

High Voltage XLPE Cable Data Sheet

132kV Copper Stranded, Water Blocked

Description: 132 kV Copper, XLPE, Corrugated Seamless Aluminium (CSA), #LLDPE Graphite

Specification: SANS/IEC 60840/ NRS 077, Fully Water Blocked

Last updated: December 2025

PHYSICAL													
Conductor size	mm ²	300	400	500	630	800	1000						
Conductor diameter	mm	20,7	24,0	27,2	30,4	34,2	38,7						
Diameter over s/c conductor screen	mm	26,0	29,7	32,9	36,1	39,9	43,5						
Diameter over XLPE insulation	mm	58,0	60,8	64,5	68,3	72,6	76,6						
Diameter over s/c core screen	mm	60,6	63,5	67,2	71,2	75,5	79,5						
Diameter over CSA sheath	mm	79,8	83,0	86,8	91,0	95,5	99,7						
Final diameter of cable (D)	mm	90,0	96,2	100,0	104,2	108,7	112,9						
Cable mass (approximate)	kg/m	9,0	10,5	11,9	13,7	15,9	18,3						
Gross mass (500 m) (approximate)	kg	5750	6500	7210	8120	9200	10400						
Minimum installation bending radius	m	1,80	1,92	2,00	2,08	2,17	2,26						
ELECTRICAL RATINGS													
DC Resistance @ 20°C	Ω/km	0,0601	0,0470	0,0366	0,0283	0,0221	0,0176						
Max Electric stress at conductor screen	kV/mm	7,31	7,16	6,89	6,63	6,38	6,19						
Min Electric stress at insulation screen	kV/mm	3,28	3,50	3,51	3,51	3,51	3,51						
Capacitance	μF/km	0,173	0,194	0,207	0,218	0,232	0,245						
Zero Sequence Resistance @ 90 °C	Ω/km	0,1470	0,1280	0,1120	0,0984	0,0882	0,0753						
Zero Sequence Reactance @ 90 °C	Ω/km	0,0957	0,0885	0,0836	0,0798	0,0756	0,0706						
ELECTRICAL RATINGS (FORMATION BASED)													
		Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat
Current rating in ground	Amps	535	573	606	655	681	745	761	844	838	947	908	1049
Current rating in air in shade	Amps	737	841	848	977	970	1129	1102	1300	1238	1483	1386	1693
AC Resistance @ 90 °C	Ω/km	0,079	0,078	0,062	0,061	0,049	0,049	0,039	0,038	0,032	0,031	0,027	0,026
Reactance	Ω/km	0,153	0,211	0,147	0,205	0,142	0,200	0,137	0,195	0,132	0,191	0,127	0,185
Impedance	Ω/km	0,171	0,225	0,159	0,214	0,150	0,205	0,143	0,199	0,136	0,193	0,130	0,187
Sheath standing voltage outer phases	V/km	30,5	73,3	35,5	84,9	39,5	96,0	43,7	108,0	47,6	121,0	51,1	134,0
SHORT CIRCUIT RATINGS													
Symmetrical fault rating (250 °C)	kA (1 s)	42,9	42,9	71,5	90,1	114,0	143,0						
Earth fault rating (150 °C)	kA (1 s)	40,0	39,7	43,0	45,0	47,2	50,3						

*Note LLDPE default, datasheet applicable for MDPE and HDPE where required.

The current ratings above are based on standard laying conditions for a single circuit in isolation as follows:

- Conductor temperature = 90 °C
- Soil thermal resistance = 1,2 K·m/W
- Soil temperature = 25 °C
- Air temperature = 30 °C
- Depth of burial = 1200 mm
- * Flat spacing 2D
- ±5% tolerance on dimensions



DISCLAIMER: CBI reserves the right to change product specifications from time to time to effect improvements and /or enhancements and accepts no liability arising from any difference between the published parameters of this data sheet and the finished product, unless by prior written agreement.

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