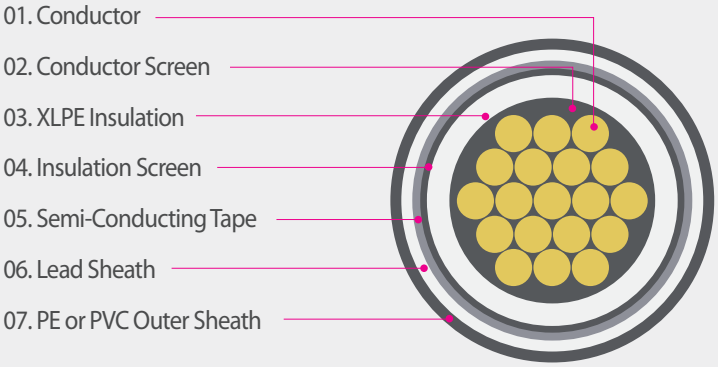
36/66kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation / Lead Sheath/PE(PVC) Sheath

Lead Sheath Cable

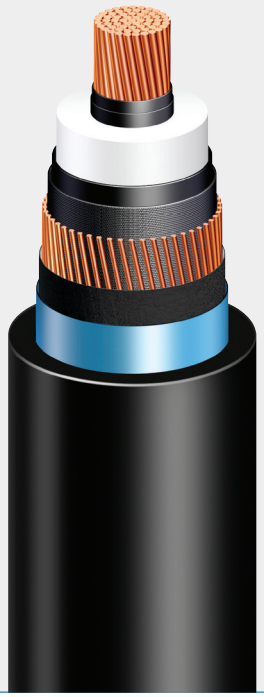


Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Lead Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
240	Round Compact	18.3	1.0	11.0	1.0	2.1	3.5	62	8.1	0.0754
300		20.4	1.0	11.0	1.0	2.2	3.5	64	9.1	0.0601
400		23.2	1.0	11.0	1.0	2.3	3.5	67	10.5	0.0470
500		26.3	1.0	11.0	1.0	2.4	4.0	72	12.5	0.0366
630		30.2	1.0	11.0	1.0	2.4	4.0	76	14.2	0.0283
800		34.0	1.0	11.0	1.0	2.6	4.0	80	16.9	0.0221
1000	Segment Compact	38.7	1.0	11.0	1.0	2.7	4.0	85	19.9	0.0176
1200		41.8	1.0	11.0	1.0	2.8	4.5	91	23.0	0.0151
1600		48.1	1.0	11.0	1.0	3.0	4.5	97	28.0	0.0113

※ Thickness of Lead Sheath can be changed

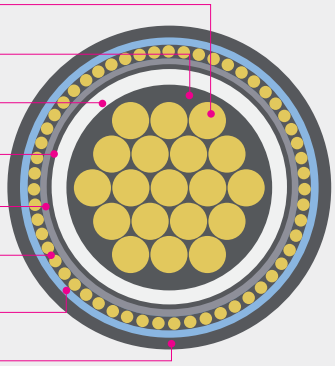
36/66kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation / Copper Wire Shield /PE(PVC) Sheath



Wire Shield Cable

01. Conductor
02. Conductor Screen
03. XLPE Insulation
04. Insulation Screen
05. Semi-Conducting Tape
06. Copper Wire Screen
07. Aluminum Laminated Tape
08. PE or PVC Outer Sheath

