ELECTRICAL DATA

AUSTRALIA PACIFIC ELECTRIC CABLES

MAXIMUM D.C. RESISTANCE VALUES
TABLE 1a

CLASS 2 STRANDED COPPER CONDUCTORS	*Solid Conductor
Nominal Conductor area mm²	**Max. D.C. Resistance at 20°c Ω/km Single Core & Multicore Plain Annealed Copper**
0.75	25.3
*1.0	18.1
1.5	13.6
2.5	7.41
4.0	4.61
6.0	3.08
10	1.83
16	1.15
25	0.727
35	0.524
50	0.387
70	0.268
95	0.193
120	0.1530
150	0.124
185	0.0991
240	0.0754
300	0.0601
400	0.047
500	0.0366
630	0.0283

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MAXIMUM D.C. RESISTANCE VALUES
TABLE 1b

CLASS 5 FLEXIBLE COPPER SINGLE & MULTICORE

Nominal Conductor area mm²	Max. D.C. Resistance at 20°c Ω/km Plain Annealed Copper
10	1.98
16	1.21
25	0.78
35	0.554
50	0.386
70	0.272
95	0.206
120	0.161
150	0.129
185	0.106
240	0.0801
300	0.0641
400	0.0486
500	0.0384
630	0.0287

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MAXIMUM D.C. RESISTANCE VALUES
TABLE 1c

STRANDED ALUMINIUM SINGLE & MULTICORE

Nominal Conductor area mm²	Max. D.C. Resistance at 20°c Ω/km Single core Stranded Aluminium Conductors
4	7.41
6	4.61
10	3.08
16	1.91
25	1.2
35	0.868
50	0.641
70	0.443
95	0.32
120	0.253
150	0.206
185	0.164
240	0.125
300	0.100
400	0.0778
500	0.0605*
630	0.0469*

*Resistance values are applicable to single-core cables.
For multicore cables, these resistance values should be multiplied by 1.02.

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BENDING RADIUS

Recommended Minimum Bending Radius

Cable Description	During Installation	Fixed Location (installed)
Overall cable diameter ≤ 25mm	6D	4D
Overall cable diameter over 25mm	9D	6D
Flexible cables of all diameters	6D	4D
Solid, Compacted or Sector shaped Aluminium conductors	12D	8D
Mica Glass taped cables	12D	8D
Armoured (SWA) cables	18D	12D
HDPE sheathed cables	25D	15D
Nylon jacketed cables	30D	20D
Where D= overall diameter of cable in mm		

The above table covers the recommended minimum bending radius for single core or multicore cables for working voltages up to and including 0.6/1KV.
When planning a cable installation, care should be taken to allow for as large a bending radius as possible, as excessive bending can be detrimental to cable life expectancy.