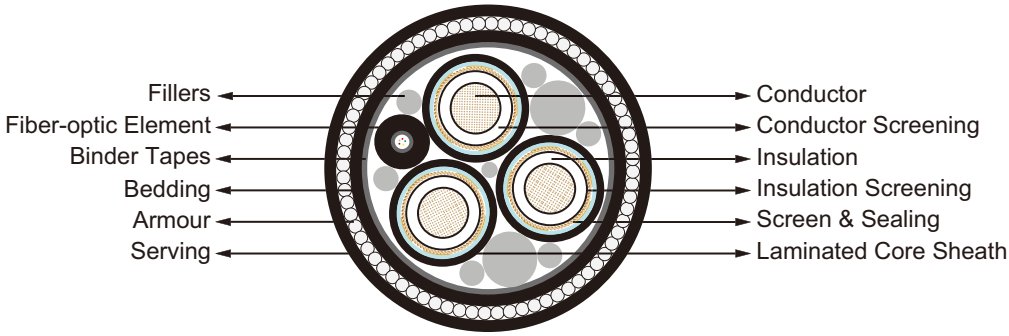
XLPE Insulated AC Medium-voltage Submarine Cable With Fibre Optic Cable



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 wires and copper helix, swelling powder.
- **Laminated Core Sheath:** Aluminium tape bonded to overlaying PE sheath
- **Fillers:** Polypropylene filler.
- **Fibre-optic Element:** Fibre optic cable.
- **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	0.43	167
50	0.26	0.41	199
70	0.29	0.38	241
95	0.32	0.37	288
120	0.35	0.35	327
150	0.38	0.34	363
185	0.42	0.33	405
240	0.47	0.32	464

12/20(24) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
35	0.17	0.47	171
50	0.18	0.44	199
70	0.20	0.41	243
95	0.22	0.40	292
120	0.24	0.38	328
150	0.26	0.37	364
185	0.28	0.35	408
240	0.31	0.34	467

18/30(36) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
50	0.14	0.48	202
70	0.15	0.45	245
95	0.17	0.42	291
120	0.18	0.41	330
150	0.19	0.39	366
185	0.21	0.38	411
240	0.23	0.36	470

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	24	2	3.15	3.5	70	7.5
50	8.2	3.4	16	2.5	25	2	3.15	3.5	73	8.2
70	9.9	3.4	16	2.5	27	2	4.0	3.5	77	9.9
95	11.5	3.4	16	2.5	28	2	4.0	3.5	80	11.1
120	13.0	3.4	16	2.5	30	2	4.0	3.5	84	12.2
150	14.5	3.4	25	2.5	31	2	4.0	3.5	87	13.6
185	16.1	3.4	25	2.5	33	2	5.0	4.0	93	16.8
240	18.6	3.4	25	2.5	35	2	5.0	4.0	99	19.1

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	28	2	3.15	3.5	78	8.8
50	8.2	5.5	16	2.5	30	2	3.15	3.5	83	9.3
70	9.9	5.5	16	2.5	31	2	4.0	3.5	87	11.4
95	11.5	5.5	16	2.5	33	2	4.0	3.5	89	12.7
120	13.0	5.5	16	2.5	34	2	4.0	4.0	94	14.1
150	14.5	5.5	25	2.5	36	2	4.0	4.0	97	15.3
185	16.1	5.5	25	2.5	37	2	5.0	4.0	102	18.6
240	18.6	5.5	25	2.5	40	2	5.0	4.0	108	21.1

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	35	2	3.15	3.5	93	11.1
70	9.9	8.0	16	2.5	36	2	4.0	4.0	99	12.8

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
95	11.5	8.0	16	2.5	38	2	4.0	4.0	102	14.9
120	13.0	8.0	16	2.5	39	2	4.0	4.0	105	16.2
150	14.5	8.0	25	2.5	41	2	4.0	4.0	108	17.6
185	16.1	8.0	25	2.5	42	2	5.0	4.0	113	21.0
240	18.6	8.0	25	2.5	45	2	5.0	4.0	119	23.4