SBEE™

Fire Survival Fire Resistant Zero Halogen CABLES

SBEE SINGLE CORE FIRE-X (FS) FIRE SURVIVAL FRLS ZH/LSZH CABLE

ENERGY STAR RoHS Recyclable

TECHNICAL DATA

- Generally confirms to BS & IEC standards
- Specific Insulation Resistance:>20G Ω x cm
- HV Test Voltage: 3 kV
- Conductor Bunching as per BS6360 Standard
- Rated Voltage: U_0/U :600V/1.1KV
- Temperature Range: Fixed Installation -20°C to +90°C

APPLICATIONS

- Used for lighting at Hospitals, metro stations & other public places, High Raise buildings where safety is utmost concern on fire accidents

PRODUCT MAKEUP

- Available in Stranded Electrolytic Grade Oxygen Free Bare copper conductor with class 2/ class 5 construction
- Glass Mica Tape over the conductor
- LSZH Color coded FRLSZH (Thermoplastic)/XLPE (Thermosetic) based Insulation

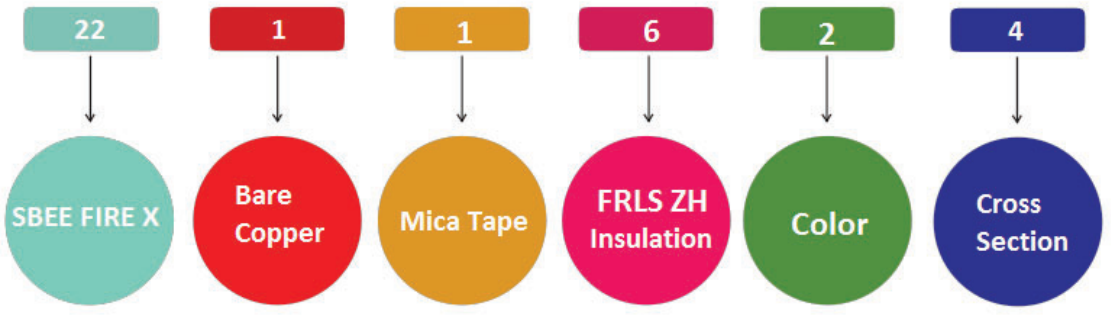
PRODUCT FEATURES

- Passes fire test as per category C, W, Z test at 950°C of BS6387 & BS 7846
- Acid gas emission IEC 60574, BSEN 50267
- Smoke emission IEC 61034 BSEN 50268
- Smoke density, Oxygen Index, Temp. Index to ASTM D-2843
- Vertical flame to IEC 60332-1

* Energy efficient product optional and available on request. * Anti-rodent & anti-termite properties optional on request. * In-built UV protection.

Article No.	Nominal area of Conductor	Insulation Thickness Max. Overall diameter	Max. Overall diameter	Approx weight of cable	Class 2 DC Conductor res. Max at 20°C
	mm²	mm	mm	kg/km	Ohm/km
2211624	1.5	0.7	3.8	32	12.1
2211625	2.5	0.8	4.5	43	7.41
2211626	4	0.8	5	55	4.61
2211627	6	0.8	5.5	85	3.08
2211628	10	1.0	7	146	1.83
2211629	16	1.0	8	198	1.15
22116210	25	1.2	9.7	320	0.727
22116211	35	1.2	10.8	410	0.524
22116212	50	1.4	13.3	549	0.387
22116213	70	1.4	15.1	770	0.268
22116214	95	1.6	17.5	1140	0.193
22116215	120	1.6	19.2	1425	0.153
22116216	150	1.8	21.2	1720	0.124
22116217	185	2.0	23.6	2155	0.0991

Example to find out Part Number, for SBEE SINGLE CORE FIRE-X (FS) of 1.5 SQMM Black



SBEE SINGLE CORE FIRE RESISTANT FRLS ZH/LSZH CABLE

ENERGY STAR RoHS Recyclable

TECHNICAL DATA

- Generally confirms to BS & IEC standards
- Specific Insulation Resistance:>20G Ω x cm
- HV Test Voltage: 3 kV
- Conductor Bunching as per BS6360 Standard
- Rated Voltage: U_0/U :600V/1.1KV
- Temperature Range: Fixed Installation -20°C to +90°C

APPLICATIONS

- Used for lighting at Hospitals, metro stations & other public places, High Raise buildings where safety is utmost concern on fire accidents

PRODUCT MAKEUP

- Available in Stranded Electrolytic Grade Oxygen Free Bare copper conductor with class 2/ class 5 construction
- LSZH Color coded FRLSZH (Thermoplastic)/XLPE (Thermosetic) based Insulation

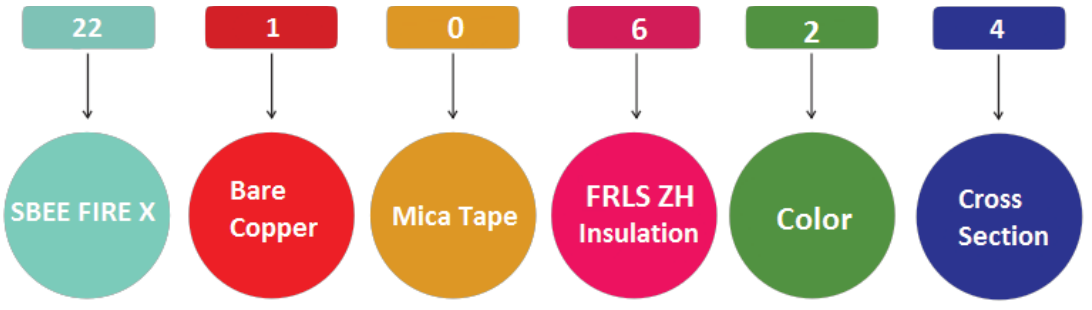
PRODUCT FEATURES

- Acid gas emission IEC 60574 P1, BSEN 50267-2-1
- Smoke emission IEC 61034 BSEN 50268
- Smoke density, Oxygen Index, Temp. Index to ASTM D-2843
- Vertical flame to IEC 60332-1

* Energy efficient product optional and available on request. * Anti-rodent & anti-termite properties optional on request. * In-built UV protection.

Article No.	Nominal area of Conductor	Insulation Thickness Max. Overall diameter	Max. Overall diameter	Approx weight of cable	Class 2 DC Conductor res. Max at 20°C
	mm²	mm	mm	kg/km	Ohm/km
2210624	1.5	0.7	3.8	32	12.1
2210625	2.5	0.8	4.5	43	7.41
2210626	4	0.8	5.0	55	4.61
2210627	6	0.8	5.5	85	3.08
2210628	10	1.0	7.0	146	1.83
2210629	16	1.0	8.0	198	1.15
22106210	25	1.2	9.7	320	0.727
22106211	35	1.2	10.8	410	0.524
22106212	50	1.4	13.3	549	0.387
22106213	70	1.4	15.1	770	0.268
22106214	95	1.6	17.5	1140	0.193
22106215	120	1.6	19.2	1425	0.153
22106216	150	1.8	21.2	1720	0.124
22106217	185	2.0	23.6	2155	0.0991

Example to find out Part Number, for SBEE SINGLE CORE FIRE RESISTANT FRLS ZH/LSZH CABLE of 1.5 SQMM Black



