

Electrodac

Aerial Bundle Conductor (ABC)

600/1000V Cable System



**CABLE
YOU CAN
TRUST**

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ABERDARE
CABLES

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600/1000V Low Voltage Cable System



SELF SUPPORTING



SUPPORTING CORE

Cable Description

Self-supporting system consists of four cores of hard-drawn stranded and compacted aluminum conductors of equal cross-section and insulated with carbon-loaded XLPE to ensure UV protection. All cores strained equally. Supporting-core system consists of three phase cores of hard-drawn stranded compacted aluminium conductors insulated with carbon-loaded XLPE laid up around an aluminium-alloy supporting core insulated with carbon loaded XLPE to ensure UV protection. Additional sub-conductors optional in both self-supporting and supporting-core systems.

Application Information

- Economical
- Flexible
- Aesthetically pleasing
- Safe
- Vandal proof
- Durable
- Adaptable

Properties

- Specification : SANS 1418 Part 1 and 2
 Temperature Range : -10°C to 80°C
 Voltage Rating : 600/1000V
 Core Identification : Phase 1,2 and 3 indented, • Non strain-bearing neutral, 2 longitudinal ribs on opposite surfaces 0,5mm x 1,00mm • Strain-bearing (supporting) neutral, 1 longitudinal rib on one surface 0,5mm x 1,00mm
 Packaging : Available on 500 metre wooden drums

Technical Data

Electrical Properties - Self Supporting System

Product Code	Cable Size	Current Rating (Note 1)	Short Circuit Rating (Note 2)	Conductor Resistance @ 20°C	Conductor Resistance (ac) @ 80°	Induction Reactance @ 50Hz	Impedance (Z) @ 50Hz @ 80°C
	mm ²	(A)	kA	(Ω/km)	(Ω/km)	(Ω/km)	(Ω/km)
	25	105	2,3	1,200	1,490	0,096	1,493
	35	144	3,2	0,868	1,078	0,096	1,082
	50	183	4,6	0,641	0,796	0,090	0,801
	70	228	6,4	0,443	0,550	0,089	0,557
	95	277	8,5	0,320	0,397	0,086	0,406
	120	322	11,0	0,253	0,314	0,084	0,325
	150	350	13,8	0,206	0,256	0,082	0,269

Electrical Properties - Supporting Core System

Product Code	Cable Size	Current Rating (Note 1)	Short Circuit Rating (Note 2)	Conductor Resistance @ 20°C	Conductor Resistance (ac) @ 80°	Supporting Core Size	Induction Reactance @ 50Hz	Impedance (Z) @ 50Hz @ 80°C
	mm ²	(A)	kA	(Ω/km)	(Ω/km)	mm ²	(Ω/km)	(Ω/km)
	25	105	2,3	1,200	1,490	54,6	0,101	1,493
	35	144	3,2	0,868	1,078	54,6	0,097	1,082
	50	183	4,6	0,641	0,796	54,6	0,089	0,801
	70	228	6,4	0,443	0,550	54,6	0,086	0,557
	95	277	8,5	0,320	0,397	54,6	0,081	0,405
	120	322	11,0	0,253	0,314	70	0,079	0,324
	150	350	13,8	0,206	0,256	95	0,079	0,268

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- NOTES:** 1. Continuous current ratings are given for ambient temperature of 35 °C, and maximum conductor temperature of 80 °C. For other ambient temperatures use adjoining rating factors
 2. Short circuit ratings of 1 second duration, for a final conductor temperature of 130 °C.

Temp °C	25	30	35	40	45
Factor	1.11	1.05	1.00	0.94	0.88

Technical Data

Mechanical Properties - Self Supporting System

Product Code	Cable Size	Conductor Diameter		Core Diameter		Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load
		min	max	min	max			
	mm ²	(mm)		(mm)		(mm)	(kg/km)	(kN)
	25	5,6	6,5	8,4	9,6	25	400	5
	35	6,6	7,5	9,8	11,1	27	540	7
	50	7,7	8,6	10,9	12,3	29	697	9
	70	9,3	10,2	12,9	14,3	33	982	14
	95	11,0	12,0	14,6	16,2	37	1302	19
	120	12,5	13,5	16,1	17,5	41	1470	24
	150	13,9	15,0	17,5	19,2	45	2011	30
Above Plus 25mm² Auxiliary Core								
	25	N/A	N/A	N/A	N/A	25	505	N/A
	35					32	645	
	50					34	802	
	70					38	1087	
	95					42	1407	
	120					44	1575	
	150					48	2116	

