

## 22kV XLPE – Copper Технические характеристики



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Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Ярославль (4852)69-52-93

**Description:** 12700/22000V, Copper, 1 Core, Type F2HC...  
**Bedding/ Sheathing:** A 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 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.	21.33	23.03	20.57	26.23	27.68	29.21	31.44	33.73	37.83	41.98	45.01	48.81	53.37
Bedding diameter	mm app.	26.18	27.88	25.42	31.08	32.53	34.06	36.29	38.78	42.88	47.24	50.27	54.27	59.04
Armour diameter	mm app.	29.38	31.88	28.62	35.08	36.53	38.06	40.29	43.78	47.88	52.24	55.27	59.27	64.04
Cable diameter	mm app.	34.26	36.76	33.30	40.16	41.82	43.35	45.78	49.48	53.79	58.35	61.79	66.00	70.97
<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	1.650	2.013	2.367	2.656	2.998	3.410	4.055	4.930	6.047	7.268	9.002	10.67	12.85
Gross mass ( 500 m )	kg app.	1007	1189	1390	1552	1835	1962	2360	2797	3652	4262	4973	5915	7156
Bending radius	mm min.	685	735	666	803	836	867	916	990	1076	1167	1236	1320	1419
DC Resistance @ 20°C	Ω/km	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060	0.047	0.037	0.028	0.022	0.018
AC Resistance @ 90°C	Ω/km	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079	0.063	0.051	0.042	0.035	0.030
Reactance	Ω/km	0.152	0.145	0.128	0.131	0.126	0.122	0.117	0.115	0.110	0.107	0.104	0.101	0.098
Impedance	Ω/km	0.517	0.372	0.278	0.235	0.203	0.177	0.153	0.139	0.127	0.119	0.112	0.107	0.102
Capacitance	µF/km	0.185	0.206	0.336	0.247	0.265	0.285	0.313	0.341	0.361	0.444	0.481	0.529	0.585
Zero Sequence Resistance	Ω/km	0.746	0.535	0.506	0.369	0.325	0.286	0.247	0.191	0.165	0.143	0.127	0.113	0.102
Zero Sequence Reactance	Ω/km	0.096	0.089	0.072	0.075	0.070	0.067	0.062	0.060	0.056	0.054	0.051	0.048	0.045
<b>Current rating:</b>														
In ground	Amps	206	250	298	334	371	413	469	512	565	618	667	711	748
In air in shade	Amps	244	303	361	416	468	529	612	682	772	863	948	1030	1107
In air in direct sunlight	Amps	193	239	287	328	369	416	480	534	603	672	736	799	857
<b>Short circuit ratings:</b>														
Symmetrical (250°C)	kA (1sec)	6.4	9.2	12.8	16.2	20.0	25.0	32.8	41.2	52.7	67.6	87.5	112.0	140.6
Earth fault (200°C)	kA (1sec)	11.5	15.1	16.0	16.7	17.5	18.3	19.4	25.7	28.2	31.0	32.9	35.4	38.4

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



Description:	12700/22000V, Copper, 1 Core, Type	F2HC...
Sheathing:	B FRPVC (red stripe)	...081
	LHPVC (blue stripe)	...082
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 $\dot{I}$ 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.	21.00	23.00	24.50	26.00	27.50	29.50	32.00	34.00	38.50	42.00	46.00	50.50	54.50
Cable diameter	mm app.	28.00	30.00	32.00	33.00	35.00	37.00	39.00	41.00	46.00	50.00	54.00	59.00	63.00
<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	1.029	1.229	1.815	2.115	2.424	2.700	3.340	3.984	4.928	5.986	7.457	9.542	11.64
Gross mass ( 500 m )	kg app.	745	765	1090	1275	1429	1567	1887	2261	2866	3434	4170	5572	6639
Bending radius	mm min.	560	600	640	660	700	740	780	820	920	1000	1080	1180	1260
DC Resistance @ 20°C	$\Omega$ /km	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060	0.047	0.037	0.028	0.022	0.018
AC Resistance @ 90°C	$\Omega$ /km	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079	0.063	0.051	0.042	0.035	0.030
Reactance	$\Omega$ /km	0.139	0.133	0.125	0.117	0.113	0.111	0.105	0.101	0.101	0.097	0.094	0.093	0.090
Impedance	$\Omega$ /km	0.513	0.367	0.277	0.228	0.195	0.169	0.144	0.128	0.119	0.110	0.102	0.099	0.095
Capacitance	$\mu$ F/km	0.231	0.243	0.283	0.305	0.328	0.336	0.371	0.424	0.391	0.434	0.483	0.488	0.533
<b>Current rating:</b>														
In ground	Amps	205	250	299	339	379	426	493	553	621	694	771	841	902
In air in shade	Amps	236	293	357	411	466	531	628	717	823	939	1070	1188	1301
In air in direct sunlight	Amps	189	234	284	327	369	421	496	566	646	736	836	925	1011
<b>Short circuit ratings:</b>														
Symmetrical (250°C)	kA (1sec)	6.4	9.2	12.8	16.2	20.0	25.0	32.8	41.2	52.7	67.6	87.5	112.0	140.6
Earth fault (200°C)	kA (1sec)	2.5	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.3	4.7	5.1	5.6	6.0

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

Description:	12700/22000V, Copper, 3 Core, Type	F2HC...
Bedding/ Armouring/ Sheathing:	A FRPVC/SWA/FRPVC (red stripe)	...111
	LHPVC/SWA/LHPVC (blue stripe)	...212
Specification:	SANS 1339	