SBEE FS FIRE-X MULTICORE COPPER FIRE SURVIVAL CABLE 1.1 KV

ENERGY STAR RoHS Recyclable

TECHNICAL DATA

- Generally confirms to BS 7846 & BS 6387 requirements
- HV Test Voltage: 3 kV
- Rated Voltage: 600/1100 volts grade.
- Core Colours: Up to 5 Cores as per BS
- Conductor Bunching: Short lay, Class 2 as per BS
- Temperature Range: Fixed Installation -30^0 C TO +90^0 C XLPE. Higher Current Carrying capacity for given crossection
- Specific Insulation Resistance:As Per BS
- Protective Conductor: As Per BS (Optional)
- Minimum Bending Radius: Occasional Flexing 12 x Cable Dia

APPLICATIONS

- Areas where people remain in occupation for short time eg., Schools, Hospitals, Shopping Malls, Mass transit system like Metro Stations etc.,
- Services where circuit integrity is very important under fire conditions
- Essential safety circuit eg., Fire detection, fire alarm, voice alarm etc.,
- Power supply to equipment used in fire fighting eg., sprinkler pumps
- In large buildings where fire stratergy involves evacuation of occupants in phased manner

PRODUCT MAKEUP

- Strands of Electrolytic Grade, Oxygen free Bare Copper wire class 2
- Glass Mica taped over the conductor
- Insulation of XLPE-GP8 acc to BS7655
- Cores are layed up in sequence and in layers
- Inner & Outer sheathing of LSZH type LTS1 acc to BS 7655
- G.I. Steel Round Wire armouring 95% coverage

PRODUCT FEATURES

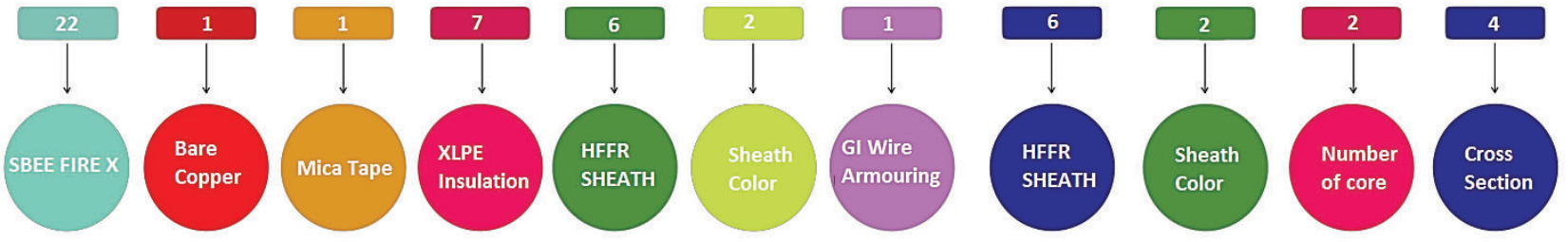
- Flame retardent as per IEC 60332-1-2
- Smoke emission as per IEC 61034
- Acid gas emission as per IEC 60754
- Fire Test as per BS 6387 & BS 7846 CW&Z
- Toxicity index test on LSZH sheath as per NES 713

* Energy efficient product optional and available on request. * Anti-rodent & anti-termite properties optional on request. * In-built UV protection.

Article No.	No of Cores X Sqmm	Overall Diameter	Weight of Copper/km	Approx Weight of Cable	Current Carrying Capacity (AMPS)		
					In Air	In Duct	Laid Direct
221176216224	2 X 1.50 Sqmm	13.00	26.67	276.00	31	31	38
221176216225	2 X 2.50 Sqmm	14.00	44.45	345.00	41	41	49
221176216226	2 X 4.00 Sqmm	15.00	71.12	414.00	55	53	65
221176216227	2 X 6.00 Sqmm	16.50	106.68	506.00	70	67	81
221176216228	2 X 10.00 Sqmm	19.00	177.80	667.00	95	89	109
221176216229	2 X 16.00 Sqmm	21.00	284.48	989.00	126	115	141
2211762162210	2 X 25.00 Sqmm	25.00	444.50	1,208.00	164	148	183
2211762162211	2 X 35.00 Sqmm	28.00	622.30	1,668.00	202	178	219
2211762162212	2 X 50.00 Sqmm	30.00	889.00	1,955.00	244	211	259
2211762162213	2 X 70.00 Sqmm	32.00	1,244.60	2,588.00	306	260	317
2211762162214	2 X 95.00 Sqmm	33.00	1,689.10	3,508.00	378	313	381
2211762162215	2 X 120.00 Sqmm	36.00	2,133.60	4,198.00	437	357	433
2211762162216	2 X 150.00 Sqmm	39.00	2,667.00	5,002.00	499	401	485
2211762162217	2 X 185.00 Sqmm	44.00	3,289.30	6,497.00	576	455	547
2211762162218	2 X 240.00 Sqmm	49.00	4,267.20	7,992.00	680	527	632
2211762162219	2 X 300.00 Sqmm	54.00	5,334.00	9,602.00	775	592	708
2211762162220	2 X 400.00 Sqmm	59.00	7,112.00	12,684.00	892	669	799
221176216234	3 X 1.50 Sqmm	14.00	40.01	299.00	26	26	32
221176216235	3 X 2.50 Sqmm	15.00	66.68	368.00	35	34	42
221176216236	3 X 4.00 Sqmm	16.00	106.68	460.00	47	45	55
221176216237	3 X 6.00 Sqmm	17.00	160.02	563.50	59	56	69
221176216238	3 X 10.00 Sqmm	21.00	266.70	874.00	82	75	92
221176216239	3 X 16.00 Sqmm	25.00	426.72	1,173.00	107	96	119
2211762162310	3 X 25.00 Sqmm	27.00	666.75	1,840.00	140	124	152
2211762162311	3 X 35.00 Sqmm	30.00	933.45	2,242.50	172	149	182
2211762162312	3 X 50.00 Sqmm	31.00	1,333.50	2,587.50	209	177	217
2211762162313	3 X 70.00 Sqmm	34.00	1,866.90	3,335.00	263	218	266
2211762162314	3 X 95.00 Sqmm	38.00	2,533.65	4,715.00	324	263	319
2211762162315	3 X 120.00 Sqmm	41.00	3,200.40	5,692.50	376	300	363
2211762162316	3 X 150.00 Sqmm	46.00	4,000.50	7,303.00	430	338	406
2211762162317	3 X 185.00 Sqmm	50.00	4,933.95	8,740.00	495	382	458
2211762162318	3 X 240.00 Sqmm	55.00	6,400.80	10,983.00	584	442	529
2211762162319	3 X 300.00 Sqmm	61.00	8,001.00	13,283.00	666	496	592
2211762162320	3 X 400.00 Sqmm	67.00	10,668.00	16,560.00	766	570	667
221176216244	4 X 1.50 Sqmm	15.00	53.34	345.00	26	26	32
221176216245	4 X 2.50 Sqmm	16.00	88.90	437.00	35	34	42
221176216246	4 X 4.00 Sqmm	17.00	142.24	552.00	47	45	55
221176216247	4 X 6.00 Sqmm	20.00	213.36	793.50	59	56	69
221176216248	4 X 10.00 Sqmm	22.00	355.60	1,058.00	82	75	92

