

## 6.6kV MV PILC Copper Технические характеристики



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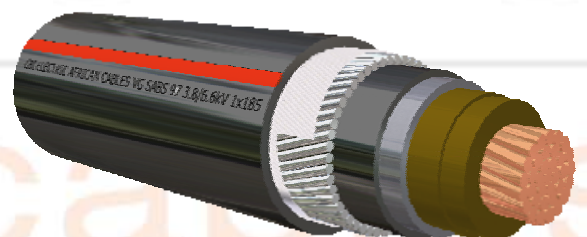
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Copper I Core  
3800/6600V  
Table 9  
SANS 97

PILAC  
FRPVC AWA FRPVC (red stripe) FIEC...  
LHPVC AWA LHPVC (blue stripe) ...29141  
...29242 Primary group code  
Table + Finish code

Size code	...naaa...	1150	1185	1240	1300	1400	1500	1630
Conductor size	mm <sup>2</sup> nom	150	185	240	300	400	500	630
Conductor diameter	mm nom	14.7	16.5	18.8	21.2	23.9	27.4	30.3
Insulated diameter	mm nom	20.9	22.8	25.0	27.5	30.2	33.6	37.0
Diameter over lead sheath	mm nom	24.5	26.0	28.5	31.5	34.0	37.5	41.0
Bedding diameter	mm nom	27.0	29.0	31.5	34.0	37.5	41.0	44.0
Size of armour wires	mm	2.00	2.00	2.00	2.00	2.50	2.50	2.50
Overall diameter	mm nom	35.0	37.0	39.5	42.0	47.0	51.0	54.0
Normal drum length	m	500	500	500	500	500	500	500
Cable mass	kg/m app.	3.7	4.2	5.1	6.0	7.4	8.8	10.7
Gross mass ( drum length)	kg app.	2350	2600	3050	3500	4200	4900	5850
Bending radius	mm min.	700	740	790	840	940	1020	1080
<b>Current rating</b>								
In ground	Amps	340	380	430	475	510	560	605
In ducts	Amps	310	345	390	430	460	505	540
In air	Amps	400	455	530	600	660	740	820
<b>Positive sequence</b>								
Resistance dc @ 20°C	Ω/km max	0.124	0.0991	0.0754	0.0601	0.0470	0.0366	0.0283
ac @ 80°C	Ω/km max	0.154	0.1235	0.0946	0.0761	0.0605	0.0483	0.0391
Reactance	Ω/km	0.118	0.114	0.110	0.104	0.103	0.099	0.096
Impedance at 80°C	Ω/km	0.194	0.168	0.145	0.129	0.120	0.111	0.104
<b>Zero sequence</b>								
Resistance	Ω/km	0.353	0.310	0.265	0.233	0.175	0.153	0.135
Reactance	Ω/km	0.047	0.045	0.043	0.038	0.036	0.034	0.032
Impedance	Ω/km							1.009
<b>Short circuit ratings</b>								
Symmetrical	kA (1sec)	20.7	25.9	34.1	42.8	54.7	70.2	90.8
Earth fault(Symmetrical limit)	kA (1sec)	16.2	17.3	19.0	20.9	28.0	30.5	33.2

When ordering please quote: primary + size + table + finish code  
e.g. FIEC 1500 29 141



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Copper 3 Core  
3800/6600V  
Table 15  
SANS 97

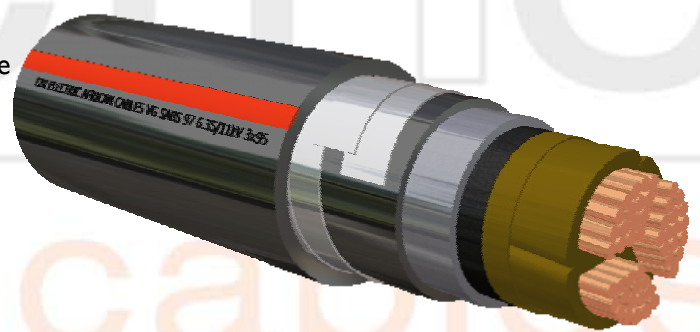
PILC/PILAC  
FRPVC DTA FRPVC(red stripe)  
LHPVC DTA LHPVC(blue stripe)

