

# XDRCU-ALT Single-core Cable 220/127 (245) kV

220/127 kV

with Copper wire screen and Aluminium laminated sheath

### Construction

- Copper conductor, round stranded or segmented, optionally with longitudinal water barrier
- Inner semi-conductive layer firmly bonded to the XLPE insulation
- XLPE main insulation, cross-linked
- Outer semi-conductive layer firmly bonded to the XLPE insulation
- Copper wire screen with semi-conductive swelling tapes above and below as longitudinal water barrier
- Aluminium foil, overlapped and glued as radial diffusion barrier bonded to the overshath
- Thermoplastic overshath as mechanical protection, optionally with semi-conductive and/or flame-retardant layer

### Remarks

The inner semi-conductive layer, the XLPE main insulation and the outer semi-conductive layer are extruded in a single operation applying a dry curing and a water or nitrogen cooling method.

### Features

- Low weight
- Low losses
- Low cost
- Internationally proven design
- Suitable for most applications

### Standards

IEC 62067  
ICEA S-108-720  
AEIC CS9-06



### Technical data

Conductor cross-section	Outer diameter (approx.)	Cable weight (approx.)	AC resistance	AC resistance	Reactance	Reactance	Capacitance	Min. bending radius	Max. pulling force
mm <sup>2</sup>	mm	kg/m	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\mu\text{F}}{\text{km}}$	mm	kN
400	96	12	61.6	60.2	148	234	0.124	2000	24
500	97	13	48.9	47.0	141	227	0.136	2000	30
630	97	14	39.0	36.5	132	218	0.156	2000	38
800	101	16	31.9	28.8	126	209	0.173	2100	48
1000	104	18	27.0	23.2	120	201	0.193	2100	60
1200	108	20	20.4	20.1	115	194	0.220	2200	72
1400	111	22	17.8	17.4	111	188	0.239	2300	84
1600	115	25	16.0	15.5	110	185	0.249	2300	96
2000	119	29	13.4	12.8	107	180	0.263	2400	120
2500	126	34	11.5	10.8	104	173	0.287	2600	150

### Capacity

Installation Amb. temp. Soil resist. Load factor	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$	$\frac{\text{m}\Omega}{\text{km}}$
	1.0	1.0	0.7	0.7	-	-
Cross-section mm <sup>2</sup>	A	A	A	A	A	A
400	678	744	802	862	818	899
500	769	849	915	989	942	1043
630	872	972	1044	1140	1090	1221
800	976	1098	1176	1296	1245	1411
1000	1072	1219	1299	1448	1395	1602
1200	1240	1397	1510	1670	1647	1877
1400	1333	1514	1631	1818	1802	2072
1600	1410	1610	1729	1937	1924	2224
2000	1540	1780	1895	2150	2134	2497
2500	1668	1954	2064	2374	2365	2808

Calculation basis: Conductor temperature: 90°C, Frequency: 50 Hz, 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 220 kV to 230 kV acc. to IEC 62067