



D1 = Diameter over bedding sheath d = Diameter of armour wire D2 = Diameter over outer sheath

Electrical and physical properties of Multicore PVC Insulated PVC Bedded *SWA PVC sheathed 600/1000 V cables with stranded copper conductors manufactured to SANS 1507-3.

* Where the armouring of cable is used as the earth continuity path, it may be necessary to replace some of the steel wires with tinned copper wires (ECC) or to use a supplementary earth continuity conductor.

Technical Data

1.5mm² Multicore Cables

No of Cores	Electrical Properties					Physical Properties			
	Current Rating			Impedance	Capacitance	Nominal Diameters			Mass
	Ground	Ducts	Air			(mm)			
(A)	(A)	(A)	(Ω/km)	(nF/lm)	D1	d	D2	(kg/km)	
2	29	23	22	14,4782	422	8,1	1,25	13,8	422
3	24	20	19	14,4782	422	8,6	1,25	14,3	456
4	24	20	19	14,4782	422	9,5	1,25	15,1	510
5	21	17	17	14,4782	422	10,3	1,25	15,8	577
6	20	16	16	14,4782	422	11,4	1,25	17,0	613
7	18	15	15	14,4782	422	11,4	1,25	17,0	629
8	17	14	14	14,4782	422	12,6	1,25	18,2	710
10	16	13	13	14,4782	413	14,8	1,25	20,7	837
12	15	12	12	14,4782	413	15,3	1,25	21,2	901
14	14	11	12	14,4782	413	16,2	1,60	22,0	980
19	12	10	11	14,4782	379	19,2	1,60	25,9	1404
24	11	9	10	14,4782	379	22,4	1,60	29,3	1687
27	11	8	10	14,4782	379	22,9	1,60	29,8	1783
30	10	8	9	14,4782	379	23,7	1,60	30,7	1867
37	9	7	9	14,4782	379	25,9	1,60	32,8	2153

2.5mm² Multicore Cables

No of Cores	Electrical Properties					Physical Properties			
	Current Rating			Impedance	Capacitance	Nominal Diameters			Mass
	Ground	Ducts	Air			(mm)			
(A)	(A)	(A)	(Ω/km)	(nF/lm)	D1	d	D2	(kg/km)	
2	37	31	31	8,8668	487	9,0	1,25	14,7	475
3	32	26	26	8,8668	487	9,6	1,25	15,2	524
4	32	26	26	8,8668	487	10,6	1,25	16,2	606
5	27	22	22	8,8668	487	11,5	1,25	17	690
6	25	20	21	8,8668	487	12,7	1,25	18,5	737
7	24	19	20	8,8668	487	12,7	1,25	18,5	756
8	22	18	19	8,8668	487	13,0	1,25	18,9	806
10	21	17	18	8,8668	477	16,6	1,60	22,5	1000
12	19	15	17	8,8668	434	18,1	1,60	24,8	1306
14	18	14	16	8,8668	434	19,0	1,60	25,7	1421
19	16	13	14	8,8668	434	21,4	1,60	28,1	1695
24	14	12	13	8,8668	434	25,1	1,60	32,0	2053
27	14	11	13	8,8668	434	25,7	1,60	32,6	2181
30	13	10	12	8,8668	434	26,6	2,00	34,8	2594
37	12	10	11	8,8668	410	29,4	2,00	37,6	3011

PVC Current Ratings are Based on the following Environmental Parameters

Maximum Sustained Conductor Temperature	Ground Temperature	Ambient Air Temperature (Free Air Shaded)	Ground Thermal Resistivity	Depth of Laying to top of Cable or Duct
70°C	25°C	30°C	1,2 K.m/W	500mm

Technical Data

4mm² Multicore Cables

No of Cores	Electrical Properties					Physical Properties			
	Current Rating			Impedance	Capacitance	Nominal Diameters			Mass
	Ground	Ducts	Air			(mm)			
(A)	(A)	(A)	(Ω/km)	(nF/lm)	D1	d	D2	(kg/km)	
2	50	41	41	5,5171	487	10,2	1,25	16,3	597
3	42	34	35	5,5171	487	10,9	1,25	17,0	669
4	42	34	35	5,5171	487	12,3	1,25	18,4	764
5	35	28	29	5,5171	487	13,6	1,25	19,7	884
6	33	27	28	5,5171	487	14,9	1,25	21,0	961
7	31	25	26	5,5171	487	14,9	1,25	21,0	986
8	29	24	25	5,5171	487	18,1	1,25	24,2	1079
10	27	22	24	5,5171	477	20,2	1,60	27,0	1251
12	25	20	22	5,5171	434	20,4	1,60	28,2	1211
14	23	19	21	5,5171	434	22,8	1,60	29,6	1885
19	21	16	19	5,5171	434	24,9	2,00	32,5	2282

6mm² Multicore Cables

No of Cores	Electrical Properties					Physical Properties			
	Current Rating			Impedance	Capacitance	Nominal Diameters			Mass
	Ground	Ducts	Air			(mm)			
(A)	(A)	(A)	(Ω/km)	(nF/lm)	D1	d	D2	(kg/km)	
2	62	51	53	3,6868	556	11,8	1,25	17,4	684
3	53	43	45	3,6868	556	12,6	1,25	18,4	791
4	53	43	45	3,6868	556	13,9	1,25	19,7	911

Sustained Current Rating Factors for Non-Standard Conditions for both PVDAC and Multicore LV PVC Cables

Maximum Conductor Temperature (°C)	Ground Temperature (°C)				Maximum Conductor Temperature (°C)	Air Temperature (°C)			
	25	30	35	40		30	35	40	45
70	1,00	0,94	0,88	0,82	70	1,00	0,94	0,87	0,79

Depth of Laying (mm)	Direct in Ground
500	1,00
800	0,96
1000	0,94
1250	0,92
1500	0,90

Current Rating Factors for Grouping of Multicore Cables Installed Horizontally in Air

No of Cables in group	Direct in ground				
	Axial Spacing (mm)				
	Touching	150	300	450	600
2	0,81	0,87	0,91	0,93	0,94
3	0,70	0,78	0,84	0,87	0,90
4	0,63	0,74	0,81	0,86	0,89
5	0,59	0,70	0,78	0,83	0,87
6	0,55	0,67	0,76	0,82	0,86

No of Cables	2	3	5	6	9
Condition	Derating Factor				
Cables touching	0,86	0,81	0,75	0,74	0,72
Clearance D* between cables	0,91	0,89	0,87	0,87	0,85

* Note: - D is overall diameter of one cable