


Single-core Cable for 400/230 (420) kV with Copper wire screen and Aluminum laminated sheath		XDRCU-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
500	1000	108	16	0.12	0.23	0,15	56	2300	30
630	1250	109	17	0.13	0.22	0,14	53	2300	38
800	1600	110	18	0.15	0.20	0,13	48	2300	48
1000	2000	112	21	0.17	0.19	0,12	45	2400	60
1200	2400	116	24	0.19	0.19	0,12	43	2450	72
1400	2750	116	25	0.20	0.18	0,11	41	2450	84
1600	3200	123	28	0.20	0.18	0,11	40	2600	96
2000	4000	131	33	0.21	0.17	0,10	39	2700	120
2500	5000	132	38	0.26	0.17	0,09	35	2700	150

Ampacity

		Directly buried ..	Directly buried ...	In ducts ..	In ducts ...	In free air ..	In free air ...	In ductbank ...	Directly buried ..
Ambient temp.		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
500	1000	751	822	740	776	928	1015	829	548
630	1250	853	943	843	895	1083	1199	951	616
800	1600	954	1064	945	1014	1237	1382	1072	683
1000	2000	1120	1250	1106	1189	1492	1672	1259	795
1200	2400	1209	1351	1192	1268	1630	1835	1363	855
1400	2750	1294	1452	1276	1362	1765	1996	1465	913
1600	3200	1379	1553	1359	1456	1899	2157	1567	970
2000	4000	1513	1727	1573	1638	2146	2480	1762	1054
2500	5000	1646	1900	1725	1804	2392	2803	1946	1137

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

Values apply for cables with rated voltages from 380 kV to 400 kV acc. to IEC 62067

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