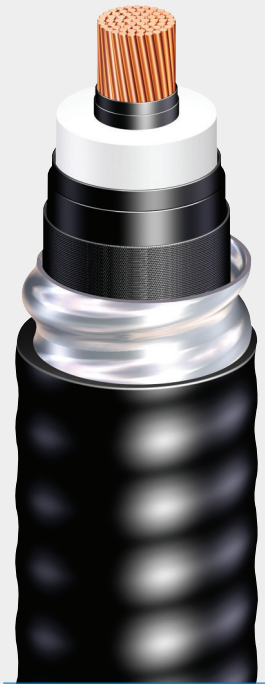


Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Diameter&Number of Copper Wires	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
240	Round Compact	18.3	1.0	11.0	1.0	1.2x40	3.5	58	4.4	0.0754
300		20.4	1.0	11.0	1.0	1.2x40	3.5	60	5.1	0.0601
400		23.2	1.0	11.0	1.0	1.2x40	3.5	63	5.9	0.0470
500		26.3	1.0	11.0	1.0	1.2x40	4.0	66	7.2	0.0366
630		30.2	1.0	11.0	1.0	1.2x40	4.0	71	8.6	0.0283
800		34.0	1.0	11.0	1.0	1.2x40	4.0	75	10.4	0.0221
1000	Segment Compact	38.7	1.0	11.0	1.0	1.2x40	4.0	80	12.7	0.0176
1200		41.8	1.0	11.0	1.0	1.2x40	4.5	85	14.7	0.0151
1600		48.1	1.0	11.0	1.0	1.2x40	4.5	91	18.7	0.0113

※ Diameter & Number of Copper Wires can be changed

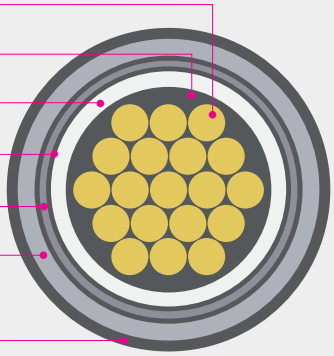
36/66kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation/Aluminum Sheath /PE(PVC) Sheath



Corrugated Aluminum Sheath Cable

1. Conductor
2. Conductor Screen
3. XLPE Insulation
4. Insulation Screen
5. Semi-Conducting Tape
6. Corrugated Aluminum Sheath
7. PE or PVC Outer Sheath



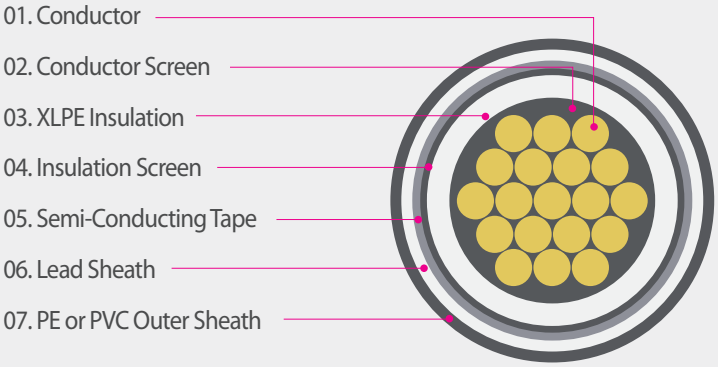
Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Aluminum Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
240	Round Compact	18.3	1.0	11.0	1.0	1.6	3.5	69	5.5	0.0754
300		20.4	1.0	11.0	1.0	1.6	3.5	72	6.3	0.0601
400		23.2	1.0	11.0	1.0	1.7	3.5	75	7.2	0.0470
500		26.3	1.0	11.0	1.0	1.8	4.0	79	8.6	0.0366
630		30.2	1.0	11.0	1.0	1.8	4.0	83	10.1	0.0283
800		34.0	1.0	11.0	1.0	1.9	4.0	87	12.0	0.0221
1000	Segment Compact	38.7	1.0	11.0	1.0	2.0	4.0	92	14.4	0.0176
1200		41.8	1.0	11.0	1.0	2.1	4.5	98	16.7	0.0151
1600		48.1	1.0	11.0	1.0	2.2	4.5	105	20.9	0.0113

※ Thickness of Aluminum can be changed

76/132kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation /Lead Sheath /PE(PVC) Sheath

