

BS6622/BS7835 Single Core Armoured 11 kV XLPE Stranded Aluminium Conductor

CABLE CHARACTERISTICS



Bending radius $r=15D$



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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.BEDDING SHEATH

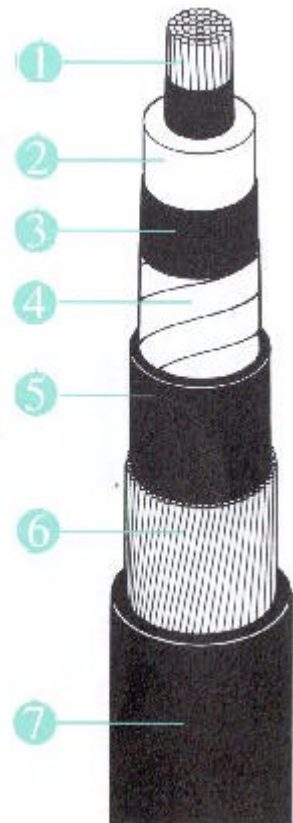
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

6.ARMOURING

Single layer of circular aluminium wires

7.OVERSHEATH

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



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Constructional Data

Cross-sectional area mm ²	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	1.2	42/1.6	1.9	29.7
95	3.4	20.5	1.2	45/1.6	1.9	31.4
120	3.4	22.0	1.2	47/1.6	2.0	33.1
150	3.4	23.3	1.2	40/2.0	2.1	35.4
185	3.4	25.1	1.2	43/2.0	2.1	37.2
240	3.4	27.3	1.2	46/2.0	2.2	39.8
300	3.4	29.6	1.2	49/2.0	2.3	42.3
400	3.4	32.3	1.2	53/2.0	2.4	45.2
500	3.4	35.2	1.3	46/2.5	2.5	49.5
630	3.4	38.6	1.4	50/2.5	2.6	53.3

Installation Data

Cross-sectional area mm ²	Approximate cable weight kg/m	Nominal drum length m	Minimum bending radius mm	Nominal internal diameter of ducts mm
70	1.1	1000	450	100
95	1.3	1000	500	100
120	1.4	500	500	100
150	1.7	500	550	100
185	1.9	500	600	100
240	2.1	500	600	100
300	2.4	500	650	100
400	2.8	300	700	100
500	3.5	300	750	100
630	4.1	300	800	100

Electrical

Cross-sectional area mm ²	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	130	583	288	0.58
95	320	410	123	428	323	0.65
120	253	325	118	346	353	0.71
150	206	265	117	291	380	0.76
185	164	211	112	240	416	0.83
240	125	161	109	195	460	0.92
300	100	130	105	168	506	1.01
400	77.8	102	101	144	561	1.12
500	60.5	81	99.8	129	619	1.24
630	46.9	64	96.1	116	697	1.37

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Ratings Data

Cross-sectional area mm ²	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 kA
70	210	210	240	6.3	-
95	250	245	295	8.5	-
120	280	275	335	11.0	Typically
150	315	300	380	13.5	Less
185	355	335	435	17.0	Then
240	405	380	510	22.3	1kA
300	455	420	580	28.0	-
400	510	455	670	36.6	-
500	570	500	770	46.2	-
630	640	550	880	58.3	-

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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