# 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 |
|---|---|---|---|---|---|---|---|---|---|
| mm² | 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 |

Subject to change without notice



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# HV-Cables XLPE (Al)

## Capacity

| Installation | | | | | | |
|---|---|---|---|---|---|---|
| Amb. temp. | 20 °C | | | | 35 °C | |
| 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 |
| 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

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