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

220/127 kV

with Copper wire screen and Aluminium laminated sheath

Construction

- Aluminium 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 oversheath
- Thermoplastic oversheath 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

- Very 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
mm²	mm	kg/m	mΩ/km	mΩ/km	mΩ/km	mΩ/km	µF/km	mm	kN
400	97	10	101.0	101.0	147	232	0.126	2000	12
500	97	10	78.9	78.7	141	227	0.136	2000	15
630	98	10	62.0	61.5	132	217	0.158	2000	19
800	101	11	49.5	48.8	126	209	0.173	2100	24
1000	103	12	40.5	39.5	121	203	0.190	2100	30
1200	106	13	35.5	34.3	117	197	0.208	2200	36
1400	111	14	27.6	27.5	111	188	0.238	2300	42
1600	115	15	24.4	24.2	110	185	0.248	2300	48
2000	119	16	19.8	19.5	107	180	0.263	2400	60
2500	126	18	17.1	16.8	104	173	0.285	2600	75

Capacity

Installation			20 °C			35 °C	
Amb. temp.							
Soil resist.			1.0 Km/W			in air	
Load factor	1.0	1.0	0.7	0.7	-	-
Cross-section mm²	A	A	A	A	A	A
400	531	581	629	674	645	706
500	606	665	720	774	743	819
630	694	767	831	900	871	969
800	785	873	945	1030	1003	1125
1000	876	982	1060	1165	1139	1290
1200	944	1065	1148	1270	1246	1423
1400	1079	1207	1320	1449	1459	1656
1600	1153	1293	1412	1555	1571	1790
2000	1283	1450	1577	1751	1776	2040
2500	1389	1579	1716	1919	1962	2275

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

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