Lead Sheath Cable



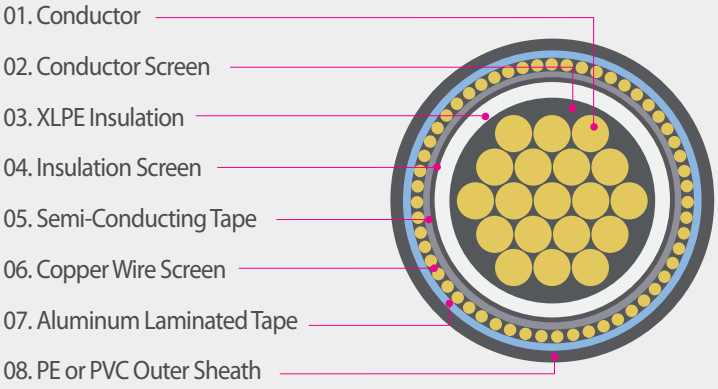
Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Lead Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
400	Round Compact	23.2	1.5	16.0	1.3	2.6	4.5	81	13.8	0.0470
500		26.3	1.5	16.0	1.3	2.7	4.5	85	15.6	0.0366
630		30.2	1.5	16.0	1.3	2.7	4.5	88	17.5	0.0283
800		34.0	1.5	16.0	1.3	2.9	4.5	93	20.4	0.0221
1000	Segment Compact	38.7	1.5	16.0	1.3	3.0	4.5	98	23.6	0.0176
1200		41.8	1.5	16.0	1.3	3.1	4.5	102	26.5	0.0151

※ Thickness of Lead Sheath can be changed

76/132kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation /Copper Wire Shield / PE(PVC) Sheath

Wire Shield Cable

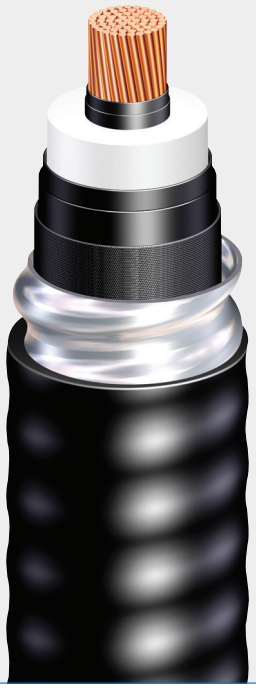


Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Diameter&Number of Copper Wires	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
400	Round Compact	23.2	1.5	16.0	1.3	1.5x80	4.5	75	8.1	0.0470
500		26.3	1.5	16.0	1.3	1.5x80	4.5	80	9.5	0.0366
630		30.2	1.5	16.0	1.3	1.5x80	4.5	84	11.0	0.0283
800		34.0	1.5	16.0	1.3	1.5x80	4.5	88	12.9	0.0221
1000	Segment Compact	38.7	1.5	16.0	1.3	1.5x80	4.5	93	15.3	0.0176
1200		41.8	1.5	16.0	1.3	1.5x80	4.5	96	17.1	0.0151

※ Diameter & Number of Copper Wires can be changed

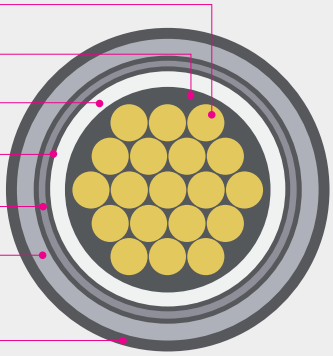
76/132kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation /Aluminum Sheath / PE(PVC) Sheath



Corrugated Aluminum Sheath Cable

1. Conductor
2. Conductor Screen
3. XLPE Insulation
4. Insulation Screen
5. Semi-Conducting Tape
6. Corrugated Aluminum Sheath
7. PE or PVC outer Sheath

