

# BS6622/BS7835 Three Core Armoured 11kV XLPE Stranded Aluminium Conductor

## CABLE CHARACTERISTICS



Bending radius  $r=12D$

## CABLE DESCRIPTION

### 1.CONDUCTOR

Compacted circular stranded Aluminium conductor complying with BS6360 class 2.

### CONDUCTOR SCREEN

Extruded semi-conducting compound bonded to the insulation and applied in the same operation as the insulation.

### 2.INSULATION

Extruded cross-linked polyethylene (XLPE) suitable for operation at a conductor temperature of 90°C.

### 3.INSULATION SCREEN

Extruded semi-conducting compound applied in the same operation as the insulation. Cold strippable screens are supplied as standard but fully bonded screens may be provided if specified.

### 4.METALLIC SCREEN

Copper tapes applied overlapped to provide an earth fault current path.

### 5.LAYING UP

Three cores laid up with polypropylene string fillers to form a compact circular cable, and bound with tape.

### 6.TAPE BINDER

### 7.BEDDING SHEATH

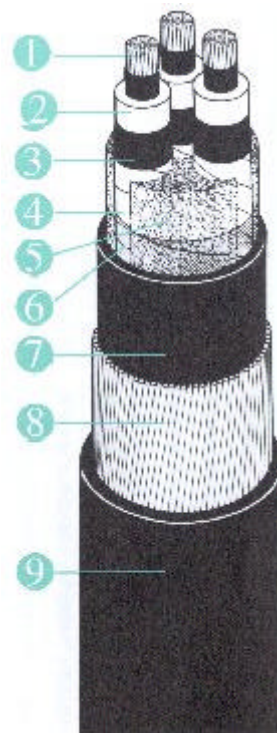
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

### 8.ARMOURING

Single layer of galvanised steel wires.

### 9.OVERSHEATH

Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.



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## Constructional Data

Cross-sectional area mm <sup>2</sup>	Minimum average thickness of insulation mm	Nominal diameter over insulation mm	Nominal thickness of PVC/LSOH bedding mm	Nominal number and diameter of armoured wires no./mm	Nominal thickness of PVC/LSOH oversheath mm	Nominal overall diameter of cable mm
70	3.4	18.8	1.4	54/2.5	2.7	57.1
95	3.4	20.5	1.5	59/2.4	2.8	61.2
120	3.4	22.0	1.6	62/2.4	3.0	65.0
150	3.4	23.3	1.6	65/2.4	3.1	68.0
185	3.4	25.1	1.7	70/2.4	3.2	72.3
240	3.4	27.3	1.8	61/3.14	3.4	79.0
300	3.4	29.6	1.9	65/3.14	3.6	84.5
400	3.4	32.3	2.0	70/3.15	3.8	90.9

## Installation

Cross-sectional area mm <sup>2</sup>	Approximate cable weight kg/m	Nominal drum length m	Minimum bending radius mm	Nominal internal diameter of ducts mm
70	5.1	500	700	100
95	5.7	500	750	100
120	6.4	500	800	100
150	6.9	500	850	125
185	7.3	500	900	125
240	9.7	500	950	125
300	10.9	450	1050	125
400	12.5	400	1100	125

## Electrical data

Cross-sectional area mm <sup>2</sup>	Maximum DC resistance of conductor at 20°C μohms/m	Maximum AC resistance of conductor at 90°C μohms/m	Reactance at 50 Hz μohms/m	Impedance at 50 Hz μohms/m	Maximum capacitance pF/m	Maximum charging current at normal voltage and frequency mA/m
70	443	568	108.0	578	298	0.62
95	320	410	102.0	422	334	0.67
120	253	325	98.8	340	365	0.73
150	206	265	96.2	282	392	0.78
185	164	211	93.1	231	430	0.86
240	125	161	90.0	184	476	0.95
300	100	130	87.4	157	524	1.05
400	77.8	102	84.9	133	580	1.16

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## Ratings data

Cross-sectional area mm <sup>2</sup>	Current ratings:			Short circuit ratings:	
	Laid direct in ground A	Drawn into ducts A	Laid in air A	One second short circuit rating of conductor kA	One second short circuit rating of copper tape screen per core kA
70	195	165	210	6.3	-
95	230	200	250	8.5	Typically
120	265	225	295	11.0	Less
150	295	255	330	13.5	Than
185	335	290	385	17.0	1kA
240	380	335	450	22.3	-
300	435	375	510	28.0	-
400	480	420	570	36.6	-

### Current rating conditions:

Ground temperature 15°C  
 Ambient temperature (air) 25°C  
 Depth of burial 0.8m  
 Thermal resistance of soil 1.2°C m/W