

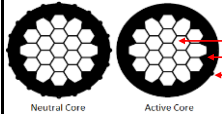


Australia Pacific Electric Cables Pty Ltd
ABN 23 084 442 743

Your first choice for Quality Australian
cables and Excellent service.

Cables Technical Specification - ABC (Aerial Bundled Cables 2 Cores) Aluminium Cl2 Power Cables XLPE (X90UV) Insulated AS/NZS 3560.1

* Cable drawing



Stranded compacted circular aluminium class 2
Weatherability X90UV (min 2% carbon black added)
Rib

Cable Configuration:

AI Class 2/X90UV 0.6/1kV

Cable Construction:

Conductor Material: Compacted aluminium Class 2 to AS/NZS 1125
Insulation: Weatherability X90UV (min 2% carbon black added)

Technical data

Item Description	Units	Average Values				
Product Code	-	ABC016A02	ABC025A02	ABC035A02	ABC050A02	ABC095A02
Number of Cores	-	2 Cores (2C)				
Number of ribs	Active core	-	1	1	1	1
	Neutral core	-	10	12	14	16
Active / Neutral Cores	Conductor Cross Section Area (CSA)	mm ²	16	25	35	50
	Number of wires in conductor	mm	7	7	7	7
	Maximum Diameter of Wires	mm	1.70	2.20	2.58	2.96
	Diameter of conductor (minimum)	mm	4.5	5.8	6.8	8.0
	Diameter of conductor (maximum)	mm	4.8	6.1	7.2	8.4
	Maximum thickness of insulation at any point (excluding ribs)	mm	1.9	1.9	1.9	2.1
	* Minimum average thickness of insulation (excluding ribs)	mm	1.3	1.3	1.3	1.5
	* Minimum thickness of insulation at any point	mm	1.07	1.07	1.07	1.25
	Maximum diameter of core (excluding ribs)	mm	7.9	9.2	10.3	11.9
	Maximum laid-up cores diameter	mm	15.8	18.4	20.6	23.8
Maximum Overall Diameter		mm	15.8	18.4	20.6	23.8
Approximate Cable Mass (±10%)		kg/km	140	200	260	350
Height of active core numbering		mm	≥ 3	≥ 3	≥ 3	≥ 5
Maximum d.c. resistance of conductor in the cable at 20°C		Ω/km	1.91	1.20	0.868	0.641
Maximum a.c. resistance of conductor in cable at 80°C		Ω/km	2.37	1.49	1.08	0.796
Positive sequence reactance of cable at 50Hz		Ω/km	0.106	0.102	0.0982	0.0924
Maximum continuous current carrying capacity per phase	Still air	A	49	64	78	94
	Wind speed of 1m/s	A	78	103	125	151
	Wind speed of 2m/s	A	91	121	147	178
Minimum breaking load of conductor		kN	2.2	3.5	4.9	7.0
Minimum breaking load of cable		kN	4.4	7.0	9.8	14.0
Minimum bending radius of single core		mm	30	40	40	50
Minimum bending radius of cable		mm	95	110	125	145
Highest value for maximum working tension		kN	1.23	1.96	2.74	3.92
Highest value for everyday tension		kN	0.79	1.26	1.76	2.52
Voltage drop at 50 Hz 80°C		mV/A.m	4.75	2.99	2.16	1.60
A.C. resistance at 50 Hz 90°C		Ω/km	2.45	1.54	1.11	0.822
Remark						

Core Identification:

Active core: 1 ONE (with 1 rib)
Neutral core: Evenly spaced ribs around

Colour Identification:

Insulation: Black

Operating Temperature:

Maximum Continuous Conductor Temperature: 80°C
Emergency Conductor Temperature: 105°C
Short Circuit (5 secs): 250°C
Coefficient of linear thermal expansion: 23 x 10⁻⁶ °C

Insulation Markings:

Active Core: Numerals & letters (example: 1 ONE) and meter marking

Polyethylene Terephthalate Tape (non-hygroscopic) Markings (on active core 1):

APEC YEAR X90UV ELECTRIC AERIAL CABLE 0.6/1 KV SIZE SQMM AL AS/NZS 5000.1

Standard Compliance:

AS/NZS 5000.1 Part 1: For working voltages up to and including 0.6/1 (1.2kV)
AS/NZS 3808 Insulation and sheathing materials for electric cables
AS/NZS 3560.1:2000 Electric cables - Cross-linked polyethylene insulated - Aerial bundled - For working voltages up to and including 0.6/1 (1.2kV)
AS/NZS 3008.1.1:2009 Electrical installations - Selection of cables - Cables for alternating voltages up to and including 0.6/1 kV - Typical Australian installation conditions
AS 2848.1 Aluminium and aluminium alloys - Compositions and designations - Wrought products
AS/NZS 1660 Test methods for electric cables, cords and conductors
AS 1531 Conductors - Bare overhead - Aluminium and aluminium alloy
AS/NZS 1125 Conductors in insulated electric cables and flexible cords
RoHS Restriction of Hazardous Substances

BRISBANE P 07 3802 3488 F 07 3803 1955 89 Platinum St Crestmead QLD
BRISBANE SALES P 07 3802 3451
SYDNEY P 02 9409 1580
MELBOURNE P 03 9445 1188 F 03 9445 9333 188 Holt Pde Thomastown VIC
PERTH P 08 9350 1300 F 08 9350 1333 638 Casella Pl Kewdale WA



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