

R



TABLE 4F1A 60°C thermosetting insulated flexible cables with sheath, non-armoured (Copper Conductors)

CURRENT-CARRYING CAPACITY (amperes):

Ambient temperature : 30°C Conductor operating temperature:60°C

Conductor	Cinale alect	Three who	Cinale ab		
cross- sectional area	Single-phase a.c. or d.c.	Single-phase a.c. or d.c.			
	1 two-core cable, with or without protective conductor	1 three-core, four-core or five-core cable	2 single-core cables		
1	2	3	4		
(mm²)	(A)	(A)	(A)		
4 6 10 16	30 39 51 73	27 34 47 63	- - -		
25 35 50 70 95	97 - - - -	83 102 124 158 192	- 140 175 216 258		
120 150 185 240 300	- - - -	222 255 291 343 394	302 347 394 471 541		
400 500 630	- - -		644 738 861		

NOTES:

1. The current ratings tabulated are for cables in free air but may also be used for cables resting on a surface. If the cable is to be wound on a drum on load the ratings should be reduced in accordance with NOTE 2 below and for cables which may be covered, NOTE 3 below

2. Flexible cables wound on reeling drums

The current ratings of cables used on reeling drums are to be reduced by the following factors:

a) Radial type drum ventilated: 85% 1 layer of cable: 85% 2 layers of cable: 65% 3 layers of cable: 45% 4 layers of cable: 35%

A radial type drum is one where spiral layers of cable are accommodated between closely spaced flanges; if fitted with solid flanges the ratings given above should be reduced and the drum is described as non-ventilated. If the flanges have suitable apertures the drum is described as ventilated.

A ventilated cylindrical cable drum is one where layers of cable are accommodated between widely spaced flanges and the drum and end flanges have suitable ventilating apertures

Where cable may be covered over or coiled up whilst on load, or the air movement over the cable restricted, the current rating should be reduced.

It is not possible to specify the amount of reduction but the table of rating facotrs for reeling drums can be used as a guide

VOLTAGE DROP (per ampere per metre) TABLE 4F1B Conductor operating temperature:60°C

Conductor Two-core		Two-core cable, single-phase a.c.		1 three-core,			2 single-core cables, touching				
Cross- Sectional area	cable d.c	sing	le-phase	e a.c.		our-core or five-core cable, three-phase a.c.		d.c.	singl	single-phase a.c.*	
1	2	3		4			5	6			
(mm²)	(mV/A/m)	(mV/A/m)		(mV/A/m)		n)	(mV/A/m)	(mV/A/m)			
4 6 10 16	12 7.8 4.6 2.9		12 7.8 4.6 2.9 10 6.7 4.0 2.5		6.7 4.0		- - - -	- - - -			
		r	х	Z	r	х	z				
25	1.80	1.80	0.175	1.85	1.55	0.150	1.55	-	-	-	-
35 50 70 95	- - -	- - -	- - -	- - -	0.83 0.57	0.150 0.145 0.140 0.135	0.84 0.58	1.31 0.91 0.64 0.49	1.31 0.91 0.64 0.49	0.21 0.21 0.20 0.195	1.32 0.93 0.67 0.53
120 150 185 240	- - -	-	- - -	- - -	0.27 0.22	0.135 0.130 0.130 0.130	0.30 0.26	0.38 0.31 0.25 0.190	0.31 0.25	0.190 0.190 0.190 0.185	0.36 0.32
300 400 500 630	- - -	- - -	- - -	- - -	0.135 - - -	0.125 - - -	0.185 - - -	0.150 0.115 0.090 0.068	0.120	0.180 0.175 0.170 0.170	0.21 0.20

NOTE: * A larger voltage drop will result if the cables are spaced

All tables are reproduced by kind permission of The Institution of Engineering & Technology from IEE Regs, 17th Edition However, it should be noted that in order to apply these tables correctly, reference is required to appendix 4 of the 17th edition of the wiring regualtions which may be obtained from: Institution of Engineering & Technology, Michael Faraday House, Six Hills Way, Stevenage, Hertfordshire, ENGLAND, SG1 2AY.

 SCOTLAND (SOUTH)
 SCOTLAND (NORTH)
 BELGIUM Mechelen
 DENMARK

 Tel:
 0131 333 4400
 Tel:
 01224 897979
 Tel: + 32 1520 6572
 Tel: + 45 3965 6650

 Fax:
 0131 333 1199
 Fax:
 01224 894646
 Fax: + 32 1543 0713
 Fax: + 45 3965 6651

GERMANY Mainz Tel:+1 49 6131 6273874 Fax:+1 49 6131 6273875 HOLLAND USA Houston
Tel: + 31 186 622311 Tel: +1 713 5901100
Fax: + 31 186 626333 Fax: +1 713 7830067