

CU / XLPE / SWA / PVC Low Voltage Power Cables



▶ APPLICATION

Industrial wiring and mains distribution. Can be laid direct in the ground, or in ducts, clipped to surface, on trays or in free air.

▶ CONSTRUCTION

Conductor : Single, Two, Three, Four and Five core cables. Stranded plain copper conductors
Insulation : XLPE insulated, cores laid up, extruded PVC bedding, galvanised steel wire armoured (Aluminium wires for single cores) and PVC sheathed.

▶ STANDARD COLOURS

Cores : Single-core- Red or Black
 2-core- Red and Black
 3-core- Red, Yellow and Blue
 4-core- Red, Yellow, Blue and Black
 5-core- Red, Yellow, Blue, Black and Green/Yellow

As per New Harmonised Code

Single-core- Brown or Blue
 2-core- Brown and Blue
 3-core- Brown, Black and Grey
 4-core- Brown, Black Grey and Blue
 5-core- Brown, Black, Grey, Green/Yellow and Blue

Sheath Colours : Black. Other colours available on request

▶ MINIMUM BENDING RADIUS

6D circular conductors, 8D shaped conductors

▶ TECHNICAL DATA

Max. Operating Temperature : 90°C
Rated Voltage : 600/1000V
Standards : BS5467

Single Core Cables 600/1000V

Nominal Area of the Conductor (mm ²)	Thickness of Insulation (mm)	Thickness of Extruded Bedding (mm)	Diameter of Armour Wire (mm)	Thickness of Outer Sheath (mm)	Approx Overall Diameter (mm)	Approx. Nett Weight (kg/km)
50.0	1.0	0.8	0.90	1.5	17.5	695
70.0	1.1	0.8	1.25	1.5	20.2	960
95.0	1.1	0.8	1.25	1.6	22.3	1240
120.0	1.2	0.8	1.25	1.6	24.2	1495
150.0	1.4	1.0	1.60	1.7	27.4	1908
185.0	1.6	1.0	1.60	1.8	30.0	2320
240.0	1.7	1.0	1.60	1.8	32.8	2910
300.0	1.8	1.0	1.60	1.9	35.6	3550
400.0	2.0	1.2	2.00	2.0	40.5	4580
500.0	2.2	1.2	2.00	2.1	44.2	5600
630.0	2.4	1.2	2.00	2.2	48.8	7070
800.0	2.6	1.4	2.50	2.4	55.4	10660
1000.0	2.8	1.4	2.50	2.5	60.6	13140

Note:
 Circular or compacted circular stranded conductor (Class 2)

contd... ▶▶

CU / XLPE / SWA / PVC Low Voltage Power Cables



Two Core Cables - 600/1000V

Nominal Area of the Conductor (mm ²)	Thickness of Insulation (mm)	Thickness of Extruded Bedding (mm)	Diameter of Armour Wire (mm)	Thickness of Outer Sheath (mm)	Approx Overall Diameter (mm)	Approx. Nett Weight (kg/km)
1.5*	0.6	0.8	0.90	1.3	12.1	315
2.5*	0.7	0.8	0.90	1.4	13.6	380
4.0*	0.7	0.8	0.90	1.4	14.7	460
6.0*	0.7	0.8	0.90	1.4	15.9	550
10.0*	0.7	0.8	0.90	1.5	18.0	795
16.0*	0.7	0.8	1.25	1.5	20.4	860
25.0~	0.9	0.8	1.25	1.6	20.4	1000
35.0~	0.9	1.0	1.60	1.7	23.3	1420
50.0~	1.0	1.0	1.60	1.8	25.8	1760
70.0~	1.1	1.0	1.60	1.9	29.0	2270
95.0~	1.1	1.2	2.00	2.0	33.1	3120
120.0~	1.2	1.2	2.00	2.1	36.1	3730
150.0~	1.4	1.2	2.00	2.2	39.3	4430
185.0~	1.6	1.4	2.50	2.4	44.7	5700
240.0~	1.7	1.4	2.50	2.5	49.0	7060
300.0~	1.8	1.6	2.50	2.6	53.5	8490
400.0~	2.0	1.6	2.50	2.8	59.0	10470

