

Description: 44 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	38,7						
Diameter over s/c conductor screen	mm	24,9	28,4	30,9	34,2	38,7	43,2						
Diameter over XLPE insulation	mm	40,7	43,8	46,1	49,1	53,3	57,7						
Diameter over s/c core screen	mm	42,2	45,2	47,5	50,6	54,8	59,2						
Diameter over CSA sheath	mm	60,6	63,8	66,4	69,6	74,0	78,5						
Final diameter of cable (D)	mm	71,6	74,8	77,4	80,6	85,0	89,5						
Cable mass (approximate)	kg/m	4,8	5,2	5,7	6,3	12,4	14,6						
Gross mass (500 m) (approximate)	kg	3640	3880	4120	4430	7450	8560						
Minimum installation bending radius	m	1,43	1,50	1,55	1,61	1,70	1,79						
ELECTRICAL RATINGS													
DC Resistance @ 20°C	Ω/km	0,1000	0,0778	0,0605	0,0469	0,0221	38,7						
Max Electric stress at conductor screen	kV/mm	4,15	4,13	4,11	4,10	4,08	43,2						
Min Electric stress at insulation screen	kV/mm	2,54	2,68	2,76	2,85	2,96	57,7						
Capacitance	µF/km	0,283	0,320	0,348	0,384	0,432	59,2						
Zero Sequence Resistance @ 90 °C	Ω/km	0,2250	0,1910	0,1660	0,1440	0,1080	78,5						
Zero Sequence Reactance @ 90 °C	Ω/km	0,0776	0,0709	0,0672	0,0630	0,0584	89,5						
ELECTRICAL RATINGS (FORMATION BASED)													
		Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat
Current rating in ground	Amps	426	451	487	518	552	592	625	676	849	956	917	1056
Current rating in air in shade	Amps	589	688	687	810	791	939	912	1095	1272	1589	1405	1795
AC Resistance @ 90 °C	Ω/km	0,1290	0,1290	0,1010	0,1010	0,0790	0,0787	0,0620	0,0616	0,0323	0,0312	0,0274	0,0261
Reactance	Ω/km	0,139	0,197	0,132	0,190	0,127	0,185	0,122	0,180	0,117	0,175	0,112	0,170
Impedance	Ω/km	0,190	0,236	0,166	0,215	0,150	0,201	0,137	0,191	0,121	0,178	0,116	0,172
Sheath standing voltage outer phases	V/km	26,1	59,6	29,5	68,2	33,2	77,5	37,2	88,2	49,7	124,0	53,0	136,0
SHORT CIRCUIT RATINGS													
Symmetrical fault rating (250 °C)	kA (1 s)	28,3	37,8	47,2	59,5	75,6	143,0						
Earth fault rating (150 °C)	kA (1 s)	28,6	32,6	33,6	32,6	37,4	36,8						

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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