FIEC...  
...15191  
...15292

Primary group code  
Table + Finish code

Size code	...naaa...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
Conductor size	mm <sup>2</sup> nom	16*	25*	35*	50*	70	95	120	150	185	240	300
Conductor depth	mm nom	5.2	6.1	7.2	8.3	8.3	9.8	11.0	12.2	13.7	15.7	17.6
Insulated depth	mm nom	9.7	10.6	11.7	12.8	12.8	14.3	15.5	16.7	18.2	20.2	22.1
Diameter over lead sheath	mm nom	26.0	28.0	30.5	33.0	32.5	36.0	38.5	41.5	45.0	49.5	54.0
Bedding diameter	mm nom	28.0	31.0	33.5	36.0	35.5	39.0	42.0	44.5	48.5	53.0	57.5
Thickness of DSTA	mm	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Overall diameter	mm nom	35.5	38.0	41.0	44.0	43.5	47.5	50.5	53.5	57.5	63.0	67.5
Normal drum length	m	500	500	500	300	300	300	300	300	300	300	300
Cable mass	kg/m app.	3.4	3.9	4.6	5.3	5.9	7.2	8.4	9.7	11.4	14.1	16.7
Gross mass ( drum length)	kg app.	2080	2330	2680	1970	2150	2540	2900	3290	3800	4610	5390
Bending radius	mm min.	426	456	492	528	522	570	606	642	690	756	810
Current rating												
In ground	Amps	92	115	140	170	210	250	285	320	360	420	470
In ducts	Amps	76	98	115	140	170	210	240	265	300	350	395
In air	Amps	91	115	145	170	215	265	305	350	400	470	539
Positive sequence												
Resistance dc @ 20°C	Ω/km max	1.150	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
ac @ 80°C	Ω/km max	1.421	0.899	0.648	0.479	0.332	0.239	0.190	0.155	0.124	0.0955	0.0773
Reactance	Ω/km	0.105	0.101	0.096	0.093	0.075	0.071	0.069	0.067	0.065	0.063	0.061
Impedance at 80°C	Ω/km	1.425	0.904	0.655	0.487	0.340	0.249	0.202	0.168	0.140	0.114	0.098
Zero sequence												
Resistance	Ω/km	7.851	6.821	5.687	5.120	4.747	3.993	3.466	3.037	2.643	2.159	1.882
Reactance	Ω/km	0.127	0.120	0.115	0.110	0.112	0.106	0.103	0.100	0.097	0.094	0.091
Impedance	Ω/km	7.852	6.822	5.689	5.121	4.749	3.995	3.468	3.039	2.645	2.161	1.884
Short circuit ratings												
Symmetrical	kA (1sec)	2.2	3.5	4.9	6.6	9.5	13.3	16.7	20.7	25.9	34.0	42.7
Earth fault(Symmetrical limit)	kA (1sec)	2.7	2.9	3.4	3.7	3.9	4.6	5.3	6.0	6.8	8.4	9.6

\* Circular Conductor  
When ordering please quote: primary + size + table + finish code  
e.g. FIEC 3120 15 191



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Copper 3 Core  
6600/6600V  
Table 16  
SANS 97

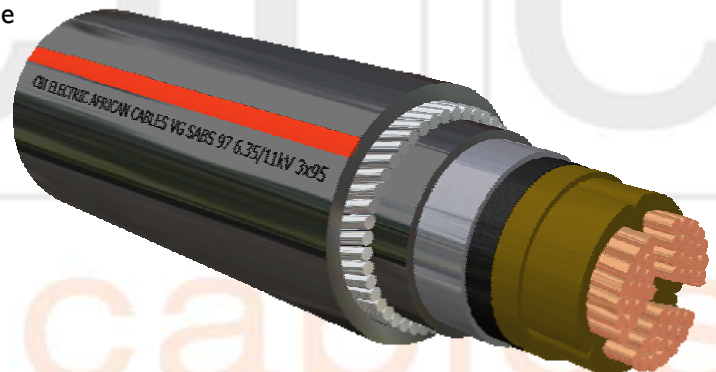
PILC/PILAC  
FRPVC SWA FRPVC (red stripe)  
LHPVC SWA LHPVC (blue stripe)