Article No.	No of Cores X Sqmm	Overall Diameter	Weight of Copper/km	Approx Weight of Cable	Current Carrying Capacity (AMPS)		
					In Air	In Duct	Laid Direct
221176216249	4 X 16.00 Sqmm	24.00	568.96	1,438.00	107	96	119
2211762162410	4 X 25.00 Sqmm	29.00	889.00	2,128.00	140	124	152
2211762162411	4 X 35.00 Sqmm	32.00	1,244.60	2,645.00	172	149	182
2211762162412	4 X 50.00 Sqmm	34.00	1,778.00	3,220.00	209	177	217
2211762162413	4 X 70.00 Sqmm	38.00	2,489.20	4,658.00	263	218	266
2211762162414	4 X 95.00 Sqmm	42.00	3,378.20	5,980.00	324	263	319
2211762162415	4 X 120.00 Sqmm	47.00	4,267.20	7,705.00	376	300	363
2211762162416	4 X 150.00 Sqmm	52.00	5,334.00	9,200.00	430	338	406
2211762162417	4 X 185.00 Sqmm	57.00	6,578.60	11,213.00	495	382	458
2211762162418	4 X 240.00 Sqmm	62.00	8,534.40	14,088.00	584	442	529
2211762162419	4 X 300.00 Sqmm	68.00	10,668.00	17,078.00	666	496	592
2211762162420	4 X 400.00 Sqmm	76.00	14,224.00	22,540.00	766	570	667
221176216254	5 X 1.50 Sqmm	15.00	66.68	426.00	26	26	32
221176216255	5 X 2.50 Sqmm	17.00	111.13	541.00	35	34	42
221176216256	5 X 4.00 Sqmm	19.00	177.80	782.00	47	45	55
221176216257	5 X 6.00 Sqmm	21.00	266.70	932.00	59	56	69
221176216258	5 X 10.00 Sqmm	23.00	444.50	1,254.00	82	75	92
221176216259	5 X 16.00 Sqmm	26.00	711.20	1,886.00	107	96	119
2211762162510	5 X 25.00 Sqmm	32.00	1,111.25	2,588.00	140	124	152
2211762162511	5 X 35.00 Sqmm	35.00	1,555.75	3,278.00	172	149	182
2211762162512	5 X 50.00 Sqmm	40.00	2,222.50	4,439.00	209	177	217
221176216274	7 X 1.50 Sqmm	16.00	93.35	466.00	31 Amps - Single Phase & 26 Amps 3 Phases	31 Amps - Single Phase & 26 Amps 3 Phases	38 Amps - Single Phase & 32 Amps 3 Phases
2211762162124	12 X 1.50 Sqmm	20.00	160.02	777.00			
2211762162194	19 X 1.50 Sqmm	23.00	253.37	1,023.00			
2211762162274	27 X 1.50 Sqmm	27.00	360.05	1,495.00			
2211762162374	37 X 1.50 Sqmm	30.00	493.40	1,898.00			
2211762162484	48 X 1.50 Sqmm	33.00	640.80	2,242.00			
221176216275	7 X 2.50 Sqmm	19.00	155.58	598.00	41 Amps - Single Phase & 35 Amps 3 Phases	41 Amps - Single Phase & 34 Amps 3 Phases	49 Amps - Single Phase & 42 Amps 3 Phases
2211762162125	12 X 2.50 Sqmm	20.00	266.70	802.00			
2211762162195	19 X 2.50 Sqmm	27.00	422.28	1,553.00			
2211762162275	27 X 2.50 Sqmm	32.00	600.08	1,955.00			
2211762162375	37 X 2.50 Sqmm	34.00	822.33	2,645.00			
2211762162485	48 X 2.50 Sqmm	40.00	1,068.00	3,450.00			
221176216276	7 X 4.00 Sqmm	22.00	249.20	863.00	55 Amps - Single Phase & 47 Amps 3 Phases	53 Amps - Single Phase & 45 Amps 3 Phases	65 Amps - Single Phase & 47 Amps 3 Phases
2211762162126	12 X 4.00 Sqmm	28.00	427.20	1,495.00			
2211762162196	19 X 4.00 Sqmm	33.00	676.40	2,012.00			
2211762162276	27 X 4.00 Sqmm	37.00	961.20	2,702.00			

Example to find out Part Number, for SBEE FIRE X HALOGEN FREE 2 Core of 1.5mm² Control Cable



SBEE LSZH FIRE RESISTANT MULTICORE COPPER XLPE CABLE 1.1 KV

ENERGY STAR RoHS Recyclable

TECHNICAL DATA

- Generally confirms to BS 6724 requirements
- HV Test Voltage: 3 kV
- Rated Voltage: 600/1100 volts grade.
- Core Colours: Up to 5 Cores as per BS
- Conductor Bunching: Short lay, Class 2 as per BS
- Temperature Range: Fixed Installation -30^0 C TO +90^0 C PVC XLPE. Higher Current Carrying capacity for given crossection
- Specific Insulation Resistance:As Per BS
- Protective Conductor: As Per BS (Optional)
- Minimum Bending Radius: Occasional Flexing 12 x Cable Dia

APPLICATIONS

- Power & auxiliary control cables for used in power networks, undergrounds, outdoor & indoor application & for use in cable ducting for installation where fire, smoke, emission & toxic humes create a potential threat to life and equipment

PRODUCT MAKEUP

- Strands of Electrolytic Grade, Oxygen free Bare Copper wire class 2
- Insulation of XLPE-GP8 acc to BS7655
- Cores are layed up in sequence and in layers
- Inner & Outer sheathing of LSZH type LTS1 acc to BS 7655
- G.I. Steel Round Wire armouring

PRODUCT FEATURES

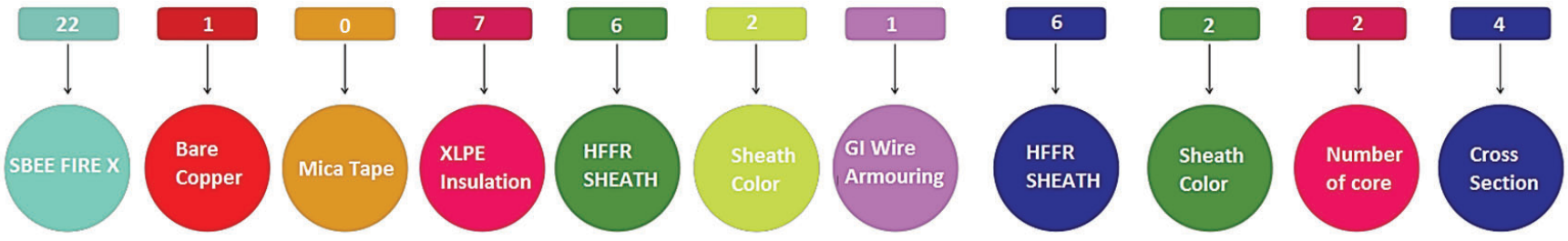
- Flame retardent as per IEC 60332-1-2
- Smoke emission as per IEC 61034
- Acid gas emission as per IEC 60754
- Toxicity index test on LSZH sheath as per NES 713

* Energy efficient product optional and available on request. * Anti-rodent & anti-termite properties optional on request. * In-built UV protection.