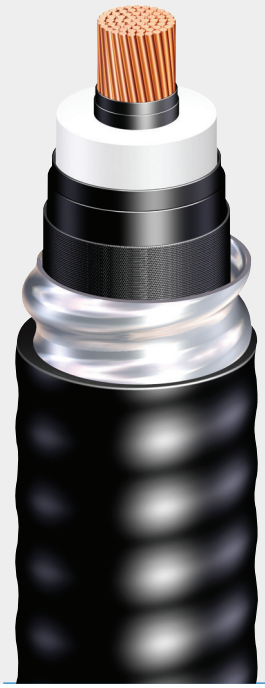


Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Aluminum Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
400	Round Compact	23.2	1.5	16.0	1.3	1.9	4.5	89	8.9	0.0470
500		26.3	1.5	16.0	1.3	2.0	4.5	92	10.2	0.0366
630		30.2	1.5	16.0	1.3	2.1	4.5	97	11.9	0.0283
800		34.0	1.5	16.0	1.3	2.2	4.5	101	14.0	0.0221
1000	Segment Compact	38.7	1.5	16.0	1.3	2.2	4.5	106	16.6	0.0176
1200		41.8	1.5	16.0	1.3	2.3	4.5	110	18.6	0.0151

※ Thickness of Aluminum Sheath can be changed

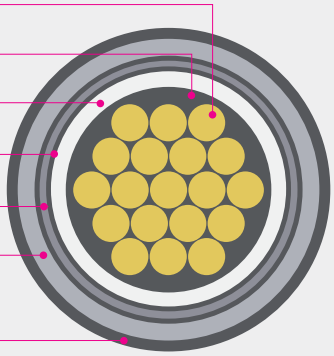
154kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation /Aluminum Sheath / PE(PVC) Sheath



Corrugated Aluminum Sheath Cable

1. Conductor
2. Conductor Screen
3. XLPE Insulation
4. Insulation Screen
5. Semi-Conducting Tape
6. Corrugated Aluminum Sheath
7. PE or PVC Outer Sheath



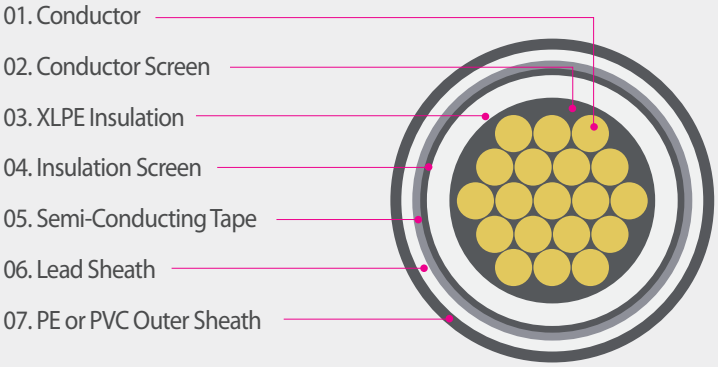
Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Aluminum Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
400	Round Compact	23.2	1.5	17.0	1.3	2.3	4.5	92	10.5	0.0470
600		29.5	1.5	17.0	1.3	2.9	4.5	100	14.0	0.0308
1200	Segment Compact	41.8	1.5	17.0	1.3	2.5	4.5	113	19.5	0.0151

※ Thickness of Aluminum Sheath

127/230kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation /Lead Sheath /PE(PVC) Sheath

Lead Sheath Cable



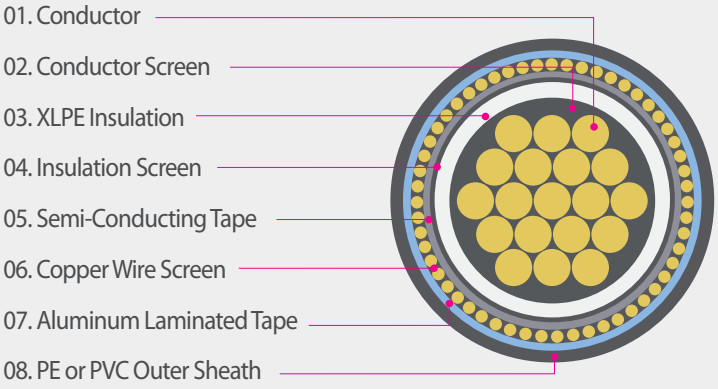
Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Lead Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
500	Round Compact	26.3	1.5	23.0	1.3	3.3	4.5	100	19.7	0.0366
630		30.2	1.5	23.0	1.3	3.4	4.5	104	22.1	0.0283
800		34.0	1.5	23.0	1.3	3.5	4.5	108	24.8	0.0221
1000	Segment Compact	38.7	1.5	23.0	1.3	3.6	4.5	114	28.8	0.0176

