

## HV XLPE ALUMINIUM HIGH STRESS

### Технические характеристики



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

**PHYSICAL DIMENSIONS:**

Conductor size	mm	300	400	500	630	800	1000
Conductor diameter	mm	20.4	23.9	26.4	29.7	34.2	38.7
Diameter over s/c conductor screen	mm	23.8	27.3	29.8	33.1	37.6	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	49.7	53.9	58.4
Diameter over CSA sheath	mm	59.8	63.0	65.4	68.7	73.1	78.4
Final diameter of cable (D)	mm	70.8	74.0	76.4	79.7	84.1	89.4
Cable mass (approximate)	kg/m	4.7	5.2	5.6	6.3	7.1	8.0
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	450	487	516	551	588	623	670	697	759	767	84
Current rating in air	Amps	587	685	684	805	786	932	904	1084	1035	1258	1161	14
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	0.03
Reactance	Ω/km	0.1385	0.1966	0.1308	0.1889	0.1266	0.1846	0.1217	0.1798	0.1161	0.1742	0.1120	0.17
Impedance	Ω/km	0.1893	0.2351	0.1652	0.2140	0.1493	0.2007	0.1367	0.1901	0.1264	0.1810	0.1192	0.17
Sheath standing voltage	V/km	26.3	47.3	29.6	53.9	33.2	61.1	37.1	69.1	41.0	77.6	44.5	86.1

**ELECTRICAL PARAMETERS:**

DC Resistance @ 20°C	Ω/km	0.100	0.078	0.061	0.047	0.037	0.029
Max Electric stress at conductor screen	kV/mm	5.0	5.0	5.0	5.0	5.0	5.0
Min Electric stress at insulation screen	kV/mm	3.2	3.4	3.5	3.6	3.8	3.9
Capacitance	µF/km	0.2728	0.3102	0.3372	0.3733	0.4231	0.4719
Zero Sequence Resistance	Ω/km	0.1968	0.1651	0.1407	0.1206	0.1043	0.0920
Zero Sequence Reactance	Ω/km	0.0768	0.0700	0.0663	0.0621	0.0573	0.0539
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)	35.5	37.4	38.8	40.8	43.4	46.4

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

- Soil thermal resistance = 1.2Km/WV
- Soil temperature = 25°C
- Depth of burial = 1.2m
- Air temperature = 30°C
- Earthing = Cross bonded or single point bonded
- Tolerance on dimensions = +5%



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

**PHYSICAL DIMENSIONS:**

Conductor size	mm <sup>l</sup>	300	400	500	630	800	1000
Conductor diameter	mm	20.4	23.9	26.4	29.7	34.2	38.7
Diameter over s/c conductor screen	mm	23.8	27.3	29.8	33.1	37.6	42.2
Diameter over XLPE insulation	mm	44.0	46.8	48.9	51.8	56.7	61.6
Diameter over s/c core screen	mm	45.7	48.4	50.6	53.5	58.4	63.3
Diameter over CSA sheath	mm	64.4	67.3	69.5	72.7	77.7	82.8
Final diameter of cable (D)	mm	75.4	78.3	80.5	83.7	88.7	96.0
Cable mass (approximate)	kg/m	5.2	5.7	6.1	6.8	7.7	8.9
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	426	449	486	516	551	587	622	669	697	758	769	84
Current rating in air	Amps	584	675	681	794	782	919	900	1070	1029	1238	1162	141
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	0.03
Reactance	Ω/km	0.1425	0.2006	0.1344	0.1925	0.1299	0.1880	0.1248	0.1829	0.1195	0.1775	0.1169	0.17
Impedance	Ω/km	0.1923	0.2384	0.1681	0.2172	0.1521	0.2038	0.1394	0.1930	0.1294	0.1842	0.1238	0.17
Sheath standing voltage	V/km	25.8	46.7	29.1	53.3	32.7	60.5	36.6	68.5	40.3	76.9	45.1	86.7

**ELECTRICAL PARAMETERS:**

DC Resistance @ 20°C	Ω/km	0.100	0.078	0.061	0.047	0.037	0.029
Max Electric stress at conductor screen	kV/mm	6.0	6.0	6.0	6.0	5.7	5.6
Min Electric stress at insulation screen	kV/mm	3.4	3.7	3.9	4.0	4.0	4.0
Capacitance	μF/km	0.2263	0.2577	0.2801	0.3104	0.3378	0.3640
Zero Sequence Resistance	Ω/km	0.1919	0.1609	0.1370	0.1173	0.1010	0.0888
Zero Sequence Reactance	Ω/km	0.0820	0.0745	0.0705	0.0659	0.0615	0.0582
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)	38.3	40.0	41.3	43.2	46.2	48.8

**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%



**Description:** ALUMINIUM, XLPE, W/B, CSA, LLDPE, HIGH  
**Voltage & Specification:** STRESS 51/88kV, SANS 60840 / NRS 077  
**Water blocking:** Core is standard, conductor on request

**PHYSICAL DIMENSIONS:**

Conductor size	mm <sup>l</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	24.3	27.7	30.2	33.6	38.0	42.1
Diameter over XLPE insulation	mm	48.6	51.1	53.3	57.0	61.8	66.3
Diameter over s/c core screen	mm	50.7	53.1	55.4	59.1	63.9	68.4
Diameter over CSA sheath	mm	69.6	72.3	74.7	78.5	83.5	88.1
Final diameter of cable (D)	mm	80.6	83.3	85.7	89.5	96.7	101.3
Cable mass (approximate)	kg/m	5.9	6.3	6.8	7.6	8.8	9.9
Gross mass (500 m) (approximate)	kg	4150	4350	4600	5000	5600	6150
Minimum installation bending radius	m	1.61	1.67	1.71	1.79	1.93	2.02

