

Aerial Bundle Conductor (ABC) Cable



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.

Installation Information

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

Cable Size	Current Rating (Note 1)	Short Circuit Rating (Note 2)	Conductor Resistance @ 20°C	Conductor Resistance (ac) @ 80°C	Self Supporting System		Supporting Core System		
					Induction Reactance @ 50Hz	Impedance (z) @ 50Hz at 80°C	Supporting Core Size	Induction Reactance @ 50Hz	Impedance (z) @ 50Hz at 80°C
mm ²	(A)	kA	(Ω/km)	(Ω/km)	(Ω/km)	(Ω/km)	mm ²	(Ω/km)	(Ω/km)
25	105	2,3	1,200	1,490	0,096	1,493	54,6	0,101	1,493
35	144	3,2	0,868	1,078	0,096	1,082	54,6	0,097	1,082
50	183	4,6	0,641	0,796	0,090	0,801	54,6	0,089	0,801
70	228	6,4	0,443	0,550	0,089	0,557	54,6	0,086	0,557
95	277	8,5	0,320	0,397	0,086	0,406	54,6	0,081	0,405
120	322	11,0	0,253	0,314	0,084	0,325	70	0,079	0,324
150	350	13,8	0,206	0,256	0,082	0,269	95	0,079	0,268

- 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

Mechanical Properties

Cable Size	Conductor Diameter		Core Diameter		Self Supporting System			Supporting Core System			
	Min	Max	Min	Max	Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load	Supporting Core Size	Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load
Phase Cores	mm		mm		mm	kg/km	kN	mm ²	mm	kg/km	kN
mm ²											
25	5,6	6,5	8,4	9,6	25	400	5	54,6	26	507	6
35	6,6	7,5	9,8	11,1	27	540	7	54,6	28	612	6
50	7,7	8,6	10,9	12,3	29	697	9	54,6	32	730	6
70	9,3	10,2	12,9	14,3	33	982	14	54,6	34	944	6
95	11,0	12,0	14,6	16,2	37	1302	19	54,6	38	1183	6
120	12,5	13,5	16,1	17,5	41	1470	24	70,0	40	1600	8
150	13,9	15,0	17,5	19,2	45	2011	30	95,0	44	1870	13

Above Plus 25mm² Auxiliary Core

25	N/A	N/A	N/A	N/A	25	505	N/A	N/A	32	612	N/A
35					32	645			34	717	
50					34	802			36	835	
70					38	1087			38	1049	
95					42	1407			42	1288	
120					44	1575			50	1705	
150					48	2116			56	1975	