Note:

* Circular or compacted circular stranded conductor (Class 2)

~ Shaped standard conductor (Class 2)

Three Core Cables - 600/1000V

Nominal Area of the Conductor (mm ²)	Thickness of Insulation (mm)	Thickness of Extruded Bedding (mm)	Diameter of Armour Wire (mm)	Thickness of Outer Sheath (mm)	Approx Overall Diameter (mm)	Approx. Nett Weight (kg/km)
1.5*	0.6	0.8	0.90	1.3	12.6	330
2.5*	0.7	0.8	0.90	1.4	14.1	415
4.0*	0.7	0.8	0.90	1.4	15.3	505
6.0*	0.7	0.8	0.90	1.4	16.6	615
10.0*	0.7	0.8	1.25	1.5	19.5	870
16.0*	0.7	0.8	1.25	1.6	21.6	1055
25.0~	0.9	1.0	1.60	1.7	23.6	1485
35.0~	0.9	1.0	1.60	1.8	25.7	1855
50.0~	1.0	1.0	1.60	1.8	28.5	2305
70.0~	1.1	1.0	1.60	1.9	32.2	3050
95.0~	1.1	1.2	2.00	2.1	37.0	4190
120.0~	1.2	1.2	2.00	2.2	40.4	5050
150.0~	1.4	1.4	2.50	2.3	45.5	6450
185.0~	1.6	1.4	2.50	2.4	49.8	7790
240.0~	1.7	1.4	2.50	2.6	55.1	9680
300.0~	1.8	1.6	2.50	2.7	60.2	11780
400.0~	2.0	1.6	2.50	2.9	66.6	14600

Note:

* Circular or compacted circular stranded conductor (Class 2)

~ Shaped standard conductor (Class 2)

contd... ►►

CU / XLPE / SWA / PVC Low Voltage Power Cables



Four Core Cables 600/1000V

Nominal Area of the Conductor (mm ²)	Thickness of Insulation (mm)	Thickness of Extruded Bedding (mm)	Diameter of Armour Wire (mm)	Thickness of Outer Sheath (mm)	Approx Overall Diameter (mm)	Approx. Nett Weight (kg/km)
1.5*	0.6	0.8	0.90	1.3	13.3	345
2.5*	0.7	0.8	0.90	1.4	15.0	440
4.0*	0.7	0.8	0.90	1.4	16.4	540
6.0*	0.7	0.8	1.25	1.5	18.7	780
10.0*	0.7	0.8	1.25	1.5	21.1	1125
16.0*	0.7	0.8	1.25	1.6	23.4	1300
25.0~	0.9	1.0	1.60	1.7	26.1	1860
35.0~	0.9	1.0	1.60	1.8	28.6	2335
50.0~	1.0	1.0	1.60	1.9	32.0	2960
70.0~	1.1	1.2	2.00	2.1	37.7	4200
95.0~	1.1	1.2	2.00	2.2	41.7	5400
120.0~	1.2	1.4	2.50	2.3	47.1	6990
150.0~	1.4	1.4	2.50	2.4	51.4	8300
185.0~	1.6	1.4	2.50	2.6	56.6	10076
240.0~	1.7	1.6	2.50	2.7	63.0	12660
300.0~	1.8	1.6	2.50	2.9	68.8	15350
400.0~	2.0	1.8	3.15	3.2	78.1	19880

Note:

* Circular or compacted circular stranded conductor (Class 2)

~ Shaped standard conductor (Class 2)

Five Core Cables - 600/1000V

Nominal Area of the Conductor (mm ²)	Thickness of Insulation (mm)	Thickness of Extruded Bedding (mm)	Diameter of Armour Wire (mm)	Thickness of Outer Sheath (mm)	Approx Overall Diameter (mm)	Approx. Nett Weight (kg/km)
1.5	0.6	0.8	0.90	1.4	14.3	430
2.5	0.7	0.8	0.90	1.4	16.1	545
4.0	0.7	0.8	0.90	1.5	17.8	680
6.0	0.7	0.8	1.25	1.5	20.0	840
10.0	0.7	0.8	1.25	1.6	22.9	1105
16.0	0.7	1.0	1.60	1.7	26.6	1450
25.0	0.9	1.0	1.60	1.8	31.5	2245
35.0	0.9	1.0	1.60	1.9	34.8	2840
50.0	1.0	1.2	2.00	2.0	40.4	3895
70.0	1.1	1.2	2.00	2.2	46.3	5145

