



## Construction of stranded conductors (in accordance with IEC 60228)



### Scope

This specification specifies the nominal cross-sectional areas, in the range 0,75 mm<sup>2</sup> to 240 mm<sup>2</sup>, for conductors in electric shipboard (power and telecom) cables. The standard does not apply to conductors for telecommunication purposes in land application.

### Terms and definitions

Nominal cross-sectional area value that identifies a particular size of conductor but is not subject to direct measurement.

### Classification

The conductors have been divided into four classes, 1, 2, 5 and 6. Those in classes 1 and 2 are intended for use in cables for fixed installations. Classes 5 and 6 are intended for use in flexible cables and cords but may also be used for fixed installations.

- Class 1: solid conductors
- Class 2: stranded conductors
- Class 5: flexible conductors
- Class 6: flexible conductors which are more flexible than class 5.

### Material

The conductors consist of plain annealed copper.

### Requirements

Class 2: stranded conductors. Resistance and number of strands is determinative.

Class 5: flexible conductors. Resistance and strand diameter is determinative.

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## Conductors (in accordance with IEC 60228)

- Class 2 Stranded Copper conductors (standard)
- Class 2 Sector Shaped conductors (type: svs)
- Smaller cable diameter
- Class 5+ highly flexible conductors (MarineFlex)
- Easy installation
- TKF Chooses to use a much more flexible construction then specified by the IEC60228 Specification

Conductor Size	Class 2 Conductors According to IEC 60228		Class 5 Conductors According to IEC 60228		TKF Class 5+ Conductors According to IEC 60228
	Construction TKF MarineLine Class 2 Cables	Maximum Resistance $\Omega/\text{km}$	Construction regular Class 5 Cables	Maximum Resistance $\Omega/\text{km}$	
0,75	7 x 0,37	24,5	22 x 0,21	26	Construction TKF MarineFlex Cables
1	7 x 0,43	18,1	29 x 0,21	19,5	
1,5	7 x 0,52	12,1	28 x 0,26	13,3	
2,5	7 x 0,67	7,41	48 x 0,26	7,98	
4	7 x 0,85	4,61	48 x 0,31	4,95	
6	7 x 1,04	3,08	72 x 0,31	3,3	
10	7 x 1,35	1,83	72 x 0,41	1,91	
16	7 x 1,7	1,15	114 x 0,41	1,21	
25	7 x 2,13	0,727	180 x 0,41	0,78	
35	19 x 1,53	0,524	252 x 0,41	0,554	
50	19 x 1,78	0,387	360 x 0,41	0,386	627 x 0,3 [19 x (33x0,3)]
70	19 x 2,13	0,268	330 x 0,51	0,272	893 x 0,3 [19 x (47x0,3)]
95	19 x 2,52	0,193	427 x 0,51	0,206	1178 x 0,3 [19 x (62x0,3)]
120	37 x 2,03	0,153	551 x 0,51	0,161	1517 x 0,3 [37 x (41x0,3)]
150	37 x 2,25	0,124	684 x 0,51	0,129	1887 x 0,3 [37 x (51x0,3)]
185	37 x 2,52	0,0991	846 x 0,51	0,106	2294 x 0,3 [37 x (62x0,3)]
240	51 x 2,25	0,0754	1150 x 0,51	0,0801	3111 x 0,3 [61 x (51x0,3)]

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