FIEC...  
...16111  
...16212

Primary group code  
Table + Finish code

Size code	...naaa...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
Conductor size	mm <sup>2</sup> nom	16*	25*	35*	50	70	95	120	150	185	240	300
Conductor depth	mm nom	5.2	6.1	7.2	6.9	8.3	9.8	11.0	12.2	13.7	15.7	17.6
Insulated depth	mm nom	9.7	10.6	11.7	11.4	12.8	14.3	15.5	16.7	18.2	20.2	22.1
Diameter over lead sheath	mm nom	28.5	31.0	33.0	32.0	35.5	38.5	41.5	44.0	47.5	52.0	56.5
Bedding diameter	mm nom	31.0	33.5	36.0	34.5	38.5	42.0	44.5	48.0	51.0	55.5	60.0
Size of armour wires	mm	2.00	2.00	2.50	2.50	2.50	2.50	2.50	3.15	3.15	3.15	3.15
Overall diameter	mm nom	39.5	42.0	45.5	44.5	48.5	52.0	55.0	60.0	63.5	68.5	73.5
Normal drum length	m	300	300	300	300	300	300	300	300	300	300	300
Cable mass	kg/m app.	4.1	4.8	5.8	6.2	7.5	8.9	10.2	12.3	14.2	16.8	19.8
Gross mass ( drum length)	kg app.	1730	1940	2240	2360	2750	3170	3560	4190	4760	5540	6440
Bending radius	mm min.	474	504	546	534	582	624	660	720	762	822	882
Current rating												
In ground	Amps	90	115	140	165	200	245	280	315	355	415	465
In ducts	Amps	76	97	120	140	170	205	235	265	300	350	395
In air	Amps	89	115	140	170	210	260	300	340	390	465	530
Positive sequence												
Resistance dc @ 20°C	Ω/km max	1.150	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060
ac @ 80°C	Ω/km max	1.421	0.899	0.648	0.479	0.332	0.239	0.190	0.155	0.124	0.095	0.077
Reactance	Ω/km	0.105	0.101	0.096	0.079	0.075	0.071	0.069	0.067	0.065	0.063	0.061
Impedance at 80°C	Ω/km	1.425	0.904	0.655	0.485	0.340	0.249	0.202	0.168	0.140	0.114	0.098
Zero sequence												
Resistance	Ω/km	3.332	2.634	2.030	1.876	1.574	1.360	1.220	0.959	0.863	0.764	0.675
Reactance	Ω/km	0.145	0.138	0.131	0.135	0.127	0.121	0.116	0.112	0.108	0.104	0.100
Impedance	Ω/km	3.335	2.638	2.034	1.881	1.579	1.366	1.226	0.966	0.870	0.771	0.682
Short circuit ratings												
Symmetrical	kA (1sec)	2.2	3.5	4.9	6.6	9.6	13.3	16.7	20.7	25.9	34.0	42.8
Earth fault(Symmetrical limit)	kA (1sec)	10.7	11.7	14.9	14.7	16.5	18.2	19.8	25.5	27.7	30.6	34.0

\* Circular Conductor  
When ordering please quote: primary + size + table + finish code  
e.g. FIEC 3120 16 111



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PILC/PILAC  
FRPVC DTA FRPVC (red stripe)  
LHPVC DTA LHPVC (blue stripe)

FIEC...  
...16191  
...16292

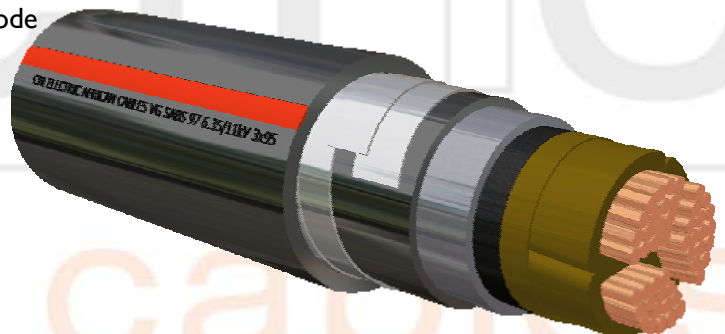
Primary group code  
Table + Finish code

