

345/200 kV XLPE Cable

Single-core XLPE High Voltage Cable with Aluminium laminated sheath

Cable layout

- *Copper* conductor, stranded, cross-sections of 1000 sqmm and above segmented, optionally with longitudinal water barrier
- Inner semiconductive layer, firmly bonded to the XLPE insulation
- XLPE main insulation, cross-linked
- Outer semiconductive layer, firmly bonded to the XLPE insulation
- *Copper* wire screen with semi-conductive swelling tapes as longitudinal water barrier
- *Aluminium* laminated sheath
- HDPE oversheath, halogen-free, as mechanical protection, optionally: with semi-conductive and/or flame-retardant layer

Production process

The inner semiconductive layer, the XLPE main insulation and the outer semiconductive layer are extruded in a single operation.

Special features of metallic sheath

- *Copper* wire screen as short-circuit current carrying component
- *Aluminium* foil, overlapped, 0,25 mm thick, as radial diffusion barrier
- Low weight, low cost, internationally proven design

Applicable standards

IEC 62067 (2001)
ANSI / ICEA S-108-720-2004

**XDRCU-ALT
345/200 kV**



Technical data

Copper conductor cross-section		Outer diameter approx. mm	Cable weight approx. kg/m	Capacitance µF/km	Impedance (90°C, 50 Hz) Ω/km	Surge impedance Ω	Min. bending radius mm	Max. pulling force kN
mm ²	kcmil							
500	1000	113	16	0.12	0.23	56	2300	30
630	1250	114	17	0.13	0.22	53	2300	38
800	1600	115	18	0.15	0.20	48	2300	48
1000	2000	118	21	0.17	0.19	45	2400	60
1200	2400	122	24	0.19	0.19	43	2450	72
1400	2750	123	25	0.20	0.18	41	2450	84
1600	3200	128	28	0.20	0.18	40	2600	96
2000	4000	135	33	0.21	0.17	39	2700	120
2500	5000	136	38	0.26	0.17	35	2700	150

Ampacity

Load Factor		Buried in soil ∴ 0.7	Buried in soil ∴ 1.0	Buried in soil ∴∴ 0.7	Buried in soil ∴∴ 1.0	In free air ∴ -	In free air ∴∴ -
mm ²	kcmil	A	A	A	A	A	A
500	1000	859	728	918	793	927	1009
630	1250	980	825	1056	906	1072	1176
800	1600	1108	925	1208	1027	1233	1371
1000	2000	1311	1087	1427	1205	1485	1652
1200	2400	1416	1170	1547	1301	1619	1810
1400	2750	1526	1255	1680	1407	1763	1987
1600	3200	1617	1329	1783	1491	1877	2120
2000	4000	1780	1456	1975	1643	2088	2384
2500	5000	1956	1586	2214	1825	2359	2750

Calculation basis:

Conductor temperature 90°C, soil temperature 25°C, laying depth 1200 mm, 50 Hz; phase distance flat 30 cm, air temperature 35°

Earthing method: Single-end bonding or Cross-bonding

Values apply for cables with rated voltages from 330 kV to 345 kV acc. to IEC 62067