

Description: 66 kV Aluminium, XLPE, Corrugated Seamless Aluminium (CSA), LLDPE Graphite

Specification: SANS/IEC 60840/ NRS 077, Core Water Blocked Only

Last updated: December 2025

PHYSICAL									
Conductor size	mm ²	1200	1600	2000	2500				
Conductor diameter	mm	43,4	51,0	56,1	63,4				
Diameter over s/c conductor screen	mm	48,1	54,9	60,8	67,9				
Diameter over XLPE insulation	mm	67,0	74,3	80,4	87,7				
Diameter over s/c core screen	mm	70,2	77,2	83,3	90,8				
Diameter over CSA sheath	mm	90,1	97,4	103,8	111,5				
Final diameter of cable (D)	mm	103,3	110,6	117,0	124,7				
Cable mass (approximate)	kg/m	10,6	12,4	14,2	16,6				
Gross mass (500 m) (approximate)	kg	6700	7610	8470	9680				
Minimum installation bending radius	m	3,10	3,32	3,51	3,74				
ELECTRICAL RATINGS (FORMATION BASED)									
DC Resistance @ 20°C	Ω/km	0,0247	0,0186	0,0149	0,0119				
Max Electric stress at conductor screen	kV/mm	4,77	4,60	4,50	4,39				
Min Electric stress at insulation screen	kV/mm	3,43	3,40	3,40	3,40				
Capacitance	μF/km	0,419	0,460	0,498	0,543				
Zero Sequence Resistance @ 90 °C	Ω/km	0,0929	0,0808	0,0725	0,0647				
Zero Sequence Reactance @ 90 °C	Ω/km	0,0566	0,0517	0,0499	0,0470				
ELECTRICAL RATINGS (FORMATION BASED)									
		Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat
Current rating in ground	Amps	863	970	978	1128	1066	1261	1156	1411
Current rating in air in shade	Amps	1329	1635	1554	1964	1730	2232	1926	2562
AC Resistance @ 90 °C	Ω/km	0,0319	0,0318	0,0241	0,0241	0,0195	0,0194	0,0157	0,0156
Reactance	Ω/km	0,114	0,172	0,108	0,166	0,106	0,164	0,102	0,160
Impedance	Ω/km	0,119	0,175	0,111	0,168	0,108	0,165	0,103	0,161
Sheath standing voltage outer phases	V/km	49,7	125,0	55,4	144,0	59,7	160,0	63,8	178,0
SHORT CIRCUIT RATINGS									
Symmetrical fault rating (250 °C)	kA (1 s)	113,0	151,0	189,0	236,0				
Earth fault rating (150 °C)	kA (1 s)	42,9	46,3	49,5	53,2				

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



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