

XDRCU-ALT Single-core Cable 380/220 (420) kV

380/220 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 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

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

Standards

IEC 62067



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	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{\mu F}{km}$	mm	kN
630	112	13	61.9	61.5	141	217	0.131	2300	19
800	112	13	49.4	48.8	133	209	0.148	2300	24
1000	114	14	40.3	39.5	127	203	0.163	2300	30
1200	116	14	35.2	34.3	123	197	0.176	2400	36
1400	122	16	27.6	27.5	117	188	0.199	2500	42
1600	126	17	24.3	24.2	116	185	0.207	2600	48
2000	130	18	19.7	19.5	113	180	0.219	2600	60
2500	136	20	17.0	16.8	109	173	0.239	2800	75

Capacity

Installation Amb. temp. Soil resist. Load factor	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$	$\frac{m\Omega}{km}$
	1.0	1.0	0.7	0.7	-	-
Cross-section mm ²	A	A	A	A	A	A
630	678	742	806	866	849	933
800	766	845	917	993	980	1088
1000	854	950	1028	1123	1113	1248
1200	919	1029	1111	1222	1217	1375
1400	1046	1161	1271	1387	1418	1596
1600	1116	1241	1359	1487	1528	1725
2000	1241	1389	1518	1669	1726	1963
2500	1340	1508	1648	1824	1908	2190

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 380 kV to 400 kV acc. to IEC 62067