BS6622/BS7835 Three Core Armoured 6.6kV XLPE Stranded Copper Conductors

CABLE CHARACTERISTICS

Bending radius r=12D

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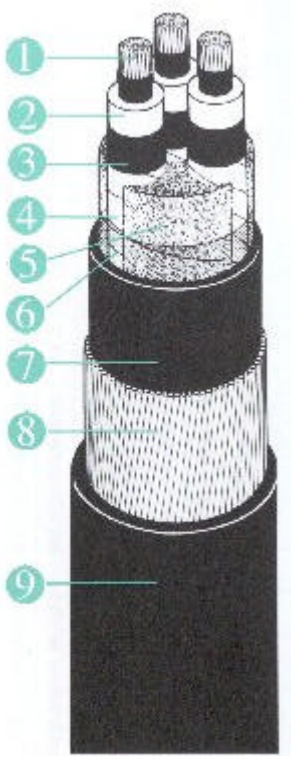
CABLE DESCRIPTION

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 ploythylene (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 a 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.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 circular 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 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
50	2.5	15.0	1.3	45/2.5	2.5	48.4
70	2.5	16.8	1.3	49/2.5	2.6	52.4
95	2.5	18.5	1.4	54/2.5	2.7	56.5
120	2.5	20.0	1.5	57/2.5	2.8	60.1
150	2.5	21.3	1.5	60/2.5	2.9	63.1
185	2.5	23.1	1.6	65/2.5	3	67.4
240	2.6	25.5	1.7	71/2.5	3.2	73.2
300	2.8	28.3	1.8	62/3.15	3.5	81.3
400	3.0	31.4	2.0	69/3.15	3.7	88.8

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
50	4.9	750	600	100
70	5.8	750	650	100
95	6.9	500	700	100
120	7.9	500	750	100
150	8.9	500	800	100
185	10.4	450	850	125
240	12.7	400	900	125
300	16.0	400	1000	125
400	19.4	350	1100	125

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
50	387	494	108	506	332	0.40
70	268	343	102	358	383	0.46
95	193	248	96.2	266	432	0.52
120	153	196	93.1	217	474	0.57
150	124	159	90.8	183	511	0.61
185	99.1	128	88.1	155	562	0.67
240	75.4	98	85.9	130	602	0.72
300	60.1	80	84.7	117	622	0.75
400	47.0	64	83.2	105	648	0.78

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Ratings Data

Cross-sectional area mm²	Current Ratings			Short circuit ratings	
	Laid direct in ground Amps	Drawn into ducts Amps	Laid in air Amps	One second short circuit rating of conductor kA	One second short circuit rating of copper tape screen per core kA
50	210	180	220	6.8	-
70	255	215	270	9.8	-
95	300	255	330	13.3	Typically
120	340	290	375	17.2	Less
150	380	330	430	21.2	Then
185	430	370	490	26.6	1kA
240	490	425	570	34.9	-
300	540	470	650	43.8	-
400	590	520	700	57.3	-

Current Ratings Conditions:

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