※ Thickness of Lead Sheath can be changed

127/230kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation /Copper Wire Shield /PE(PVC) Sheath

Wire Shield Cable

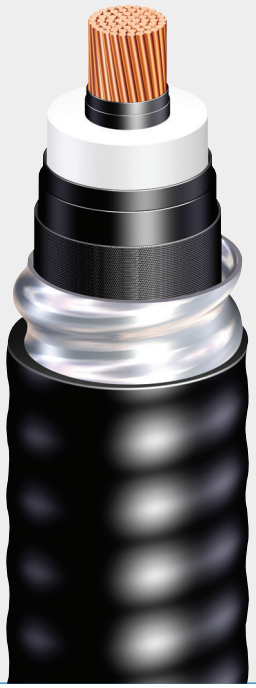


Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Diameter&Number of Copper Wires	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
500	Round Compact	26.3	1.5	23.0	1.3	1.5x80	4.5	94	11.2	0.0366
630		30.2	1.5	23.0	1.3	1.5x80	4.5	98	12.8	0.0283
800		34.0	1.5	23.0	1.3	1.5x80	4.5	102	14.8	0.0221
1000	Segment Compact	38.7	1.5	23.0	1.3	1.5x80	4.5	107	17.2	0.0176

※ Diameter & Number of Copper Wires can be changed

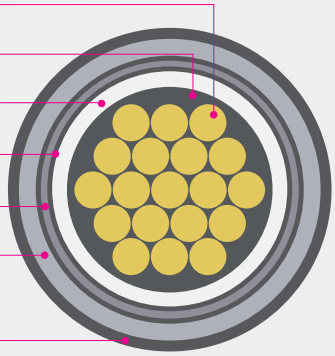
127/230kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation /Aluminum Sheath /PE(PVC) Sheath



Corrugated Aluminum Sheath Cable

1. Conductor
2. Conductor Screen
3. XLPE Insulation
4. Insulation Screen
5. Semi-Conducting Tape
6. Corrugated Aluminum Sheath
7. PE or PVC Outer Sheath



Conductor			Thickness of Conductor Screen Approx.	Thickness of Insulation	Thickness of Insulation Screen Approx.	Thickness of Aluminum Sheath	Thickness of Outer Sheath	Outer Diameter of Cable	Weight of Cable	Max. DC Conductor Resistance (20°C)
Cross-sectional Area	Shape	Diameter								
mm^2	-	mm	mm	mm	mm	mm	mm	mm	kg/m	Ω/km
500	Round Compact	26.3	1.5	23.0	1.3	2.3	4.5	108	12.1	0.0366
630		30.2	1.5	23.0	1.3	2.4	4.5	112	14.2	0.0283
800		34.0	1.5	23.0	1.3	2.4	4.5	116	15.8	0.0221

※ Thickness of Aluminum Sheath can be changed

Current Ratings for Single Circuit(A)

36/66kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation / Lead Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
240	535	525	621	706
300	606	567	710	810
400	691	646	822	942
500	787	733	951	1098
630	898	833	1096	1274
800	1008	958	1243	1462
1000	1184	1121	1505	1759
1200	1282	1208	1648	1938
1600	1469	1434	1906	2282

36/66kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation / Copper Wire Shield / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
240	530	483	606	692
300	599	544	693	795
400	683	616	802	925
500	780	729	929	1075
630	886	828	1066	1247
800	997	929	1210	1432
1000	1173	1087	1473	1728
1200	1270	1173	1611	1894
1600	1465	1375	1883	2245

Current Ratings for Single Circuit(A)

