

FR/Cu/XLPE/SWA/LSOH-F2

Mica/Glass Taped with XLPE Insulated,LSOH Sheathed,Armored,-
Fire Resistant Cable,BS7846 F2

APPLICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES



- ◎ **Conductor:** IEC 60228 or BS EN 60228 Class 2
- ◎ **Insulation:** 90°C cross-linked XLPE insulation
 - Identification:** 2 Cores: Brown,Blue
 - 3 Cores: Brown,Blue,Yellow/Green or Brown, Black, Grey
 - 4 Cores: Blue, Brown, Black, Grey
 - 5 Cores: Green/Yellow, Blue, Brown, Black,Grey
 - Above 5 Cores: white color with black number
 - Other color available upon request
- ◎ **Bedding:** LSOH
- ◎ **Armour:** Galvanized steel wires for multi cores(SWA)
- ◎ **Sheath:** LSOH sheath
 - Black color,other color available upon request

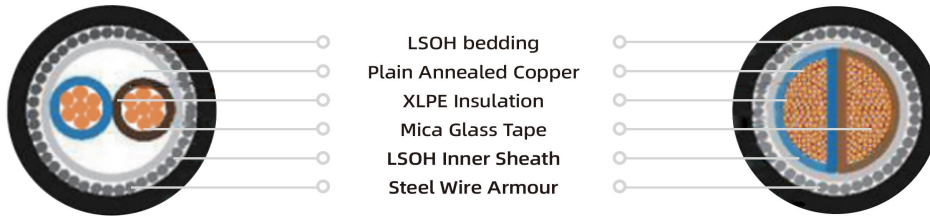
APPLICABLE STANDARDS

- ◎ **Design guidelines:** BS7846 F2
- ◎ **Circuit Integrity:** BS 6387 CWZ
- ◎ **Acid gas emission:** BS EN 60754-1
- ◎ **Flame retardant:** BS EN 60332-1-2,BS EN 60332-3-24
- ◎ **Smoke density:** BS EN 61034-2

TECHNICAL CHARACTERISTICS

Working voltage	600/1000V
Minimum bending radius	Circular conductor: 6 X Overall diameter Shaped conductor: 8 X Overall diameter
Operating temperature	-15°C to +90°C

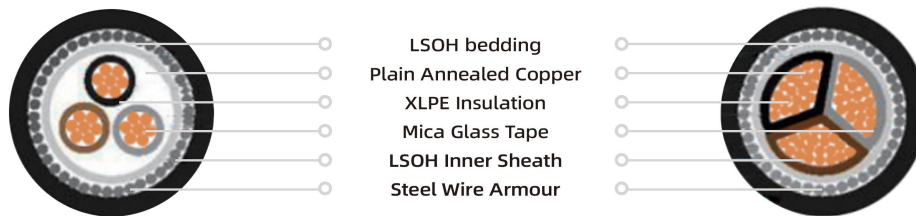
Two Core,BS7846-F2



Nominal cross sectional area	Approx. diameter under armour	Approx. overall diameter	Approx. cable weight	Max conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating		Voltage Drop	
						single phase AC or DC clipped direct	single phase AC or DC free air	DC	single phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps		mV/A/m	
Two Core									
1.5	9.7	14.5	384	12.1	0.20	27	29	31	31
2.5	11.0	16.0	463	7.41	0.35	36	39	19	19
4	12.0	17.1	530	4.61	0.57	49	52	12	12
6.0	13.2	18.2	613	3.08	0.86	62	66	7.9	7.9
10	15.7	20.9	800	1.83	1.4	85	90	4.7	4.7
16	17.7	23.6	1127	1.15	2.2	110	115	2.9	2.9
25	21.1	27.3	1483	0.727	3.6	146	152	1.85	1.90
35	23.6	30.7	2002	0.524	5.00	180	188	1.35	1.35
50*	26.6	33.8	2417	0.387	7.10	219	228	0.98	1.00
70*	30.6	38.0	3064	0.268	10.00	279	291	0.67	0.69
95*	34.7	43.2	4119	0.193	13.60	338	354	0.49	0.52
120*	38.3	46.9	4876	0.153	17.20	392	410	0.39	0.42
150*	42.0	50.9	5686	0.124	21.40	451	472	0.31	0.35
185*	47.0	57.2	7349	0.0991	26.50	515	539	0.25	0.29
240*	52.4	62.8	8883	0.0754	34.30	607	636	0.195	0.24
300*	58.1	68.8	10611	0.0601	42.90	698	732	0.155	0.21
400*	65.2	76.3	13038	0.0470	57.20	787	847	0.120	0.19

