Multi-Core XLPE/LSF/SWA/LSF Power and Control Cable

600/1000 and 1900/3300V

Application

LSF insulated, armoured and sheathed, multi-core power cable. Especially for use in areas where fire would create dense smoke and toxic fumes causing a major threat to life and equipment.

Specifications

- In accordance with BS6724.
- Conductors: Stranded Class 2 copper conductors.
- Insulation: XLPE insulation Type GP8 to BS7655.
- Core identification:
  2 core - brown, blue
  3 core - brown, black, grey
  4 core - brown, black, grey, blue
  5 core - brown, black, grey, blue, green/yellow
- Inner Sheath: LSF inner sheath Type LTS1 to BS7655.
- Mild galvanised steel wires to BSEN10257-1.
- Outer Sheath: Black LSF outer sheath Type LTS1 to BS7655.
- Flame retardant to BS EN 60332-3-24 & IEC60332-3-24 Cat. C as a minimum.
- Temperature Rating: 90°C maximum conductor operating temperature.
- Voltage Rating: 600/1000 & 1900/3300V.

NB:1900/3300V only available in 3 core.

Multi-Core XLPE/LSF/SWA/LSF Power & Control Cable

600/1000 and 1900/3300V

Anixter Number	Number of Cores	Nominal Conductor Area mm²	Insulation Thickness mm	Diameter Under Armour mm	Armour Wire Size mm	Nominal O/D mm	Approx Weight kg/km	Min Bending Radius (fixed bend) mm
600/1000V Cables								
BS6724-2C-0015	2	1.5*	0.6	7.7	0.9	12.1	310	80
BS6724-2C-0025	2	2.5*	0.7	9.0	0.9	13.6	360	90
BS6724-2C-0040	2	4*	0.7	10.1	0.9	14.7	420	90
BS6724-2C-0060	2	6*	0.7	11.3	0.9	15.9	500	100
BS6724-2C-0100	2	10*	0.7	13.2	0.9	18.0	800	110
BS6724-2C-0160	2	16†	0.7	14.7	1.25	20.4	940	120
BS6724-2C-0250	2	25\\	0.9	14.7	1.25	20.4	1250	170
BS6724-2C-0350	2	35	0.9	16.7	1.6	23.3	1720	190
BS6724-2C-0500	2	50	1.0	19.0	1.6	25.8	1800	210
BS6724-2C-0700	2	70	1.1	22.0	1.6	29.0	2330	240
BS6724-2C-0950	2	95	1.1	25.1	2.0	33.1	3170	270
BS6724-2C-1200	2	120	1.2	27.9	2.0	36.1	3810	290
BS6724-2C-1500	2	150	1.4	30.9	2.0	39.3	4530	320
BS6724-2C-1850	2	185	1.6	34.9	2.5	44.7	5860	360
BS6724-2C-2400	2	240	1.7	39.0	2.5	49.0	7300	400
BS6724-2C-3000	2	300	1.8	43.3	2.5	53.5	8790	430
BS6724-2C-4000	2	400	2.0	48.4	2.5	59.0	10770	480
BS6724-3C-0015	3	1.5*	0.6	8.2	0.9	12.6	340	80
BS6724-3C-0025	3	2.5*	0.7	9.5	0.9	14.1	400	90
BS6724-3C-0040	3	4*	0.7	10.7	0.9	15.3	500	100
BS6724-3C-0060	3	6*	0.7	12.0	0.9	16.6	770	100
BS6724-3C-0100	3	10*	0.7	14.0	1.25	19.5	900	120
BS6724-3C-0160	3	16†	0.7	15.9	1.25	21.6	1180	130
BS6724-3C-0250	3	25†	0.9	20.1	1.6	26.7	1720	170
BS6724-3C-0350	3	35†	0.9	22.6	1.6	29.4	2130	180
BS6724-3C-0500	3	50 \\	1.0	21.7	1.6	28.5	2380	230
BS6724-3C-0700	3	70	1.1	25.2	1.6	32.2	3150	260
BS6724-3C-0950	3	95	1.1	28.8	2.0	37.0	4320	300
BS6724-3C-1200	3	120	1.2	32.0	2.0	40.4	5200	330
BS6724-3C-1500	3	150	1.4	35.9	2.5	45.5	6630	370
BS6724-3C-1850	3	185	1.6	40.0	2.5	49.8	7980	400
BS6724-3C-2400	3	240	1.7	44.9	2.5	55.1	9960	450
BS6724-3C-3000	3	300	1.8	49.8	2.5	60.2	12060	490
BS6724-3C-4000	3	400	2.0	55.8	2.5	66.6	14980	540

