

# 11kV XLPE Aluminium

## Технические характеристики



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**Description:** 6350/11000V, Aluminium, 1 Core, Type A F2FA...  
**Bedding/ Sheathing:** FRPVC/AWA/FRPVC (red stripe) ...141  
 LHPVC/AWA/LHPVC (blue stripe) ...242  
**Specification:** SANS 1339

Size code	...n/a...	1050	1070	1095	1120	1150	1185	1240	1300	1400	1500	1630	1800	1999
<b>PHYSICAL DIMENSIONS</b>														
Conductor size	mm <sup>2</sup> nom	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor diameter	mm app.	8.35	10.05	11.90	13.25	14.70	16.23	18.46	20.75	24.05	27.42	30.45	34.25	38.81
Insulation diameter	mm app.	17.02	18.72	20.57	21.92	23.37	24.90	27.13	29.42	33.52	37.67	40.70	44.50	49.06
Bedding diameter	mm app.	21.87	23.57	25.42	26.77	28.22	29.75	31.98	34.27	38.37	42.73	45.96	49.76	54.53
Armour diameter	mm app.	25.07	26.77	28.62	29.97	32.22	33.75	35.98	38.27	42.37	47.73	50.96	54.76	59.53
Cable diameter	mm app.	29.54	31.45	33.30	34.85	37.31	38.84	41.27	43.56	48.07	53.63	57.07	61.08	66.25
<b>TECHNICAL DATA</b>														
Normal drum length	m	500	500	500	500	500	500	500	500	500	500	500	500	500
Cable mass (approximate)	kg/m	1.07	1.22	1.37	1.52	1.78	1.95	2.23	2.51	3.08	3.74	4.41	5.12	60.6
Gross mass ( 500 m )	kg app.	710	830	910	980	1110	1320	1460	1600	2015	2360	2695	3315	3850
Bending radius	mm min.	591	629	666	697	746	777	825	871	961	1073	1141	1222	1325
DC Resistance @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078	0.061	0.047	0.037	0.029
AC Resistance @ 90°C	Ω/km	0.822	0.568	0.411	0.325	0.265	0.211	0.162	0.130	0.102	0.081	0.064	0.052	0.044
Reactance	Ω/km	0.143	0.133	0.126	0.122	0.119	0.115	0.111	0.107	0.103	0.102	0.099	0.096	0.093
Impedance	Ω/km	0.834	0.584	0.429	0.347	0.291	0.241	0.196	0.168	0.145	0.130	0.118	0.109	0.103
Capacitance	µF/km	0.264	0.298	0.336	0.363	0.392	0.423	0.468	0.514	0.596	0.679	0.739	0.815	0.906
Zero Sequence Resistance	Ω/km	1.122	0.847	0.670	0.571	0.455	0.392	0.330	0.287	0.242	0.182	0.158	0.138	0.121
Zero Sequence Reactance	Ω/km	0.085	0.075	0.069	0.065	0.063	0.059	0.055	0.052	0.049	0.048	0.045	0.043	0.040
<b>Current rating:</b>														
In ground	Amps	160	196	233	263	293	329	377	420	473	521	573	624	668
In air in shade	Amps	187	233	282	323	366	417	486	552	636	720	807	897	981
In air in direct sunlight	Amps	149	185	224	257	290	330	383	435	499	563	630	698	761
<b>Short circuit ratings:</b>														
Symmetrical (250°C)	kA (1sec)	4.0	5.8	8.1	10.2	12.6	15.8	20.7	25.9	33.3	42.8	55.2	70.6	89.0
Earth fault (180°C)	kA (1sec)	9.7	10.4	11.1	11.7	15.3	16.0	17.2	18.4	20.5	28.1	30.2	32.5	35.5

**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 = 800mm

Air temperature = 30°C

5% tolerance on dimensions

Ratings for solid bonded, Trefoil formation

<b>Description:</b>	6350/11000V, Aluminium, 1 Core, Type B	F2FA...
<b>Sheathing:</b>	FRPVC (red stripe)	...081
	LHPVC (blue stripe)	...082
<b>Specification:</b>	SANS 1339	