Article No.	No of Cores X Sqmm	Overall Diameter	Weight of Copper/km	Approx Weight of Cable	Current Carrying Capacity (AMPS)		
					In Air	In Duct	Laid Direct
221076216224	2 X 1.50 Sqmm	11.00	26.67	240.00	31	31	38
221076216225	2 X 2.50 Sqmm	12.00	44.45	300.00	41	41	49
221076216226	2 X 4.00 Sqmm	13.00	71.12	360.00	55	53	65
221076216227	2 X 6.00 Sqmm	14.00	106.68	440.00	70	67	81
221076216228	2 X 10.00 Sqmm	16.00	177.80	580.00	95	89	109
221076216229	2 X 16.00 Sqmm	19.00	284.48	860.00	126	115	141
2210762162210	2 X 25.00 Sqmm	22.00	444.50	1,050.00	164	148	183
2210762162211	2 X 35.00 Sqmm	26.00	622.30	1,450.00	202	178	219
2210762162212	2 X 50.00 Sqmm	25.00	889.00	1,700.00	244	211	259
2210762162213	2 X 70.00 Sqmm	28.00	1,244.60	2,250.00	306	260	317
2210762162214	2 X 95.00 Sqmm	32.00	1,689.10	3,050.00	378	313	381
2210762162215	2 X 120.00 Sqmm	35.00	2,133.60	3,650.00	437	357	433
2210762162216	2 X 150.00 Sqmm	39.00	2,667.00	4,350.00	499	401	485
2210762162217	2 X 185.00 Sqmm	44.00	3,289.30	5,650.00	576	455	547
2210762162218	2 X 240.00 Sqmm	47.00	4,267.20	6,950.00	680	527	632
2210762162219	2 X 300.00 Sqmm	52.00	5,334.00	8,350.00	775	592	708
2210762162220	2 X 400.00 Sqmm	58.00	7,112.00	11,030.00	892	669	799
221076216234	3 X 1.50 Sqmm	11.00	40.01	260.00	26	26	32
221076216235	3 X 2.50 Sqmm	12.00	66.68	320.00	35	34	42
221076216236	3 X 4.00 Sqmm	13.00	106.68	400.00	47	45	55
221076216237	3 X 6.00 Sqmm	14.00	160.02	490.00	59	56	69
221076216238	3 X 10.00 Sqmm	17.00	266.70	760.00	82	75	92
221076216239	3 X 16.00 Sqmm	19.00	426.72	1,020.00	107	96	119
2210762162310	3 X 25.00 Sqmm	25.00	666.75	1,600.00	140	124	152
2210762162311	3 X 35.00 Sqmm	27.00	933.45	1,950.00	172	149	182
2210762162312	3 X 50.00 Sqmm	28.00	1,333.50	2,250.00	209	177	217
2210762162313	3 X 70.00 Sqmm	31.00	1,866.90	2,900.00	263	218	266
2210762162314	3 X 95.00 Sqmm	36.00	2,533.65	4,100.00	324	263	319
2210762162315	3 X 120.00 Sqmm	39.00	3,200.40	4,950.00	376	300	363
2210762162316	3 X 150.00 Sqmm	44.00	4,000.50	6,350.00	430	338	406
2210762162317	3 X 185.00 Sqmm	49.00	4,933.95	7,600.00	495	382	458
2210762162318	3 X 240.00 Sqmm	54.00	6,400.80	9,550.00	584	442	529
2210762162319	3 X 300.00 Sqmm	58.00	8,001.00	11,550.00	666	496	592
2210762162320	3 X 400.00 Sqmm	65.00	10,668.00	14,400.00	766	570	667
221076216244	4 X 1.50 Sqmm	12.00	53.34	300.00	26	26	32
221076216245	4 X 2.50 Sqmm	13.00	88.90	380.00	35	34	42
221076216246	4 X 4.00 Sqmm	15.00	142.24	480.00	47	45	55
221076216247	4 X 6.00 Sqmm	17.00	213.36	690.00	59	56	69
221076216248	4 X 10.00 Sqmm	19.00	355.60	920.00	82	75	92
221076216249	4 X 16.00 Sqmm	21.00	568.96	1,250.00	107	96	119
2210762162410	4 X 25.00 Sqmm	27.00	889.00	1,850.00	140	124	152
2210762162411	4 X 35.00 Sqmm	30.00	1,244.60	2,300.00	172	149	182
2210762162412	4 X 50.00 Sqmm	31.00	1,778.00	2,800.00	209	177	217

Article No.	No of Cores X Sqmm	Overall Diameter	Weight of Copper/km	Approx Weight of Cable	Current Carrying Capacity (AMPS)		
					In Air	In Duct	Laid Direct
2210762162413	4 X 70.00 Sqmm	36.00	2,489.20	4,050.00	263	218	266
2210762162414	4 X 95.00 Sqmm	40.00	3,378.20	5,200.00	324	263	319
2210762162415	4 X 120.00 Sqmm	45.00	4,267.20	6,700.00	376	300	363
2210762162416	4 X 150.00 Sqmm	50.00	5,334.00	8,000.00	430	338	406
2210762162417	4 X 185.00 Sqmm	54.00	6,578.60	9,750.00	495	382	458
2210762162418	4 X 240.00 Sqmm	64.00	8,534.40	12,250.00	584	442	529
2210762162419	4 X 300.00 Sqmm	67.00	10,668.00	14,850.00	666	496	592
2210762162420	4 X 400.00 Sqmm	77.00	14,224.00	19,600.00	766	570	667
221076216254	5 X 1.50 Sqmm	13.10	66.68	370.00	26	26	32
221076216255	5 X 2.50 Sqmm	14.60	111.13	470.00	35	34	42
221076216256	5 X 4.00 Sqmm	17.00	177.80	680.00	47	45	55
221076216257	5 X 6.00 Sqmm	18.50	266.70	810.00	59	56	69
221076216258	5 X 10.00 Sqmm	20.70	444.50	1,090.00	82	75	92
221076216259	5 X 16.00 Sqmm	24.30	711.20	1,640.00	107	96	119
2210762162510	5 X 25.00 Sqmm	29.00	1,111.25	2,250.00	140	124	152
2210762162511	5 X 35.00 Sqmm	32.00	1,555.75	2,850.00	172	149	182
2210762162512	5 X 50.00 Sqmm	37.00	2,222.50	3,860.00	209	177	217
221076216274	7 X 1.50 Sqmm	14.00	93.35	405.00	31 Amps - Single Phase & 26 Amps 3 Phases	31 Amps - Single Phase & 26 Amps 3 Phases	38 Amps - Single Phase & 32 Amps 3 Phases
2210762162124	12 X 1.50 Sqmm	18.00	160.02	675.00			
2210762162194	19 X 1.50 Sqmm	21.00	253.37	890.00			
2210762162274	27 X 1.50 Sqmm	25.00	360.05	1,300.00			
2210762162374	37 X 1.50 Sqmm	27.50	493.40	1,650.00			
2210762162484	48 X 1.50 Sqmm	31.00	640.80	1,950.00			
221076216275	7 X 2.50 Sqmm	16.00	155.58	520.00	41 Amps - Single Phase & 35 Amps 3 Phases	41 Amps - Single Phase & 34 Amps 3 Phases	49 Amps - Single Phase & 42 Amps 3 Phases
2210762162125	12 X 2.50 Sqmm	18.00	266.70	697.00			
2210762162195	19 X 2.50 Sqmm	25.00	422.28	1,350.00			
2210762162275	27 X 2.50 Sqmm	29.00	600.08	1,700.00			
2210762162375	37 X 2.50 Sqmm	32.00	822.33	2,300.00			
2210762162485	48 X 2.50 Sqmm	37.00	1,068.00	3,000.00			
221076216276	7 X 4.00 Sqmm	18.00	249.20	750.00	55 Amps - Single Phase & 47 Amps 3 Phases	53 Amps - Single Phase & 45 Amps 3 Phases	65 Amps - Single Phase & 47 Amps 3 Phases
2210762162126	12 X 4.00 Sqmm	24.00	427.20	1,300.00			
2210762162196	19 X 4.00 Sqmm	27.50	676.40	1,750.00			
2210762162276	27 X 4.00 Sqmm	32.50	961.20	2,350.00			

Example to find out Part Number. for SBEE FIRE X HALOGEN FREE(NON FS) 2 Core of 1.5mm² Control Cable



