



Single Wire Armoured Cable PVC 694_X

PVC 694_X DIMENSIONS

A 600/1000 Volt PVC sheathed energy distribution cable with steel wire mechanical protection, for use on fixed installations in industrial environments. The cable may be installed in air, on tray, clipped direct to surface or directly buried in the ground.

Armoured cables are durable and weather resistant, available in a range of core configurations, cross sections and voltage categories.

CONSTRUCTION

Plain stranded copper conductor with cross linked polyethylene (XLPE) insulation, cores laid up, PVC extruded inner sheath, a single layer of galvanised steel wire (aluminium wires for single cores) and PVC sheathed black overall.

TECHNICAL DATA

BS 5467, IEC 60502-1

Nominal Voltage	600/1000V
Test Voltage	5000V
Operating Temperature	-15°C to +90°C
Bending Radius	6 x O/D circular conductors 8 x O/D shaped conductors
Flame Propagation	BS EN 60332-1-2
Current Rating Table	4E4A & 4E4B

NOTES: Minimum installation temperature 0°C



Core identification chart -	
● ●	2 core: Blue - Brown
● ● ●	3 core: Brown - Black - Grey
● ● ● ●	4 core: Blue - Brown - Black - Grey
● ● ● ● ●	5 core: Blue - Brown - Black - Grey - Green/Yellow
○ ○ ○ ○ ○ ○ ○ ○	7-48 core: White cores with black numbers

Single Core x mm²	Nom OD mm	Weight kg / km
50.0	17.5	758
70.0	20.2	960
95.0	22.3	1240
120.0	24.2	1510
150.0	27.4	1900
185.0	30.0	2320
240.0	32.8	2930
300.0	35.6	3580
400.0	40.4	4600
500.0	44.2	5770
630.0	48.8	7250

Cores x mm²	Nom OD mm	Weight kg / km
2 x 1.5	12.1	302
2 x 2.5	13.6	346
2 x 4.0	14.7	410
2 x 6.0	15.9	499
2 x 10.0	17.0	648
2 x 16.0	20.2	978
2 x 25.0*	20.4	1290
2 x 35.0*	23.3	1500
2 x 50.0*	25.8	1890
2 x 70.0*	29.0	2450
2 x 95.0*	33.1	3300
2 x 120.0*	36.1	3800
3 x 1.5	12.6	330
3 x 2.5	14.0	390
3 x 4.0	15.3	464
3 x 6.0	16.6	568
3 x 10.0	19.0	866
3 x 16.0	21.6	1152
3 x 25.0	20.0	1800
3 x 35.0	28.0	2230
3 x 50.0*	29.5	2490
3 x 70.0*	33.2	3290
3 x 95.0*	37.0	4440
3 x 120.0*	40.0	5470
3 x 150.0*	45.5	6930
3 x 185.0*	49.8	8040
3 x 240.0*	55.1	10150
4 x 1.5	13.0	365

Cores x mm²	Nom OD mm	Weight kg / km
4 x 2.5	15.0	438
4 x 4.0	16.0	532
4 x 6.0	18.0	764
4 x 10.0	20.0	1013
4 x 16.0	22.9	1360
4 x 25.0	27.6	2160
4 x 35.0	30.4	2690
4 x 50.0*	32.0	3130
4 x 70.0*	38.0	4500
4 x 95.0*	41.7	5600
4 x 120.0*	46.0	7400
4 x 150.0*	51.0	8780
4 x 185.0*	55.6	10630
4 x 240.0*	62.0	13390
4 x 300.0*	67.5	16290
4 x 400.0*	76.5	19800
5 x 1.5	14.3	410
5 x 2.5	16.3	470
5 x 4.0	17.8	710
5 x 6.0	20.0	876
5 x 10.0	22.9	1165
5 x 16.0	26.6	1742
5 x 25.0	31.5	2323
5 x 35.0	33.8	2932
5 x 50.0*	40.4	4192
5 x 70.0*	46.3	5336
5 x 95.0*	52.0	7700
7 x 1.5	14.9	508
7 x 2.5	16.8	620
7 x 4.0	19.8	910
7 x 6.0	21.4	1110
7 x 10.0	25.6	1720
12 x 1.5	18.6	855
12 x 2.5	21.5	1088
12 x 4.0	27.6	1550
19 x 1.5	21.0	1120
19 x 2.5	25.8	1574
27 x 1.5	26.8	1635
27 x 2.5	30.2	2050
37 x 1.5	28.8	1970
37 x 2.5	33.8	2540
48 x 1.5	33.9	2390
48 x 2.5	38.8	3430

