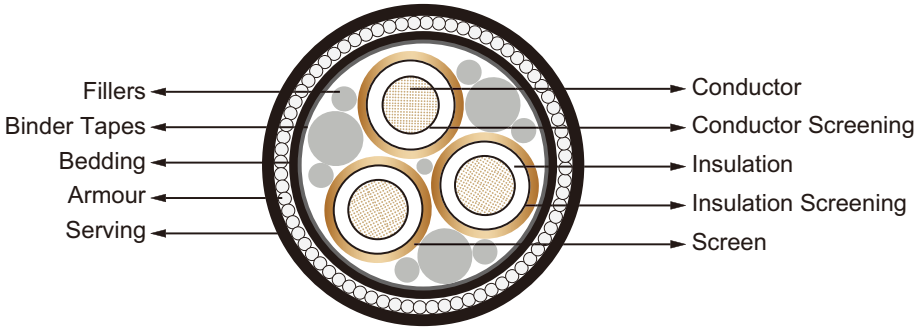
EPR Insulated AC Medium-voltage Submarine Cable



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:** EPR.
- **Insulation Screening:** Extruded semi-conductive compound.
- **Screen:** Copper tapes.
- **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	0.27	0.37	166
50	0.30	0.35	197
70	0.34	0.33	242
95	0.38	0.32	289
120	0.42	0.31	328
150	0.45	0.30	367
185	0.49	0.29	402
240	0.55	0.28	469

12/20(24) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
35	0.19	0.41	166
50	0.21	0.39	197
70	0.24	0.37	241
95	0.26	0.35	288
120	0.29	0.34	327
150	0.31	0.33	365
185	0.33	0.32	409
240	0.37	0.31	470

18/30(36) kV

Nominal Cross Section Area	Capacitance	Inductance	Current Rating
mm²	µF/mm	mH/km	A
50	0.17	0.43	196
70	0.18	0.41	241
95	0.20	0.39	287
120	0.22	0.37	325
150	0.23	0.36	364
185	0.25	0.35	406
240	0.28	0.33	467

Dimension and Weight

6/10(12) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	kg/m
35	7.0	3.4	3x4	2.0	3.15	3.5	56	5.4
50	8.2	3.4	3x4	2.0	3.15	3.5	59	5.9
70	9.9	3.4	3x5.4	2.0	4.0	3.5	64	7.9
95	11.5	3.4	3x5.4	2.0	4.0	3.5	68	9.1
120	13.0	3.4	3x5.4	2.0	4.0	3.5	71	10.2
150	14.5	3.4	3x6	2.0	4.0	3.5	74	11.4
185	16.1	3.4	3x6	2.5	5.0	4.0	86	15.0
240	18.6	3.4	3x6	2.5	5.0	4.0	87	16.7

12/20(24) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	kg/m
35	7.0	5.5	3x6	2	3.15	3.5	65	6.8
50	8.2	5.5	3x6	2	3.15	3.5	68	7.4
70	9.9	5.5	3x6	2	4.0	3.5	73	9.5
95	11.5	5.5	3x6	2	4.0	3.5	77	10.7
120	13.0	5.5	3x6	2	4.0	3.5	80	11.8
150	14.5	5.5	3x6	2	4.0	3.5	83	13.0
185	16.1	5.5	3x8	2	5.0	4.0	90	16.2
240	18.6	5.5	3x8	2	5.0	4.0	95	18.5

18/30(36) kV

Nominal Cross Section Area	Nominal Conductor Diameter	Nominal Insulation Thickness	Nominal Screen Cross Section Area	Nominal Bedding Thickness	Nominal Steel Wire Diameter	Serving Thickness	Overall Diameter	Weight
mm²	mm	mm	mm²	mm	mm	mm	mm	kg/m
50	8.2	8.0	3x6	2	3.15	3.5	79	9.2
70	9.9	8.0	3x6	2	4.0	3.5	84	11.5
95	11.5	8.0	3x8	2	4.0	3.5	88	12.8
120	13.0	8.0	3x8	2	4.0	3.5	91	14.0
150	14.5	8.0	3x8	2	4.0	3.5	94	15.4
185	16.1	8.0	3x10	2	5.0	4.0	101	18.7
240	18.6	8.0	3x10	2	5.0	4.0	106	21.1