Current carrying capacity and associated voltage drop for single core PVC Insulated cables, non-armoured, with or without sheath BS 6004
Conductor operating temperature :70°C, Ambient Temperature:30°C , For installations required to comply with BS 7671

conductor	Reference method A - enclosed in conduit in thermally insulating wall etc.				Reference method B - enclosed in conduit on a wall or in trunking etc.				Reference method C - clipped direct				Reference method F-in free air or on a perforated cable tray horizontal or vertical									
													Touching						Spaced by one diameter			
	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.		3 cables, three phase a.c.		3 cables, three phase a.c. trefoil		2 cables, single phase a.c. or d.c. or 3 cables three phase a.c. flat			
CSA	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Current Carrying Capacity	Voltage Drop	Voltage Drop
mm^2	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	A	mV/A/m	mV/A/m
1	11	44	10.5	38	13.5	44	12	38	15.5	44	14	38	-	-	-	-	-	-	-	-	-	-
1.5	14.5	29	13.5	25	17.5	29	15.5	25	20	29	18	25	-	-	-	-	-	-	-	-	-	-
2.5	20	18	18	15	24	18	21	15	27	18	25	15	-	-	-	-	-	-	-	-	-	-
4	26	11	24	9.5	32	11	28	9.5	37	11	33	9.5	-	-	-	-	-	-	-	-	-	-
6	34	7.3	31	6.4	41	7.3	36	6.4	47	7.3	43	6.4	-	-	-	-	-	-	-	-	-	-
10	46	4.4	42	3.8	57	4.4	50	3.8	65	4.4	59	3.8	-	-	-	-	-	-	-	-	-	-
16	61	2.8	56	2.4	76	2.8	68	2.4	87	2.8	79	2.4	-	-	-	-	-	-	-	-	-	-
25	80	"1.75d	73	1.55	101	"1.75d 1.80a"	89	1.55	114	1.75	104	"1.55f 1.50t"	131	1.75	114	1.55	110	1.5	146	130	"1.75d 1.80a"	1.55
35	99	"1.25d 1.30a"	89	1.1	125	"1.25d 1.30a"	110	1.1	141	1.25	129	"1.10f 1.10t"	162	1.25	143	1.1	137	1.1	181	162	"1.25d 1.30a"	1.15
50	119	"0.93d 1.00a"	108	0.85	151	"0.93d 1.00a"	134	0.85	182	"0.93d 0.95a"	167	"0.84f 0.82t"	196	"0.93d 0.95a"	174	0.84	167	0.82	219	197	"0.93d 0.97a"	0.86
70	151	"0.63d 0.72a"	136	0.61	192	"0.63d 0.72a"	171	0.61	234	"0.63d 0.66a"	214	"0.60f 0.57t"	251	"0.63d 0.66a"	225	0.6	216	0.57	281	254	"0.63d 0.69a"	0.63
95	182	"0.46d 0.56a"	164	0.48	232	"0.46d 0.56a"	207	0.48	284	"0.46d 0.50a"	261	"0.47f 0.43t"	304	"0.46d 0.50a"	275	0.47	264	0.43	341	311	"0.46d 0.54a"	0.51
120	210	"0.36d 0.47a"	188	0.41	269	"0.36d 0.47a"	239	0.41	330	"0.36d 0.41a"	303	"0.40f 0.36t"	352	"0.36d 0.41a"	321	0.4	308	0.36	396	362	"0.36d 0.45a"	0.44
150	240	"0.29d 0.41a"	216	0.36	300	"0.29d 0.41a"	262	0.36	381	"0.29d 0.34a"	349	"0.34f 0.30t"	406	"0.29d 0.34a"	372	0.34	356	0.3	456	419	"0.29d 0.39a"	0.4
185	273	"0.23d 0.37a"	245	0.32	341	"0.23d 0.37a"	296	0.32	436	"0.23d 0.29a"	400	"0.31f 0.26t"	463	"0.23d 0.29a"	427	0.31	409	0.26	521	480	"0.23d 0.35a"	0.36
240	321	"0.18d 0.33a"	286	0.29	400	"0.18d 0.37a"	346	0.29	515	"0.18d 0.25a"	472	"0.27f 0.22t"	546	"0.18d 0.25a"	507	0.27	485	0.22	615	569	"0.18d 0.31a"	0.34
300	367	"0.145d 0.31a"	328	0.27	458	"0.145d 0.31a"	394	0.27	594	"0.145d 0.22a"	545	"0.25f 0.19t"	629	"0.145d 0.22a"	587	0.25	561	0.19	709	659	"0.145 0.29"	0.32
400	-	-	-	-	546	"0.105d 0.29a"	467	0.25	694	"0.105d 0.20a"	634	"0.24f 0.175t"	754	"0.105d 0.20a"	689	0.24	656	0.175	852	795	"0.105 0.27"	0.31
500	-	-	-	-	626	"0.086d 0.28a"	533	0.25	792	"0.086d 0.185a"	723	"0.23f 0.16t"	868	"0.086d 0.185a"	789	0.23	749	0.16	982	920	"0.086 0.26"	0.3
630	-	-	-	-	720	"0.068d 0.27a"	611	0.24	904	"0.068d 0.175a"	826	"0.22f 0.15t"	1005	"0.068d 0.175a"	905	0.22	855	0.15	1138	1070	"0.068 0.25"	0.29
800	-	-	-	-	-	-	-	-	1030	"0.053d 0.165a"	943	"0.22f 0.145t"	1086	"0.053d 0.165a"	1020	0.22	971	0.145	1265	1188	"0.053 0.25"	0.29
1000	-	-	-	-	-	-	-	-	1154	"0.042d 0.16a"	1058	"0.21f 0.14t"	1216	"0.042d 0.16a"	1149	0.21	1079	0.14	1420	1337	"0.042 0.24"	0.28

Where more precise calculations require the use of resistive and reactive components of cable impedence,reference should be made to Table 4D1B of BS 7671.

Notes:

1) Where the conductor is to be protected by a semi - enclosed fuse to BS 3036. See item 5.1 of the preface to Appendix 4 of BS 7671
2) The current carrying capacities in coloumns 2 & 4 are also applicable to flexible cables to BS 6004 Table 1 ©where the cables are used in fixed installations.
3) Spacing larger than those specified in Method C (Table 4A) will result in a larger voltage drop.

Correction Factors
For Ambient Temperature

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C
Correction Factor	1.03	1.0	0.94	0.87	0.79	0.71	0.61	0.50	0.35

