in or on a wall)	Reference Methods 1, 11 & 12 (in trefoil)	Reference Methods 1 & 11 (flat touching)	Reference Method 12 (flat spaced)														
1	2	3	4	5	6	7	8	9														
mm <sup>2</sup>	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m														
1	.44	.44	.44	.44	.38	.38	.38	.38														
1.5	.29	.29	.29	.29	.25	.25	.25	.25														
2.5	.18	.18	.18	.18	.15	.15	.15	.15														
4	.11	.11	.11	.11	.9.5	.9.5	.9.5	.9.5														
6	.7.3	.7.3	.7.3	.7.3	.6.4	.6.4	.6.4	.6.4														
10	4.4	4.4	4.4	4.4	3.8	3.8	3.8	3.8														
16	2.8	2.8	2.8	2.8	2.4	2.4	2.4	2.4														
	r	x	z	r	x	z	r	x	z													
25	1.75	1.80	0.33	1.80	1.75	0.20	1.75	1.75	0.29	1.80	1.50	0.29	1.55	1.50	0.175	1.50	1.50	0.25	1.55	1.50	0.32	1.5
35	1.25	1.30	0.31	1.30	1.25	0.195	1.25	1.25	0.28	1.30	1.10	0.27	1.10	1.10	0.170	1.10	1.10	0.24	1.10	1.10	0.32	1.1
50	0.93	0.95	0.30	1.00	0.93	0.190	0.95	0.93	0.28	0.97	0.81	0.26	0.85	0.80	0.165	0.82	0.80	0.24	0.84	0.80	0.32	0.8
70	0.63	0.65	0.29	0.72	0.63	0.185	0.66	0.63	0.27	0.69	0.56	0.25	0.61	0.55	0.160	0.57	0.55	0.24	0.60	0.55	0.31	0.6
95	0.46	0.49	0.28	0.56	0.47	0.180	0.50	0.47	0.27	0.54	0.42	0.24	0.48	0.41	0.155	0.43	0.41	0.23	0.47	0.40	0.31	0.5
120	0.36	0.39	0.27	0.47	0.37	0.175	0.41	0.37	0.26	0.45	0.33	0.23	0.41	0.32	0.150	0.36	0.32	0.23	0.40	0.32	0.30	0.4
150	0.29	0.31	0.27	0.41	0.30	0.175	0.34	0.29	0.26	0.39	0.27	0.23	0.36	0.26	0.150	0.30	0.26	0.23	0.34	0.26	0.30	0.4
185	0.23	0.25	0.27	0.37	0.24	0.170	0.29	0.24	0.26	0.35	0.22	0.23	0.32	0.21	0.145	0.26	0.21	0.22	0.31	0.21	0.30	0.3
240	0.180	0.195	0.26	0.33	0.185	0.165	0.25	0.185	0.25	0.31	0.17	0.23	0.29	0.160	0.145	0.22	0.160	0.22	0.27	0.160	0.29	0.3
300	0.145	0.160	0.26	0.31	0.150	0.165	0.22	0.150	0.25	0.29	0.14	0.23	0.27	0.130	0.140	0.190	0.130	0.22	0.25	0.130	0.29	0.3
400	0.105	0.130	0.26	0.29	0.120	0.160	0.20	0.115	0.25	0.27	0.12	0.22	0.25	0.105	0.140	0.175	0.105	0.21	0.24	0.100	0.29	0.3
500	0.086	0.110	0.26	0.28	0.098	0.155	0.185	0.093	0.24	0.26	0.10	0.22	0.25	0.086	0.135	0.160	0.086	0.21	0.23	0.081	0.29	0.3
630	0.068	0.094	0.25	0.27	0.081	0.155	0.175	0.076	0.24	0.25	0.08	0.22	0.24	0.072	0.135	0.150	0.072	0.21	0.22	0.066	0.28	0.2
800	0.053	-	-	-	0.068	0.150	0.165	0.061	0.24	0.25	-	-	-	0.060	0.130	0.145	0.060	0.21	0.22	0.053	0.28	0.2
1000	0.042	-	-	-	0.059	0.150	0.160	0.050	0.24	0.24	-	-	-	0.052	0.130	0.140	0.052	0.20	0.21	0.044	0.28	0.28

Note : r = conductor resistance at operating temperature, x = reactance, z = impedance