Mechanical Properties - Supporting Core System

Product Code	Cable Size	Conductor Diameter		Core Diameter		Supporting Core Size	Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load
		min	max	min	max				
	mm ²	(mm)		(mm)		(mm)	(kg/km)	(kN)	
	25	5,6	6,5	8,4	9,6	54,6	26	507	6
	35	6,6	7,5	9,8	11,1	54,6	28	612	6
	50	7,7	8,6	10,9	12,3	54,6	32	730	6
	70	9,3	10,2	12,9	14,3	54,6	34	944	6
	95	11,0	12,0	14,6	16,2	54,6	38	1183	6
	120	12,5	13,5	16,1	17,5	70,0	40	1600	8
	150	13,9	15,0	17,5	19,2	95,0	44	1870	13
Above Plus 25mm² Auxiliary Core									
	25	N/A	N/A	N/A	N/A	N/A	32	612	N/A
	35						34	717	
	50						36	835	
	70						38	1049	
	95						42	1288	
	120						50	1705	
	150						56	1975	

Quality and reliability backed by Aberdare

All cable manufactured by Aberdare Cables are covered by warranty for a period of 3 years. Please review our Terms and Conditions of Sale for further details.

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Notice to the user of Electric Cable products manufactured by Aberdare Cables:

- **“WARNING: Electrical equipment (including cable) and installations which form part of a facility, whether fixed, mobile or moveable are by nature inherently dangerous when energized with electrical power as contact with un-insulated or damaged components of such a facility may result in injury, loss of life and damage to property. Only qualified persons should attend to the installation of such electrical equipment, the maintenance thereof, and the repair of any faulty facilities which have an electrical component.”**
- Selection and Installation of the product must be carried out as per the applicable compulsory specifications by appropriately qualified persons and certified by a competent person so authorized by law prior to being put into service. All fixed electrical Low Voltage installations must have a valid Certificate of Compliance (COC)
- Low voltage electrical installations up to 600/1000V must conform to the compulsory specification SANS 10142-1 “The Wiring of Premises Part 1: Low voltage installations”
- SA Legislation determines that the User or Lessor is responsible for the safety of the electrical installation.
- All Medium Voltage installations above 1 kV must conform to the specification SANS 10198 “The Selection, Handling and installation of electric power cables of rating not exceeding 33 kV”; and where applicable SABS 10142-2 “The wiring of premises Part 2: Medium voltage installations above 1 kV a.c. and not exceeding 22kV a.c. and up to and including 3 000 kW installed capacity”.
- The following **Compulsory Safety Standards** are applicable to Electric Cables manufactured, imported and used in South Africa and no product may be used which does not comply to the applicable standard:
 - (VC 8075) SANS 1507: Electric Cables with solid dielectric insulation for fixed installations (300/500 V to 1900/3300 V)
 - (VC 8077) SANS 1339: Electric Cables Cross linked Polyethylene (XLPE) insulated cables for rated voltages 3,8/6,6 kV to 19/33 kV
 - (VC 8077) SANS 97: Electric Cables Impregnated paper insulated metal sheathed cables for rated voltages 3,3/3,3 kV to 19/33 kV
 - (VC8006) SANS 1574: Electric Flexible Cables with solid dielectric insulation.
- All cables manufactured to a compulsory safety standard must be clearly marked with the applicable SANS standard number as well as the Manufacturer's name.
- Aberdare Cables manufactures all Electric Cables made to Compulsory standards under the SABS Mark scheme. Products manufactured under the SABS mark scheme carries the wording “SABS” to show that the manufacturer is a licensed Mark Holder. The SABS Mark gives the user the assurance that the South African Bureau of Standards monitors the quality of the products which carries this mark and verifies the quality system used by Aberdare Cables to manufacture these products, on an ongoing basis.
- Compulsory specifications (VC's) may be downloaded for free from the SABS website www.sabs.co.za.
- The user of electric cable products has the right to take up any issue of concern with the **National Regulator of Compulsory Specifications at +27(0)12 428 5000**

POSSIBLE SPECIFICATION CHANGES: Aberdare's policy of continuous product improvement may result in changes to the finished product, the parameters of which may differ from the published parameters in this brochure. Aberdare reserves the right to change product specifications from time to time to effect improvements and/or enhancements and accepts no liability arising from any differences between the published parameters of this brochure and the finished product, unless by prior written agreement.

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Electrical Accessories

