

**Description:****ALUMINIUM, XLPE, W/B, CSA, LLDPE, HIGH STRESS****Voltage & Specification:****25.4/44kV, SANS 60840 / NRS 077****Water blocking:****Core is standard, conductor on request***Last updated: April 2018***PHYSICAL DIMENSIONS:**

	mm <sup>2</sup>	300	400	500	630	800	1000
Conductor size	mm <sup>2</sup>	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	39.6	42.7	45.0	48.1	52.3	56.7
Diameter over s/c core screen	mm	41.3	44.4	46.6	49.8	54.0	58.4
Diameter over CSA sheath	mm	59.9	63.1	65.5	68.8	73.3	78.4
Final diameter of cable (D)	mm	70.9	74.1	76.5	79.8	84.3	89.4
Cable mass (approximate)	kg/m	4.7	5.2	5.7	6.3	7.1	8.1
Gross mass (500 m) (approximate)	kg	3550	3780	4020	4350	4735	5200
Minimum installation bending radius	m	1.4	1.5	1.5	1.6	1.7	1.8

**RATINGS:**

		Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)
Current rating in ground	Amps	426	452	486	518	550	590	621	672	695	761	766	851
Current rating in air	Amps	596	695	695	816	799	945	919	1099	1053	1276	1186	1461
AC Resistance @ 90°C	Ω/km	0.1291	0.1289	0.1009	0.1007	0.0791	0.0787	0.0622	0.0617	0.0498	0.0490	0.0409	0.0398
Reactance	Ω/km	0.1383	0.1963	0.1307	0.1888	0.1265	0.1846	0.1216	0.1797	0.1161	0.1742	0.1119	0.1700
Impedance	Ω/km	0.1892	0.2349	0.1651	0.2139	0.1492	0.2007	0.1366	0.1900	0.1263	0.1809	0.1191	0.1746
Sheath standing voltage (flat - centre phase)	V/km	26.27	47.51	29.58	54.09	33.17	61.25	37.05	69.33	40.86	77.84	44.52	86.47

**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	4.2	4.2	4.2	4.1	4.1	4.1
Min Electric stress at insulation screen	kV/mm	2.5	2.7	2.8	2.9	3.0	3.0
Capacitance	μF/km	0.2754	0.3124	0.3390	0.3754	0.4231	0.4719
Zero Sequence Resistance	Ω/km	0.1967	0.1649	0.1406	0.1205	0.1041	0.0912
Zero Sequence Reactance	Ω/km	0.0766	0.0698	0.0662	0.0620	0.0573	0.0538
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)	35.6	37.5	38.9	40.9	43.6	46.6

**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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