

Low Voltage Mains 3 Core PVC Cables

1kV Al Armoured

Description 3 Core Al PVC FRPVC SWA FRPVC, 1000 V

F4CA 3nnn ZZ 111 0K0S

Description 3 Core Al PVC LHFRPVC SWA LHFRPVC, 1000 V

F4CA 3nnn ZZ 212 0K0S

Specification SANS 1507

Last updated: December 2025

PHYSICAL	... naaa ...	3025	3035	3050	3070	3095	3120	3150	3185	3240	3300	3400
Conductor size	mm ² nom	25	35	50	70	95	120	150	185	240	300	400
Conductor diameter	mm app	5,0	5,9	6,9	8,3	9,7	11,0	12,2	13,7	15,6	16,9	19,8
Insulation diameter	mm app	7,5	8,4	9,8	11,2	13,1	14,3	16,0	17,9	20,3	21,9	25,3
Bedding diameter	mm app	16,6	18,5	21,4	24,5	28,4	31,0	34,4	38,5	43,5	47,1	54,2
Armour diameter	mm app	21,8	23,7	28,1	31,2	35,5	38,1	41,6	47,1	52,1	55,7	62,8
Cable diameter	mm app	25,4	27,3	32,0	35,5	40,2	42,9	46,8	52,3	57,8	61,7	69,3
Length of cable on a drum	m	300	300	300	300	300	300	300	300	300	300	300
Cable mass (approximate)	kg/m app	1,2	1,3	2,0	2,4	3,0	3,4	4,0	5,2	6,1	7,1	8,6
Gross mass on drum	kg app	396	450	703	831	1013	1202	1373	1763	2101	2381	2977
Bending radius	mm min	254	273	320	355	402	429	468	523	578	617	693

ELECTRICAL												
DC Resistance @ 20 °C	Ω/km	1,200	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100	0,078
AC Resistance @ 70 °C	Ω/km	1,442	1,043	0,770	0,533	0,385	0,305	0,248	0,198	0,151	0,122	0,095
Reactance X+	Ω/km	0,046	0,049	0,048	0,048	0,047	0,045	0,048	0,049	0,048	0,045	0,046
Impedance Z+	Ω/km	1,443	1,044	0,772	0,535	0,388	0,308	0,253	0,204	0,159	0,130	0,106
Capacitance C+	µF/km	0,927	1,055	1,113	1,329	1,362	1,556	1,637	1,652	1,854	1,937	2,474
Resistance Ro	Ω/km	11,05	9,76	6,094	5,233	4,487	4,173	3,765	2,741	2,466	2,279	2,000
Reactance Xo	Ω/km	0,322	0,311	0,310	0,295	0,290	0,279	0,279	0,281	0,275	0,271	0,265

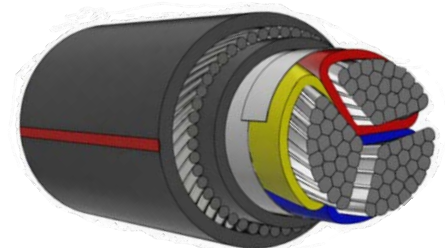
CURRENT RATINGS												
Ground	Amps	91	109	130	160	192	219	246	279	324	363	416
Ducts in ground	Amps	73	88	106	130	156	178	200	227	264	296	339
Air in Shade	Amps	82	100	123	155	190	221	251	292	345	392	460
Air in sunlight	Amps	64	78	95	119	144	166	188	217	255	289	337

SHORT CIRCUIT RATING												
Symmetrical (160 °C)	kA (1 sec)	1,9	2,7	3,8	5,3	7,2	9,1	11,4	14,1	18,2	22,8	30,4
Earth fault (160 °C)	kA (1 sec)	2,7*	3,0*	5,2*	5,9*	6,8	7,2	7,9	11,3	12,4	13,3	15,0
Three Phase Volt Drop	mV/A/m	2,50	1,81	1,34	0,93	0,67	0,53	0,44	0,35	0,27	0,23	0,18

* In practice the earth fault rating must be limited to symmetrical fault rating.

The ratings above are based on standard laying conditions for a single circuit in isolation, with the following parameters:

- Conductor temperature = 70 °C
- Soil thermal resistance = 1,2 Km/W
- Soil temperature = 25 °C
- Air temperature = 30 °C
- Depth of burial = 500 mm
- Single circuit in isolation
- 5% tolerance on dimensions



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