

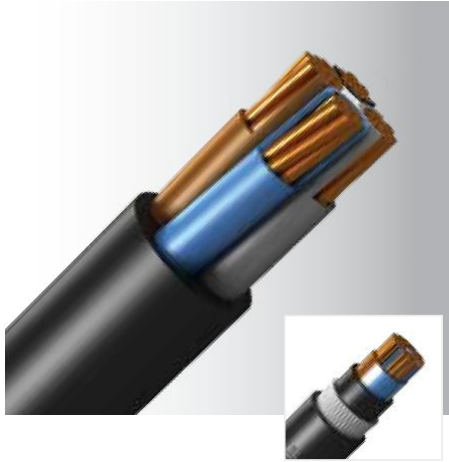
PVC-Insulated Cables

600/1000V 2-Core ~ 4-Core

PVC Insulated, Unarmoured & Armoured, PVC Sheathed Cable

Description: CU/PVC/PVC or CU/PVC/PVC/SWA/PVC-AT

Model Code: PP or PPSP-AT



Application :	This cable is primarily used for main power supply. It can be installed in cable ducts, on cable trays, on cable ladders and in cable trunking. The armoured cable is ideal for ground emplacement if a higher electrical or mechanical protection is required
Voltage rating :	600/1000V
Construction :	Plain annealed copper, PVC insulated, unarmoured or galvanized steel wires armoured, PVC or Anti-termite PVC (for armoured cable only) sheathed cable
Insulation Colour :	2-Core: (Brown & Blue) 3-Core: (Brown, Black & Grey) 4-Core: (Brown, Black, Grey & Blue) (other colour upon request)
Sheath colour :	Black
Specification :	IEC60502-1
Operating Temperature:	70°C

2-CORE

Conductor Nominal Area (mm ²)	Insulation Thickness (mm)	Unarmoured Cable			Armoured Cable		
		Part No.	Approx. Overall Diam. (mm)	Approx. Weight (kg/km)	Part No.	Approx. Overall Diam. (mm)	Approx. Weight (kg/km)
1.5	0.8	07023004	11.2	150	07023052	14.9	397
2.5	0.8	08023004	11.6	180	08023052	15.7	440
4	1.0	09023004	13.7	260	09023052	17.6	547
6	1.0	10023004	15.2	290	10023052	19.5	734
10	1.0	11023004	16.8	385	11023052	21.3	898
16	1.0	12023004	18.8	528	12023052	23.4	1100
25 (cs)	1.2	13023004	22.0	761	13023052	27.5	1573
35 (cs)	1.2	14023004	24.4	983	14023052	29.8	1887
50 (cs)	1.4	15023004	27.7	1288	15023052	33.3	2321
70 (cs)	1.4	16023004	31.6	1772	16023052	38.0	3210
95 (cs)	1.6	17023004	36.2	2397	17023052	43.3	4096
120 (cs)	1.6	18023004	38.8	2934	18023052	45.9	4755
150 (cs)	1.8	19023004	42.7	3562	19023052	50.8	5985
185 (cs)	2.0	20023004	47.6	4445	20023052	56.2	7196
240 (cs)	2.2	21023004	54.0	5751	21023052	62.7	8860
300 (cs)	2.4	22023004	60.2	7166	22023052	69.1	10677
400 (cs)	2.6	23023004	67.6	9082	23023052	76.8	13018

PVC-Insulated Cables

600/1000V 2-Core ~ 4-Core

PVC Insulated, Unarmoured & Armoured, PVC Sheathed Cable

Description: CU/PVC/PVC or CU/PVC/PVC/SWA/PVC-AT

Model Code: PP or PPSP-AT

3-CORE							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
Nominal Area	Thickness	Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.8	07033005	11.3	165	07033017	15.4	433
2.5	0.8	08033005	12.3	200	08033017	16.3	493
4	1.0	09033005	14.2	300	09033017	19.1	728
6	1.0	10033005	15.8	380	10033017	20.3	840
10	1.0	11033005	17.7	545	11033017	22.3	1048
16	1.0	12033005	20.0	760	12033017	24.6	1321
25 (cs)	1.2	13033005	23.1	1046	13033017	28.5	1914
35 (cs)	1.2	14033005	26.0	1365	14033017	31.0	2326
50 (cs)	1.4	15033005	30.1	1822	15033017	36.0	2967
70 (cs)	1.4	16033005	33.7	2494	16033017	40.8	4100
95 (cs)	1.6	17033005	38.9	3412	17033017	45.7	5209
120 (cs)	1.6	18033005	41.7	4190	18033017	48.5	6110
150 (cs)	1.8	19033005	45.9	5096	19033017	54.4	7750
185 (cs)	2.0	20033005	51.2	6364	20033017	59.7	9300
240 (cs)	2.2	21033005	58.2	8282	21033017	67.1	11657
300 (cs)	2.4	22033005	64.6	10295	22033017	73.8	14082
400 (cs)	2.6	23033005	72.8	13098	23033017	83.3	18298