Size code	...n/a	1050	1070	1095	1120	1150	1185	1240	1300	1400	1500	1630	1800	1999
<b>PHYSICAL DIMENSIONS</b>														
Conductor size	mm <sup>2</sup> nom	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor diameter	mm app.	8.50	10.00	12.00	13.50	15.00	16.50	19.00	21.50	24.00	27.50	31.50	35.00	39.00
Insulation diameter	mm app.	17.00	18.50	20.50	22.00	23.50	25.00	27.50	30.00	34.00	38.00	42.00	46.00	50.00
Cable diameter	mm app.	24.00	25.00	27.00	29.00	30.00	32.00	35.00	37.00	41.00	45.00	50.00	54.00	58.00
<b>TECHNICAL DATA</b>														
Normal drum length	m	500	500	500	500	500	500	500	500	500	500	500	500	500
Cable mass (approximate)	kg/m	0.75	0.86	1.01	1.13	1.27	1.43	1.68	1.82	2.26	2.7	3.24	3.86	4.6
Gross mass ( 500 m )	kg app.	530	585	680	740	810	935	1065	1135	1475	1695	2095	2425	2795
Bending radius	mm min.	480	500	540	580	600	640	700	740	820	900	1000	1080	1160
DC Resistance @ 20°C	Ω/km	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078	0.061	0.047	0.037	0.029
AC Resistance @ 90°C	Ω/km	0.822	0.568	0.411	0.325	0.265	0.211	0.162	0.130	0.102	0.081	0.064	0.052	0.044
Reactance	Ω/km	0.129	0.119	0.112	0.109	0.105	0.102	0.099	0.094	0.093	0.091	0.089	0.087	0.085
Impedance	Ω/km	0.832	0.580	0.426	0.343	0.285	0.235	0.189	0.161	0.138	0.121	0.110	0.101	0.095
Capacitance	μF/km	0.355	0.394	0.445	0.483	0.521	0.559	0.622	0.686	0.602	0.632	0.706	0.727	0.797
<b>Current rating:</b>														
In ground	Amps	156	194	233	264	296	334	385	435	496	563	633	705	772
In air in shade	Amps	173	223	273	315	359	410	484	559	652	760	873	992	1111
In air in direct sunlight	Amps	139	179	219	252	286	327	385	444	515	598	685	776	867
<b>Short circuit ratings:</b>														
Symmetrical (250°C)	kA (1sec)	4.0	5.8	8.1	10.2	12.6	15.8	20.7	25.9	33.3	42.8	55.2	70.6	89.0
Earth fault (200°C)	kA (1sec)	2.0	2.2	2.4	2.6	2.7	2.9	3.2	3.4	3.8	4.3	4.7	5.1	5.5

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 = 800mm

Air temperature = 30°C

5% tolerance on dimensions

Ratings for solid bonded, Trefoil formation

african cables

<b>Description:</b>	6350/11000V, Aluminium, 3 Core, Type A	F2FA...
<b>Bedding/Sheathing:</b>	FRPVC/ SWA/ FRPVC (red stripe)	...111
	LHPVC/ SWA/ FRPVC(blue stripe)	...212
<b>Specification:</b>	SANS 1339	

Size code	...n/a...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300	3400
<b>PHYSICAL DIMENSIONS</b>													
Conductor size	mm <sup>2</sup> nom	16	25	35	50	70	95	120	150	185	240	300	400
Conductor diameter	mm app.	4.8	6.0	7.2	8.4	9.9	11.7	13.4	14.6	16.4	18.8	20.4	24.3
Insulation diameter	mm app.	13.5	14.7	15.9	17.1	18.6	20.4	22.1	23.3	25.1	27.5	29.1	33.8
Bedding diameter	mm app.	36.6	39.4	42.0	44.8	48.0	52.1	56.0	58.6	62.6	68.0	71.7	82.1
Armour diameter	mm app.	40.6	44.4	47.0	49.8	53.0	57.1	61.0	64.9	68.9	74.3	78.0	88.4
Cable diameter	mm app.	45.3	49.3	52.1	55.1	58.5	62.8	67.1	71.2	75.5	81.3	85.4	96.1
<b>TECHNICAL DATA</b>													
Normal drum length	m	300	300	300	300	300	300	300	300	300	300	300	300
Cable mass (approximate)	kg/m	3.3	4.2	4.5	4.9	5.4	6.1	6.8	8.1	8.8	9.9	11.2	13.1
Gross mass ( 300 m )	kg app.	1225	1620	1695	1820	2095	2320	2555	2940	3440	3820	4190	4675
Bending radius	mm min.	543	591	625	661	702	754	805	855	906	976	1025	1154
DC Resistance @ 20°C	Ω/km	1.910	1.200	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078
AC Resistance @ 90°C	Ω/km	2.449	1.539	1.113	0.822	0.568	0.411	0.325	0.265	0.211	0.162	0.130	0.102
Reactance	Ω/km	0.137	0.128	0.121	0.115	0.107	0.102	0.098	0.095	0.092	0.088	0.086	0.084
Impedance	Ω/km	2.453	1.544	1.120	0.830	0.578	0.423	0.339	0.282	0.230	0.184	0.156	0.132
Capacitance	μF/km	0.191	0.215	0.240	0.265	0.295	0.332	0.366	0.390	0.426	0.475	0.507	0.601
Zero Sequence Resistance	Ω/km	3.917	2.721	2.222	1.864	1.540	1.307	1.160	0.945	0.848	0.748	0.687	0.589
Zero Sequence Reactance	Ω/km	0.154	0.149	0.142	0.137	0.130	0.124	0.120	0.119	0.115	0.110	0.108	0.103
Current rating:													
In ground	Amps	82	105	125	147	179	214	242	270	304	350	391	444
In air in shade	Amps	88	114	137	163	202	243	279	314	358	417	469	545
In air in direct sunlight	Amps	77	100	121	143	177	213	244	274	312	363	408	472
Short circuit ratings:													
Symmetrical (250°C)	kA (1sec)	1.4	2.2	3.0	4.0	5.8	8.1	10.2	12.6	15.8	20.7	25.9	33.3
Earth fault (200°C)	kA (1sec)	11.9	15.6	16.6	17.6	18.9	20.4	21.9	28.3	30.2	32.6	34.3	39.1