*Circular stranded conductors.

\Shaped stranded conductors on 25sqmm & above (2 core), 50sqmm & above (3 & 4 core)

† Circular or circular compacted stranded conductors.

Continued overleaf. . .

Multi-Core XLPE/LSF/SWA/LSF Power & Control Cable

600/1000 and 1900/3300V (continued)

Anixter Number	Number of Cores	Nominal Conductor Area mm^2	Insulation Thickness mm	Diameter Under Armour mm	Armour Wire Size mm	Nominal O/D mm	Approx Weight kg/km	Min Bending Radius (fixed bend) mm
BS6724-4C-0015	4	1.5*	0.6	8.9	0.9	13.3	390	90
BS6724-4C-0025	4	2.5*	0.7	10.4	0.9	15.0	470	90
BS6724-4C-0040	4	4*	0.7	11.8	0.9	16.4	580	100
BS6724-4C-0060	4	6*	0.7	13.2	1.25	18.7	820	120
BS6724-4C-0100	4	10*	0.7	15.6	1.25	21.1	1060	130
BS6724-4C-0160	4	16†	0.7	17.7	1.25	23.4	1410	140
BS6724-4C-0250	4	25†	0.9	22.3	1.6	28.9	2090	180
BS6724-4C-0350	4	35†	0.9	25.1	1.6	31.9	2590	200
BS6724-4C-0500	4	50 \\	1.0	25.0	1.6	32.0	2960	260
BS6724-4C-0700	4	70	1.1	29.5	2.0	37.7	4240	310
BS6724-4C-0950	4	95	1.1	33.3	2.0	41.7	5410	340
BS6724-4C-1200	4	120	1.2	37.5	2.5	47.1	6980	380
BS6724-4C-1500	4	150	1.4	41.6	2.5	51.4	8320	420
BS6724-4C-1850	4	185	1.6	46.4	2.5	56.6	10080	460
BS6724-4C-2400	4	240	1.7	52.6	2.5	63.0	12690	510
BS6724-4C-3000	4	300	1.8	58.0	2.5	68.8	15420	560
A3-03-C007	7	1.5*	0.6	10.6	0.9	15.2	490	100
A3-03-C012	12	1.5*	0.6	13.9	1.25	19.4	830	120
A3-03-C019	19	1.5*	0.6	16.5	1.25	22.2	1070	140
A3-03-C027	27	1.5*	0.6	20.1	1.6	26.7	1580	170
A3-03-C037	37	1.5*	0.6	22.4	1.6	29.0	1880	180
A3-P3-C007	7	2.5*	0.7	12.5	0.9	17.1	600	110
A3-P3-C012	12	2.5*	0.7	16.7	1.25	22.4	1020	140
A3-P3-C019	19	2.5*	0.7	20.0	1.6	26.6	1530	160
A3-P3-C027	27	2.5*	0.7	23.9	1.6	30.7	1960	190
A3-P3-C037	37	2.5*	0.7	27.0	1.6	33.8	2370	210
A3-Q3-C007	7	4*	0.7	14.2	1.25	19.7	830	120
A3-Q3-C012	12	4*	0.7	19.3	1.6	25.7	1440	160
A3-Q3-C019	19	4*	0.7	22.7	1.6	29.3	1930	180
A3-Q3-C027	27	4*	0.7	27.4	1.6	34.4	2530	210
A3-Q3-C037	37	4*	0.7	31.2	2.0	39.2	3470	240

