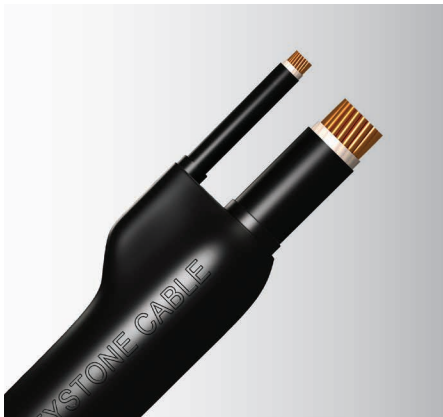


KEYFAB™ Prefabricated Branch Cables

0.6/1kV Single-Core
XLPE Insulated, Unarmoured, PVC Sheathed Cable
Description: CU/XLPE/PVC
Model Code: XP



Application :	This cable is used in power supplies and distribution systems for high-rise residentials, commercial buildings, hotels, and factories.
Voltage rating :	0.6/1kV
Construction :	Plain annealed copper (IEC 60228 Class 2), XLPE insulated, unarmoured, PVC sheathed cable
Insulation colour :	Natural
Sheath colour :	Black
Specification :	IEC 60502-1, IEC 60332-1-2
Operating temperature :	90°C

Conductor			Insulation	Part No.	Unarmoured Cable	
Nominal Area	No./Diam. of Strand	Approx. Diam.	Thickness		Approx. Overall Diam.	Approx. Weight
(mm ²)	(no./mm)	(mm)	(mm)		(mm)	(kg/km)
10	7/1.35	4.05	0.7	1101B****	8.5	150
16	7/1.70	5.10	0.7	1201B****	9.5	200
25 (cs)	7/2.14	6.20	0.9	1301B****	11.5	310
35 (cs)	19/1.53	7.30	0.9	1401B****	12.5	420
50 (cs)	19/1.78	8.20	1.0	1501B****	14.0	550
70 (cs)	19/2.14	10.00	1.1	1601B****	16.3	770
95 (cs)	19/2.52	11.80	1.1	1701B****	18.2	1040
120 (cs)	37/2.03	13.00	1.2	1801B****	20.0	1300
150 (cs)	37/2.25	14.40	1.4	1901B****	22.0	1580
185 (cs)	37/2.52	16.20	1.6	2001B****	24.5	1970
240 (cs)	61/2.25	18.80	1.7	2101B****	27.5	2520
300 (cs)	61/2.52	21.20	1.8	2201B****	30.5	3150
400 (cs)	61/2.85	24.30	2.0	2301B****	34.0	4000
500 (cs)	61/3.20	27.40	2.2	2401B****	38.6	5000
630	127/2.52	32.76	2.4	2501B****	43.5	6500
800	127/2.85	37.05	2.6	2601B****	48.5	8200
1000	127/3.20	41.60	2.8	2701B****	53.6	10000

****Stands for branch size, please contact us for more information.
For technical specification, please refer to Table 24 (Page 65)

Current rating and voltage drop
Please refer to Table 10 & 11 (Page 58)

(cs) : Circular Compact Stranded Conductor

Current Rating and Voltage Drop



XLPE (or LSZH) Insulated Cables
Single-Core, Unarmoured

tel (65) 6367 0107 fax (65) 6365 2963
www.keystone-cable.com

Single-Core Cables with XLPE (or LSZH) Insulation, with or without PVC (or LSZH) Outsheath 450/750V or 0.6/1kV

Table 10 : Current-Carrying Capacities (Amp)

[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MT/LSZH or CU/MT/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C
Ambient Temperature : 30°C