Note:

Circular or compacted circular stranded conductor (Class 2)

contd... ►►

CU / XLPE / SWA / PVC Low Voltage Power Cables



Single Core Copper, XLPE Insulated Armoured/Umarmoured Cables Current Ratings & Voltage Drop of the cables - 600/1000V

Area (mm ²)	In Air Single Core in Trefoil		In Ground Single Core in Trefoil Armoured	In Duct (A) Single Core in Trefoil Armoured	Voltage Drop of 3 Single core cables Trefoil (V/A/km)
	Unarmoured	Armoured			
1.5	22	22	28	26	26.7
2.5	30	30	38	35	16.4
4.0	39	39	49	46	10.2
6.0	49	49	62	59	6.80
10	67	67	82	78	4.00
16	92	92	108	101	2.50
25	123	123	139	134	1.62
35	146	146	165	154	1.17
50	174	180	199	199	0.88
70	222	230	244	239	0.62
95	275	282	292	281	0.46
120	321	328	332	315	0.38
150	371	377	371	341	0.32
185	430	433	417	376	0.28
240	513	510	480	421	0.23
300	594	581	536	459	0.21
400	692	664	594	488	0.20
500	801	751	658	529	0.18
630	925	846	723	571	0.17
800	1051	919	764	595	0.16
1000	1172	997	810	632	0.15

Operating conditions

Ambient air temperature : 50°C
 Ground temperature : 35°C
 Depth of laying : 0.50m
 Thermal resistivity of soil : 1.2 Km/W

contd... ►►

CU / XLPE / SWA / PVC Low Voltage Power Cables



Two Core Copper, XLPE Insulated Armoured/Umarmoured Cables Current Ratings & Voltage Drop of the cables - 600/1000V

Area (mm ²)	In Air		In Ground Armoured	In Duct (A) Armoured	Voltage Drop (V/A/km)
	Unarmoured	Armoured			
1.5	22	24	33	27	30.9
2.5	30	32	42	35	18.9
4.0	39	43	56	46	11.8
6.0	50	55	70	58	7.90
10	67	74	94	77	4.70
16	97	98	121	99	2.90
25	122	128	157	127	1.90
35	151	158	188	153	1.35
50	183	190	223	181	1.00
70	232	239	273	224	0.70
95	287	295	328	269	0.52
120	335	341	372	307	0.42
150	383	289	417	345	0.35
185	444	449	470	391	0.30
240	529	530	544	453	0.24
300	611	605	609	509	0.21
400	711	696	687	575	0.20

Operating conditions
 Ambient air temperature : 50°C
 Ground temperature : 35°C
 Depth of laying : 0.50m
 Thermal resistivity of soil : 1.2 Km/W

Three & Four Core Copper, XLPE Insulated Armoured/Umarmoured Cables Current Ratings & Voltage Drop of the cables - 600/1000V

Area (mm ²)	In Air		In Ground Armoured	In Duct (A) Armoured	Voltage Drop (V/A/km)
	Unarmoured	Armoured			
1.5	19	20	28	22	26.7
2.5	27	27	36	29	16.4
4.0	34	37	47	39	10.2
6.0	44	46	59	48	6.80
10	58	64	79	65	4.00
16	83	83	102	83	2.50
25	105	109	131	107	1.65
35	129	134	157	128	1.15
50	157	163	187	152	0.87
70	200	205	229	187	0.60
95	246	253	274	226	0.45
120	288	293	312	258	0.37
150	330	335	349	291	0.30
185	381	386	394	329	0.26
240	454	456	455	380	0.21
300	524	519	509	427	0.19
400	608	597	574	490	0.17

Operating conditions
 Ambient air temperature : 50°C
 Ground temperature : 35°C
 Depth of laying : 0.50m
 Thermal resistivity of soil : 1.2 Km/W