For Grouping refer to Table 4C1 of BS 7671
E & O.E

Current carrying capacity and associated voltage drop for Twin and Multicore XLPE Insulated cables, non-armoured
Conductor operating temperature :90°C, Ambient Temperature:30°C , For installations required to comply with BS 7671

conductor	Reference method A of Table 4E2A (enclosed in conduit in thermally insulating wall etc.)				Reference method B of Table 4E2A ('Enclosed')				Reference method C of Table 4E2A ('Clipped direct')				Reference method F of Table 4E1A (in free air)			
	1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.	
CSA	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop
mm^2	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m
1	14.5	46	13	40	17	46	15	40	19	46	17	40	21	46	18	40
1.5	18.5	31	16.5	27	22	31	19.5	27	24	31	22	27	26	31	23	27
2.5	25	19	22	16	30	19	26	16	33	19	30	16	36	19	32	16
4	33	12	30	10	40	12	35	10	45	12	40	10	49	12	42	10
6	42	7.9	38	6.8	51	7.9	44	6.8	58	7.9	52	6.8	63	7.9	54	6.8
10	57	4.7	51	4	69	4.7	60	4	80	4.7	71	4	86	4.7	75	4
16	76	2.9	68	2.5	91	2.9	80	2.5	107	2.9	96	2.5	115	2.9	100	2.5
25	99	"1.90a 1.85d"	89	1.65	119	"1.90a 1.85d"	105	1.65	138	"1.90a 1.85d"	119	1.65	149	1.90a	127	1.65
35	121	"1.35a 1.35d"	109	1.15	146	"1.35a 1.35d"	128	1.15	171	"1.35a 1.35d"	147	1.15	185	"1.35a 1.35d"	158	1.15
50	145	"1.00a 0.98d"	130	0.87	175	"1.00a 0.98d"	154	0.87	209	"1.00a 0.98d"	179	0.87	225	"1.00a 0.98d"	192	0.87
70	183	"0.69a 0.67d"	164	0.6	221	"0.69a 0.67d"	194	0.6	269	"0.69a 0.67d"	229	0.6	289	"0.69a 0.67d"	246	0.6
95	220	"0.52a 0.49d"	197	0.45	265	"0.52a 0.49d"	233	0.45	328	"0.52a 0.49d"	278	0.45	352	"0.52a 0.49d"	298	0.45
120	253	"0.42a 0.39d"	227	0.37	305	"0.42a 0.39d"	268	0.37	382	"0.42a 0.39d"	322	0.37	410	"0.42a 0.39d"	346	0.37
150	290	"0.35a 0.31d"	259	0.3	334	"0.35a 0.31d"	300	0.3	441	"0.35a 0.31d"	371	0.3	473	"0.35a 0.31d"	399	0.3
185	329	"0.29a 0.25d"	295	0.26	384	"0.29a 0.25d"	340	0.26	506	"0.29a 0.25d"	424	0.26	542	"0.29a 0.25d"	456	0.26
240	386	"0.24a 0.195d"	346	0.21	459	"0.24a 0.195d"	398	0.21	599	"0.24a 0.195d"	500	0.21	641	"0.24a 0.195d"	538	0.21
300	442	"0.21a 0.155d"	396	0.185	532	"0.21a 0.155d"	455	0.185	693	"0.21a 0.155d"	576	0.185	741	"0.21a 0.155d"	621	0.185
400	-	-	-	-	625	"0.190a 0.120d"	536	0.165	803	"0.190a 0.120d"	667	0.165	865	"0.190a 0.120d"	741	0.165

where more precise calculations require the use of resistive and reactive components of cable impedence, reference should be made to Table 4E2B of BS 7671.

Notes:
1) Where the conductor is to be protected by a semi - enclosed fuse to BS 3036. see item 5.1 of the preface to Appendix 4 of BS 7671

Correction Factors
For Ambient Temperature

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Correction Factor	1.03	1.0	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

For Grouping refer to Table 4C1 of BS 7671
E & O.E
Where a conductor operates a temprature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature.

conductor	Reference method A of Table 4E1A - enclosed in conduit in thermally insulating wall etc.				Reference method B of Table 4E1A - enclosed in conduit on a wall or in trunking etc.				Reference method C of Table 4E1A - clipped direct				Ref. method F of Table 4E1A (in free air or on a perforated cable tray)						Reference method G of Table 4E1A (in 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		Touching						Spaced by one diameter			
													2 cables, single phase a.c. or d.c.		3 cables, three phase a.c.		3 cables, three phase a.c. trefoil		2 cables, single phase a.c. or d.c. or 3 cables three phase a.c. flat			
																			Horiz	Vert	Single Phase	Three Phase
CSA	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Current Carrying Capacity	Voltage Drop	Voltage Drop
mm^2	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	A	mV/A/m	mV/A/m
1	14	46	13	40	17	46	15	40	19	46	17.5	40	-	-	-	-	-	-	-	-	-	-
1.5	19	31	17	27	23	31	20	27	25	31	23	27	-	-	-	-	-	-	-	-	-	-
2.5	26	19	23	16	31	19	28	16	34	19	31	16	-	-	-	-	-	-	-	-	-	-
4	35	12	31	10	42	12	37	10	46	12	41	10	-	-	-	-	-	-	-	-	-	-
6	45	7.9	40	6.8	54	7.9	48	6.8	59	7.9	54	6.8	-	-	-	-	-	-	-	-	-	-
10	61	4.7	54	4	75	4.7	66	4	81	4.7	74	4	-	-	-	-	-	-	-	-	-	-
16	81	2.9	73	2.5	100	2.9	88	2.5	109	2.9	99	2.5	-	-	-	-	-	-	-	-	-	-
25	106	“1.85d 1.90a”	95	1.65	133	“1.85d 1.90a”	117	1.65	143	1.85	130	“1.60f 1.60t”	161	1.85	141	1.6	135	1.6	182	161	“1.85d 1.85a”	1.65
35	131	“1.35d 1.35a”	117	1.15	164	“1.35d 1.35a”	144	1.15	176	1.35	161	“1.15f 1.15t”	200	1.35	176	1.15	169	1.15	226	201	“1.35d 1.35a”	1.2
50	158	“0.99d 1.05a”	141	0.9	198	“0.99d 1.05a”	175	0.9	228	“0.99d 1.00a”	209	“0.87f 0.87t”	242	“0.99d 1.00a”	216	0.87	207	0.87	275	246	“0.99d 1.00a”	0.89
70	200	“0.68d 0.75a”	179	0.65	253	“0.68d 0.75a”	222	0.65	293	“0.68d 0.71a”	268	“0.62f 0.61t”	310	“0.68d 0.71a”	279	0.62	268	0.61	353	318	“0.68d 0.73a”	0.65
95	241	“0.49d 0.58a”	216	0.5	306	“0.49d 0.58a”	269	0.5	355	“0.49d 0.52a”	326	“0.46f 0.45t”	377	“0.49d 0.52a”	342	0.46	328	0.45	430	389	“0.49d 0.56a”	0.49
120	278	“0.39d 0.48a”	249	0.42	354	“0.39d 0.48a”	312	0.42	413	“0.39d 0.43a”	379	“0.38f 0.37t”	437	“0.39d 0.43a”	400	0.38	383	0.37	500	454	“0.39d 0.47a”	0.42
150	318	“0.32d 0.43a”	285	0.37	393	“0.32d 0.43a”	342	0.37	476	“0.32d 0.36a”	436	“0.32f 0.31t”	504	“0.32d 0.36a”	464	0.32	444	0.31	577	527	“0.32d 0.41a”	0.37
185	362	“0.25d 0.37a”	324	0.32	449	“0.25d 0.37a”	384	0.32	545	“0.25d 0.30a”	500	“0.28f 0.26t”	575	“0.25d 0.30a”	533	0.28	510	0.26	661	605	“0.25d 0.36a”	0.33
240	424	“0.19d 0.33a”	380	0.29	528	“0.19d 0.33a”	450	0.29	644	“0.19d 0.25a”	590	“0.24f 0.22t”	679	“0.19d 0.25a”	634	0.24	607	0.22	781	719	“0.19d 0.31a”	0.29
300	486	“0.155d 0.31a”	435	0.27	603	“0.155d 0.31a”	514	0.27	743	“0.155 0.22”	681	“0.21f 0.195t”	783	“0.155 0.22”	736	0.21	703	0.195	902	833	“0.155 0.29”	0.27
400	-	“0.120d 0.29a”	-	0.25	683	“0.120d 0.29a”	584	0.25	868	“0.120 0.20”	793	“0.195f 0.175t”	940	“0.120 0.20”	868	0.195	823	0.175	1085	1008	0.12	0.26
500	-	“0.093d 0.28a”	-	0.24	783	“0.093d 0.28a”	666	0.24	990	“0.093 0.185”	904	“0.180f 0.160t”	1083	“0.093 0.185”	998	0.18	946	0.16	1253	1169	“0.093 0.26”	0.25
630	-	“0.072d 0.27a”	-	0.23	900	“0.072d 0.27a”	764	0.23	1130	“0.072 0.175”	1033	“0.170f 0.15t”	1254	“0.072 0.175”	1151	0.17	1088	0.15	1454	1362	“0.072 0.25”	0.24
800	-	-	-	-	-	-	-	-	1280	“0.056 0.170”	1179	“0.165f 0.145t”	1358	“0.056 0.170”	1275	0.165	1214	0.145	1581	1485	“0.056 0.25”	0.24
1000	-	-	-	-	-	-	-	-	1443	“0.045 0.165”	1323	“0.165f 0.140t”	1520	“0.045 0.165”	1436	0.165	1349	0.14	1775	1671	“0.045 0.24”	0.24