BS EN 50525-3-41 (BS 7211)
BS 8592
IEC 60502-1

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 (in free air)		
	2 cables, 1-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, 1-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, 1-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, 1-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil
									2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase a.c.	2 cables, 1-phase a.c. or d.c. or 3 cables 3-phase a.c.	3 cables trefoil, 3-phase a.c.
1	2	3	4	5	6	7	8	9	10	11	12
mm ²	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-
6	43	39	51	45	59	54	-	-	-	-	-
10	58	53	71	63	81	74	-	-	-	-	-
16	76	70	95	85	109	99	-	-	-	-	-
25	100	91	126	111	143	130	158	140	183	163	138
35	124	111	156	138	176	161	195	176	226	203	171
50	149	135	189	168	228	209	239	215	274	246	209
70	189	170	240	214	293	268	308	279	351	318	270
95	228	205	290	259	355	326	375	341	426	389	330
120	263	235	336	299	413	379	436	398	495	453	385
150	300	270	375	328	476	436	505	461	570	524	445
185	341	306	426	370	545	500	579	530	651	600	511
240	400	358	500	433	644	590	686	630	769	711	606
300	459	410	573	493	743	681	794	730	886	824	701
400	-	-	683	584	868	793	915	849	1065	994	820
500	-	-	783	666	990	904	1044	973	1228	1150	936
630	-	-	900	764	1130	1033	1191	1115	1423	1338	1069
800	-	-	-	-	1288	1179	1358	1275	1581	1485	1214
1000	-	-	-	-	1443	1323	1520	1436	1775	1671	1349

Note : For rating factors of ambient temperature other than 30°C, please refer to Table 25 (Page 66)

Table 11 : Voltage Drop (Per Amp Per Meter)

[CU/LSZH, CU/XLPE/PVC, CU/XLPE/LSZH, CU/MT/LSZH or CU/MT/XLPE/LSZH Cables]

Conductor Operating Temperature : 90°C

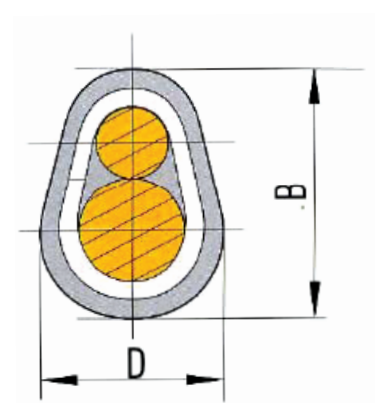
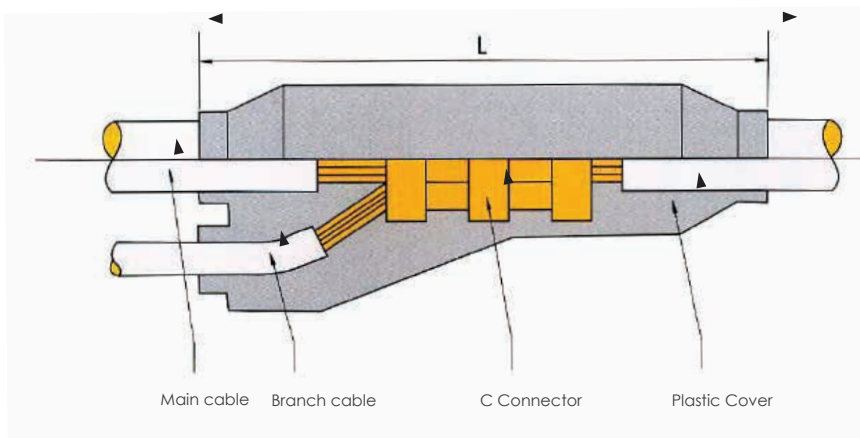
BS EN 50525-3-41 (BS 7211)
BS 8592
IEC 60502-1

Conductor Cross-sectional Area	2 cables, d.c.	2 cables, 1-phase a.c.						3 or 4 cables, 3-phase a.c.								
		Reference Methods 3 and 4 (enclosed in conduit etc, in or on a wall)		Reference Methods 1 and 11 (clipped direct or on trays touching)		Reference Methods 3 and 4 (enclosed in conduit etc, in or on a wall)		Reference Methods 1, 11 and 12 (trefoil)		Reference Methods 1 and 11 (flat and touching)						
		3	4	3	4	3	4	3	4	3	4					
1	2	3	4	5	6	7										
mm ²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m										
1.5	31	31	27	27	27	27										
2.5	19	19	16	16	16	16										
4	12	12	10	10	10	10										
6	7.9	7.9	6.8	6.8	6.8	6.8										
10	4.7	4.7	4.7	4.7	4.0	4.0										
16	2.9	2.9	2.9	2.9	2.5	2.5										
	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	
25	1.85	1.85	0.31	1.90	1.85	0.190	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.190	1.60
35	1.35	1.35	0.29	1.35	1.35	0.180	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.180	1.15
50	0.99	1.00	0.29	1.05	0.99	0.180	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.180	0.87
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.60	0.24	0.65	0.59	0.150	0.61	0.59	0.175	0.62
95	0.49	0.51	0.27	0.58	0.49	0.170	0.52	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.170	0.46
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.35	0.23	0.42	0.34	0.140	0.37	0.34	0.165	0.38
150	0.32	0.33	0.26	0.43	0.32	0.165	0.36	0.29	0.23	0.37	0.28	0.140	0.31	0.28	0.165	0.32
185	0.25	0.27	0.26	0.37	0.26	0.165	0.30	0.23	0.23	0.32	0.22	0.140	0.26	0.22	0.165	0.28
240	0.190	0.21	0.26	0.33	0.20	0.160	0.25	0.185	0.22	0.29	0.170	0.140	0.22	0.170	0.165	0.24
300	0.155	0.175	0.25	0.31	0.160	0.160	0.22	0.150	0.22	0.27	0.140	0.140	0.195	0.135	0.160	0.21
400	0.12	0.140	0.25	0.29	0.130	0.155	0.20	0.125	0.22	0.25	0.110	0.135	0.175	0.110	0.160	0.195
500	0.093	0.120	0.25	0.28	0.105	0.155	0.185	0.100	0.22	0.24	0.090	0.135	0.160	0.088	0.160	0.180
630	0.072	0.100	0.25	0.27	0.086	0.155	0.175	0.088	0.21	0.23	0.074	0.135	0.150	0.071	0.160	0.170
800	0.056	-	-	-	0.072	0.150	0.170	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165
1000	0.045	-	-	-	0.063	0.150	0.165	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165