Multi-Core XLPE/LSF/SWA/LSF Power & Control Cable

600/1000 and 1900/3300V (continued)

Anixter Number	Number of Cores	Nominal Conductor Area mm²	Insulation Thickness mm	Diameter Under Armour mm	Armour Wire Size mm	Nominal O/D mm	Approx Weight kg/km	Min Bending Radius (fixed bend) mm
600/1000V Five Core Cables								
BS6724-5C-0015N	5	1.5*	0.6	9.7	0.9	14.3	380	90
BS6724-5C-0025N	5	2.5*	0.7	11.5	0.9	16.1	500	100
BS6724-5C-0040N	5	4*	0.7	13.0	0.9	17.8	617	110
BS6724-5C-0060N	5	6*	0.7	14.5	1.25	20.0	875	120
BS6724-5C-0100N	5	10*	0.7	17.2	1.25	22.9	1180	140
BS6724-5C-0160N	5	16†	0.7	20.0	1.6	26.6	1720	160
BS6724-5C-0250	5	25†	0.9	24.7	1.6	31.5	2400	190
BS6724-5C-0350	5	35†	0.9	27.8	1.6	34.8	2930	210
BS6724-5C-0500	5	50†	1.0	32.4	2.0	40.4	4050	250
BS6724-5C-0700	5	70†	1.1	37.9	2.0	46.3	5320	280
BS6724-5C-0950	5	95†	1.1	42.7	2.5	52.5	7280	320
BS6724-5C-1200	5	120†	1.2	46.3	2.5	56.5	8745	340
1900/3300V Cables								
A2-AZ-0250	3	25†	2.0	25.4	1.6	32.2	2100	200
A2-AZ-0350	3	35†	2.0	28.0	1.6	35.0	2520	210
A2-AZ-0500	3	50\\	2.0	26.7	2.0	34.7	3030	280
A2-AZ-0700	3	70	2.0	29.8	2.0	38.0	3810	310
A2-AZ-0950	3	95	2.0	33.0	2.5	41.4	4730	340
A2-AZ-1200	3	120	2.0	36.1	2.5	45.7	6020	360
A2-AZ-1500	3	150	2.0	38.7	2.5	48.5	6980	390
A2-AZ-1850	3	185	2.0	41.9	2.5	51.9	8250	420
A2-AZ-2400	3	240	2.0	46.7	2.5	56.9	10200	460
A2-AZ-3000	3	300	2.0	50.8	2.5	61.2	12210	490
A2-AZ-4000	3	400	2.0	55.8	2.5	66.6	15160	540

N.B. Part numbers for 5 core cable ending in a letter N, e.g. BS6724-5C-0015N, indicate that the cable has number printed cores. All cables containing 7, 12, 19, 27 and 37 cores also have number printed core identification.

* Circular stranded conductors
† Circular or circular compacted stranded conductors.
\\ Cables having conductors of nominal area 50sqmm and above have shaped stranded conductors (with the exception of 5 core cables)

For more technical information see page 1:68 (See 1:76 for technical information on 1900/3300V cables).

For conductor and armour resistances refer page 19:31.
For Gross Cross-Sectional area of armour refer to page 19:34.
For conductor short-circuit ratings refer to page 19:28.
For armour short-circuit ratings refer to page 19:36.

Technical Information

- Multi-core XLPE/PVC/SWA/PVC 600/1000V
- Multi-core XLPE/LSF/SWA/LSF 600/1000V
- Multi-core XLPE/LC/PVC/SWA/PVC 600/1000V

CURRENT CARRYING CAPACITY (Amperes)

Direct Burial			In Single-Way Duct		
Nominal Conductor Area	2 Core	3 & 4 Core	Nominal Conductor Area	2 Core	3 & 4 Core
mm^2	Arm'd	Arm'd	mm^2	Arm'd	Arm'd
1.5	38	32	1.5	31	26
2.5	49	42	2.5	41	34
4	65	55	4	53	45
6	81	69	6	67	56
10	109	92	10	89	75
16	141	119	16	115	96
25	183	152	25	148	124
35	219	182	35	178	149
50	259	217	50	211	177
70	317	266	70	260	218
95	381	319	95	313	263
120	433	363	120	357	300
150	485	406	150	401	338
185	547	458	185	455	382
240	632	529	240	527	442
300	708	592	300	592	496
400	799	667	400	669	570

