

XDRCU-ALT Single-core Cable 110/64 (123) kV

110/64 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 60840
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 ²	mm	kg/m	 mΩ/km	 mΩ/km	 mΩ/km	 mΩ/km	μF/km	mm	kN
240	72	6.1	161.0	161.0	144	249	0.141	1500	7.2
300	72	6.2	129.0	129.0	138	242	0.156	1500	9.0
400	74	6.4	101.0	101.0	130	232	0.181	1500	12.0
500	75	6.8	79.2	78.7	125	227	0.196	1500	15.0
630	78	7.2	62.4	61.5	117	217	0.230	1600	19.0
800	78	7.7	50.1	48.8	109	209	0.287	1600	24.0
1000	81	8.3	41.2	39.5	105	203	0.318	1700	30.0
1200	85	9.0	36.3	34.3	102	197	0.345	1700	36.0
1400	91	10.0	27.8	27.5	99	188	0.393	1900	42.0
1600	95	11.0	24.5	24.2	98	185	0.405	1900	48.0
2000	100	13.0	20.0	19.5	96	180	0.432	2000	60.0
2500	105	14.0	17.4	16.8	92	173	0.506	2100	75.0

HV-Cables XLPE (AI)

Capacity

Installation Amb. temp. Soil resist. Load factor	⊕	⊕⊕	⊕	⊕⊕	⊕	⊕⊕
	1.0	1.0	0.7	0.7	-	-
Cross-section mm ²	A	A	A	A	A	A
240	415	460	492	532	492	546
300	468	521	558	605	562	627
400	538	601	645	704	658	741
500	613	687	738	808	759	858
630	702	792	851	938	889	1016
800	794	905	969	1082	1027	1194
1000	883	1018	1083	1223	1165	1371
1200	949	1103	1169	1330	1272	1512
1400	1095	1248	1355	1515	1503	1759
1600	1169	1336	1448	1624	1620	1901
2000	1302	1499	1617	1829	1830	2171
2500	1406	1637	1756	2012	2028	2444

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 110 kV to 115 kV acc. to IEC 60840