

【Allowable ampacity】

Allowable ampacity (A) general wiring table 310.15 (B) (16) (17) Allowable ampacity 30℃

Size	Single insulated wires		three of them (b)	
	75℃	90℃	75℃	90℃
18 AWG	—	18	—	14
16 AWG	—	24	—	18
14 AWG	30	35	20	25
12 AWG	35	40	25	30
10 AWG	50	55	35	40
8 AWG	70	80	50	55
6 AWG	95	105	65	75
4 AWG	125	140	85	95
2 AWG	170	190	115	130
1 AWG	195	220	130	145
1/0 AWG	230	260	150	170
2/0 AWG	265	300	175	195
3/0 AWG	310	350	200	225
4/0 AWG	360	405	230	260
300MCM	445	500	285	320
400MCM	545	615	335	380
500MCM	620	700	380	430

NFPA79 table 12.5.1 Allowable ampacity 30℃

Size	three of them (b)	
	75℃	90℃
30 AWG	0.5	0.5
28 AWG	0.8	0.8
26 AWG	1	1
24 AWG	2	2
22 AWG	3	3
20 AWG	5	5
18 AWG	7	14
16 AWG	10	18
14 AWG	20	25
12 AWG	25	30
10 AWG	35	40
8 AWG	50	55
6 AWG	65	75
4 AWG	85	95
2 AWG	115	130
1 AWG	130	150
1/0 AWG	150	170
2/0 AWG	175	195
3/0 AWG	200	225
4/0 AWG	230	260
300 MCM	285	320
400 MCM	335	380
500 MCM	380	430

【Ambient temperature correction factor】

Extract it than table 310.15 (B) (2) (a)

Ambient temperature(℃)	Temperature rating of conductor	
	75℃	90℃
10以下	1.20	1.15
11～15	1.15	1.12
16～20	1.11	1.08
21～25	1.05	1.04
26～30	1.00	1.00
31～35	0.94	0.96
36～40	0.88	0.91
41～45	0.82	0.87
46～50	0.75	0.82
51～55	0.67	0.76
56～60	0.58	0.71
61～65	0.47	0.65
66～70	0.33	0.58
71～75	—	0.50
76～80	—	0.41
81～85	—	0.29

NFPA79 table 12.5.5 (a)

Ambient temperature(℃)	Temperature rating	
	75℃	90℃
21～25	1.05	1.04
26～30	1	1
31～35	0.94	0.96
36～40	0.88	0.91
41～45	0.82	0.87
46～50	0.75	0.82
51～55	0.67	0.76
56～60	0.58	0.71
61～70	0.33	0.58
71～80	—	0.41

【Current reduction rate that adapt wiring road or more than 4 lines cable's conductor】

Extract it than table 310.15 (B) (3) (a)

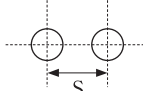
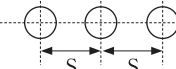
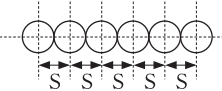
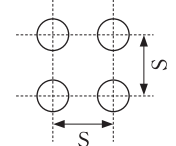
Number of conductor	Current reduction rate (%) as above table (b)
4～6	80
7～9	70
10～20	50
21～30	45
31～40	40
41以上	35

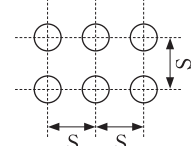
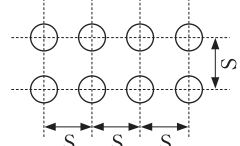
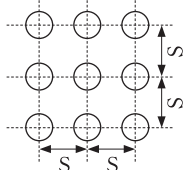
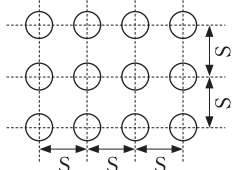
NFPA79 Extract it than table 12.5.5 (b)

Number of conductor	Current reduction rate (%) as above table (b)
4～6	80
7～9	70
10～20	50
21～30	45
31～40	40
41以上	35

【Adjustment factor at many articles in the air construction】

Adjustment factor adapted 1 to 12 line at many articles in the air construction Extract it than JCS 0168-1 : 2004

Line number	Adjustment factor of current η_o				
	1	2	3	6	4
Layout					
Space of center					
S= d _s	1.00	0.85	0.80	0.70	0.70
S=2d _s		0.95	0.95	0.90	0.90
S=3d _s		1.00	1.00	0.95	0.95

Line number	Adjustment factor of current η_o			
	6	8	9	12
Layout				
Space of center				
S= d _s	0.60	—	—	—
S=2d _s	0.90	0.85	0.80	0.80
S=3d _s	0.95	0.90	0.85	0.85

Adjustment factor at many articles in the air construction of other than above table

		Adjustment factor of current η_o										
		1	2					3				
Space of center layout	Step (n)											
	Column (m)	7～20	4	5	6	7	8～20	3	4	5	6	7
S= d _s		0.70	0.60	0.56	0.53	0.51	0.50	0.48	0.41	0.37	0.34	0.32
S=2d _s		0.80	—	0.73	0.72	0.71	0.70	—	—	0.68	0.66	0.65

		Adjustment factor of current η_o					
		3					
Space of center layout	Step (n)						
	Column (m)	8	9～10	11～12	13～15	16～19	20
S= d _s		0.31	0.30	0.30	0.30	0.30	0.30
S=2d _s		0.65	0.64	0.63	0.62	0.61	0.60

〈Product color notation〉

Color	Abbreviation
Black	BK
White	WT
Red	RD
Green	GN
Yellow	YL
Brown	BN
Blue	BL
Gray	GY
Orange	OR
Violet	VT
Yellow/Green	Y/G
Beige	BG
Light Blue	LB, BU
Light Gray	LG
Dark Blue	DB
Dark Gray	DG