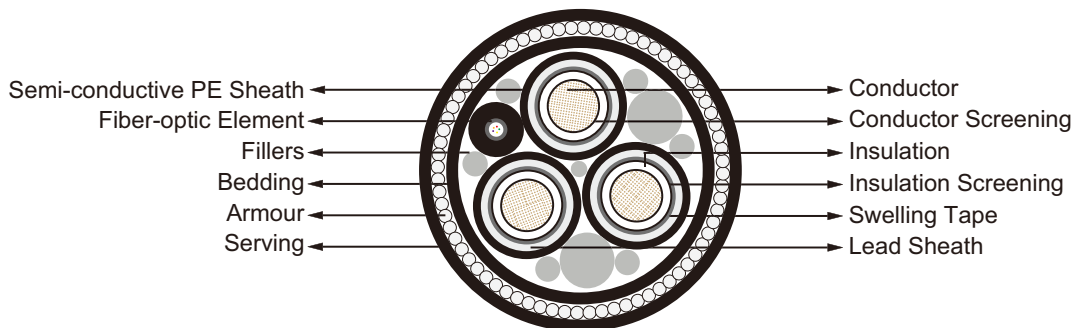




Lead Sheathed AC High-voltage Submarine Cable



Application

These submarine cables are used for power transmission to offshore islands, oil platforms or to cross-rivers and lakes. Cable design based on the mayor national or international standards e.g. VDE, IEC and ICEA or according to customers design and standards.

Construction

- **Conductor:** Copper conductor, water blocked.
- **Conductor Screening:** Extruded semi-conductive compound.
- **Insulation:** XLPE.
- **Insulation Screening:** extruded semi-conductive compound.
- **Separator:** Swelling tape.
- **Core Sheath1:** Lead Sheath.
- **Core Sheath2:** Semi-conductive PE sheath.
- **Fillers:** Polypropylene filler.
- **Fibre-optic Element:** Fibre optic cable.
- **Bedding:** Bedding layer.
- **Armour:** Galvanized steel wires filled with bitumen compound.
- **Serving:** Polypropylene yarn.



High Voltage Submarine Cables

www.caledonian-cables.co.uk

Electrical Data

26/45(52) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
95	0.18	0.43	1.5
120	0.19	0.42	1.6
150	0.21	0.40	1.6
185	0.22	0.39	1.8
240	0.24	0.37	2.0
300	0.26	0.36	2.2
400	0.29	0.35	2.3
500	0.32	0.33	2.6
630	0.35	0.32	2.9
800	0.38	0.31	3.1
1000	0.42	0.30	3.5

38/66(72.5) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
95	0.17	0.44	2.0
120	0.18	0.43	2.1
150	0.19	0.41	2.3
185	0.20	0.40	2.4
240	0.22	0.38	2.6
300	0.24	0.37	2.8
400	0.26	0.35	3.1
500	0.29	0.34	3.5
630	0.32	0.33	3.7
800	0.35	0.32	4.1
1000	0.38	0.31	4.6

64/110(123) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
185	0.14	0.46	2.8
240	0.15	0.43	3.0
300	0.17	0.41	3.5
400	0.20	0.38	3.9
500	0.22	0.37	4.3
630	0.24	0.36	4.7
800	0.26	0.34	5.2
1000	0.28	0.33	5.6





76/132(145) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
185	0.13	0.47	3.0
240	0.14	0.44	3.4
300	0.16	0.42	3.8
400	0.18	0.40	4.3
500	0.20	0.38	4.6
630	0.21	0.37	5.1
800	0.23	0.36	5.6
1000	0.25	0.35	6.1

87/150(170) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
240	0.13	0.47	3.4
300	0.14	0.44	3.7
400	0.15	0.42	4.1
500	0.17	0.40	4.7
630	0.19	0.38	5.3
800	0.21	0.37	5.7
1000	0.23	0.36	6.3

127/220(245) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
500	0.14	0.43	5.7
630	0.16	0.41	6.4
800	0.17	0.40	6.9
1000	0.19	0.38	7.4

160/275(300) kV

Nominal Cross Section Area mm ²	Capacitance μF/km	Inductance mH/km	Charging Current per phase @50Hz A/km
500	0.14	0.44	6.8
630	0.16	0.42	7.7
800	0.17	0.40	8.3
1000	0.18	0.39	9.0



