

High Voltage XLPE Cable Data Sheet

132kV Aluminium Stranded, Water Blocked

Description: 132 kV Aluminium, 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	20,4	23,9	26,4	29,7	34,2	38,3						
Diameter over s/c conductor screen	mm	26,3	29,7	30,9	34,8	39,3	43,4						
Diameter over XLPE insulation	mm	59,1	59,7	61,2	66,9	71,9	76,6						
Diameter over s/c core screen	mm	61,8	62,4	63,6	69,4	74,4	79,1						
Diameter over CSA sheath	mm	81,3	81,8	83,2	89,1	94,3	99,3						
Final diameter of cable (D)	mm	94,5	95,0	96,4	102,3	107,5	112,5						
Cable mass (approximate)	kg/m	7,7	7,9	8,3	9,4	10,4	11,6						
Gross mass (500 m) (approximate)	kg	5100	5190	5390	5760	6480	7050						
Minimum installation bending radius	m	1,89	1,90	1,93	2,05	2,15	2,25						
ELECTRICAL RATINGS													
DC Resistance @ 20°C	Ω/km	0,1000	0,0778	0,0605	0,0469	0,0367	0,0291						
Max Electric stress at conductor screen	kV/mm	7,16	7,36	7,22	6,71	6,43	6,18						
Min Electric stress at insulation screen	kV/mm	3,19	3,67	3,64	3,49	3,51	3,50						
Capacitance	μF/km	0,171	0,199	0,203	0,213	0,230	0,244						
Zero Sequence Resistance @ 90 °C	Ω/km	0,1970	0,1680	0,1450	0,1230	0,1070	0,0945						
Zero Sequence Reactance @ 90 °C	Ω/km	0,0976	0,0878	0,0826	0,0798	0,0748	0,0711						
ELECTRICAL RATINGS (FORMATION BASED)													
Current rating in ground	Amps	421	447	481	513	546	586	617	670	692	761	766	854
Current rating in air in shade	Amps	574	649	670	766	771	889	886	1027	1015	1191	1144	1359
AC Resistance @ 90 °C	Ω/km	0,129	0,129	0,101	0,101	0,079	0,079	0,0618	0,0615	0,049	0,049	0,040	0,040
Reactance	Ω/km	0,156	0,215	0,147	0,205	0,141	0,199	0,137	0,196	0,132	0,190	0,127	0,186
Impedance	Ω/km	0,203	0,250	0,178	0,228	0,162	0,214	0,151	0,205	0,141	0,196	0,134	0,190
Sheath standing voltage outer phases	V/km	24,8	58,0	28,3	66,6	32,0	75,9	35,6	86,1	39,4	97,4	43,2	109,0
SHORT CIRCUIT RATINGS													
Symmetrical fault rating (250 °C)	kA (1 s)	28,3	37,8	47,2	59,5	75,6	94,5						
Earth fault rating (150 °C)	kA (1 s)	40,6	40,5	40,9	44,0	46,5	48,9						

*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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