

# 11 kV three core cables XLPE-AL

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Conductor:	Circular solid aluminium conductor
Conductor screen:	Extruded semi-conducting compound
Insulation:	XLPE
Insulation screen:	Extruded semi-conducting compound, strippable
Phase marking:	Yes
Screen:	Layer of copper wires with a copper tape applied in the opposite direction
Outer sheath:	LLDPE
Colour of sheath:	Red
Marking of sheath:	ELECTRIC CABLE 11000 V nkt cables 'Dimension' 'Year' 'Metres' (additional text on request)
Application:	For AC voltage with max. 12 kV between phases
Maximum operating conductor temperature:	90°C
Maximum short circuit temperature:	250°C
Minimum installation temperature:	-15°C
Standard:	BS 7870-4.20

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Area of conductor	mm <sup>2</sup>	70	95	120	150	185	240	300
<b>Mechanical properties</b>								
Diameter of conductor, nom.	mm	9.03	10.70	11.91	13.25	14.90	16.96	18.94
Thickness of insulation	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Diameter over insulation, nom.	mm	17.2	18.9	20.1	21.5	23.1	25.2	27.1
Diameter of laid up cores, nom.	mm	40.6	44.2	46.8	49.7	53.2	57.7	61.9
Area of copper screen, nom.	mm <sup>2</sup>	60	60	60	60	60	60	60
Diameter over screen, nom.	mm	43.9	47.5	50.1	53.0	56.5	60.9	65.2
Thickness of sheath	mm	2.6	2.7	2.8	2.9	3.0	3.2	3.3
External diameter, nom.	mm	49.5	53.3	56.1	59.2	62.9	67.7	72.2
Maximum external diameter	mm	52	56	59	63	67	72	76
Weight of cable, approx.	kg/km	2420	2850	3115	3510	3940	4640	5260
Radius of bend, min.	mm	495	533	561	592	629	677	722
Pull at cable, max.	kN	6.3	7.5	8.7	10.0	10.0	15.0	15.0
<b>Electrical properties:</b>								
Resistance, DC, at 20°C, max.	Q/km	0.443	0.320	0.253	0.206	0.164	0.125	0.100
Capacitance, max.	µF/km	0.279	0.314	0.339	0.367	0.401	0.444	0.485
Star reactance at 50 Hz.	Q/km	0.102	0.097	0.094	0.090	0.087	0.084	0.082
<b>Short circuit rating for 1 sec.</b>								
a) of conductor with initial temperature 90°C and final temperature 250°C	kA	6.6	8.97	11.3	14.2	17.5	22.7	28.3
b) of screen with final screen temperature 300°C	kA	12.0	12.0	12.0	12.0	12.0	12.0	12.0
<b>Continuous current carrying capacity for maximum conductor temperature 90°C:</b>								
a) Direct in ground at 15°C depth 0.7 m and thermal resistivity 1.0°C m/W	A*	205	240	270	310	345	400	450
b) In free air at 25°C	A	190	230	265	305	340	400	460

\*In ducts the rated current should be multiplied with 0.82

\*If continuous current rating, buried direct 10°C ambient, soil resistivity 1-Okm/W, multiplied with 1.03