※Shaped stranded conductor(class 2)

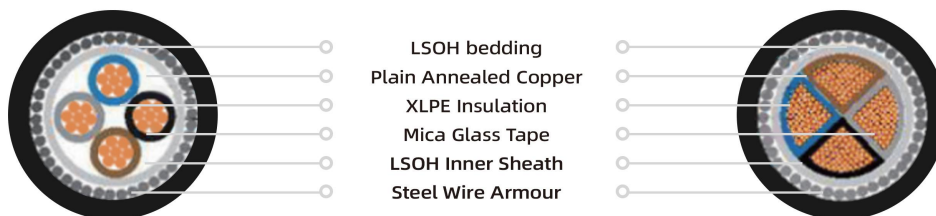
Three Core,BS7846-F2



Nominal cross sectional area	Approx. diameter under armour	Approx. overall diameter	Approx. cable weight	Max conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating		Voltage Drop
						three phase AC clipped direct	three phase AC free air	three phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps		mV/A/m
Three Core								
1.5	10.2	15.1	424	12.1	0.20	23	25	27
2.5	11.6	16.7	517	7.41	0.35	31	33	16
4	12.8	17.8	606	4.61	0.57	42	44	10
6.0	14.0	19.1	710	3.08	0.86	53	56	6.8
10	16.7	22.6	1069	1.83	1.4	73	78	4.0
16	18.9	25.0	1349	1.15	2.2	94	99	2.5
25	22.8	29.8	2005	0.727	3.6	124	131	1.65
35	25.3	32.5	2438	0.524	5.00	154	162	1.15
50*	24.4	31.7	2699	0.387	7.10	187	197	0.87
70*	27.4	34.8	3433	0.268	10.00	238	251	0.60
95*	32.8	41.4	4780	0.193	13.60	289	304	0.45
120*	34.7	43.5	5530	0.153	17.20	335	353	0.37
150*	39.7	49.7	7200	0.124	21.40	386	406	0.30
185*	42.7	52.9	8459	0.0991	26.50	441	463	0.26
240*	47.7	58.4	10474	0.0754	34.30	520	546	0.21
300*	52.3	63.2	12576	0.0601	42.90	599	628	0.185
400*	68.6	79.8	16577	0.0470	57.20	673	728	0.165

※Shaped stranded conductor(class 2)