Note : r = resistive component; x = reactive component; z = impedance value

Table 24 : KEYFAB™ Prefabricated Branch Cables Size Reference

Main Cable	(mm ²)	25	35	50	70	70	95	120	95	120	150	185	240	185	240	300	400	400	500	630	800	1000
Branch Cable	(mm ²)	6 to 25	6 to 35	6 to 50	6 to 25	35 to 70	6 to 50	6 to 25	70 to 95	35 to 120	6 to 120	6 to 95	6 to 35	120	50 to 120	60 to 150	6 to 50	70 to 150	6 to 185	6 to 185	6 to 185	6 to 185
Reference Size	L (mm)	104	130	154	190	213	250	290														
	D (mm)	28	35	42	52	66	78	88														
	B (mm)	46	58	70	86	100	113	134														



KEYFAB™ Prefabricated Branch Cables Inspection and Testing

- Each connection made between the main and prefabricated branch cable employs a copper “C” type connector and is encapsulated in thermoplastic;
- The insulation Resistance value of the system is measured over 200MΩ at the factory;
- Cable with connectors can withstand dielectric voltage of 3.5kV for 5 minutes under one meter water pressure;
- The DC conductor resistance ratio between the connected cable system and the cables with same length is less than 1.2;
- Able to withstand 250 Heat Cycle Test;
- Cable system meets flame retardant requirement to IEC 60332.

Table 25 : Correction Factor for Ambient Air Temperature Other Than 30°C to be Applied to the Current-Carrying Capacities for Cables in Free Air

Ambient Temperature (°C)	Insulation				
	PVC (70°C)	XLPE (90°C)	HT-PVC (90°C)	Rubber (85°C)	Rubber (60°C)
10	1.22	1.15	-	-	-
15	1.17	1.12	-	-	-
20	1.12	1.08	-	-	-
25	1.06	1.04	1.03	1.02	-
30	1.00	1.00	1.00	1.00	1.00
35	0.94	0.96	0.97	0.95	0.91
40	0.87	0.91	0.94	0.90	0.82
45	0.79	0.87	0.91	0.85	0.71
50	0.71	0.82	0.87	0.80	0.58
55	0.61	0.76	0.84	0.74	0.41
60	0.50	0.71	0.80	0.67	-
65	0.35	0.65	0.76	0.60	-
70	-	0.58	0.71	0.52	-
75	-	0.50	0.61	0.43	-
80	-	0.41	0.50	0.30	-
85	-	0.29	0.35	-	-

Table 26 : Correction Factor for Ambient Ground Temperature Other Than 15°C to be Applied to the Current-Carrying Capacities for Cables in Ducts or in Ground

Ground Temperature (°C)	Insulation	
	PVC (70°C)	XLPE (90°C)
10	1.04	1.03
15	1.00	1.00
20	0.95	0.97
25	0.90	0.93
30	0.85	0.89
35	0.80	0.86
40	0.74	0.82
45	0.67	0.77
50	0.60	0.73
55	-	0.68
60	-	0.63
65	-	0.58