4-CORE							
Conductor	Insulation	Unarmoured Cable			Armoured Cable		
Nominal Area	Thickness	Part No.	Approx. Overall Diam.	Approx. Weight	Part No.	Approx. Overall Diam.	Approx. Weight
(mm ²)	(mm)		(mm)	(kg/km)		(mm)	(kg/km)
1.5	0.8	07043006	12.3	210	07043018	16.3	485
2.5	0.8	08043006	13.2	265	08043018	17.3	562
4	1.0	09043006	15.2	385	09043018	20.3	830
6	1.0	10043006	16.9	440	10043018	21.7	976
10	1.0	11043006	19.3	675	11043018	24.0	1229
16	1.0	12043006	21.9	925	12043018	27.2	1738
25 (cs)	1.2	13043006	25.5	1320	13043018	30.7	2290
35 (s)	1.2	14043007	26.5	1740	14043055	31.4	2850
50 (s)	1.4	15043007	30.0	2300	15043055	35.9	3709
70 (s)	1.4	16043007	34.0	3180	16043055	39.4	4672
95 (s)	1.6	17043007	38.3	4370	17043055	46.8	6471
120 (s)	1.6	18043007	41.8	5400	18043055	51.0	7741
150 (s)	1.8	19043007	47.5	6550	19043055	55.2	9183
185 (s)	2.0	20043007	52.0	8180	20043055	58.8	10776
240 (s)	2.2	21043007	58.0	10700	21043055	68.2	13893
300 (s)	2.4	22043007	66.0	13200	22043055	74.0	17444
400 (s)	2.6	23043007	73.5	17100	23043055	85.5	22340

Current Rating and Voltage Drop

PVC Insulated Cables
Multi-Core, Unarmoured

Multi-Core Cables with PVC Insulation, Unarmoured, PVC Outersheath 600/1000V

Table 6 : Current-Carrying Capacities (Amp) [CU/PVC/PVC Cables]

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

BS EN 50525-2-31 (BS 6004)
IEC 60502-1 (BS 6346)

Conductor cross-sectional area	Reference Method 4 (enclosed in an insulated wall etc)		Reference Method 3 (enclosed in conduit on a wall or ceiling, or in trunking)		Reference Method 1 (clipped direct)		Reference Method 11 (on perforated cable tray), or Reference Method 13 (free air)	
	one 2-core cable* single-phase a.c. or d.c.	one 3-core cable* or one 4-core cable 3-phase a.c.	one 2-core cable* single-phase a.c. or d.c.	one 3-core cable* or one 4-core cable 3-phase a.c.	one 2-core cable* single-phase a.c. or d.c.	one 3-core cable* or one 4-core cable 3-phase a.c.	one 2-core cable* single-phase a.c. or d.c.	one 3-core cable* or one 4-core cable 3-phase a.c.
1	2	3	4	5	6	7	8	9
mm ²	A	A	A	A	A	A	A	A
1	11	10	13	11.5	15	13.5	17	14.5
1.5	14	13	16.5	15	19.5	17.5	22	18.5
2.5	18.5	17.5	23	20	27	24	30	25
4	25	23	30	27	36	32	40	34
6	32	29	38	34	46	41	51	43
10	43	39	52	46	63	57	70	60
16	57	52	69	62	85	76	94	80
25	75	68	90	80	112	96	119	101
35	92	83	111	99	138	119	148	126
50	110	99	133	118	168	144	180	153
70	139	125	168	149	213	184	232	196
95	167	150	201	179	258	223	282	238
120	192	172	232	206	299	259	328	276
150	219	196	258	225	344	299	379	319
185	248	223	294	255	392	341	434	364
240	291	261	344	297	461	403	514	430
300	334	298	394	339	530	464	593	497
400	-	-	470	402	634	557	715	597

* With or without protective conductor

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

Table 7 : Voltage Drop (Per Amp Per Meter) [CU/PVC/PVC Cables]

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

Conductor cross-sectional	2-core cable a.c.	2-core cable single-phase a.c.			3-core or 4-core cable 3-phase a.c.		
		1	3	4	1	3	4
mm ²	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	38			
1.5	29	29	29	25			
2.5	18	18	18	15			
4	11	11	11	9.5			
6	7.3	7.3	7.3	6.4			
10	4.4	4.4	4.4	3.8			
16	2.8	2.8	2.8	2.4			
		r	x	z	r	x	z
25	1.75	1.75	0.170	1.75	1.50	0.145	1.50
35	1.25	1.25	0.165	1.25	1.10	0.145	1.10
50	0.93	0.93	0.165	0.94	0.80	0.140	0.81
70	0.63	0.63	0.160	0.65	0.55	0.140	0.57
95	0.46	0.47	0.155	0.50	0.41	0.135	0.43
120	0.36	0.38	0.155	0.41	0.33	0.135	0.35