Size code	...n/a...	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
<b>PHYSICAL DIMENSIONS</b>											
Conductor size	mmI nom	25	35	50	70	95	120	150	185	240	300
Conductor diameter	mm app.	6.0	7.2	8.4	9.9	11.7	13.4	14.6	16.4	18.8	20.4
Insulation diameter	mm app.	19.0	20.2	21.4	22.9	24.7	26.4	27.6	29.4	31.8	33.4
Bedding diameter	mm app.	49.1	51.7	54.3	57.7	61.8	65.5	68.3	72.4	77.7	81.2
Armour diameter	mm app.	54.1	56.7	59.3	64.0	68.1	71.8	74.6	78.7	84.0	87.5
Cable diameter	mm app.	59.6	62.4	65.2	70.2	74.7	78.5	81.5	86.0	91.6	95.5
<b>TECHNICAL DATA</b>											
Normal drum length	m	300	300	300	300	300	300	300	300	300	300
Cable mass (approximate)	kg/m	5.871	6.336	6.986	8.890	10.27	12.66	12.61	14.27	16.81	19.49
Gross mass ( 300 m )	kg app.	1987	2237	2432	3014	3427	4427	4410	4753	5789	6591
Bending radius	mm min.	715	749	782	842	896	942	978	1032	1100	1146
DC Resistance @ 20°C	Ω/km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060
AC Resistance @ 90°C	Ω/km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079
Reactance	Ω/km	0.139	0.131	0.124	0.117	0.111	0.107	0.104	0.100	0.096	0.094
Impedance	Ω/km	0.938	0.681	0.509	0.362	0.271	0.223	0.190	0.162	0.138	0.123
Capacitance	μF/km	0.154	0.170	0.185	0.205	0.227	0.249	0.264	0.287	0.317	0.337
Zero Sequence Resistance	Ω/km	1.879	1.572	1.354	1.032	0.892	0.805	0.744	0.680	0.613	0.571
Zero Sequence Reactance	Ω/km	0.155	0.148	0.143	0.139	0.134	0.129	0.126	0.122	0.117	0.114
<b>Current rating:</b>											
In ground	Amps	135	161	190	230	274	310	344	385	441	490
In air in shade	Amps	149	179	213	263	316	362	405	457	530	594
In air in direct sunlight	Amps	130	157	186	229	275	314	352	397	459	514
<b>Short circuit ratings:</b>											
Symmetrical (250°C)	kA (1sec)	3.4	4.7	6.4	9.2	12.8	16.2	20.0	25.0	32.8	41.2
Earth fault (200°C)	kA (1sec)	19.3	20.3	21.3	27.9	29.8	31.5	32.8	34.6	37.1	38.7

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

Description:	12700/22000V, Copper, 3 Core, Type	F2HC...
Sheathing:	B FRPVC (red stripe)	...001
	LHPVC (blue stripe)	...002
Specification:	SANS 1339	

Size code	...n/a...	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
<b>PHYSICAL DATA</b>											
Conductor size	mmI nom	25	35	50	70	95	120	150	185	240	300
Conductor diameter	mm app.	6.0	7.2	8.4	9.9	11.7	13.4	14.6	16.4	18.8	20.4
Insulation diameter	mm app.	19.0	20.2	21.4	22.9	24.7	26.4	27.6	29.4	31.8	33.4
Bedding diameter	mm app.	46.0	48.6	51.2	54.4	58.3	62.0	64.6	68.5	73.6	77.1
Cable diameter	mm app.	51.5	54.3	57.1	60.6	64.7	68.5	71.5	75.6	81.2	84.9
<b>TECHNICAL DATA</b>											
Normal drum length	m	300	300	300	300	300	300	300	300	300	300
Cable mass (approximate)	kg/m	2.714	3.007	3.746	4.463	5.430	6.356	7.406	8.657	10.28	12.667
Gross mass ( 300 m )	kg app.	1020	1240	1370	1675	1965	2310	2570	3225	3780	4495
Bending radius	mm min.	773	815	857	909	970	1028	1073	1135	1218	1273
DC Resistance @ 20°C	Ω/km	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060
AC Resistance @ 90°C	Ω/km	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079
Reactance	Ω/km	0.139	0.131	0.124	0.117	0.111	0.107	0.104	0.100	0.096	0.094
Impedance	Ω/km	0.938	0.681	0.509	0.362	0.271	0.223	0.190	0.162	0.138	0.123
Capacitance	μF/km	0.154	0.170	0.185	0.205	0.227	0.249	0.264	0.287	0.317	0.337
<b>Current rating:</b>											
In ground	Amps	139	165	195	238	284	323	361	407	470	527
In air in shade	Amps	153	185	220	272	330	380	427	488	571	647
In air in direct sunlight	Amps	134	162	193	238	288	332	373	425	497	562
<b>Short circuit ratings:</b>											
Symmetrical (250°C)	kA (1sec)	3.4	4.7	6.4	9.2	12.8	16.2	20.0	25.0	32.8	41.2
Earth fault (200°C)	kA (1sec)	2.7	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.3	4.5

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>Иваново</b> (4932)77-34-06	<b>Набережные Челны</b> (8552)20-53-41	<b>Севастополь</b> (8692)22-31-93	<b>Череповец</b> (8202)49-02-64
<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	

Единый адрес для всех регионов: [ccr@nt-rt.ru](mailto:ccr@nt-rt.ru) || [www.cbi-electric.nt-rt.ru](http://www.cbi-electric.nt-rt.ru)