

# BS6622/BS7835 Single Core Armoured 33kV XLPE Stranded Copper Conductor

## CABLE CHARACTERISTICS



Bending radius  $r=15D$

## CABLE DESCRIPTION

### 1.CONDUCTOR

Compact circular stranded copper conductor complying with BS EN 60228 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.BEDDING

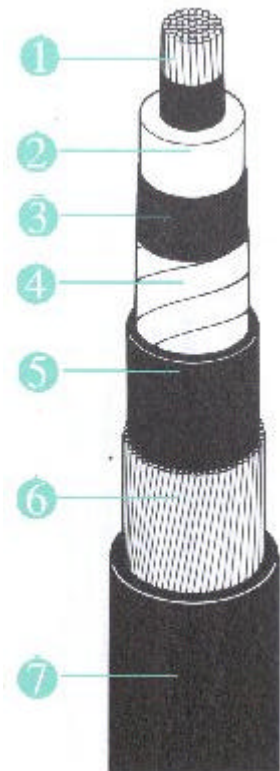
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

### 6.ARMOURING

Single layer of circular aluminium wires.

### 7.OVERSHEATH

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



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## Constructional Data

Cross-sectional area mm <sup>2</sup>	Minimum average thickness of 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	8	1.2	2.0	2.2	41.5
95	8	1.2	2.0	2.3	43.5
120	8	1.2	2.0	2.3	45.0
150	8	1.3	2.5	2.4	47.5
185	8	1.3	2.5	2.5	49.5
240	8	1.3	2.5	2.5	51.5
300	8	1.4	2.5	2.6	54.5
400	8	1.4	2.5	2.7	57.5
500	8	1.5	2.5	2.8	62.0
630	8	1.5	2.5	2.9	66.0
800	8	1.6	2.5	3.1	71.0
1000	8	1.7	2.5	3.2	75.5

## Installation Data

Cross-sectional area mm <sup>2</sup>	Approximate cable weight kg/m	Nominal drum length m	Nominal internal diameter of twin wall ducts mm
70	2.3	500	100
95	2.6	500	100
120	3.0	500	100
150	3.5	500	100
185	3.9	500	100
240	4.5	500	100
300	5.3	500	100
400	6.3	250	100
500	7.5	250	100
630	9.1	250	125
800	11.2	250	125
1000	13.6	250	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
70	268.0	342
95	193.0	247
120	153.0	196
150	124.0	159
185	99.1	127
240	75.4	97.4
300	60.1	78.3
400	47.0	62.2
500	36.6	49.7
630	28.3	40.0
800	22.1	33.1
1000	17.6	28.3

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## Ratings Data

Cross-sectional area  mm <sup>2</sup>	Current Ratings			Short Circuit Ratings	
	Laid in ground	Drawn into twin wall ducts	Laid in air	One second short circuit rating of conductor kA	One second short circuit rating of armour kA
Amps	Amps	Amps	Amps		
70	265	245	315	10.0	12.8
95	315	290	380	13.6	13.6
120	355	320	435	17.2	14.1
150	395	350	490	21.5	18.8
185	445	385	555	26.5	19.6
240	505	430	640	34.3	20.4
300	560	470	725	42.9	21.7
400	625	515	825	57.2	22.9
500	685	560	930	71.5	25.0
630	750	595	1045	90.1	26.7
800	810	635	1145	114.5	28.8
1000	855	675	1240	143.1	30.8

### 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

Single core cables in trefoil, bonded and earthed at both ends.



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