

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 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

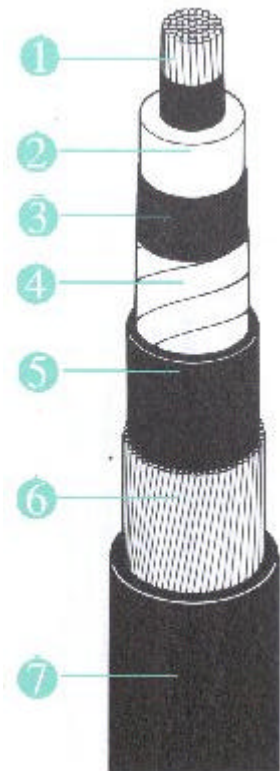
Extruded black polyvinyl chloride (PVC) or Low Smoke Zero Halogen (LSOH) compound is supplied as standard. Alternative materials may be provided if specified.

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 mm²	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	8	28.9	1.2	48/2.0	2.2	41.4
95	8	30.6	1.2	51/2.0	2.3	43.3
120	8	32.1	1.2	53/2.0	2.3	44.8
150	8	33.4	1.3	44/2.5	2.4	47.5
185	8	35.2	1.3	46/2.5	2.5	49.5
240	8	37.4	1.3	49/2.5	2.5	51.7
300	8	39.7	1.4	52/2.5	2.6	54.4
400	8	42.4	1.4	55/2.5	2.7	57.3
500	8	45.3	1.5	58/2.5	2.8	60.6
630	8	48.7	1.5	62/2.5	2.9	64.2
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 mm²	Approximate cable weight kg/m	Nominal drum length m	Minimum bending radius mm	Nominal internal diameter of ducts mm
70	2.4	500	650	100
95	2.7	500	650	100
120	3.1	500	700	100
150	3.6	500	750	100
185	4.0	500	750	100
240	4.7	500	800	100
300	5.5	500	850	100
400	6.4	250	900	100
500	7.6	250	950	125
630	9.1	250	1000	125
800	Please refer to	our technical	department for	further information
1000	Please refer to	our technical	department for	further information

Electrical Data

Cross-sectional area mm²	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	268.0	343	151	374	154	0.92
95	193.0	248	143	285	169	1.01
120	153.0	196	137	239	183	1.10
150	124.0	159	135	207	194	1.16
185	99.1	128	130	181	210	1.26
240	75.4	98	125	158	229	1.37
300	60.1	80	121	144	249	1.49
400	47.0	64	116	132	273	1.64
500	36.6	51	113	123	298	1.79
630	28.3	42	108	115	327	1.96
800	Please refer	to our	technical	department	for further	information
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Ratings Data

Cross-sectional area mm ²	Current Ratings			Short Circuit Ratings	
	Laid in ground	Drawn into ducts	Laid in air	One second short circuit rating of conductor kA	One second short circuit rating of copper tape screen kA
Amps	Amps	Amps			
70	270	260	320	9.8	-
95	320	300	380	13.3	-
120	360	340	440	17.2	-
150	410	370	490	21.2	-
185	450	400	560	26.6	Typically
240	510	450	650	34.9	Less
300	570	490	730	43.8	Then
400	640	530	830	57.3	1kA
500	700	570	940	72.3	-
630	760	610	1050	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.



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