

Description:**ALUMINIUM, XLPE, W/B, CSA, LLDPE, HIGH STRESS****Voltage & Specification:****38.1/66kV, SANS 60840 / NRS 077****Water blocking:****Core is standard, conductor on request***Last updated: April 2018***PHYSICAL DIMENSIONS:**

Conductor size	mm ²	300	400	500	630	800	1000
Conductor diameter	mm	20.5	24.0	26.4	29.8	34.3	38.8
Diameter over s/c conductor screen	mm	23.9	27.4	29.9	33.2	37.7	42.2
Diameter over XLPE insulation	mm	44.0	46.7	49.0	52.1	56.8	61.6
Diameter over s/c core screen	mm	45.6	48.4	50.6	53.8	58.5	63.3
Diameter over CSA sheath	mm	64.4	67.3	69.6	73.0	77.8	82.8
Final diameter of cable (D)	mm	75.4	78.3	80.6	84.0	88.8	96.0
Cable mass (approximate)	kg/m	5.2	5.7	6.1	6.8	7.7	9.0
Gross mass (500 m) (approximate)	kg	3850	4050	4265	4580	5040	5670
Minimum installation bending radius	m	1.5	1.6	1.6	1.7	1.8	1.9

RATINGS:

		Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)
Current rating in ground	Amps	425	450	485	517	549	588	620	670	693	759	766	850
Current rating in air	Amps	593	684	691	804	794	931	914	1082	1045	1254	1175	1428
AC Resistance @ 90°C	Ω/km	0.1291	0.1289	0.1009	0.1006	0.0791	0.0787	0.0622	0.0616	0.0497	0.0490	0.0407	0.0397
Reactance	Ω/km	0.1421	0.2002	0.1341	0.1922	0.1298	0.1879	0.1248	0.1829	0.1194	0.1774	0.1164	0.1745
Impedance	Ω/km	0.1920	0.2381	0.1678	0.2169	0.1520	0.2037	0.1394	0.1930	0.1293	0.1841	0.1233	0.1789
Sheath standing voltage (flat - centre phase)	V/km	25.71	46.86	29.02	53.42	32.57	60.54	36.42	68.57	40.13	76.94	44.88	86.77

ELECTRICAL PARAMETERS:

DC Resistance @ 20°C	Ω/km	0.1	0.0778	0.0605	0.0469	0.0367	0.0291
Max Electric stress at conductor screen	kV/mm	5.2	5.2	5.2	5.1	4.9	4.8
Min Electric stress at insulation screen	kV/mm	2.9	3.0	3.1	3.2	3.3	3.3
Capacitance	μF/km	0.2286	0.2597	0.2807	0.3086	0.3382	0.3677
Zero Sequence Resistance	Ω/km	0.1919	0.1609	0.1369	0.1171	0.1009	0.0884
Zero Sequence Reactance	Ω/km	0.0816	0.0742	0.0704	0.0660	0.0614	0.0578
Symmetrical fault rating (250°C)	kA (1s)	27.8	37.0	46.3	58.3	74.0	92.5
Earth fault rating (150°C)	kA (1s)	38.2	40.0	41.3	43.3	46.2	49.2

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

Soil thermal resistance = 1.2Km/W

Soil temperature = 25°C

Depth of burial = 1.2m

Air temperature = 30°C

Earthing = Cross bonded or single point bonded

Tolerance on dimensions = +5%



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