Standard depth of laying 0.5m
Thermal resistivity of soil 1.2°C m/W
Standard ground temperature 15°C
Ambient air temperature 25°C
Maximum conductor temperature 90°C
2 core - single phase a.c. 3 & 4 core - three phase a.c.
Ratings do not apply if the cable is protected by a semi-enclosed fuse to BS3036.
For further guidance refer to the BS7671 (IEE Wiring Regulations - latest edition) and ERA publication 69-30 Part 5.
3 & 4 core ratings also apply to 5 core cables.

Air		
Nominal Conductor Area	2 Core	3 & 4 Core
mm^2	Arm'd	Arm'd
1.5	31	26
2.5	41	35
4	55	47
6	70	59
10	95	82
16	126	107
25	164	140
35	202	172
50	244	209
70	306	263
95	378	324
120	437	376
150	499	430
185	576	495
240	680	584
300	775	666
400	892	766

For cables of five core and above it is assumed only two cores are loaded simultaneously (i.e. live and neutral) and the two core rating should be taken. In instances where several cores are loaded simultaneously, the following rating factors should be applied to the two core current rating:

Number of cores	2	3	4	5	6	7	10	12
Factor	1.0	0.87	0.78	0.72	0.67	0.63	0.56	0.53

Number of cores	14	19	24	27	30	37	44	46	48
Factor	0.51	0.45	0.42	0.4	0.39	0.36	0.34	0.33	0.33

Technical Information

- XLPE/PVC/SWA/PVC
- XLPE/LSF/SWA/LSF
- XLPE/LC/PVC/SWA/PVC 600/1000V

Conductor operating temperature 90°C

NB. for ambient air and ground temperatures other than those specified the following rating factors should be applied:

Cables Laid in Air

Ambient air temp °C	25	30	35	40	45	50	55
Rating factor	1.0	0.96	0.92	0.88	0.83	0.78	0.73

Cables laid direct in ground and in single-way ducts

Ground temp °C	10	15	20	25	30	35	40
Rating factor	1.03	1.0	0.97	0.93	0.89	0.86	0.82

VOLTAGE DROP (per Ampere per metre):

Conductor Cross Sectional Area	2 Core Cable d.c.	2 Core Cable Single Phase a.c.			3, 4 or 5 Core Cable Three Phase a.c.		
1	2	3			4		
mm^2	mV	mV			mV		
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			4.0		
16	2.9	2.9			2.5		
		r	x	z	r	x	z
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	0.145	0.195	0.115	0.125	0.170

- Multi-core PCU/XLPE/PVC 600/1000V to BS5467
- Multi-core PCU/XLPE/PVC/SWA/PVC 600/1000V to BS5467
- Multi-core PCU/XLPE/LSF/SWA/LSF 600/1000V to BS6724
- Multi-core PCU/XLPE/LC/PVC/SWA/PVC 600/1000V

ELECTRICAL CHARACTERISTICS

Conductor Size mm^2	Maximum d.c. Conductor Resistance @ 20°C ohms/km	Maximum a.c. Conductor Resistance @ 90°C ohms/km	Reactance @ 50Hz ohms/km	Impedance @ 90°C, 50Hz ohms/km
1.5	12.1	15.4	0.103	15.4
2.5	7.41	9.45	0.101	9.45
4.0	4.61	5.88	0.0929	5.88
6.0	3.08	3.93	0.0885	3.93
10	1.83	2.33	0.0835	2.33
16	1.15	1.47	0.0815	1.47
25	0.727	0.927	0.0818	0.931
35	0.524	0.668	0.0771	0.672
50	0.387	0.494	0.0765	0.500
70	0.268	0.342	0.0754	0.350
95	0.193	0.247	0.0727	0.257
120	0.153	0.197	0.0723	0.210
150	0.124	0.160	0.0728	0.176
185	0.0991	0.128	0.073	0.147
240	0.0754	0.0989	0.0722	0.122
300	0.0601	0.0802	0.0717	0.108
400	0.047	0.0656	0.0715	0.0970

