


Single-core Cable for 500/290 (550) kV with Copper wire screen and Aluminum laminated sheath		XDRUCU-ALT
Cable layout <ul style="list-style-type: none"> Copper conductor, round stranded or 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 as short-circuit current carrying component with semi-conductive swelling tapes above and below as longitudinal water barrier Aluminum foil, overlapped as radial diffusion barrier laminated to the oversheath Thermoplastic oversheath as mechanical protection optionally with semi-conductive and/or flame-retardant layer 	Features of metallic sheath <ul style="list-style-type: none"> Low weight Low losses Low cost Internationally proven design Production process The inner semiconductive layer, the XLPE main insulation and the outer semiconductive layer are extruded in a single operation applying a dry curing and a water or nitrogen cooling method.	
		Applicable standards IEC 62067

Technical data

Copper conductor cross-section		Outer diameter (approx.)	Cable weight (approx.)	Capacitance	Impedance (90°C, 50 Hz) ...	Impedance (90°C, 50 Hz) ..	Surge impedance ..	Min. bending radius	Max. pulling force
mm ²	kcmil	mm	kg/m	µF/km	Ω/km	Ω/km	Ω	mm	kN
800	1600	121	20	0.14	0.21	0.14	54	2500	48
1000	2000	129	23	0.16	0.20	0.13	51	2600	60
1200	2400	129	24	0.17	0.19	0.13	48	2600	72
1400	2750	129	26	0.17	0.19	0.12	45	2600	84
1600	3200	136	29	0.18	0.18	0.12	44	2800	96
2000	4000	137	34	0.21	0.18	0.11	42	2800	120
2500	5000	139	40	0.25	0.17	0.11	37	2800	150

Ampacity

		Directly buried ..	Directly buried ...	In ducts/pipes ..	In ducts/pipes ...	In free air ..	In free air ...	In pipes (ductbank) ...	Directly buried ..
		20°C	20°C	20°C	20°C	35°C	35°C	15°C	40°C
Soil resistivity		1.0 Km/W	1.0 Km/W	1.0 Km/W	1.0 Km/W	-	-	0.8/1.0 Km/W	1.4 Km/W
mm ²	kcmil	A	A	A	A	A	A	A	A
800	1600	940	1037	957	990	1215	1343	1060	666
1000	2000	1104	1214	1119	1158	1458	1610	1242	778
1200	2400	1189	1315	1208	1252	1597	1776	1346	831
1400	2750	1276	1421	1303	1344	1742	1952	1446	885
1600	3200	1359	1509	1383	1436	1859	2082	1546	945
2000	4000	1490	1675	1527	1592	2095	2381	1719	1022
2500	5000	1610	1843	1667	1747	2352	2731	1891	1081

Calculation basis:

Conductor temperature 90°C, 50 Hz, load factor 1.0, laying depth 1200 mm, phase distance at flat formation 30 cm
 Earthing method: Single-Point Bonding or Cross-bonding

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