where more precise calculations require the use of resistive and reactive components ofcable impedence,reference should be made to Table 4E1B of BS 7671.

Notes:

1) where the conductor is to be protected by a semi - enclosed fuse to BS 3036.see item 5.1 of the preface to Appendix 4 of BS 7671.
2) The current carrying capacities in coloumns 2 & 4 are also applicable to flexible cables to BS 7211 Table 3(b) where the cables are used in fixed installations.
3) Spacing larger than those specified in Method C (Table 4A) will result in a larger voltage drop.
4) Where these cables are installed in rigid PVC conduit, the current carrying capacities for PVC Insulated cables to Table 4D1A of BS 7671 should be used.

Correction Factors
For Ambient Temperature

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Correction Factor	1.02	1.0	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

For Grouping refer to Table 4C1 of BS 7671
Where a conductor operates a temprature exceeding 70°C it shall be ascertained that the equip-mentconnected to the conductor is suitable for the conductor operating temperature(see Regulation 512.1.2 of BS 7671)

Current carrying capacity and associated voltage drop for single core PVC Insulated cables, non-armoured, with or without sheath BS 6004. Conductor operating temperature :70°C, Ambient Temperature:30°C , For installations required to comply with BS 7671

Current carrying capacity and associated voltage drop for Twin and Multicore XLPE Insulated cables, non-armoured BS 7211
Conductor operating temperature :90°C, Ambient Temperature:30°C , For installations required to comply with BS 7671

conductor	Reference method A of Table 4D2A (enclosed in conduit in thermally insulating wall etc.)				Reference method B of Table 4D2A ('Enclosed')				Reference method C of Table 4D2A ('Clipped direct')				Reference method E of Table 4D2A (Free air)			
	1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.		1 two-core cable, with or without protective conductor single phase a.c. or d.c.		1 three-core or 1 four-core cable, with or without protective conductor three phase a.c.	
CSA	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop
mm^2	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m
1	11	44	10	38	13	44	11.5	38	15	44	13.5	38	17	44	14.5	38
1.5	14	29	13	25	16.5	29	15	25	19.5	29	17.5	25	22	29	18.5	25
2.5	18.5	18	17.5	15	23	18	20	15	27	18	24	15	30	18	25	15
4	25	11	23	9.5	30	11	27	9.5	36	11	32	9.5	40	11	34	9.5
6	32	7.3	29	6.4	38	7.3	34	6.4	46	7.3	41	6.4	51	7.3	43	6.4
10	43	4.4	39	3.8	52	4.4	46	3.8	63	4.4	57	3.8	70	4.4	60	3.8
16	57	2.8	52	2.4	69	2.8	62	2.4	85	2.8	76	2.4	94	2.8	80	2.4
25	75	"1.75a 1.75d"	68	1.5	90	"1.75a 1.75d"	80	1.5	112	"1.75a 1.75d"	96	1.5	119	"1.75a 1.75d"	101	1.5
35	92	"1.25a 1.25d"	83	1.1	111	"1.25a 1.25d"	99	1.1	138	"1.25a 1.25d"	119	1.1	148	"1.25a 1.25d"	126	1.1
50	110	"0.94a 0.93d"	99	0.81	133	"0.94a 0.93d"	118	0.81	168	"0.94a 0.93d"	144	0.81	180	"0.94a 0.93d"	153	0.81
70	139	"0.65a 0.63d"	125	0.57	168	"0.65a 0.63d"	149	0.57	213	"0.65a 0.63d"	184	0.57	232	"0.65a 0.63d"	196	0.57
95	167	"0.50a 0.46d"	150	0.43	201	"0.50a 0.46d"	179	0.43	258	"0.50a 0.46d"	223	0.43	282	"0.50a 0.46d"	238	0.43
120	192	"0.41a 0.36d"	172	0.35	232	"0.41a 0.36d"	206	0.35	299	"0.41a 0.36d"	259	0.35	328	"0.41a 0.36d"	276	0.35
150	219	"0.34a 0.29d"	196	0.29	258	"0.34a 0.29d"	225	0.29	344	"0.34a 0.29d"	299	0.29	379	"0.34a 0.29d"	319	0.29
185	248	"0.29a 0.23d"	223	0.25	294	"0.29a 0.23d"	255	0.25	392	"0.29a 0.23d"	341	0.25	434	"0.29a 0.23d"	364	0.25
240	291	"0.24a 0.18d"	261	0.21	344	"0.24a 0.180d"	297	0.21	461	"0.24a 0.180d"	403	0.21	514	"0.24a 0.180d"	430	0.21
300	334	"0.21a 0.185	298	0.185	394	"0.21a 0.145d"	339	0.185	530	"0.21a 0.145d"	464	0.185	593	"0.21a	0.145d" 0.145d"	497	
400	-	"0.185a 0.105d"	-	0.16	470	"0.185a 0.105d"	402	0.16	634	"0.185a 0.105d"	557	0.16	715	"0.185a 0.105d"	597	0.16

where more precise calculations require the use of resistive and reactive components of cable impedence, reference should be made to Table 4E2B of BS 7671.

Notes:
1) Where the conductor is to be protected by a semi - enclosed fuse to BS 3036. see item 5.1 of the preface to Appendix 4 of BS 7671
2) Cables to BS 7629 are rated for a conductor operating temperature of 70°C and are therefore included inthis table,although the material used for the cable insulation is not PVC.

Correction Factors
For Ambient Temperature

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C
Correction Factor	1.03	1.0	0.94	0.87	0.79	0.71	0.61	0.50

For Grouping refer to Table 4C1 of BS 7671
E & O.E
Where a conductor operates a temprature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature.

