

FURUKAWA ELECTRIC INDUSTRIAL CABLE CO., LTD
 CABLE ENGINEERING SECTION
 ENGINEERING DEPARTMENT
 ENGINEERING DEVELOPMENT DIVISION

Current-carrying capacities for continuous service

Current rating available for use in the general case for continuous service are shown in Table1.
 This case is applicable to both unarmoured and armoured cable laid in free air as group of 6 bunched together. In case of 7 cables or more is correction factor of 0.85.

Table1 current carrying capacities in continuous service

Nominal area mm ²	Single core A	2-core A	3- or 4-core A
1	18	15	13
1.5	23	20	16
2.5	30	26	21
4	40	34	28
6	52	44	36
10	72	61	50
16	96	82	67
25	127	108	89
35	157	133	110
50	196	167	137
70	242	206	169
95	293	249	205
120	339	288	237
150	389	331	273
185	444	377	311
240	522	444	366
300	601	511	420
*conductor temperature of 90°C *ambient air temperature of 45°C			

Correction factors for various ambient air temperatures are given table2.

Table2 Correction factors for various ambient air temperature

Item	Maximum conductor temperature: 90°C									
	35	40	45	50	55	60	65	70	75	80
Correction factor	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

Current rate of exceeding 4-core cable are given table2.

Table2 Exceeding 4-core cable of current rate (A)

No. of cores	1mm ²	1.5mm ²	2.5mm ²
5	11	13	18
7	9	12	16
9	9	11	14
12	8	10	13
14	7	10	12
16	7	9	12
19	7	9	11
24	6	8	10
30	6	7	10
37	5	7	9
44	5	7	8
Methods of calculation $I = \frac{I_1}{\sqrt[3]{N}}$ <div style="display: flex; justify-content: space-between;"> <div> I_1: Current for single core cable N: Number of cores </div> </div>			