150	0.29	0.30	0.155	0.34	0.26	0.130	0.29
185	0.23	0.25	0.150	0.29	0.21	0.130	0.25
240	0.180	0.190	0.150	0.24	0.165	0.130	0.21
300	0.145	0.155	0.145	0.21	0.135	0.130	0.185
400	0.105	0.115	0.145	0.185	0.100	0.125	0.160

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

Current Rating and Voltage Drop

PVC Insulated Cables
Multi-Core, Armoured

Multi-Core Cables with PVC Insulation, Armoured, PVC Outersheathed 600/1000V

Table 8 : Current-Carrying Capacities (Amp) [CU/PVC/PVC/SWA/PVC Cables]

Conductor Operating Temperature : 70°C

IEC 60502-1 (BS6346)

Ambient Temperature : 30°C

Depth of Laying : 0.5m

Ground Temperature : 15°C

Soil Thermal Resistivity : 1.2 k•m/W

Conductor cross-sectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray or Reference Method 13 [free air])		Direct in ground		In single way ducts	
	one 2-core cable single-phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	one 2-core cable single-phase a.c. or d.c.	one 3-core or 4-core cable 3-phase a.c.	2-core	3-core or 4-core	2-core	3-core or 4-core
1	2	3	4	5	6	7	8	9
mm ²	A	A	A	A	A	A	A	A
1.5	21	18	22	19	32	27	26	22
2.5	28	25	31	26	41	35	34	29
4	38	33	41	35	55	47	45	38
6	49	42	53	45	69	59	57	48
10	67	58	72	62	92	78	76	64
16	89	77	97	83	119	101	98	83
25	118	102	128	110	158	132	129	107
35	145	125	157	135	190	159	154	126
50	175	151	190	163	225	188	183	153
70	222	192	241	207	277	233	225	190
95	269	231	291	251	332	279	271	228
120	310	267	336	290	377	317	309	260
150	356	306	386	332	422	355	346	292
185	405	348	439	378	478	401	393	331
240	476	409	516	445	551	462	455	382
300	547	469	592	510	616	517	510	428
400	621	540	683	590	693	580	574	490

Note : For rating factors of ambient temperature other than 30°C please refer to Table 25
For rating factors of group temperature other than 15°C please refer to Table 30
For group rating factors please refer to Table 27

Table 9 : Voltage Drop (Per Amp Per Meter) [CU/PVC/PVC/SWA/PVC Cables]

Conductor Operating Temperature : 70°C

IEC 60502-1 (BS6346)

Ambient Temperature : 30°C

Depth of Laying : 0.5m

Ground Temperature : 15°C

Soil Thermal Resistivity : 1.2 k•m/W

Conductor cross-sectional area	2-core cable a.c.	2-core cable single-phase a.c.	3-core or 4-core cable 3-phase a.c.	Direct in ground		In single way ducts	
				2-core	3-core or 4-core	2-core	3-core or 4-core
1	2	3	4	5	6	7	8
mm ²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.5	29	29	25	29	25	29	25
2.5	18	18	15	18	15	18	15
4	11	11	9.5	11	9.5	11	9.5
6	7.3	7.3	6.4	7.4	6.4	7.4	6.4
10	4.4	4.4	3.8	4.4	3.8	4.4	3.8
16	2.8	2.8	2.4	2.8	2.4	2.8	2.4

	1.75	r	0.17	1.75	1.5	0.145	1.5				
25	1.25	1.75	0.165	1.25	1.1	0.145	1.1	1.7	1.5	1.7	1.5
35	0.93	1.25	0.165	0.94	0.8	0.14	0.81	1.3	1.1	1.3	1.1
50	0.63	0.93	0.16	0.65	0.55	0.14	0.57	0.94	0.82	0.94	0.82
70	0.46	0.63	0.155	0.5	0.41	0.135	0.43	0.66	0.57	0.66	0.57
95	0.36	0.47	0.155	0.41	0.33	0.135	0.35	0.49	0.42	0.49	0.42
120	0.29	0.38	0.155	0.34	0.26	0.13	0.29	0.4	0.35	0.40	0.35
150	0.23	0.30	0.15	0.29	0.21	0.13	0.25	0.34	0.29	0.34	0.29
185	0.18	0.25	0.15	0.24	0.165	0.13	0.21	0.29	0.25	0.29	0.25
240	0.145	0.19	0.145	0.21	0.135	0.13	0.185	0.24	0.21	0.24	0.21
300	0.105	0.155	0.145	0.185	0.1	0.125	0.16	0.21	0.18	0.21	0.18
400		0.115						0.19	0.17	0.19	0.17

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