Current carrying capacity and associated voltage drop for Twin and Multi core armoured XLPE Insulated Cables BS 5467 BS 6724
Conductor operating temperature : 90°C, Ambient Temperature: 30°C air/20°C ground for installations required to comply with BS 7671

conductor	Reference method C of Table 4E4A ('Clipped direct')				Reference method E of Table 4E4A (Free air)				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.	
CSA	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop	Current Carrying Capacity	Voltage Drop
mm^2	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m	A	mV/A/m
1.5	27	31	23	27	29	31	25	27	25	31	21	27
2.5	36	19	31	16	39	19	33	16	33	19	28	16
4	49	12	42	10	52	12	44	10	43	12	36	10
6	62	7.9	53	6.8	66	7.9	56	6.8	53	7.9	44	6.8
10	85	4.7	73	4	90	4.7	78	4	71	4.7	58	4
16	110	2.9	94	2.5	115	2.9	99	2.5	91	2.9	75	2.5
25	146	"1.90a 1.85d"	124	1.65	152	"1.90a 1.85d"	131	1.65	116	"1.90a 1.85d"	96	1.65
35	180	"1.35a 1.35d"	154	1.15	188	"1.35a 1.35d"	162	1.15	139	"1.35a 1.35d"	115	1.15
50	219	"1.00a 0.98d"	187	0.87	228	"1.00a 0.98d"	197	0.87	164	"1.00a 0.98d"	135	0.87
70	279	"0.69a 0.67d"	238	0.6	291	"0.69a 0.67d"	251	0.6	203	"0.69a 0.67d"	167	0.6
95	338	"0.52a 0.49d"	289	0.45	354	"0.52a 0.49d"	304	0.45	239	0.52a	197	0.45
120	392	"0.42a 0.39d"	335	0.37	410	"0.42a 0.39d"	353	0.37	271	"0.42a 0.39d"	223	0.37
150	451	"0.35a 0.31d"	386	0.3	472	"0.35a 0.31d"	406	0.3	306	"0.35a 0.31d"	251	0.3
185	515	"0.29a 0.25d"	441	0.26	539	"0.29a 0.25d"	463	0.26	343	"0.29a 0.25d"	281	0.26
240	607	"0.24a 1.195d"	520	0.21	636	"0.24a 0.195d"	546	0.21	395	"0.24a 0.195d"	324	0.21
300	698	"0.21a 0.155d"	599	0.185	732	"0.21a 0.155d"	628	0.185	446	"0.21a 0.155d"	365	0.185
400	787	"0.190a 0.120d"	673	0.165	847	"0.190a 0.120d"	728	0.165	-	"0.190a 0.120d"	-	0.165

Where more precise calculations require the use of resistive and reactive components of cable impedence, reference should be made to Table 4E4B of BS 7671.

Notes:
1) Where the conductor is to be protected by a semi - enclosed fuse to BS 3036.see item 5.1 of the preface to Appendix 4 of BS 7671.

Where a conductor operates a temprature exceeding 70°C it shall be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature (see Regulation 512.1.2 of BS 7671)
E&O.E

Correction Factors
For Ambient Temperature

Ambient Temperature	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
Correction Factor	1.02	1.0	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

For Ground Temperature

Ambient Temperature	10°C	15°C	25°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C
Correction Factor	1.07	1.0	1.00	0.96	0.93	0.89	0.85	0.80	0.76	0.71	0.65	0.60	0.53	0.46

Soil Resistivity

Thermal Resistivity Km/W	0.5	0.8	1	1.5	2	2.5	3
Rating Factor for cables buried in Ducts	1.28	1.2	1.18	1.1	1.05	1	0.96
Rating Factor for direct buried cables	1.88	1.62	1.5	1.28	1.12	1	0.9

Size of fuse Element Composed of tinned Copper wire for use in semi enclosed fuses

Nominal current of fuse element	Nominal diameter of wire
A	mm
3	0.15
5	0.2
10	0.35
15	0.5
20	0.6
25	0.75
30	0.85
45	1.25
60	1.53
80	1.8
100	2

Current Carrying Capacity and associated Voltage Drop for mineral insulated Copper sheathed Cables
BS EN 60702 PART 1 :2002 Sheath Temperture :70°C
Ambient Temperature :30°C For Installations required to comply with BS 7671

	two-core cables		three-core cables		four-core cables		seven-core cables	
"Conductor C.S.A."	Reference method C Clipped direct	Reference method E Tray mounted	Reference method C Clipped direct	Reference method E Tray mounted	Reference method C Clipped direct	Reference method E Tray mounted	Reference method C Clipped direct	Reference method E Tray mounted
	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH
mm2	A	A	A	A	A	A	A	A
1	18.5	19.5	15	16.5	15	16.5	-	-
1.5	23	25	19	21	19	21	13	14
2.5	31	33	26	28	26	28	17.5	19
4	40	44	35	37	35	37	-	-

Multi core Heavy Duty Cables (750volts)

	two-core cables		three-core cables		four-core cables		seven-core cables	
"Conductor C.S.A."	Reference method 1 Clipped direct	Reference method 11 Tray mounted	Reference method 1 Clipped direct	Reference method 11 Tray mounted	Reference method 1 Clipped direct	Reference method 11 Tray mounted	Reference method 1 Clipped direct	Reference method 11 Tray mounted
	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH	LSZH
mm2	A	A	A	A	A	A	A	A
1.5	25	26	21	22	21	23	14.5	15.5
2.5	34	36	28	30	28	30	19.5	21
4	45	47	37	40	37	40	12 to 2.5 core	-
6	57	60	48	51	48	51	16	17
10	77	82	65	69	65	69	-	-
16	102	109	86	92	86	92	19 core 1.5	-
25	133	142	112	120	112	120	10	11

Spacing of Supports for cables in accessible Positions

Overall diameter of cable*	Maximum spacing of clips			
	Non-armoured rubber, PVC or lead sheated cables		Armoured Cables	
	Horizontal	Vertical	Horizontal	Vertical
mm	mm	mm	mm	mm
Not exceeding 9	250	400	-	-
Exceeding 9 and not exceeding 15	300	400	350	450
Exceeding 15 and not exceeding 20	350	450	400	550
Exceeding 20 and not exceeding 40	450	550	450	600

Table taken as the measurement of the major axis incase of flat Cables.

The spacing stated for the horizontal runs may be applied also runs at an angle morethan 30° from the vertical, the vertcal spacings are applicable.

For the spacing of supports for cable of overall diameter exceeding 40mm and for single core cable having conductors of nominal area 300mm² and larger.manufacturer,s recommendations should be observed.

For anumber of reasons , for instance as aresult of improvements in design, in methods of manufacture or experience in the use or as permitted by the relevant British standards specification, the products as supplied at any one time may differ from the descriptions given in this publication.

E & OE

Single core core Heavy Duty Cables (750volts)

	Reference method C Clipped direct		Reference method E, F & G		Voltage drop	
"Conductor C.S.A."	Single phase a.c. or d.c.	Three phase flat and touching	Single phase a.c. or d.c.	Three phase flat and touching	Single phase a.c. or d.c.	Three phase a.c.
mm2	A	A	A	A	mV/A/m	mV/A/m
6	57	52	60	57	7	6
10	77	70	82	77	4.2	3.6
16	102	92	109	102	2.6	2.3
25	133	120	142	132	1.65	1.45
35	163	147	174	161	1.2	1.1
50	202	181	215	198	0.91	0.83
70	247	221	264	241	0.64	0.6
95	296	264	317	289	0.49	0.47
120	340	303	364	331	0.41	0.4
150	388	346	416	377	0.34	0.36
185	440	392	472	426	0.29	0.32
240	514	457	552	496	0.25	0.29

1) Current ratings and volts drop values are for single phase operation,for three and four core cables:values are for three phase operation.They are based on Tables 4G1A and 4G1B of the 17th edition of the IEE wiring regulations (BS 7671) Method C (Clipped Direct) and Method E (Cable Installed on a perforated cable Tray as indicated.

Associated Voltage Drop

	Voltage Drop	
Conductor C.S.A.	Single Phase	Three Phase
mm2	mV/A/m	mV/A/m
1	42	36
1.5	28	24
2.5	17	14
4	10	9.1
6	7	6
10	4.2	3.6
16	2.6	2.3
25	1.65	1.45