36/66kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation / Aluminum Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
240	524	494	598	671
300	592	556	682	770
400	671	631	781	888
500	762	714	894	1025
630	878	808	1023	1187
800	968	928	1150	1355
1000	1119	1075	1361	1615
1200	1198	1146	1460	1745
1600	1352	1357	1654	2030

Current Ratings for Single Circuit(A)

76/132kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation / Lead Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
400	684	636	808	904
500	780	727	934	1050
630	889	840	1077	1222
800	997	941	1222	1400
1000	1170	1100	1469	1681
1200	1264	1226	1599	1842

76/132kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation / Copper Wire Shield / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
400	675	632	792	896
500	767	716	908	1033
630	872	811	1045	1200
800	979	932	1182	1374
1000	1145	1087	1420	1649
1200	1233	1212	1539	1801

76/132kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation / Aluminum Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
400	665	635	770	858
500	755	716	883	992
630	856	814	1011	1151
800	956	942	1137	1313
1000	1103	1093	1333	1555
1200	1185	1170	1439	1695

Current Ratings for Single Circuit(A)

127/230kV XLPE Lead Sheath Cable

Copper Conductor / XLPE Insulation / Lead Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
500	770	845	914	1010
630	876	847	1054	1173
800	986	950	1196	1343
1000	1153	1108	1429	1606

127/230kV XLPE Wire Shield Cable

Copper Conductor / XLPE Insulation / Copper Wire Shield / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
500	759	719	895	998
630	864	842	1031	1159
800	970	944	1167	1326
1000	1131	1100	1390	1583

127/230kV XLPE Corrugated Aluminum Sheath Cable

Copper Conductor / XLPE Insulation / Aluminum Sheath / PE(PVC) Sheath

Cross-sectional Area	Direct Buried	Pipe Duct	Conductor	
mm^2	-	-	Trefoil	Flat(S=2D)
500	745	725	866	962
630	843	822	989	1111
800	943	916	1116	1268
1000	1090	1057	1310	1505

※ Laying Condition : ① G round Temp. 25℃ ② Depth of Laying 1.5m ③ Soil Thermal Resistivity 1.0℃cm/W ④ Ambient Temp. 40℃

Strength Reduction Factor Accordance to Laying Condition

• Ground Temp.

Ground Temp.	20℃	25℃	30℃	35℃	40℃	45℃	50℃	55℃
Strength Reduction Factor	1.20	1.14	1.10	1.05	1.00	0.94	0.88	0.82

• Ambient Temp.

Ambient Temp.	15℃	20℃	25℃	30℃	35℃	40℃	45℃	50℃
Strength Reduction Factor	1.08	1.04	1.00	0.96	0.91	0.87	0.83	0.76