High Voltage Submarine Cables

www.caledonian-cables.co.uk

Dimension and Weight

26/45(52) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
95	11.2	8.0	29.6	1.3	109.0	20.8
120	12.6	8.0	31.0	1.3	112.0	22.3
150	14.2	8.0	32.6	1.4	116.0	24.4
185	15.8	8.0	34.2	1.4	119.0	26.2
240	18.1	8.0	36.5	1.5	124.0	29.5
300	20.4	8.0	38.8	1.6	130.0	32.9
400	23.2	8.0	41.6	1.7	136.0	37.9
500	26.2	8.0	45.0	1.8	144.0	43.2
630	29.8	8.0	48.6	1.9	152.0	49.7
800	33.7	8.0	52.5	2.1	162.0	58.6
1000	37.9	8.0	57.3	2.2	173.0	68.1

38/66(72.5) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
95	11.2	9.0	31.6	1.3	113.0	21.6
120	12.6	9.0	33.0	1.4	116.0	23.8
150	14.2	9.0	34.6	1.4	120.0	25.7
185	15.8	9.0	36.2	1.4	124.0	28.0
240	18.1	9.0	38.5	1.6	129.0	31.3
300	20.4	9.0	40.8	1.6	134.0	34.3
400	23.2	9.0	43.6	1.7	141.0	39.2
500	26.2	9.0	47.0	1.9	149.0	45.4
630	29.8	9.0	50.6	2.0	157.0	52.0
800	33.7	9.0	54.5	2.1	167.0	60.1
1000	37.9	9.0	59.3	2.3	178.0	70.7





64/110(123) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
185	15.8	16.0	50.2	2.0	156.0	40.9
240	18.1	15.0	50.5	2.0	157.0	42.5
300	20.4	14.0	50.8	2.0	157.0	44.1
400	23.2	13.0	51.6	2.0	159.0	47.2
500	26.2	13.0	55.0	2.1	167.0	53.0
630	29.8	13.0	58.6	2.3	176.0	60.7
800	33.7	13.0	62.5	2.4	185.0	69.5
1000	37.9	13.0	67.3	2.6	197.0	80.5

76/132(145) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
185	15.8	18.0	54.2	2.1	165.0	44.9
240	18.1	17.0	54.5	2.1	166.0	46.3
300	20.4	16.0	54.8	2.1	167.0	48.0
400	23.2	15.0	55.6	2.1	168.0	51.1
500	26.2	15.0	59.0	2.3	176.0	58.0
630	29.8	15.0	62.6	2.4	185.0	65.2
800	33.7	15.0	66.5	2.5	194.0	74.0
1000	37.9	15.0	71.3	2.7	206.0	85.4

87/150(170) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
240	18.1	21.0	62.5	2.4	184.0	55.5
300	20.4	20.0	62.8	2.4	185.0	57.3
400	23.2	19.0	63.6	2.4	187.0	60.5
500	26.2	18.0	65.0	2.5	190.0	65.1
630	29.8	17.0	66.6	2.5	194.0	69.7
800	33.7	17.0	70.5	2.7	204.0	79.8
1000	37.9	17.0	75.3	2.8	215.0	90.5



High Voltage Submarine Cables

www.caledonian-cables.co.uk

127/220(245) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
500	26.2	24.0	77.6	2.9	219.0	81.3
630	29.8	23.0	79.2	3.0	224.0	86.7
800	33.7	23.0	83.1	3.1	234.0	95.3
1000	37.9	23.0	87.3	3.1	241.0	104.0

160/275(300) kV

Nominal Cross Section Area mm ²	Nominal Conductor Diameter mm	Nominal Insulation Thickness mm	Nominal Diameter Over Insulation mm	Nominal Lead Sheath Thickness mm	Nominal Overall Diameter mm	Weight kg/m
500	26.2	26.0	81.6	2.9	229.0	84.7
630	29.8	24.0	81.2	3.0	228.0	88.9
800	33.7	24.0	85.1	3.1	237.0	97.6
1000	37.9	24.0	89.3	3.1	247.0	106.3

