

# BS 7835 XLPE LSZH 8.7/15kV Cable



## APPLICATION

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

## CHARACTERISTICS

### Voltage Rating $U_0/U$ (Um)

8.7/15 (17.5)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

### 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	MINIMUM THICKNESS mm		NOMINAL THICKNESS OF SEMI CONDUCTIVE LAYER mm		NOMINAL DIAMETER mm		NOMINAL WEIGHT
	mm <sup>2</sup>	Insulation	Outer Sheath	Inner	Outer	Over Insulation	Overall	kg/km
1	50	3.95	1.32	0.50	0.80	19.50	29	1300
1	70	3.95	1.40	0.50	0.80	21.10	31	1600
1	95	3.95	1.48	0.50	0.80	22.80	34	2000
1	120	3.95	1.48	0.50	0.80	24.10	35	2250
1	150	3.95	1.56	0.50	0.80	26.00	37	2600
1	185	3.95	1.56	0.50	0.80	27.30	39	3000
1	240	3.95	1.64	0.50	0.80	30.00	42	3600
1	300	3.95	1.72	0.50	0.80	32.10	45	4500
1	400	3.95	1.80	0.50	0.80	35.00	48	5400
1	500	3.95	1.88	0.50	0.80	38.00	51	6500
1	630	3.95	1.96	0.50	0.80	42.10	56	8000
3	50	3.95	2.12	0.50	0.80	19.50	57	5250
3	70	3.95	2.20	0.50	0.80	21.10	61	6250
3	95	3.95	2.28	0.50	0.80	22.80	65	7300
3	120	3.95	2.36	0.50	0.80	24.10	68	8300
3	150	3.95	2.52	0.50	0.80	26.00	74	10250
3	185	3.95	2.60	0.50	0.80	27.30	77	11500
3	240	3.95	2.76	0.50	0.80	30.00	83	13800
3	300	3.95	2.84	0.50	0.80	32.10	88	16200
3	400	3.95	3.08	0.50	0.80	35.00	95	19300
3	500	3.95	3.24	0.50	0.80	38.00	103	23100

## CONDUCTOR

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

NOMINAL CROSS SECTIONAL AREA	NOMINAL DIAMETER OF CONDUCTOR	NOMINAL SHORT CIRCUIT CURRENT AT 1 SECOND KA	CONDUCTOR DC RESISTANCE AT 20 °C Ω/km	CONDUCTOR DC RESISTANCE AT 20 °C Ω/km
50	8.10	7.15	0.387	0.497
70	9.70	10.01	0.268	0.344
95	11.40	13.59	0.193	0.248
120	12.70	17.16	0.153	0.196
150	14.50	21.45	0.124	0.160
185	15.90	26.46	0.0991	0.128
240	18.60	34.32	0.0754	0.098
300	20.70	42.90	0.0601	0.080
400	23.50	57.20	0.0470	0.064
500	26.50	71.50	0.0366	0.0510
630	30.20	90.09	0.0283	0.0420

## ELECTRICAL CHARACTERISTICS

Current Carrying Capacity

NO. OF CORES	NOMINAL CROSS SECTIONAL AREA mm <sup>2</sup>	CURRENT CARRYING CAPACITY A		CONDUCTOR LOSSES IN THE GROUND kW/km
		In Ground (20 °C)	In air (30 °C)	
1	50	249	277	30.81
1	70	303	345	31.58
1	95	358	418	31.78
1	120	404	481	31.99
1	150	441	537	31.12
1	185	493	612	31.11
1	240	563	716	31.06
1	300	626	811	31.35
1	400	676	901	29.25
1	500	743	1006	28.15
1	630	-	-	-
3	50	210	206	65.75
3	70	256	257	67.63
3	95	307	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	77.40
3	300	576	635	79.60
3	400	650	731	81.10
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.