Technical Information

- 1.9/3.3 kV 1 core & 3 cores XLPE Insulated, Armoured Cables BS5467 & BS6724

For further guidance refer to the BS7671 (IEE Wiring Regulations - latest edition) and ERA 69-30Part 5.
For ambient air and ground temperatures other than those specified, the following factors should be applied.

Cables laid in air

Ambient air temp °C	25	30	35	40	45	50	55
Rating factor	1.0	0.96	0.92	0.88	0.83	0.78	0.73

Cables laid direct in ground and in single-way ducts

Ground temp °C	10	15	20	25	30	35	40
Rating factor	1.03	1.0	0.97	0.93	0.89	0.86	0.82

CURRENT CARRYING CAPACITY (Amperes)

Single Core 1900/3300V 50Hz

Direct Buried - BS5467				In Single-Way Duct - BS5467		
Nominal Conductor Area	Trefoil	3 Cables Touching	Spaced	Nominal Conductor	3 Cables	
					Trefoil	Flat
mm^2	Arm'd	Arm'd	Arm'd	mm^2	Arm'd	Arm'd
50	222	221	230	50	219	220
70	271	269	279	70	264	265
95	324	321	331	95	310	311
120	366	361	369	120	342	342
150	409	402	409	150	376	376
185	460	449	454	185	414	414
240	528	513	512	240	464	463
300	589	568	560	300	506	504
400	651	619	595	400	535	532
500	720	677	641	500	579	574
630	789	733	684	630	624	618
800	831	763	703	800	650	644
1000	880	802	735	1000	689	682

CURRENT CARRYING CAPACITY (Amperes)

3 Core 1900/3300V 50Hz XLPE/PVC/SWA/PVC, XLPE/LSF/SWA/LSF

Direct Buried - BS5467		In Single-Way Duct - BS5467		Air - BS5467 & BS6724	
Nominal Conductor Area	3 Core	Nominal Conductor Area	3 Core	Nominal Conductor Area	3 Core
mm²	Arm'd	mm²	Arm'd	mm²	Arm'd
16	114	16	96	16	112
25	147	25	124	25	149
35	175	35	147	35	177
50	207	50	174	50	213
70	254	70	214	70	268
95	304	95	257	95	328
120	345	120	293	120	380
150	387	150	328	150	432
185	436	185	371	185	496
240	502	240	428	240	583
300	563	300	480	300	667
400	633	400	549	400	765

XLPE/PVC/AWA/PVC XLPE/LSF/AWA/LSF

Air - BS5467 & 6724			
Nominal Conductor Area	Trefoil	3 Cables Vertical Spaced	Horizontally Spaced
mm²	Arm'd	Arm'd	Arm'd
50	240	277	299
70	300	345	372
95	368	420	452
120	428	478	513
150	487	536	576
185	556	604	648
240	656	695	745
300	747	771	826
400	851	829	887
500	963	906	968
630	1084	983	1049
800	1178	1030	1098
1000	1278	1096	1168

Standard depth of laying 0.8m
Thermal resistivity of soil 1.2°C m/W
Standard ground temperature 15°C
Ambient air temperature 25°C
Maximum conductor temperature 90°C

- Multi-core PCU/XLPE/PVC 1900/3300V to BS5467
- Multi-core PCU/XLPE/PVC/SWA/PVC 1900/3300V to BS5467
- Multi-core PCU/XLPE/LSF/SWA/LSF 1900/3300V to BS6724