Copper 3 Core  
6600/6600V  
Table 16  
SABS 97

Size code	...naaa...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
Conductor size	mm <sup>2</sup> nom	16*	25*	35*	50*	70	95	120	150	185	240	300
Conductor depth	mm nom	5.2	6.1	7.2	8.3	8.3	9.8	11.0	12.2	13.7	15.7	17.6
Insulated depth	mm nom	9.7	10.6	11.7	12.8	12.8	14.3	15.5	16.7	18.2	20.2	22.1
Diameter over lead sheath	mm nom	28.5	31.0	33.0	36.0	35.5	38.5	41.5	44.0	47.5	52.0	56.5
Bedding diameter	mm nom	31.0	33.5	36.0	38.5	38.5	42.0	44.5	48.0	51.0	55.5	60.0
Thickness of DSTA	mm	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Overall diameter	mm nom	38.5	41.0	43.5	46.5	47.0	50.5	53.5	57.0	60.5	65.5	70.5
Normal drum length	m	500	500	500	500	300	300	300	300	300	300	300
Cable mass	kg/m app.	3.7	4.3	4.9	5.7	6.4	7.8	9.0	10.4	12.1	14.6	17.4
Gross mass ( drum length)	kg app.	2100	2400	2700	3100	2420	2840	3200	3620	4130	4880	5720
Bending radius	mm min.	462	492	522	558	564	606	642	684	726	786	846
Current rating												
In ground	Amps	89	115	140	165	200	245	280	310	355	410	460
In ducts	Amps	75	97	115	140	170	205	235	265	300	345	390
In air	Amps	88	115	140	170	210	255	295	335	385	455	525
Positive sequence												
Resistance dc @ 20°C	Ω/km max	1.150	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
ac @ 80°C	Ω/km max	1.421	0.899	0.648	0.479	0.332	0.239	0.190	0.155	0.124	0.0955	0.0773
Reactance	Ω/km	0.105	0.101	0.096	0.093	0.075	0.071	0.069	0.067	0.065	0.063	0.061
Impedance at 80°C	Ω/km	1.425	0.904	0.655	0.487	0.340	0.249	0.202	0.168	0.140	0.114	0.098
Zero sequence												
Resistance	Ω/km	7.249	5.901	5.283	4.475	4.147	3.518	3.077	2.714	2.378	2.054	1.719
Reactance	Ω/km	0.145	0.138	0.131	0.125	0.127	0.121	0.116	0.112	0.108	0.104	0.100
Impedance	Ω/km	7.251	5.903	5.285	4.477	4.149	3.520	3.079	2.716	2.381	2.056	1.722
Short circuit ratings												
Symmetrical	kA (1sec)	2.3	3.7	5.1	6.9	9.9	13.8	17.4	21.5	26.9	35.3	44.3
Earth fault(Symmetrical limit)	kA (1sec)	2.9(2.3)	3.5	3.7	4.3	4.6	5.3	6.0	6.8	7.7	8.9	10.6

\* Circular Conductor

When ordering please quote: primary + size + table + finish code  
e.g. FIEC 3120 16 191



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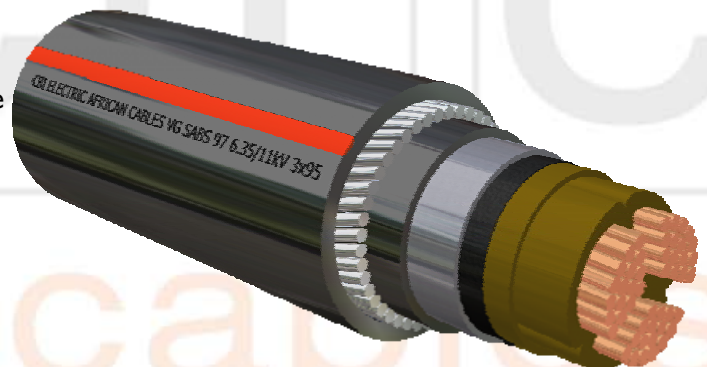
Copper 3 Core  
6600/6600V  
Table 24  
SANS 97

