

# 11kV XLPE LSZH Cable

## Application

Power cables for use in power networks, underground, outdoors and in cable ducting. For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment.



## Standards

BS7835

## Conductor

Class 2 stranded plain copper conductor to BS EN 60228:2005 (previously BS6360)

## Conductor Screen

Semi-conducting material

## Insulation

XLPE (Cross-Linked Polyethylene)  
Type GP8 to BS7655

## Insulation Screen

Semi-conducting material

## Metallic Screen

Individual and overall copper tape screen to BS6622

## Filler

PETP (Polyethylene Terephthalate) fibres

## Separator

Binding tape

## Bedding

LSZH (Low Smoke Zero Halogen)

## Armouring

Single core: AWA  
(Aluminium Wire Armour)

Multi-core: SWA

(Steel Wire Armour)

## Sheath

LSZH (Low Smoke Zero Halogen)

## Sheath Colour

Red or Black

## Voltage Rating

6350/11000V

## Temperature Rating

0 to +90°C

## Dimensions

No. of Cores x Nominal Cross Sectional Area # x mm <sup>2</sup>	Nominal Diameter mm			Nominal Weight kg/Km
	Under Armour	Over Armour	Overall	
1 x 50	21.7	24.9	28.5	1200
1 x 70	23.0	26.2	30.0	1500
1 x 95	24.7	27.9	31.7	1600
1 x 120	26.7	29.9	33.9	2100
1 x 150	27.5	31.5	35.7	2500
1 x 185	29.3	33.3	37.5	2900
1 x 240	31.6	35.6	40.0	3600
1 x 300	34.6	38.6	43.0	4300
1 x 400	37.0	41.0	45.8	5200
1 x 500	40.5	45.5	50.5	6500
1 x 630	44.6	49.6	54.8	8000
1 x 800	48.8	53.8	59.2	9850
1 x 1000	53.5	58.5	64.3	12100
3 x 25	39.0	44.0	48.8	4300
3 x 35	41.6	46.6	51.6	4700
3 x 50	44.4	49.4	54.6	5300
3 x 70	48.1	53.1	58.5	6300
3 x 95	52.0	57.0	62.6	7300
3 x 120	55.6	60.6	66.6	8400
3 x 150	58.6	63.6	69.8	9600
3 x 185	62.7	67.7	74.1	11000
3 x 240	68.1	74.4	81.2	14000
3 x 300	73.5	79.8	87.0	16600

## Conductors

Class 2 stranded conductors for Single Core and Multi-Core cables

1	2	3	4	5	6	7	8
Nominal Cross Sectional Area mm <sup>2</sup>	Minimum Number of Wires in the Conductor						Maximum Resistance of Conductor at 20°C
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires ohms/Km
50.00	19	19	6	6	6	6	0.3870
70.00	19	19	12	12	12	12	0.2680
95.00	19	19	15	15	15	15	0.1930
120.00	37	37	18	15	18	15	0.1530
150.00	37	37	18	15	18	15	0.1240

[Datasheet continues»](#)

11kV XLPE LSZH Cable continued»

**Combustion Characteristics**

Oxygen index: 35

Temperature index: 280°C

HCL emission: 0.5% in accordance with BS EN 50267-2-1

Low Smoke classification based on 3 metre cube test

Completed cables comply with the requirements of fire test BS4066-3 Category 3.

**Minimum Bending Radius**

Single cores: 15 x overall diameter  
Three cores: 12 x overall diameter

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

1	2	3	4	5	6	7	8
Nominal Cross Sectional Area mm <sup>2</sup>	Minimum Number of Wires in the Conductor						Maximum Resistance of Conductor at 20°C
	Circular		Circular Compacted		Shaped		Annealed Copper Conductor
	Cu	Al	Cu	Al	Cu	Al	Plain Wires
185.00	37	37	30	30	30	30	0.0991
240.00	37	37	34	30	34	30	0.0754
300.00	61	61	34	30	34	30	0.0601
400.00	61	61	53	53	53	53	0.0470
500.00	61	61	53	53	53	53	0.0366
630.00	91	91	53	53	53	53	0.0283
800.00	91	91	53	53	-	-	0.0221
1000.00	91	91	53	53	-	-	0.0176

Table in accordance with BS EN 60228:2005 (previously BS6360).

**Electrical Characteristics**

**Copper Conductor Dimensions and Current Carrying Capacity (amperes)**

No. of Cores x Nominal Cross Sectional Area	Continuous Current Rating in Ground Amps		Continuous Current Rating in Ducts Amps		Continuous Current Rating in Air Amps	
	Trefoil	Flat	Trefoil	Flat	Trefoil	Flat
# x mm <sup>2</sup>						
1 x 50	220	230	220	220	250	300
1 x 70	270	280	260	270	310	370
1 x 95	320	335	305	325	375	460
1 x 120	360	380	340	370	430	530
1 x 150	410	430	375	410	490	600
1 x 185	455	485	410	460	550	690
1 x 240	520	560	470	540	650	820
1 x 300	580	640	500	610	740	940
1 x 400	650	730	530	690	840	1100
1 x 500	710	830	570	780	930	1280
1 x 630	760	940	620	890	1040	1480
1 x 800	810	1060	660	990	1140	1690
1 x 1000	860	1170	690	1090	1230	1900
3 x 25	140	140	125	125	145	145
3 x 35	170	170	150	150	175	175
3 x 50	210	210	180	180	220	220
3 x 70	250	250	215	215	270	270
3 x 95	300	300	255	255	330	330
3 x 120	340	340	290	290	380	380
3 x 150	380	380	330	330	430	430
3 x 185	430	430	370	370	490	490
3 x 240	500	500	430	430	570	570
3 x 300	540	540	470	470	650	650

Datasheet continues»

11kV XLPE LSZH Cable continued»

**Correction Factors**

<b>Air Temperature</b>	25°C	30°C	35°C	40°C	45°C	50°C	55°C
<b>Correction Factor</b>	1.00	0.96	0.92	0.88	0.83	0.78	0.73
<b>Ground Temperature</b>	10°C	15°C	20°C	25°C	30°C	35°C	40°C
<b>Correction Factor</b>	1.03	1.00	0.97	0.93	0.89	0.86	0.82
<b>Ground Thermal Resistivity</b>	0.9	1.0	1.2	1.5	2.0	2.5	3.0
<b>Correction Factor</b>	1.06	1.04	1.00	0.92	0.82	0.74	0.68
<b>Depth of Laying m</b>	0.80	1.00	1.25	1.50	1.75	2.00	2.50
<b>Correction Factor</b>	1.00	0.97	0.95	0.94	0.93	0.91	0.90