

# Medium Voltage Paper Insulated Lead Alloy Covered (PILAC)

Aluminium 3 Core  
12700/22000V  
Table 20  
SANS 97

PILAC  
FRPVC SWA FRPCV (red stripe) ...40 111  
LHPVC SWA LHPVC (blue stripe) ...40 212

Size code	...naaa...	3050	3070	3095	3120	3150	3185	3240	3300
Conductor size	mm <sup>2</sup> nom	50*	70*	95*	120	150	185	240	300
Conductor depth	mm app.	8,3	9,7	11,6	11,0	12,2	13,7	15,7	17,6
Insulated depth	mm app.	20,3	21,7	23,6	23,0	24,2	25,7	27,7	29,6
Diameter over lead sheath	mm app.	50,5	53,5	58,0	55,5	58,5	61,5	66,0	70,5
Bedding diameter	mm app.	54,0	57,5	61,5	59,0	62,0	66,0	70,0	74,5
Size of armour wires	mm	3,15	3,15	3,15	3,15	3,15	3,15	3,15	3,15
Overall diameter	mm app.	66,0	69,5	74,5	72,0	75,0	79,5	84,0	89,0
Normal drum length	m	300	300	300	300	300	300	300	300
Cable mass	kg/m app.	10,3	11,4	12,8	12,9	14,0	15,5	17,4	19,2
Gross mass (drum length)	kg app.	3590	3920	4340	4370	4700	5150	5720	6260
Bending radius	mm min.	792	834	894	864	900	954	1008	1068
<b>Current rating</b>									
In ground	Amps	125	150	180	210	235	265	310	350
In ducts	Amps	107	130	155	180	200	225	260	295
In air	Amps	135	165	200	235	265	305	355	405
<b>Positive sequence</b>									
Resistance dc @ 20°C	Ω/km max	0,641	0,443	0,32	0,253	0,206	0,164	0,125	0,100
ac @ 70°C	Ω/km	0,770	0,533	0,385	0,304	0,248	0,198	0,151	0,121
Reactance	Ω/km	0,124	0,113	0,107	0,094	0,091	0,087	0,084	0,080
Impedance	Ω/km	0,780	0,544	0,399	0,319	0,264	0,216	0,172	0,145
<b>Zero sequence</b>									
Resistance	Ω/km	1,471	1,182	0,979	0,914	0,822	0,731	0,642	0,576
Reactance	Ω/km	0,124	0,119	0,114	0,118	0,115	0,112	0,108	0,104
Impedance	Ω/km	1,476	1,188	0,986	0,922	0,830	0,739	0,651	0,586
<b>Short circuit ratings</b>									
Symmetrical	kA (1sec)	4,4	6,4	8,8	11,1	13,7	17,2	22,5	28,2
Earth fault (Symmetrical limit)	kA (1sec)	29,3	31,5	34,4	33,4	35,4	38,0	41,2	44,3

\* Circular Conductor

e.g. F1HA 3120 40 111 0K0S

Last updated January 2026



Soil thermal resistance = 1,2Km/W  
Soil temperature = 25°C  
Depth of burial = 800mm  
Air temperature = 30°C  
+5% tolerance on dimensions

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