ELECTRICAL CHARACTERISTICS

Conductor Size mm^2	Maximum d.c. Conductor Resistance @ 20°C ohms/km	Maximum a.c. Conductor Resistance @ 90°C ohms/km	Reactance @ 50Hz ohms/km	Impedance @ 90°C, 50Hz ohms/km
16	1.15	1.47	0.104	1.47
25	0.727	0.927	0.094	0.932
35	0.524	0.668	0.091	0.674
50	0.387	0.494	0.088	0.502
70	0.268	0.342	0.084	0.352
95	0.193	0.247	0.081	0.260
120	0.153	0.197	0.079	0.212
150	0.124	0.160	0.077	0.178
185	0.0991	0.128	0.076	0.149
240	0.0754	0.0989	0.074	0.124
300	0.0601	0.0802	0.073	0.108
400	0.047	0.0656	0.0717	0.0972

Armour Resistances

Max. DC Resistance of Conductor & Armour for 2, 3, 4 & 5 Core XLPE Insulated Cables Having Steel Wire Armour

XLPE/PVC/SWA/PVC Cables to BS5467
XLPE/LSF/SWA/LSF Cables to BS6724
MICA/XLPE/LSF/SWA/LSF Cables to BS7846

Nominal Conductor Area	Max Resistance per Km of Cable @ 20°C					
	Copper Conductor (plain)	Steel Wire Armour Cables with Stranded Copper Conductors				
		Two Core 600/1000V	Three Core 600/1000V	Three Core 1900/3300V	Four Core 600/1000V	Five-core 600/1000V
mm^2	ohms/km	ohms/km	ohms/km	ohms/km	ohms/km	ohms/km
1.5	12.1	10.2	9.5	-	8.8	8.2
2.5	7.41	8.8	8.2	-	7.7	6.8
4.0	4.61	7.9	7.5	-	6.8	6.2
6.0	3.08	7.0	6.7	-	4.3	3.9
10	1.83	6.0	4.0	-	3.7	3.4
16	1.15	3.7	3.5	1.9	3.1	3.2
25	0.727	3.7	2.5	1.7	2.3	1.8
35	0.524	2.6	2.3	1.8	2.0	1.6
50	0.387	2.3	2.0	1.3	1.8	1.1
70	0.268	2.0	1.8	1.2	1.2	0.94
95	0.193	1.4	1.3	1.1	1.1	–
120	0.153	1.3	1.2	0.76	0.76	–
150	0.124	1.2	0.78	0.71	0.68	–
185	0.0991	0.82	0.71	0.65	0.61	–
240	0.0754	0.73	0.63	0.59	0.54	–
300	0.0601	0.67	0.58	0.55	0.49	–
400	0.0470	0.59	0.52	0.50	0.35	–

Armour Resistances

Max. DC Resistance of Conductor & Armour for Auxiliary XLPE Insulated Cables Having Steel Wire Armour

XLPE/PVC/SWA/PVC Cables to BS5467
XLPE/LSF/SWA/LSF Cables to BS6724 600/1000V
MICA/XLPE/LSF/SWA/LSF Cables to BS7846 600/1000V

Nominal Conductor Area	Max Resistance per Km of Cable @ 20°C					
	Copper Conductor (plain)	Steel Wire Armour				
		Number of Cores*				
		7	12	19	27	37
mm²	ohms/km	ohms/km				
1.5	12.1	7.5	4.0	3.5	2.3	2.0
2.5	7.41	6.3	3.5	2.3	1.9	1.7
4.0	4.61	4.0	2.3	2.0	1.7	1.2

* For non-preferred sizes, the maximum resistance shall not be greater than that of the next lowest preferred number of cores.

Gross Cross-sectional Area of Armour for 2, 3 & 4 Core PVC Insulated Cables

PVC/PVC/SWA/PVC Cables to BS6346 and ENATS 09-6 600/1000V

Nominal Conductor Area	Gross cross-sectional area of round armour wires		
	Steel Wire Armour Cables with Stranded Copper Conductors		
	Two Core	Three Core	Four Core
mm²	mm²	mm²	mm²
1.5	15	16	17
2.5	17	19	20
4.0	20	22	34
6.0	22	34	38
10	40	42	46
16	46	50	72

