

BS 7835 XLPE LSZH 12.7/22kV Cable



APPLICATION

Medium voltage LSZH power cables for power networks, underground and in cable ducting.

CHARACTERISTICS

Voltage Rating U_0/U (Um)

12.7/22 (24)kV

Temperature Rating

Fixed: 0°C to +90°C

Minimum Bending Radius

Single core - Fixed: 15 x overall diameter

3 core - Fixed: 12 x overall diameter

(Single core 12 x overall diameter and 3 core 10 x overall diameter where bends are positioned adjacent to a joint or termination provided that the bending is carefully controlled by the use of a former)

STANDARDS

IEC 60502-2, EN 60228

Low Smoke Zero Halogen to: IEC 60754-1/2, IEC 61034-2

Flame Retardant: IEC 60332-3-24 Cat C, IEC 60332-1-2

UV Resistant: ISO 4892-3

Abrasion and Tear Resistant: EN 60229-4.1

Impact rated to: AG2 EN 60364-5.51

THE CABLE TEST

We have world-class testing facility, and made rigorous testing regime, every meter of cable before leaving the factory must go through strict testing, testing qualified products will be shipped to customers, effectively ensure product quality and meet customer requirements.

SUSTAINABILITY COMMITMENT

Guowang Cable actively implements the "carbon reduction" goal, strives to promote the green's low-carbon transformation, strengthens energy-saving and emission reduction technology innovation, and promotes the company's healthy and sustainable development.

CONSTRUCTION

Conductor

Class 2 Stranded Copper

Conductor Screen

Semi-conductive XLPE(Cross-Linked Polyethylene)

Insulation

XLPE (Cross-Linked Polyethylene)

Insulation Screen

Semi-conductive XLPE(Cross-Linked Polyethylene)

Metallic Screen

Individual or collective overall copper tape screen

Filler

PET (Polyethylene Terephthalate) fibres

Separator

Binding Tape

Bedding

LSZH (Low Smoke Zero Halogen)

Armour

Single core: AWA (Aluminium Wire Armoured)

Multi-core: SWA (Steel Wire Armoured)

Sheath

LSZH (Low Smoke Zero Halogen)

Sheath Colour

● Black

DIMENSIONS

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm ²	MINIMUM THICKNESS mm		NOMINAL THICKNESS OF SEMI CONDUCTIVE LAYER mm		NOMINAL DIAMETER mm		NOMINAL WEIGHT kg/km
		Insulation	Outer Sheath	Inner	Outer	Over Insulation	Overall	
1	50	4.85	1.40	0.50	0.80	21.30	32	1500
1	70	4.85	1.48	0.50	0.80	23.00	34	1800
1	95	4.85	1.48	0.50	0.80	24.60	36	2100
1	120	4.85	1.56	0.50	0.80	26.00	37	2500
1	150	4.85	1.56	0.50	0.80	27.70	40	2750
1	185	4.85	1.64	0.50	0.80	29.30	41	3100
1	240	4.85	1.72	0.50	0.80	31.80	45	4000
1	300	4.85	1.80	0.50	0.80	34.00	47	4600
1	400	4.85	1.88	0.50	0.80	36.70	50	5600
1	500	4.85	1.96	0.50	0.80	39.70	53	6750
1	630	4.85	2.04	0.50	0.80	44.00	58	8200
3	50	4.85	2.20	0.50	0.80	21.30	61	5800
3	70	4.85	2.28	0.50	0.80	23.00	65	6800
3	95	4.85	2.44	0.50	0.80	24.60	69	8000
3	120	4.85	2.52	0.50	0.80	26.00	74	9700
3	150	4.85	2.68	0.50	0.80	27.70	78	10900
3	185	4.85	2.76	0.50	0.80	29.10	81	12250
3	240	4.85	2.84	0.50	0.80	31.80	87	14500
3	300	4.85	3.00	0.50	0.80	24.00	93	16900
3	400	4.85	3.24	0.50	0.80	36.70	100	20200
3	500	4.85	3.40	0.50	0.80	39.70	107	24000

CONDUCTOR

Class 2 Stranded Conductors for Single Core and Multi-Core Cables

NOMINAL CROSS SECTIONAL AREA	MAXIMUM CONDUCTOR DC RESISTANCE AT 20°C	MAXIMUM CONDUCTOR AC RESISTANCE AT OPERATING TEMP. AND 50 HZ	CAPACITANCE	CHARGING CURRENT	DIELECTRIC LOSSES	REACTANCE AT 50HZ	CONDUCTOR S.C.C FOR 1SEC	CURRENT RATING A	
								Laid in ground	Laid in free air
mm2	Ω/km	Ω/km	uF/km	A/Km	W/Km	ohms/km	KA		
70	0.268	0.324	0.159	0.947	72	0.146	10.02	275	308
95	0.193	0.2465	0.171	1.022	77.64	0.141	13.59	326	369
120	0.153	0.1957	0.184	1.101	83.67	0.135	17.17	368	421
150	0.124	0.1589	0.199	1.191	90.51	0.132	21.46	406	470
185	0.0991	0.1273	0.213	1.275	96.88	0.128	26.47	440	528
240	0.0754	0.0975	0.2	1.41	107.03	0.122	34.34	496	608
300	0.0601	0.0784	0.258	1.541	117.11	0.118	42.93	545	679
400	0.047	0.0623	0.282	1.684	127.99	0.113	57.23	597	758
500	0.0366	0.0498	0.313	1.87	142.16	0.109	71.54	650	844
630	0.0283	0.0401	0.356	2.127	161.68	0.106	90.14	699	931
800	0.0221	0.0332	0.394	2.35	178.65	0.102	114.47	744	1013

ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm2	CURRENT CARRYING CAPACITY A		CONDUCTOR LOSSES IN THE GROUND kW/km
		In Ground (20 °C)	In air (30 °C)	
1	50	250	279	31.10
1	70	304	347	31.80
1	95	361	420	32.30
1	120	407	483	31.47
1	150	445	540	31.68
1	185	498	614	31.74
1	240	569	718	31.73
1	300	686	813	32.10
1	400	756	904	30.10
1	500	820	1011	29.10
1	630	210	1030	28.20
3	50	256	206	65.75
3	70	307	257	67.63
3	95	349	313	70.12
3	120	392	360	71.62
3	150	443	410	73.76
3	185	430	469	75.36
3	240	513	553	77.37
3	300	576	635	79.60
3	400	650	731	81.12
3	500	-	-	-

DE-RATING FACTORS

AIR TEMPERATURE °C	25	30	35	40	45	50	55
DE-RATING FACTOR	1.00	0.96	0.92	0.88	0.83	0.78	0.73
GROUND TEMPERATURE °C	10	15	20	25	30	35	40
DE-RATING FACTOR	1.03	1.00	0.97	0.93	0.89	0.86	0.82
GROUND THERMAL RESISTIVITY km/W	0.9	1.0	1.2	1.5	2.0	2.5	3.0
DE-RATING FACTOR	1.06	1.04	1.00	0.92	0.82	0.74	0.68
DEPTH OF LAYING m	0.80	1.00	1.25	1.50	1.75	2.00	2.50
DE-RATING FACTOR	1.00	0.97	0.95	0.94	0.93	0.91	0.90

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.