

Description: COPPER, XLPE, W/B, CSA, LLDPE, HIGH STRESS
Voltage & Specification: 51/88kV, 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	20.7	24.1	27.4	30.4	34.2	38.7						
Diameter over s/c conductor screen	mm	24.5	27.9	31.3	34.2	38.1	42.7						
Diameter over XLPE insulation	mm	48.8	51.2	54.5	57.7	61.9	66.8						
Diameter over s/c core screen	mm	50.8	53.3	56.6	59.8	64.0	68.9						
Diameter over CSA sheath	mm	69.8	72.5	75.8	79.2	83.6	88.7						
Final diameter of cable (D)	mm	80.8	83.5	86.8	90.2	96.8	101.9						
Cable mass (approximate)	kg/m	7.8	8.7	10.0	11.7	14.0	16.4						
Gross mass (500 m) (approximate)	kg	5100	5600	6250	7050	8250	9450						
Minimum installation bending radius	m	1.6	1.7	1.7	1.8	1.9	2.0						
RATINGS:													
		Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)	Trefoil	Flat (2D)
Current rating in ground	Amps	538	575	608	655	682	742	759	836	837	935	904	1027
Current rating in air	Amps	752	865	868	1010	993	1169	1125	1340	1260	1522	1391	1709
AC Resistance @ 90°C	Ω/km	0.0780	0.0778	0.0617	0.0614	0.0490	0.0485	0.0391	0.0385	0.0320	0.0311	0.0270	0.0260
Reactance	Ω/km	0.1454	0.2035	0.1379	0.1960	0.1320	0.1901	0.1279	0.1860	0.1249	0.1830	0.1203	0.1783
Impedance	Ω/km	0.1650	0.2179	0.1511	0.2054	0.1408	0.1962	0.1338	0.1899	0.1290	0.1856	0.1233	0.1802
Sheath standing voltage (flat - centre phase)	V/km	31.94	59.15	35.79	67.04	39.72	75.52	43.78	84.64	48.92	95.38	52.13	103.96
ELECTRICAL PARAMETERS:													
DC Resistance @ 20°C	Ω/km	0.0601	0.047	0.0366	0.0283	0.0221	0.0176						
Max Electric stress at conductor screen	kV/mm	6.0	6.0	5.9	5.7	5.5	5.3						
Min Electric stress at insulation screen	kV/mm	3.0	3.3	3.4	3.4	3.4	3.4						
Capacitance	μF/km	0.2018	0.2286	0.2501	0.2655	0.2859	0.3091						
Zero Sequence Resistance	Ω/km	0.1359	0.1173	0.1019	0.0895	0.0794	0.0715						
Zero Sequence Reactance	Ω/km	0.0861	0.0790	0.0738	0.0702	0.0664	0.0626						
Symmetrical fault rating (250°C)	kA (1s)	43.1	57.4	71.8	90.4	114.9	143.6						
Earth fault rating (150°C)	kA (1s)	41.5	43.1	45.0	47.1	49.7	52.7						

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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