


Single-core Cable for 500/290 (550) kV with Copper wire screen and Lead sheath		XDRCU-PBT
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 Extruded Lead sheath as radial diffusion barrier Thermoplastic oversheath as mechanical protection optionally with semi-conductive and/or flame-retardant layer 	Features of metallic sheath <ul style="list-style-type: none"> Robust seamless construction 100% impervious to moisture Long-term 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	129	33	0.14	0.21	0.14	54	2600	48
1000	2000	137	37	0.16	0.20	0.13	51	2750	60
1200	2400	137	39	0.17	0.19	0.13	48	2750	72
1400	2750	138	41	0.17	0.19	0.12	45	2800	84
1600	3200	145	45	0.18	0.18	0.12	44	2900	96
2000	4000	146	48	0.21	0.18	0.11	42	2950	120
2500	5000	147	54	0.25	0.17	0.11	37	2950	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
800	1600	944	1036	957	989	1223	1348	1060	670
1000	2000	1106	1212	1117	1156	1465	1614	1241	780
1200	2400	1190	1311	1206	1250	1605	1781	1344	833
1400	2750	1275	1407	1292	1341	1736	1933	1443	890
1600	3200	1359	1503	1378	1432	1867	2085	1541	947
2000	4000	1485	1668	1518	1585	2116	2411	1712	1016
2500	5000	1611	1833	1658	1738	2365	2737	1882	1085

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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