

## Conductor Requirements for ISO 10133 and ISO 13297

This appendix is reproduced from Annex 'A' (normative) of both ISO 10133 and 13297. Both ISOs are supporting Standards to the Recreational Directive. The use of these recommendations can be used to demonstrate compliance to this Directive.

### Current Ratings

Table A1 gives allowable continuous current ratings in amperes determined for an ambient temperature of 30°C and the minimum number of strands for conductors.

**Table A1 - Conductor cross-sectional area, allowable continuous current and stranding.**  
Maximum Current in amps for a single conductor at insulation temperature ratings

Cross sectional Area mm <sup>2</sup>	60°C	70°C	85 to 90°C	105°C	125°C	200°C	Minimum number of strands	
							Type A*	Type B*
0.75	6	10	12	16	20	25	16	
1	8	14	18	20	25	35	16	
1.5	12	18	21	25	30	40	19	26
2.5	17	25	30	35	40	45	19	41
4	22	35	40	45	50	55	19	65
6	29	45	50	60	70	75	19	105
10	40	65	70	90	100	120	19	168
16	54	90	100	130	150	170	37	266
25	71	120	140	170	185	200	49	420
35	87	160	185	210	225	240	127	665
50	105	210	230	270	300	325	127	1064
70	135	265	285	330	360	375	127	1323
95	165	310	330	390	410	430	259	1666
120	190	360	400	450	480	520	418	2107
150	220	380	430	475	520	560	418	2107

**NOTE:** Conductor current ratings may be interpolated for cross sectional areas between those shown in Table A1.

\* Conductors with at least a Type A stranding shall be used for general wiring of craft. Conductors with Type B stranding shall be used for any wiring where frequent flexing is involved during use.

For conductors in engine rooms (60c ambient), the maximum current rating in tableA1 shall be de-rated by the factors:-

Temperature rating of conductor insulation °C	Multiply maximum current from table A1 by
70	0.75
85 to 90	0.82
105	0.86
125	0.89
200	1.0

### BUNDLING (For a.c. only)

When more than three a.c. conductors are bundled together the maximum current ratings in Table A1 shall be de-rated by the factor below:-

Number of conductors bundled	Multiply maximum current from A1 by
4 to 6	0.7
7 to 24	0.6

**NOTE:** De-rating reductions for temperature and building are cumulative where applicable.

Bundling reduction factors are not normally considered necessary for d.c cables in small craft.

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## ENERGY SOLUTIONS

**Energy Solutions**, George Summers Close, Medway City Estate, Rochester, Kent ME2 4EL

**Tel (UK)** : 01634 290772, **Tel (international)** : +44 1634 290772, **Fax (UK)** : 01634 290773, **Fax (International)** : +44 1634 290773

Energy Solutions (UK) Ltd. Registered No. 2904541 Registered Office as above