







POWER RATING

Table 1-1 Current Carrying Capacities of Multi-Cores 0.6/1kV Sheathed cable with TP-90 insulation at Ambient Air Temperature 40°C (referenced to AS/NZS 3008.1.1:1998 Tables 10 + 13) – FIXED INSTALLATION

Conductor Size	Unenclosed				Enclosed	
	Spaced		Touching		Non-metallic wiring enclosure in air	
						
mm ²	A	A	A	A	A	A
1.0	18	16	17	14	13	12
1.5	24	20	22	19	17	16
2.5	34	28	31	26	24	22
4.0	45	38	42	35	33	29
6	57	48	53	45	42	38
10	78	66	73	62	59	53
16	105	88	97	83	79	70
25	140	120	130	110	110	98
35	175	145	160	135	130	115
50	210	180	195	170	160	140
70	270	230	250	215	200	175









Note : Derating factors may apply subject to laying conditions . Pls refer :

- i. Table 1-3 Other ambient temperatures
- ii. Table 1-4 Bunched circuits in air or wiring enclosures
- iii. Table 1-6 for circuits of single circuit fixed to unperforated cable tray

Table 1-2A Current Carrying Capacities of Multi-Core 0.6/1kV Sheathed cable with TP-90 insulation at Ambient Air Temperature 25°C (reference to AS/NZS 3008.1.1:1998 Tables 16) – FLEXING

Conductor Size	Current-carrying capacity
mm ²	A
1.0	10
1.5	15
2.5	20
4.0	25

Table 1-2B Current Carrying Capacities of Multi-Core 0.6/1kV Sheathed cable with TP-90 insulation at Ambient Air Temperature 40°C (reference to AS/NZS 3008.1.1:1998 Tables 15) – FLEXING

Conductor Size	Two-core		Three- and Four-core	
	Protected from sun	Exposed to Sun	Protected from sun	Exposed to Sun
	 	 	 	 
mm ²	A	A	A	A
6	54	43	46	37
10	74	58	63	50
16	99	77	85	66
25	135	105	115	88
35	165	125	140	105
50	195	145	165	125
70	250	185	215	155

Notes

- 1) Where layers of flexible cable are accommodated on a drum, multiply the values by a appropriate factor in Table 1-5.



Table 1-3 Derating Factors – for variations in ambient temperature for cables in air (reference to AS/NZS 3008.1.1:1998 Table 27(1))

Ambient Temperature in °C	Conductor Temperature in °C		
	75	80	90
15	1.35	1.31	1.26
20	1.28	1.25	1.20
25	1.21	1.19	1.15
30	1.14	1.12	1.10
35	1.07	1.06	1.05
40	1.00	1.00	1.00
45	0.91	0.92	0.94
50	0.82	0.84	0.88
55	0.72	0.76	0.81
60	0.60	0.66	0.73
65	0.49	0.56	0.65
70	0.37	0.45	0.57
75	—	0.27	0.47
80	—	—	0.34
85	—	—	0.19

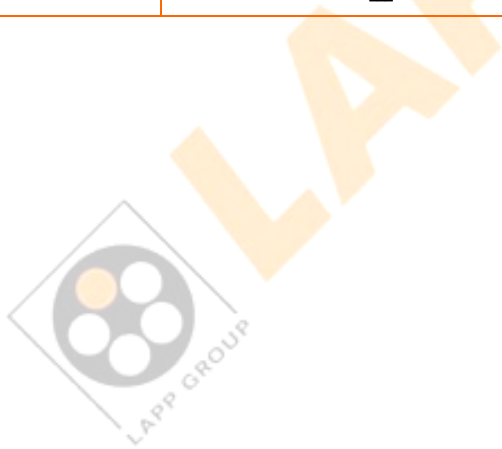


Table 1-4 Derating Factors - for bunched circuits of single core cables in air or in wiring enclosures (reference to AS/NZS 3008.1.1:1998 Table 22)

Arrangement of cables		Correction Factors														
		Number of Circuits														
		1	2	3	4	5	6	7	8	9	10	12	14	16	18	20 or more
Bunched in air		1.00	0.87	0.75	0.72	0.70	0.67	—	—	—	—	—	—	—	—	—
Bunched on a surface or enclosed		1.00	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38
Single layer on wall or floor	Touching	1.00	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70	0.70	0.70	0.70	0.70	0.70	0.70
	Spaced	1.00	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single layer on wall under ceiling	Touching	0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62	0.61	0.61	0.61	0.61	0.61	0.61	0.61
	Spaced	0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85


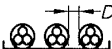

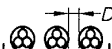

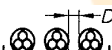

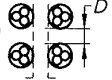
Table 1-5 Derating Factors – of spooled/winded cables (in accordance to AS/NZS 2008.1.1:1998 Table 15 & 16) For conductor sizes 1.0mm² to 4.0mm²

Number of layers	1	2	3	4
Derating Factor	0.76	0.58	0.47	0.40

For conductor sizes 6mm² to 70mm²

Number of layers	1	2	3	4
Derating Factor	0.85	0.65	0.45	0.35

Table 1-6 Correction Factors - for circuits of multi-core cables installed in trays, racks, cleats, or other supports in air (reference to AS/NZS 3008.1.1:1998 Table 24)

Installation	Diagram	Number of tiers or rows of cable supports	Correction Factors					
			Number of circuits per tier or row					
			1	2	3	4	5	6
Unperforated trays		1	0.97	0.85	0.78	0.75	0.71	0.68
		2	0.97	0.84	0.76	0.73	0.68	0.63
		3	0.97	0.83	0.75	0.72	0.66	0.61
Perforated trays		1	0.97	0.96	0.94	0.93	0.90	—
		2	0.97	0.95	0.92	0.90	0.86	—
		3	0.97	0.94	0.91	0.89	0.84	—
Unperforated trays		1	1.00	0.88	0.82	0.78	0.76	0.73
		2	1.00	0.87	0.80	0.76	0.73	0.68
		3	1.00	0.86	0.79	0.75	0.71	0.66
Ladder supports. Racks and cleats		1	1.00	1.00	0.98	0.95	0.91	—
		2	1.00	0.99	0.96	0.92	0.87	—
		3	1.00	0.98	0.95	0.91	0.85	—
Vertical perforated trays		1	1.00	0.87	0.82	0.80	0.79	0.78
		2	1.00	0.86	0.80	0.78	0.76	0.73
		3	1.00	0.85	0.79	0.76	0.73	0.70
Unperforated trays		1	1.00	1.00	1.00	1.00	1.00	—
		2	1.00	0.99	0.98	0.97	0.96	—
		3	1.00	0.98	0.97	0.96	0.93	—
Perforated trays		1	1.00	0.88	0.82	0.77	0.73	0.72
		2	1.00	0.88	0.81	0.76	0.72	0.70
Ladder supports		1	1.00	0.91	0.89	0.88	0.87	—
		2	1.00	0.91	0.88	0.87	0.86	—

- Notes :**
- 1) The vertical spacing of horizontal trays and ladder supports shall be not less than 300mm
 - 2) The horizontal spacing of vertical trays mounted back to back shall be not less than 230mm