BS6622/BS7835 Three core Armoured 33kV XLPE Stranded Copper Conductors

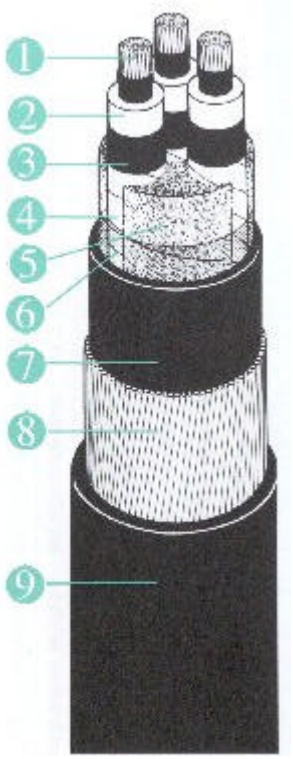
CABLE CHARACTERISTICS

Bending radius r=12D

CABLE DESCRIPTION

1.CONDUCTOR
Compact circular stranded copper conductor complying with BS6360 Class 2.

CONDUCTOR SCREEN
Extruded cross-linked polythylene (XLPE) suitable for operation at a conductor temperature at 90°C.



2.INSULATION
Extruded cross-linked ployethylene (XLPE) or alternatively cross-linked ethylene propylene rubber (EPR) 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.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
70	8	28.9	1.8	64/3.15	3.5	82.6
95	8	30.6	1.9	67/3.15	3.6	86.7
120	8	32.1	2.0	70/3.15	3.7	90.3
150	8	33.4	2.0	72/3.15	3.8	93.3
185	8	35.2	2.1	76/3.15	3.9	97.6
240	8	37.4	2.2	80/3.15	4.1	102.9
300	8	39.7	2.3	85/3.15	4.3	108.5
400	8	42.4	2.4	90/3.15	4.5	114.9

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	10.7	350	1000	125
95	12	300	1050	125
120	13.3	250	1100	150
150	14.4	250	1150	150
185	16.1	250	1200	150
240	18.4	250	1250	150
300	21	250	1300	150
400	24.2	250	1400	150

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	134	367	159	0.95
95	193.0	248	127	278	175	1.05
120	153.0	196	122	231	189	1.13
150	124.0	159	118	197	201	1.21
185	99.1	128	114	171	217	1.30
240	75.4	98	109	146	237	1.42
300	60.1	80	105	131	258	1.55
400	47.0	64	102	120	282	1.69

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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
70	255	225	275	9.8	-
95	295	260	330	13.3	Typically
120	335	300	380	17.2	Less
150	375	335	430	21.2	Then
185	420	380	490	26.6	1kA
240	480	430	570	34.9	-
300	530	480	650	43.8	-
400	580	530	720	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

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