

Rigid copper bars

Busbar

Enclosures & accessories



barre_001

Function

The SOCOMEC rigid copper bars are suitable for providing main or distribution connections.

Composition of 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.

Solid bars

- Determination of the admissible current I_z (A) for solid bars, in usual use conditions (Temperature ambient 113°F / 45°C, admissible warming of the bars 95°F / 35°C, 50 Hz current).

Pre-punched copper bars

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

Connector for drill-free connection on the busbar

- Bars for thickness 10 mm.

Connection Earth / Neutral

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

The solution for

- > Industrial Control Panel Manufacturers (UL 508A)
- > Switchboards Manufacturers (UL 891)
- > Distributors
- > OEM/Machine Builders



Amperage per number of bars

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 |
| 60 x 10 | 1000 | 1800 | 2400 | 3150 |
| 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 |

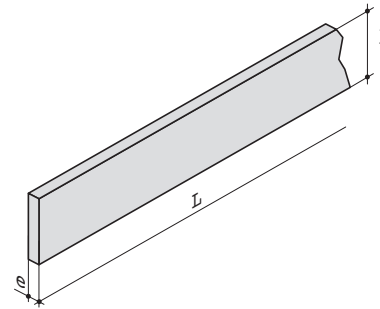
Flat mounting

| 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 |
| 60 x 10 | 850 | 1400 | 1900 | 2350 |
| 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 |

References

Solid bars

| I x e (mm) | Weight (kg/ml) | L = 1750 mm | L = 2900 mm | L = 5800 mm |
|------------|----------------|-------------------------------------|-------------------------------------|--------------------------------------------|
| | | To be ordered in multiples of 1 bar | To be ordered in multiples of 1 bar | To be ordered in multiples of 5 or 10 bars |
| Reference | Reference | Reference | Reference | Reference |
| 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⁾ |
| 60 x 10 | 5.33 | 4510 6010 | 4513 6010 | 4514 6010 ⁽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⁾ |

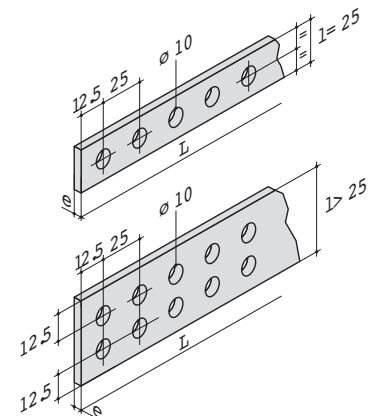


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(1) To be ordered by multiple 10 bars
(2) To be ordered by multiple 5 bars

Pre-punched bars

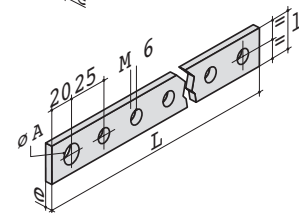
| I x e (mm) | W (mm) | Weight (kg/ml) | No. of rows | To be ordered in multiples of | Reference |
|------------|--------|----------------|-------------|-------------------------------|-----------|
| 25 x 5 | 1750 | 1.11 | 1 | 5 | 4511 2505 |
| 50 x 5 | 1750 | 2.22 | 2 | 5 | 4511 5005 |
| 63 x 5 | 1750 | 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 |
| 60 x 10 | 1750 | 5.33 | 2 | 5 | 4511 6010 |
| 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 |



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Pre-punched and threaded bars

| I x e (mm) | W (mm) | Weight (kg/ml) | Ø A (mm) | To be ordered in multiples of | Reference |
|------------|--------|----------------|----------|-------------------------------|-----------|
| 15 x 5 | 990 | 0.67 kg | 8.2 | 5 | 4512 1505 |
| 20 x 5 | 990 | 0.89 kg | 10.2 | 5 | 4512 2005 |
| 32 x 5 | 990 | 1.42 kg | 12.2 | 5 | 4512 3205 |



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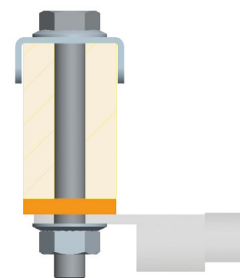
Accessories

Drill-free connection accessories

Use

- Allows the drill-free connection of flexible bars or cables onto a busbar.
- Connection across 2 bars, 10 mm thick, placed side by side, 10 mm apart.
- Compatible with busbar supports in the SBC range.
- For terminals or flexible bars with widths greater than 40 mm, use 2 connection accessories.
- Secured with M10 screws, tightening torque 45Nm.
- To make a connection: 1 securing clamp and 1 screw adapted to the height of the bars are required.

| Type | Bar (mm) | To be ordered in multiples of | Reference |
|--------------------|----------|-------------------------------|-----------|
| Securing clamp M10 | all | 12 | 5119 4423 |
| Screw M10 | 30 | 100 | 5119 4503 |
| Screw M10 | 50 | 100 | 5119 4505 |
| Screw M10 | 60 | 100 | 5119 4506 |
| Screw M10 | 80 | 100 | 5119 4508 |
| Screw M10 | 100 | 100 | 5119 4510 |
| Screw M10 | 125 | 100 | 5119 4512 |



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