**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	448	487	514	551	586	623	667	699	757	771	845
Current rating in air	Amps	584	668	681	786	782	909	899	1055	1025	1216	1151	1385
AC Resistance @ 90°C	Ω/km	0.1290	0.1289	0.1009	0.1006	0.0790	0.0787	0.0621	0.0616	0.0496	0.0490	0.0405	0.0350
Reactance	Ω/km	0.1465	0.2046	0.1383	0.1964	0.1338	0.1918	0.1290	0.1871	0.1251	0.1832	0.1209	0.1750
Impedance	Ω/km	0.1952	0.2418	0.1712	0.2207	0.1554	0.2074	0.1432	0.1970	0.1346	0.1896	0.1275	0.1800
Sheath standing voltage	V/km	25.3	46.1	28.7	52.7	32.2	59.8	36.0	67.6	41.0	77.4	44.7	85.9

**ELECTRICAL PARAMETERS:**

DC Resistance @ 20°C	Ω/km	0.100	0.0778	0.0605	0.0469	0.0367	0.0291
Max Electric stress at conductor screen	kV/mm	6.8	6.8	6.7	6.5	6.2	6.0
Min Electric stress at insulation screen	kV/mm	3.6	3.9	4.0	4.0	4.0	4.0
Capacitance	μF/km	0.1999	0.2271	0.2446	0.2621	0.2853	0.3059
Zero Sequence Resistance	Ω/km	0.1872	0.1567	0.1330	0.1132	0.0974	0.0855
Zero Sequence Reactance	Ω/km	0.0871	0.0794	0.0753	0.0712	0.0666	0.0631
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)	41.4	43.0	44.3	46.6	49.6	52.3

**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%



**Description:** ALUMINIUM, XLPE, W/B, CSA, LLDPE, HIGH  
**Voltage & Specification:** STRESS 76/132kV, SANS 60840 / NRS 077  
**Water blocking:** Core is standard, conductor on request

**PHYSICAL DIMENSIONS:**

Conductor size	mm <sup>l</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	25.1	28.3	30.4	33.8	38.2	42.3
Diameter over XLPE insulation	mm	58.4	59.8	61.8	65.7	70.8	75.4
Diameter over s/c core screen	mm	61.1	62.3	64.3	68.2	73.3	77.9
Diameter over CSA sheath	mm	80.4	81.7	83.8	87.9	93.2	98.0
Final diameter of cable (D)	mm	91.4	92.7	97.0	101.1	106.4	111.2
Cable mass (approximate)	kg/m	7.3	7.6	8.4	9.2	10.3	11.5
Gross mass (500 m) (approximate)	kg	4850	5000	5400	5800	6350	6950
Minimum installation bending radius	m	1.83	1.85	1.94	2.02	2.12	2.22

**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	445	486	511	552	585	625	667	700	755	773	84
Current rating in air	Amps	578	650	673	767	778	890	894	1032	1022	1193	1150	135
AC Resistance @ 90°C	Ω/km	0.1290	0.1289	0.1008	0.1006	0.0789	0.0787	0.0619	0.0616	0.0494	0.0489	0.0403	0.03
Reactance	Ω/km	0.1544	0.2124	0.1450	0.2031	0.1416	0.1996	0.1367	0.1947	0.1311	0.1892	0.1268	0.18
Impedance	Ω/km	0.2012	0.2485	0.1766	0.2266	0.1621	0.2146	0.1500	0.2042	0.1401	0.1954	0.1330	0.18
Sheath standing voltage	V/km	24.5	45.1	27.8	51.6	32.3	59.6	36.1	67.6	39.9	75.9	43.7	84.4

**ELECTRICAL PARAMETERS:**

DC Resistance @ 20°C	Ω/km	0.100	0.0778	0.0605	0.0469	0.0367	0.0291
Max Electric stress at conductor screen	kV/mm	8.0	8.0	7.8	7.5	7.1	6.8
Min Electric stress at insulation screen	kV/mm	3.5	3.9	4.0	4.0	4.0	4.0
Capacitance	μF/km	0.1645	0.1859	0.1961	0.2088	0.2253	0.2402
Zero Sequence Resistance	Ω/km	0.1794	0.1503	0.1271	0.1077	0.0923	0.0808
Zero Sequence Reactance	Ω/km	0.0969	0.0877	0.0831	0.0788	0.0740	0.0702
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)	47.8	48.5	49.7	52.2	55.3	58.2

**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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<b>Воронеж</b> (473)204-51-73	<b>Москва</b> (495)268-04-70	<b>Санкт-Петербург</b> (812)309-46-40	<b>Хабаровск</b> (4212)92-98-04
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<b>Ижевск</b> (3412)26-03-58	<b>Нижний Новгород</b> (831)429-08-12	<b>Симферополь</b> (3652)67-13-56	<b>Ярославль</b> (4852)69-52-93
<b>Казань</b> (843)206-01-48	<b>Новокузнецк</b> (3843)20-46-81	<b>Смоленск</b> (4812)29-41-54	

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