*Shaped Conductor, all others circular

SINGLE WIRE ARMoured CABLE PVC 694_X

Table 4E4A

Multicore 90°C armoured thermosetting insulated cables (Copper Conductors)

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature: 30°C
Ground ambient temperature: 20°C
Conductor operating temperature: 90°C

Conductor Cross sectional area	Reference Method C (clipped direct)		Reference Method E (in free air or on a perforated cable tray horizontal or vertical)		Reference Method D (direct in ground or in ducting in ground, in or around buildings)	
	1 two core cable, single phase a.c. or d.c.	1 three or four core cable, three-phase a.c.	1 two core cable, single phase a.c. or d.c.	1 three or four core cable, three-phase a.c.	1 two core cable, single phase a.c. or d.c.	1 three or four core cable, three-phase a.c.
1	2	3	4	5	6	7
(mm ²)	(A)	(A)	(A)	(A)	(A)	(A)
1.5	27	23	29	25	25	21
2.5	36	31	39	33	33	28
4	49	42	52	44	43	36
6	62	53	66	56	53	44
10	85	73	90	78	71	58
16	110	94	115	99	91	75
25	146	124	152	131	116	96
35	180	154	188	162	139	115
50	219	187	228	197	164	135
70	279	238	291	251	203	167
95	338	289	354	304	239	197
120	392	335	410	353	271	223
150	451	386	472	406	306	251
185	515	441	539	463	343	281
240	607	520	636	546	395	324
300	698	599	732	628	446	365
400	787	673	847	728	-	-

NOTES:

1. Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2).
2. Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables (Table 4D4A) must be used (see also Regulation 523.1).

SINGLE WIRE ARMoured CABLE PVC 694_X

Table 4E4B

VOLTAGE DROP (per ampere per metre) Conductor operating temperature: 90°C

Conductor Cross sectional area	Two core cable d.c.	Two core cable, Single-phase a.c.			Three or four core cable, three-phase a.c.		
1	2	3			4		
(mm ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)		
1.5	31	31			27		
2.5	19	19			16		
4	12	12			10		
6	7.9	7.9			6.8		
10	4.7	4.7			4		
16	2.9	2.9			2.5		
		r	x	y	r	x	y
25	1.85	1.85	0.160	1.90	1.60	0.140	1.65
35	1.35	1.35	0.155	1.35	1.15	0.135	1.15
50	0.98	0.99	0.155	1.00	0.86	0.135	0.87
70	0.67	0.67	0.150	0.69	0.59	0.130	0.60
95	0.49	0.50	0.150	0.52	0.43	0.130	0.45
120	0.39	0.40	0.145	0.42	0.34	0.130	0.37
150	0.31	0.32	0.145	0.35	0.28	0.125	0.30
185	0.25	0.26	0.145	0.29	0.22	0.125	0.26
240	0.195	0.20	0.140	0.24	0.175	0.125	0.21
300	0.155	0.16	0.140	0.21	0.140	0.120	0.185
400	0.120	0.13	0.140	0.190	0.115	0.120	0.165

Permission to reproduce extracts from BS 7671:2008+A 1:2011 is granted by the British Standards Institution (BSI) and the Institution of Engineering and Technology (IET). No other use of this material is permitted. BS 7671:2008 Incorporating Amendment No 1:2011 can be purchased from the IET website <http://electrical.theiet.org/> and the BSI online shop: <http://shop.bsigroup.com>