Gross Cross-Sectional

Gross Cross-sectional Area of Armour for 2, 3, 4, & 5 Core XLPE Insulated Cables

XLPE/PVC/SWA/PVC Cables to BS5467 600/1000V
XLPE/LSF/SWA/LSF Cables to BS6724 600/1000V
MICA/XLPE/LSF/SWA/LSF Cables to BS7846 600/1000V

Nominal Conductor Area	Gross cross-sectional area of round armour wires			
	Steel Wire Armour Cables with Stranded Copper Conductors			
	Two Core	Three Core	Four Core	Five Core
mm^2	mm^2	mm^2	mm^2	mm^2
1.5	15	16	17	19
2.5	17	19	20	22
4.0	19	20	22	25
6.0	22	23	36	40
10	26	39	42	46
16	42	45	50	72
25	42	62	70	88
35	60	68	78	100
50	68	78	90	144
70	80	90	131	166
95	113	128	147	–
120	125	141	206	–
150	138	201	230	–
185	191	220	255	–
240	215	250	289	–
300	235	269	319	–
400	265	304	452	–

Gross Cross-sectional Area of Armour for Auxiliary XLPE Insulated Cables

XLPE/PVC/SWA/PVC Cables to BS5467
XLPE/LSF/SWA/LSF Cables to BS6724
MICA/XLPE/LSF/SWA/LSF Cables to BS7846

Nominal Conductor Area	Gross cross-sectional area of round armour wires				
	Number of Cores				
	7	12	19	27	37
mm^2	mm^2	mm^2	mm^2	mm^2	mm^2
1.5	20	39	45	70	78
2.5	24	45	70	84	94
4.0	39	68	80	96	138

Conductor Short-Circuit Ratings

XLPE Insulated Cables

Short-Circuit Ratings

Conductor Size mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
1.5	0.479	0.214	0.123
2.5	0.799	0.357	0.206
4.0	1.27	0.572	0.330
6.0	1.91	0.858	0.495
10	3.19	1.43	0.825
16	5.11	2.28	1.32
25	7.99	3.57	2.06
35	11.1	5.0	2.88
50	15.9	7.15	4.12
70	22.3	10.0	5.77
95	30.3	13.5	7.84
120	38.3	17.1	9.9
150	47.9	21.4	12.3
185	59.1	26.4	15.2
240	76.7	34.3	19.8
300	95.9	42.9	24.7
400	127	57.2	33.0
500	159	71.5	41.2
630	201	90.0	52.0

N.B: The above ratings assume an adiabatic temperature rise and are based on a conductor temperature of 90ºC at start of short-circuit and 250ºC at end of shortcircuit.

Armour Short-Circuit Ratings

Two Core XLPE/PVC/SWA/PVC 600/1000V
Two Core XLPE/LSF/SWA/LSF 600/1000V
Two Core MICA/XLPE/LSF/SWA/LSF 600/1000V

Short-Circuit Ratings

Conductor Size mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
1.5	1.54	0.69	0.398
2.5	1.75	0.782	0.451
4.0	1.95	0.874	0.505
6.0	2.26	1.01	0.583
10	2.68	1.20	0.693
16	4.32	1.93	1.11
25	4.32	1.93	1.11
35	6.17	2.76	1.59
50	7.0	3.13	1.81
70	8.23	3.68	2.12
95	11.6	5.20	3.0
120	12.9	5.75	3.32
150	14.2	6.35	3.67
185	19.7	8.79	5.07
240	22.1	9.89	5.71
300	24.1	10.8	6.24
400	27.3	12.2	7.04

N.B: The above ratings assume an adiabatic temperature rise and are based on an armour temperature of 80ºC at start of short-circuit and 200ºC at end of short-circuit.

