

# BS6622/BS7835 Single Core Armoured 15kV XLPE Stranded Copper Conductor

## CABLE CHARACTERISTICS



Bending radius  $r=15D$

## CABLE DESCRIPTION

### 1.CONDUCTOR

Compact circular stranded copper 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.BEDDING

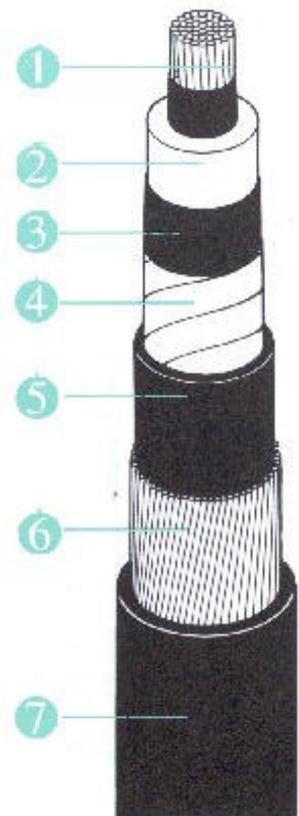
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

### 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 area of copper tape screen mm <sup>2</sup>	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	4.5	21.2	1.2	46/1.6	1.9	32.1
95	4.5	22.9	1.2	40/2.0	2.0	34.8
120	4.5	24.4	1.2	42/2.0	2.1	36.5
150	4.5	25.7	1.2	44/2.0	2.1	37.8
185	4.5	27.5	1.2	46/2.0	2.2	40.0
240	4.5	29.7	1.2	49/2.0	2.3	42.4
300	4.5	32.0	1.2	53/2.0	2.3	44.7
400	4.5	34.7	1.3	46/2.5	2.5	49.0
500	4.5	37.6	1.3	49/2.5	2.6	52.1
630	4.5	41.0	1.4	53/2.5	2.7	55.9
800	Please refer to	our technical	department	for	further	information
1000	Please refer to	our technical	department	for	further	information

## Installation Data

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	1.7	1000	500	100
95	2.1	500	550	100
120	2.4	500	550	100
150	2.7	500	600	100
185	3.2	500	600	100
240	3.8	500	650	100
300	4.5	500	700	100
400	5.6	300	750	100
500	6.7	300	800	100
630	8.2	300	850	100
800	Please refer to	our technical	department for	further information
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## 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 50Hz μOhms/m	Impedance at 50Hz μOhms/m	Maximum Capacitance pF/m	Maximum charging current at normal voltage and frequency mA/m
70	268	343	135	368	232	0.63
95	193	248	129	279	258	0.7
120	153	196	124	232	281	0.77
150	124	159	121	198	301	0.82
185	99.1	128	117	172	329	0.9
240	75.4	98	113	148	363	0.99
300	60.1	80	108	133	398	1.09
400	47	64	107	124	439	1.2
500	36.6	51	103	114	483	1.32
630	28.3	42	99.5	107	534	1.46
800	Please refer to	our technical	department	for	further	information
1000	Please refer to	our technical	department	for	further	information

## Ratings Data

Cross-sectional area mm <sup>2</sup>	Current Ratings			Short Circuit Ratings	
	Laid in ground Amps	Drawn into ducts Amps	Laid in air Amps	One second short circuit ratings of conductor kA	One second short circuit rating of copper tape screen kA
70	270	260	310	9.8	Typically
95	320	305	375	13.3	Less
120	360	340	430	17.2	Then
150	410	375	490	21.2	1 kA
185	455	410	550	26.6	-
240	520	460	650	34.9	-
300	580	500	740	43.8	-
400	650	530	840	57.3	-
500	710	570	930	72.3	-
630	760	620	1040	91.2	-
800	Please refer to	our technical	department	for further	information
1000	Please refer to	our technical	department	for further	information

### 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.