• Soil Thermal Resistivity

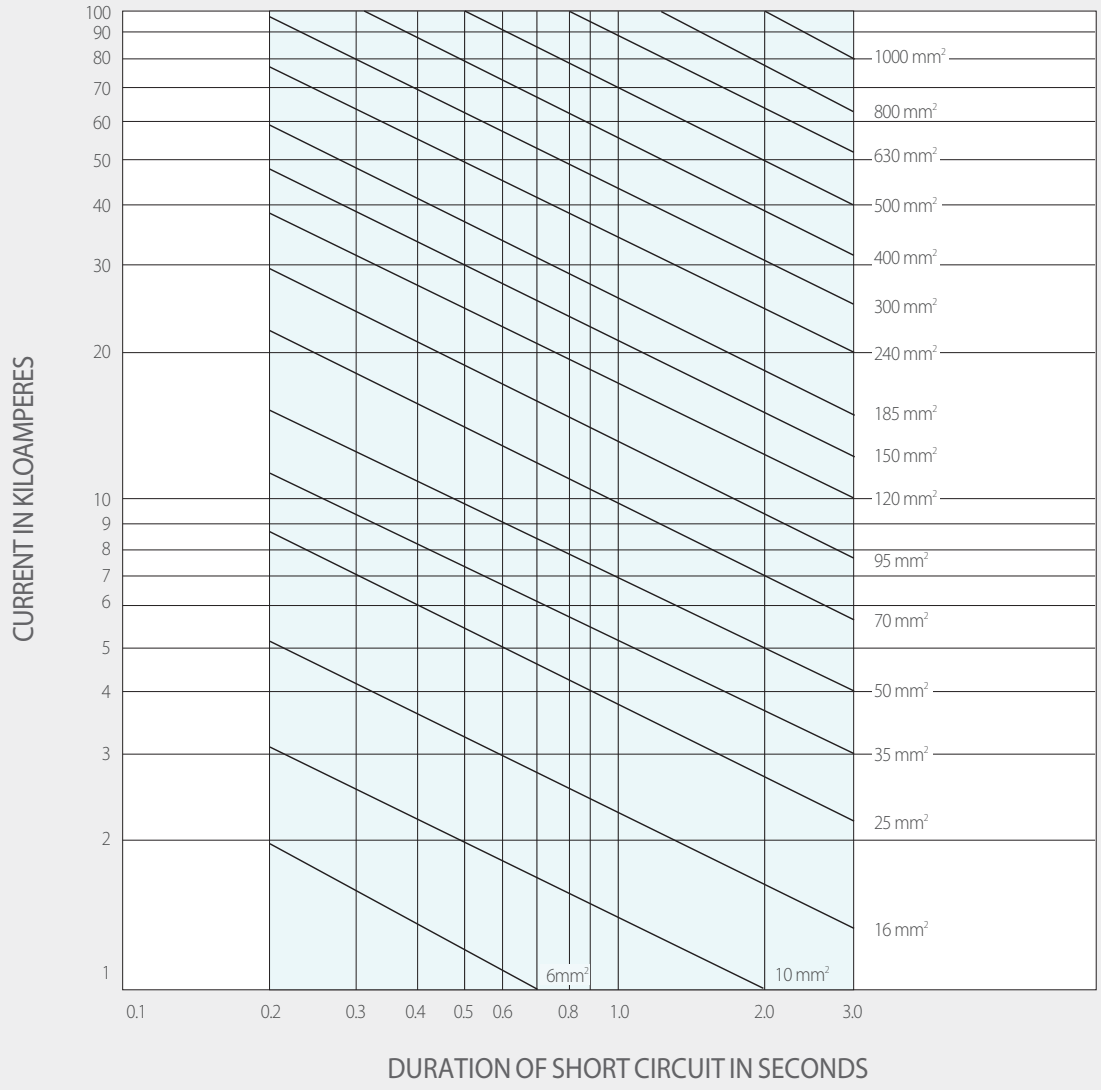
Soil Thermal Resistivity(℃m/w)	0.7	1.0	1.2	1.5	2.0	2.5	3.0
Strength Reduction Factor	1.14	1.00	0.93	0.84	0.74	0.67	0.61

• Depth of Laying

Depth of Laying(m)	0.6	0.8	1.0	1.2	1.4	1.6	2.0	2.5
Strength Reduction Factor	1.20	1.14	1.10	1.05	1.00	0.96	0.93	0.89

Duration of Short Circuit(XLPE Cable)

