

**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*

<b>PHYSICAL</b>													
Conductor size	mm <sup>2</sup>	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	23,8	27,3	29,8	33,1	37,6	41,7						
Diameter over XLPE insulation	mm	44,0	46,8	48,9	51,8	56,7	61,0						
Diameter over s/c core screen	mm	45,7	48,4	50,6	53,5	58,4	62,7						
Diameter over CSA sheath	mm	64,4	67,3	69,6	72,7	77,7	82,2						
Final diameter of cable (D)	mm	75,4	78,3	80,6	83,7	88,7	95,4						
Cable mass (approximate)	kg/m	5,2	5,7	6,1	6,8	7,7	9,0						
Gross mass (500 m) (approximate)	kg	3860	4090	4330	4650	5100	5740						
Minimum installation bending radius	m	1,51	1,57	1,61	1,67	1,77	1,91						
<b>ELECTRICAL RATINGS</b>													
DC Resistance @ 20°C	Ω/km	0,1000	0,0778	0,0605	0,046	0,0367	0,029						
Max Electric stress at conductor screen	kV/mm	5,21	5,18	5,16	5,14	4,93	4,79						
Min Electric stress at insulation screen	kV/mm	2,82	3,02	3,14	3,29	3,27	3,27						
Capacitance	µF/km	0,226	0,258	0,280	0,310	0,338	0,364						
Zero Sequence Resistance @ 90 °C	Ω/km	0,2180	0,1860	0,1610	0,141	0,122	0,108						
Zero Sequence Reactance @ 90 °C	Ω/km	0,0818	0,0745	0,0704	0,065	0,061	0,058						
<b>ELECTRICAL RATINGS (FORMATION BASED)</b>													
		Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat	Tref	*Flat
Current rating in ground	Amps	424	449	484	517	549	590	622	674	698	766	773	860
Current rating in air in shade	Amps	584	677	681	797	784	925	904	107	103	1254	1162	1423
AC Resistance @ 90 °C	Ω/km	0,129	0,129	0,101	0,101	0,078	0,078	0,061	0,061	0,049	0,048	0,0403	0,0396
Reactance	Ω/km	0,142	0,200	0,134	0,192	0,130	0,188	0,125	0,183	0,120	0,178	0,117	0,175
Impedance	Ω/km	0,192	0,238	0,168	0,217	0,152	0,204	0,139	0,193	0,129	0,184	0,124	0,180
Sheath standing voltage outer phases	V/km	25,7	59,1	29,0	67,6	32,6	76,9	36,6	87,5	40,5	98,8	45,4	111,0
<b>SHORT CIRCUIT RATINGS</b>													
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)	30,7		31,9		33,0		34,4		36,8		38,9	

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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