Armour Short-Circuit Ratings

Three Core XLPE/PVC/SWA/PVC 600/1000V
Three Core XLPE/LSF/SWA/LSF 600/1000V
Three Core MICA/XLPE/LSF/SWA/LSF 600/1000V

Short-Circuit Ratings

Conductor Size mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
1.5	1.65	0.736	0.425
2.5	1.95	0.874	0.505
4.0	2.06	0.920	0.531
6.0	2.37	1.06	0.612
10	4.0	1.79	1.03
16	4.63	2.07	1.20
25	6.37	2.85	1.65
35	7.0	3.13	1.81
50	8.03	3.59	2.07
70	9.26	4.14	2.39
95	13.2	5.89	3.4
120	14.5	6.49	3.75
150	20.7	9.25	5.34
185	22.6	10.1	5.84
240	25.7	11.5	6.64
300	27.7	12.4	7.16
400	31.3	14.0	8.08

N.B: The above ratings assume an adiabatic temperature rise and are based on an armour temperature of 80ºC at start of short-circuit and 200ºC at end of short-circuit.

Armour Short-Circuit Ratings

Four Core XLPE/PVC/SWA/PVC 600/1000V
Four Core XLPE/LSF/SWA/LSF 600/1000V
Four Core MICA/XLPE/LSF/SWA/LSF 600/1000V

Short-Circuit Ratings

Conductor Size mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
1.5	1.75	0.782	0.451
2.5	2.06	0.920	0.531
4.0	2.26	1.01	0.583
6.0	3.71	1.66	0.958
10	4.32	1.932	1.12
16	5.14	2.30	1.33
25	7.2	3.22	1.86
35	8.03	3.59	2.07
50	9.26	4.14	2.39
70	13.25	6.03	3.48
95	15.1	6.76	3.90
120	21.2	9.48	5.47
150	23.7	10.6	6.12
185	26.2	11.7	6.77
240	29.7	13.3	7.68
300	32.9	14.7	8.49
400	46.5	20.8	12.0

N.B: The above ratings assume an adiabatic temperature rise and are based on an armour temperature of 80ºC at start of short-circuit and 200ºC at end of short-circuit.

Armour Short-Circuit Ratings

Five Core XLPE/PVC/SWA/PVC 600/1000V
Five Core XLPE/LSF/SWA/LSF 600/1000V
Five Core MICA/XLPE/LSF/SWA/LSF 600/1000V

Short-Circuit Ratings

Conductor Size mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
1.5	1.95	0.874	0.505
2.5	2.26	1.01	0.583
4.0	2.57	1.15	0.664
6.0	4.11	1.84	1.06
10	6.98	2.12	1.22
16	7.40	3.31	1.91
25	9.06	4.05	2.34
35	10.3	4.6	2.66
50	14.8	6.62	3.82
70	17.1	7.64	4.41
95	–	–	–
120	–	–	–
150	–	–	–
185	–	–	–
240	–	–	–
300	–	–	–
400	–	–	–

N.B: The above ratings assume an adiabatic temperature rise and are based on an armour temperature of 80ºC at start of short-circuit and 200ºC at end of short-circuit.

Armour Short-Circuit Ratings

Auxiliary XLPE/PVC/SWA/PVC 600/1000V
Auxiliary XLPE/LSF/SWA/LSF 600/1000V
Auxiliary MICA/XLPE/LSF/SWA/LSF 600/1000V

Short-Circuit Ratings

Conductor Size No. x mm²	0.2s duration kA	1.0s duration kA	3.0s duration kA
7 x 1.5	2.06	0.920	0.531
12 x 1.5	4.0	1.79	1.03
19 x 1.5	4.63	2.07	1.20
27 x 1.5	7.20	3.22	1.86
37 x 1.5	8.03	3.59	2.07
7 x 2.5	2.46	1.10	0.635
12 x 2.5	4.63	2.07	1.20
19 x 2.5	7.20	3.22	1.86
27 x 2.5	8.63	3.86	2.23
37 x 2.5	9.66	4.32	2.49
7 x 4.0	4.0	1.79	1.03
12 x 4.0	7.0	3.13	1.81
19 x 4.0	8.23	3.68	2.12
27 x 4.0	9.88	4.42	2.55
37 x 4.0	41.2	6.35	3.67

N.B: The above ratings assume an adiabatic temperature rise and are based on an armour temperature of 80ºC at start of short-circuit and 200ºC at end of short-circuit.