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

Soil thermal resistance = 1.2

Km/W

Soil temperature = 25 °C

Depth of burial = 800 mm

Air temperature = 30 °C

Single circuit in isolation

5% tolerance on dimensions

<b>Description:</b>	6350/11000V, Aluminium, 3 Core, Type B	F2FA...
<b>Sheathing:</b>	FRPVC (red stripe) LHPVC (blue stripe)	...001 ...002
<b>Specification:</b>	SANS 1339	

Size code	...n/a...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300	3400
<b>PHYSICAL DIMENSIONS</b>													
Conductor size	mm <sup>2</sup> nom	16	25	35	50	70	95	120	150	185	240	300	400
Conductor diameter	mm app.	4.8	6.0	7.2	8.4	9.9	11.7	13.4	14.6	16.4	18.8	20.4	20.4
Insulation diameter	mm app.	13.5	14.7	15.9	17.1	18.6	20.4	22.1	23.3	25.1	27.5	29.1	29.1
Bedding diameter	mm app.	34.5	37.1	39.7	42.3	45.6	49.0	52.7	55.3	59.2	64.3	67.8	67.8
Cable diameter	mm app.	39.1	41.6	44.4	47.2	50.7	54.5	58.4	61.2	65.3	70.7	74.6	74.6
<b>TECHNICAL DATA</b>													
Normal drum length	m	300	300	300	300	300	300	300	300	300	300	300	300
Cable mass (approximate)	kg/m	1.85	1.752	1.940	2.192	2.602	2.814	3.197	3.573	4.115	4.892	5.714	7.151
Gross mass ( 300 m )	kg app.	660	705	765	840	990	1180	1220	1405	1570	1870	2345	2840
Bending radius	mm min.	586	625	667	709	760	818	876	918	980	1061	1119	1119
DC Resistance @ 20°C	Ω/km	1.910	1.200	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100	0.078
AC Resistance @ 90°C	Ω/km	2.449	1.539	1.113	0.822	0.568	0.411	0.325	0.265	0.211	0.162	0.130	0.102
Reactance	Ω/km	0.138	0.129	0.121	0.116	0.107	0.102	0.098	0.095	0.092	0.088	0.086	0.086
Impedance	Ω/km	2.453	1.544	1.120	0.830	0.578	0.423	0.339	0.282	0.230	0.184	0.156	0.134
Capacitance	μF/km	0.191	0.215	0.240	0.265	0.295	0.332	0.366	0.390	0.426	0.475	0.507	0.507
<b>Current rating:</b>													
In ground	Amps	84	109	130	153	187	221	251	281	318	368	414	467
In air in shade	Amps	89	118	142	170	211	252	291	328	377	445	504	569
In air in direct sunlight	Amps	79	104	126	150	186	221	256	288	330	389	440	497
<b>Short circuit ratings:</b>													
Symmetrical (250°C)	kA (1sec)	1.4	2.2	3.0	4.0	5.8	8.1	10.2	12.6	15.8	20.7	25.9	33.3
Earth fault (200°C)	kA (1sec)	3.9	4.2	4.5	4.8	5.2	2.8	3.0	3.2	3.4	3.7	3.9	3.9

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

Soil thermal resistance = 1.2 Km/W

Soil temperature = 25 °C

Depth of burial = 800 mm

Air temperature = 30 °C

5% tolerance on dimensions

african cables

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<b>Вологда</b> (8172)26-41-59	<b>Магнитогорск</b> (3519)55-03-13	<b>Самара</b> (846)206-03-16	<b>Уфа</b> (347)22948 -12
<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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