PILC/PILAC	FIEC...	Primary group code
FRPVC SWA FRPVC (red stripe)	...24111	Table + Finish code
LHPVC SWA LHPVC (blue stripe)	...24212	
ZEROTOX SWA ZEROTOX (white stripe)	....24313	

Size code	...naaa...	3016	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300
Conductor size	mm <sup>2</sup> nom	16*	25*	35*	50*	70	95	120	150	185	240	300
Conductor depth	mm app.	5.2	6.1	7.2	8.3	8.3	9.8	11	12.2	13.7	15.7	17.6
Insulated depth	mm app.	10.2	11.1	12.2	13.3	13.3	14.8	16	17.2	18.7	20.7	22.6
Diameter over lead sheath	mm app.	30.5	32.5	35	38	37.5	40.5	43.5	46	49.5	54	58.5
Bedding diameter	mm app.	33	35.5	38	41	40.5	44	47	49.5	53	58	62.5
Size of armour wires	mm	2	2	2.5	2.5	2.5	2.5	3.15	3.15	3.15	3.15	3.55
Overall diameter	mm app.	41.5	44	47.5	51	50.5	54	59	62	65.5	71	76.5
Normal drum length	m	500	500	500	300	300	300	300	300	300	300	300
Cable mass	kg/m app.	4.5	5.1	6.3	7.3	8	9.4	11.5	12.8	14.6	17.6	21
Gross mass (drum length)	kg app.	2610	2910	3510	2520	2730	3150	3780	4190	4730	5810	6830
Bending radius	mm min.	498	528	570	612	606	648	708	744	786	852	918
<b>Current rating</b>												
In ground	Amps	89	115	140	160	200	240	275	310	350	410	460
In ducts	Amps	76	97	120	140	170	205	235	265	300	350	390
In air	Amps	89	115	140	170	210	255	295	335	385	455	525
<b>Positive sequence</b>												
Resistance dc @ 20°C	Ω/km max	1.15	0.73	0.52	0.39	0.27	0.19	0.15	0.12	0.099	0.075	0.06
ac @ 80°C	Ω/km max	1.421	0.9	0.65	0.48	0.33	0.24	0.19	0.16	0.124	0.096	0.077
Reactance	Ω/km	0.109	0.1	0.1	0.1	0.08	0.07	0.07	0.07	0.067	0.065	0.063
Impedance	Ω/km	1.425	0.9	0.66	0.49	0.34	0.25	0.2	0.17	0.141	0.115	0.099
<b>Zero sequence</b>												
Resistance	Ω/km	3.224	2.54	1.93	1.64	1.49	1.29	1.01	0.93	0.837	0.727	0.609
Reactance	Ω/km	0.153	0.15	0.14	0.13	0.13	0.13	0.12	0.12	0.113	0.108	0.104
Impedance	Ω/km	3.227	2.55	1.93	1.65	1.49	1.29	1.02	0.94	0.845	0.735	0.618
<b>Short circuit ratings</b>												
Symmetrical	kA (1sec)	2.2	3.5	4.9	6.6	9.6	13.3	16.8	20.7	25.9	34.1	42.8
Earth fault (Symmetrical limit)	kA (1sec)	11.4	12.4	16.1	17.6	17.7	19.5	25.2	26.6	28.8	32.3	38.5

\* Circular Conductor

When ordering please quote: primary + size + table + finish code  
e.g. FIEC 3120 24 111



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<b>Астана</b> +7(7172)727-132	<b>Калуга</b> (4842)92-23-67	<b>Омск</b> (3812)21-46-40	<b>Ставрополь</b> (8652)20-65-13
<b>Астрахань</b> (8512)99-46-04	<b>Кемерово</b> (3842)65-04-62	<b>Орел</b> (4862)44-53-42	<b>Сургут</b> (3462)77-98-35
<b>Барнаул</b> (3852)73-04-60	<b>Киров</b> (8332)68-02-04	<b>Оренбург</b> (3532)37-68-04	<b>Тверь</b> (4822)63-31-35
<b>Белгород</b> (4722)40-23-64	<b>Краснодар</b> (861)203-40-90	<b>Пенза</b> (8412)22-31-16	<b>Томск</b> (3822)98-41-53
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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
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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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