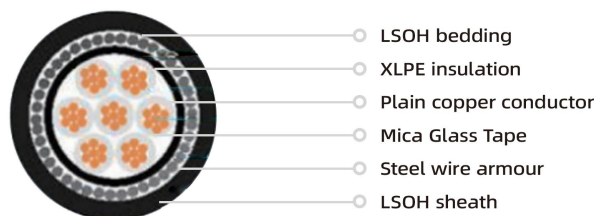
Four Core,BS7846-F2



Nominal cross sectional area	Approx. diameter under armour	Approx. overall diameter	Approx. cable weight	Max conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating		Voltage Drop
						three phase AC clipped direct	three phase AC free air	three phase AC
mm ²	mm	mm	kg/km	Ohms/km	kA	Amps		mV/A/m
Four Core								
1.5	11.2	16.0	482	12.1	0.20	23	25	27
2.5	12.7	17.8	590	7.41	0.35	31	33	16
4	14.0	19.1	698	4.61	0.57	42	44	10
6.0	15.4	21.4	961	3.08	0.86	53	56	6.8
10	18.4	24.4	1262	1.83	1.4	73	78	4.0
16	20.9	27.0	1595	1.15	2.2	94	99	2.5
25	25.2	32.3	2399	0.727	3.6	124	131	1.65
35	28.0	35.2	2934	0.524	5.00	154	162	1.15
50*	28.4	35.9	3403	0.387	7.10	187	197	0.87
70*	33.3	41.9	4787	0.268	10.00	238	251	0.60
95*	37.8	46.7	6041	0.193	13.60	289	304	0.45
120*	40.9	50.9	7582	0.153	17.20	335	353	0.37
150*	45.4	55.7	9027	0.124	21.40	386	406	0.30
185*	51.4	62.1	10872	0.0991	26.50	441	463	0.26
240*	58.1	68.9	13640	0.0754	34.30	520	546	0.21
300*	64.7	75.9	16501	0.0601	42.90	599	628	0.185
400*	72.0	85.2	21587	0.0470	57.20	673	728	0.165

※Shaped stranded conductor(class 2)

Multi Core,BS7846-F2



Nominal cross sectional area	Approx. diameter under armour	Approx. overall diameter	Approx. cable weight	Max conductor resistance at 20°C	Short circuit rating (1 sec)	Current Rating		Voltage Drop	
						single phase AC or DC clipped direct	single phase AC or DC free air	DC	single phase AC
mm²	mm	mm	kg/km	Ohms/km	kA	Amps		mV/A/m	
Seven Core									
1.5	13.4	18.4	658	12.1	0.20	27	29	31	31
2.5	15.4	20.5	820	7.41	0.35	36	39	19	19
4.0	17.0	22.9	1128	4.61	0.57	49	52	12	12
Twelve Core									
1.5	17.6	23.5	1083	12.1	0.20	27	29	31	31
2.5	20.4	26.6	1361	7.41	0.35	36	39	19	19
4.0	22.8	29.6	1842	4.61	0.57	49	52	12	12
Nineteen Core									
1.5	20.7	26.8	1379	12.1	0.20	27	29	31	31
2.5	24.3	31.3	1988	7.41	0.35	36	39	19	19
4.0	25.9	33.0	2271	4.61	0.57	49	52	12	12
Twenty seven Core									
1.5	25.1	32.2	1976	12.1	0.20	27	29	31	31
2.5	29.5	36.8	2579	7.41	0.35	36	39	19	19
4.0	31.4	38.9	2968	4.61	0.57	49	52	12	12
Thirty seven Core									
1.5	28.2	35.3	2382	12.1	0.20	27	29	31	31
2.5	33.2	40.4	3145	7.41	0.35	36	39	19	19
4.0	35.8	44.3	4043	4.61	0.57	49	52	12	12

TEMPERATURE RATING FACTORS

Ambient Temperature °C	25	30	35	40	45	50	55	60	65
Rating Factor	1.02	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65

CORRECTION FACTORS FOR GROUPING OF CABLES

Installation Method		Number of circuits or multi-core cables							
		2	3	4	5	6	7	8	9
Single layer clipped to a non-metallic surface	Touching	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70
	Spaced	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single layer multicore on a perforated metal cable tray, vertical or horizontal	Touching	0.86	0.81	0.77	0.75	0.74	0.73	0.73	0.72
	Spaced	0.91	0.89	0.88	0.87	0.87	-	-	-

※Note: Ambient Temperature 30°C

Conductor Operation Temperature 90°C

If current rating and buildings is required reference should be made to BS7671 (IEE Wiring Regs)

Complied with the HongKong EMSD COP, and the rating is the average of the conductor cross-sectional area and installation method, and the overall error is within ±5%