• Copper Conductor

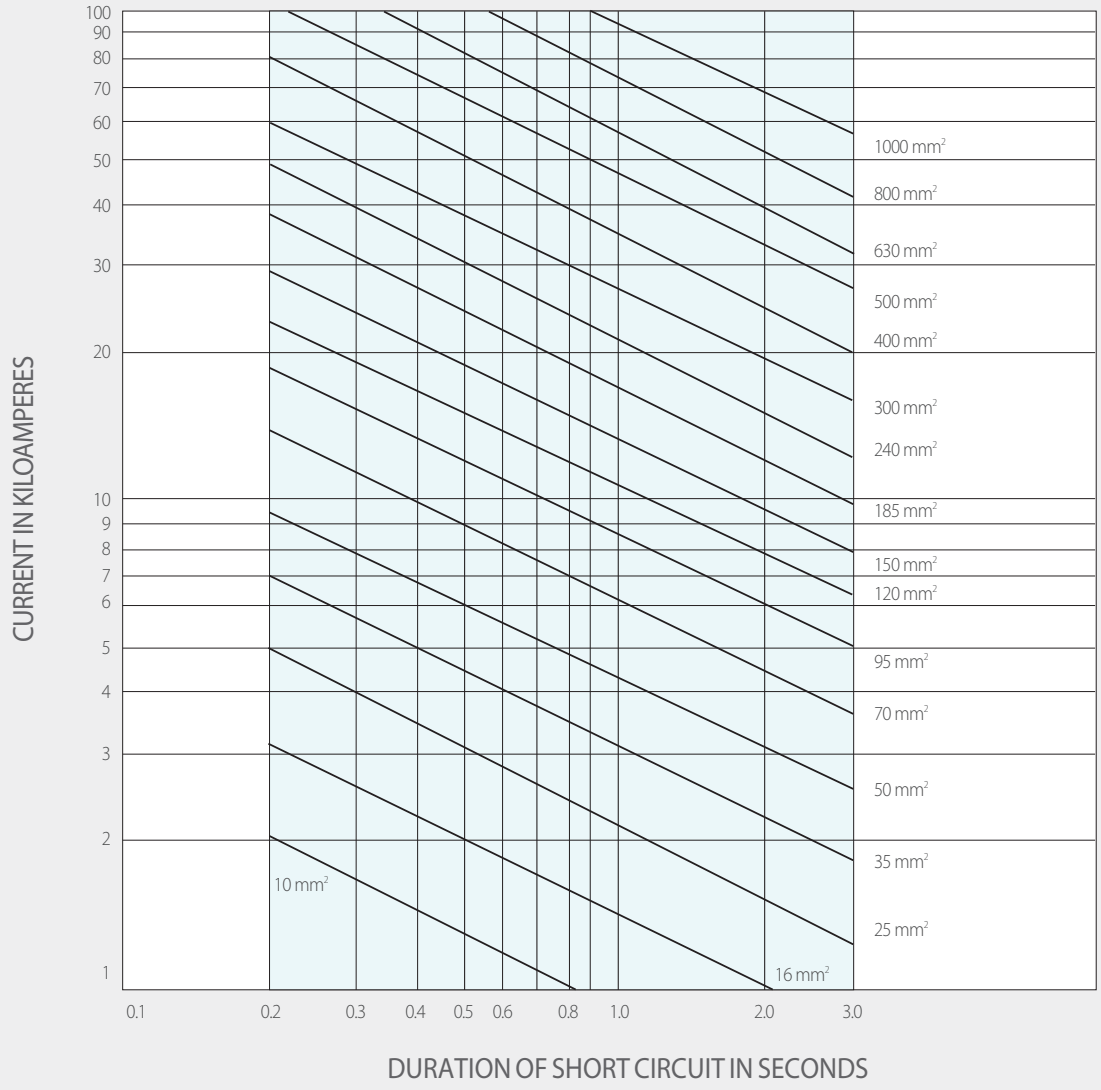


$$I_S = \sqrt{\frac{0.115 \log \frac{T_2 + 234.5}{T_1 + 234.5}}{t}} A = \frac{0.141}{\sqrt{t}} A$$

- I : Short Circuit Current(kA)
- A : Cross-setional Area(mm²)
- t : Short Circuit Time(Sec.)
- T1 : Continuous Use Temp.(90°C)
- T2 : Short Circuit Temp.(250°C)

Duration of Short Circuit(XLPE Cable)

• Aluminum Conductor



$$I_S = \sqrt{\frac{0.0486 \log \frac{T_2 + 234.5}{T_1 + 234.5}}{t}} A = \frac{0.0927}{\sqrt{t}} A$$

- I : Short Circuit Current(kA)
- A : Cross-setional Area(mm²)
- t : Short Circuit Time(Sec.)
- T1 : Continuous Use Temp.(90°C)
- T2 : Short Circuit Temp.(250°C)