

Rigid copper bars



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Insulated flexible copper bars

Busbar supports

Mechanical systems software

Distribution blocks

Power terminals

BLOCAL aluminium systems

Mounting rails and profiles

Functions

The SOCOMEC copper bars make it possible to carry out main or distribution busbars.

The range

Solid bars

- Thickness: 4, 5 and 10 mm.
- Width: 20 to 160 mm.
- Length: 1750, 2900, 5800 mm.

Pre-punched bars

- Thickness: 5 and 10 mm.
- Width: 25 to 125 mm.
- Length: 1750 mm.

Pre-punched and threaded bars

- Thickness: 5 mm.
- Width: 15 to 32 mm.
- Length: 990 mm.

Earth / Neutral connection

- Angle profile for Earth / Neutral connection, L = 1750 mm.
- Earth bar, L = 470 mm and L = 120 mm.

General characteristics of copper

- Material: electrolytic copper Cu-ETP (Cu/A1).
- State: hammer-hardened 1/2 hard (H12).
- Maximum resistivity: 0.017241 $\Omega\text{mm}^2/\text{m}$ at 20°C.

Selection guide

• Edgewise mounting

Bar section l x e (mm)	Number of bars per phase			
	I	II	III	IIII
20 x 4	240	430	600	750
15 x 5	220	390	540	650
25 x 5	330	590	800	1000
32 x 5	410	700	1000	1250
40 x 5	500	850	1200	1500
50 x 5	600	1050	1450	1850
63 x 5	700	1250	1800	2250
80 x 5	900	1550	2200	2750
100 x 5	1100	1900	2650	3350
125 x 5	1300	2350	3250	4100
30 x 10	600	1050	1450	1800
50 x 10	850	1550	2150	2700
80 x 10	1300	2300	3200	4000
100 x 10	1550	2750	3850	4850
125 x 10	1900	3350	4650	5900
160 x 10	2350	4150	5800	7300

• Flat mounting

Bar section l x e (mm)	Number of bars per phase			
	I	II	III	IIII
20 x 4	210	340	460	570
15 x 5	190	310	420	510
25 x 5	280	470	600	750
32 x 5	350	580	750	950
40 x 5	420	700	900	1150
50 x 5	510	850	1100	1400
63 x 5	620	1000	1350	1700
80 x 5	750	1250	1700	2100
100 x 5	900	1500	2050	2550
125 x 5	1100	1850	2500	3050
30 x 10	490	800	1100	1350
50 x 10	750	1200	1650	2050
80 x 10	1100	1800	2450	3000
100 x 10	1350	2200	2950	3650
125 x 10	1600	2700	3600	4400
160 x 10	2000	3300	4450	5500

• Solid bars

Determination of the current capacity I_z (A) for solid blank copper bars, in usual condition of use (T° ambient 45°, heating of the bars 35°, frequency 50 Hz).

• Pre-punched copper bars

For the pre-punched bars of same dimensions as the solid bars:

pre-punched $I_z = 0.9 I_z$ solid.

• Aluminium bars

For the aluminium bars of same dimensions as the solid bars:

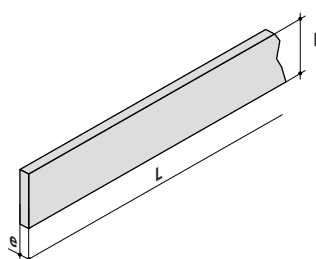
I_z aluminium = 0.78 I_z solid copper.



References

• Solid bars

barre_002_a_1_x_cat



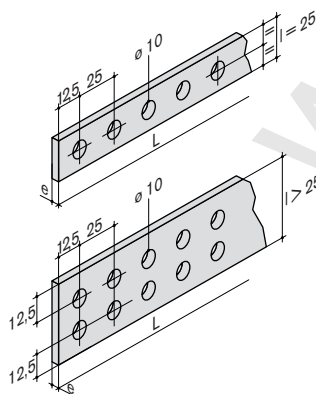
l x e (mm)	Weight (kg/ml)	L = 1750 mm	L = 2900 mm	L = 5800 mm
		1 bar References	Pack qty 1 bar References	5 or 10 bars References
20 x 4	0.71	4510 2004	4513 2004	4514 2004 ⁽¹⁾
25 x 5	1.11	4510 2505	4513 2505	4514 2505 ⁽¹⁾
32 x 5	1.42	4510 3205	4513 3205	4514 3205 ⁽¹⁾
40 x 5	1.78	4510 4005	4513 4005	4514 4005 ⁽¹⁾
50 x 5	2.22	4510 5005	4513 5005	4514 5005 ⁽¹⁾
63 x 5	2.80	4510 6305	4513 6305	4514 6305 ⁽¹⁾
80 x 5	3.56	4510 8005	4513 8005	4514 8005 ⁽²⁾
100 x 5	4.45	4510 9005	4513 9005	4514 9005 ⁽²⁾
125 x 5	5.56	4510 9205	4513 9205	4514 9205 ⁽²⁾
30 x 10	2.67	4510 3010	4513 3010	4514 3010 ⁽²⁾
50 x 10	4.45	4510 5010	4513 5010	4514 5010 ⁽²⁾
80 x 10	7.11	4510 8010	4513 8010	4514 8010 ⁽²⁾
100 x 10	8.89	4510 9010	4513 9010	4514 9010 ⁽²⁾
125 x 10	11.11	4510 9210	4513 9210	4514 9210 ⁽²⁾
160 x 10	14.22	4510 9610	4513 9610	4514 9610 ⁽²⁾

(1) Pack qty 10 bars.

(2) Pack qty 5 bars.

• Pre-punched bars

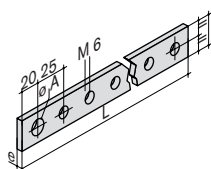
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l x e (mm)	L (mm)	Weight (kg/ml)	No. of rows	Pack qty	References
25 x 5	1750	1.11	1	5	4511 2505
50 x 5	1750	2.22	2	5	4511 5005
63 x 5	1750	2.80	2	5	4511 6305
80 x 5	1750	3.56	2	5	4511 8005
100 x 5	1750	4.45	2	5	4511 9005
125 x 5	1750	5.56	2	5	4511 9205
50 x 10	1750	4.45	2	5	4511 5010
80 x 10	1750	7.11	2	5	4511 8010
100 x 10	1750	8.89	2	5	4511 9010
125 x 10	1750	10.70	2	5	4511 9210

• Pre-punched and threaded bars

barre_004_a_1_x_cat



l x e (mm)	L (mm)	Weight (kg/ml)	Ø A (mm)	Pack qty	References
15 x 5	990	0.67	8.2	5	4512 1505
20 x 5	990	0.89	10.2	5	4512 2005
32 x 5	990	1.42	12.2	5	4512 3205