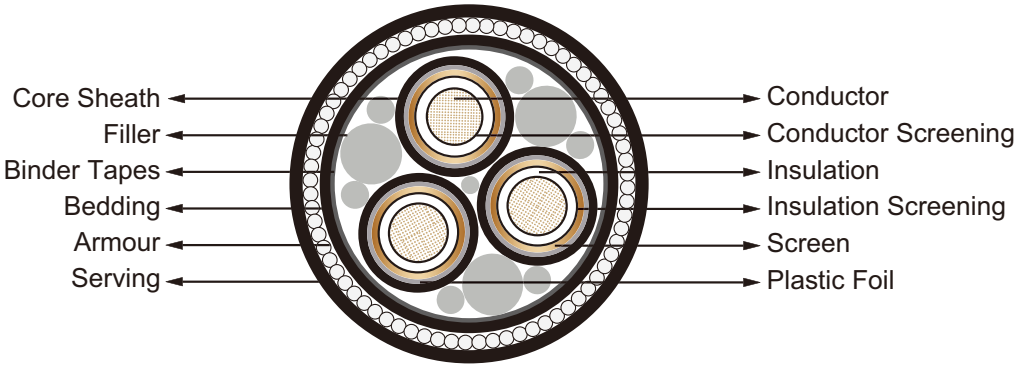
XLPE Insulated AC Medium-voltage Submarine Cable



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, circular stranded compacted, water blocked.
- **Conductor Screening:** Extruded semi-conductive compound.
- **Insulation:** XLPE.
- **Insulation Screening:** Extruded semi-conductive compound.
- **Screen:** Copper tapes.
- **Separator:** Plastic foil.
- **Core Sheath:** PE.
- **Fillers:** Polypropylene filler.
- **Separator:** Binder tapes
- **Bedding Layer:** Polypropylene strings.
- **Armour:** Galvanized steel wires.
- **Serving:** Hessian tapes, bituminous compound, polypropylene strings.

Electrical Data

6/10(12) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
35	0.23	0.41	166
50	0.26	0.39	196
70	0.29	0.37	240
95	0.32	0.35	287
120	0.35	0.34	325
150	0.38	0.33	364
185	0.42	0.32	408
240	0.47	0.30	471

12/20(24) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
35	0.17	0.45	168
50	0.18	0.43	199
70	0.20	0.40	243
95	0.22	0.38	290
120	0.24	0.37	329
150	0.26	0.35	368
185	0.28	0.34	412
240	0.31	0.33	472

18/30(36) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
50	0.14	0.46	201
70	0.15	0.43	245
95	0.17	0.41	292
120	0.18	0.40	330
150	0.19	0.38	368
185	0.21	0.37	413
240	0.23	0.35	475

Dimension and Weight

6/10(12) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Core Sheath Thickness	Nominal Core Diameter	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	mm	mm	kg/m
35	7.0	3.4	16	2.5	22	2	3.15	3.5	65	6.3
50	8.2	3.4	16	2.5	23	2	3.15	3.5	68	7.0
70	9.9	3.4	16	2.5	25	2	4.0	3.5	72	8.8
95	11.5	3.4	16	2.5	26	2	4.0	3.5	76	10.0
120	13.0	3.4	16	2.5	28	2	4.0	3.5	79	11.2
150	14.5	3.4	25	2.5	29	2	4.0	3.5	82	12.3
185	16.1	3.4	25	2.5	31	2	5.0	4.0	89	15.5
240	18.6	3.4	25	2.5	33	2	5.0	4.0	94	17.8

12/20(24) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Core Sheath Thickness	Nominal Core Diameter	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	mm	mm	kg/m
35	7.0	5.5	16	2.5	26	2	3.15	3.5	74	7.6
50	8.2	5.5	16	2.5	27	2	3.15	3.5	77	8.3
70	9.9	5.5	16	2.5	29	2	4.0	3.5	81	10.3
95	11.5	5.5	16	2.5	30	2	4.0	3.5	85	11.5
120	13.0	5.5	16	2.5	32	2	4.0	3.5	88	12.7
150	14.5	5.5	25	2.5	33	2	4.0	3.5	91	13.9
185	16.1	5.5	25	2.5	35	2	5.0	4.0	98	17.2
240	18.6	5.5	25	2.5	38	2	5.0	4.0	103	19.5

18/30(36) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Core Sheath Thickness	Nominal Core Diameter	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	mm	mm	kg/m
50	8.2	8.0	16	2.5	33	2	3.15	3.5	88	10.0
70	9.9	8.0	16	2.5	34	2	4.0	3.5	93	12.3
95	11.5	8.0	16	2.5	36	2	4.0	3.5	96	13.5
120	13.0	8.0	16	2.5	37	2	4.0	4.0	100	14.8

Medium Voltage Submarine Cables

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Core Sheath Thickness	Nominal Core Diameter	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	mm	mm	kg/m
150	14.5	8.0	25	2.5	39	2	4.0	4.0	103	16.0
185	16.1	8.0	25	2.5	40	2	5.0	4.0	109	19.5
240	18.6	8.0	25	2.5	43	2	5.0	4.0	114	22.0