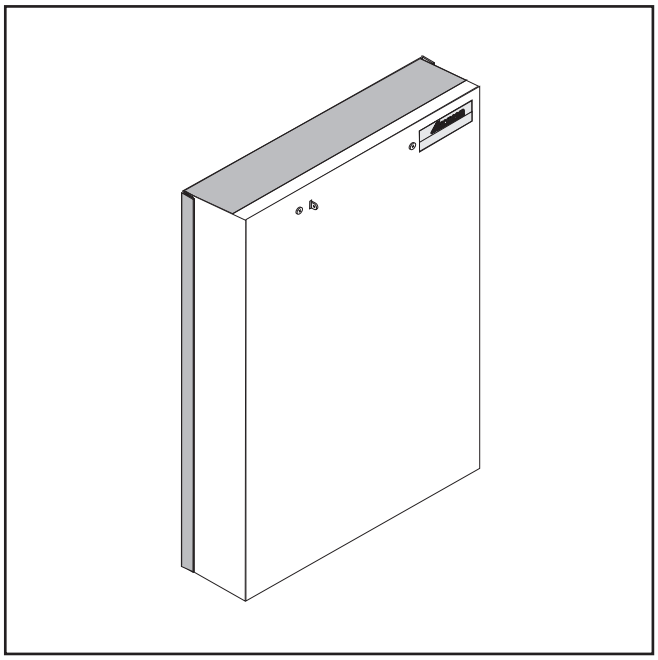
SIEMENS

External power supply unit
SAP 20

Installation instructions



1. Product description

The SAP 20 is a power supply unit suitable for an E-Bus and has an output voltage of 12 V at a maximum of 2.3 A. The housing offers space for 7 type SMT 11 (transponder) or SMR 11 (isolator/amplifier) circuit boards and for a 12 V, 24 Ah battery. At least one SMT 11 must be fitted to use the cover tamper contact.

2. Supply package

The SAP 20 UK package contains the following:
- One SAP 20 power supply unit.
- One set (4 off) of spacers.
- One SLP 20 UK language kit complete with :
  - Installation instructions.
  - One wiring diagram.

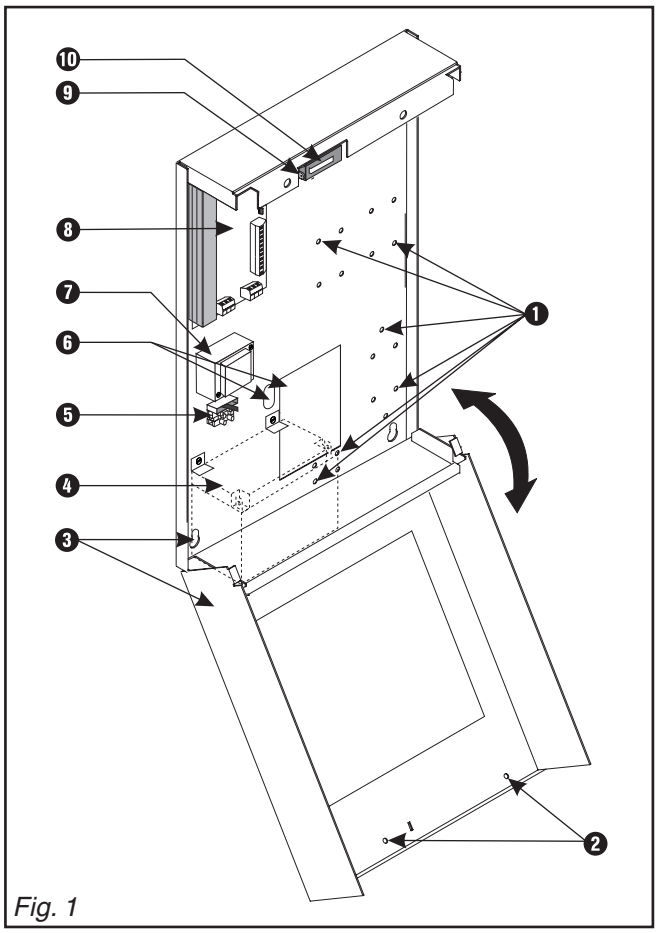


Fig. 1

3. Mounting instructions

The SAP 20 external power supply unit is designed for mounting in dry indoor rooms. It must not be exposed to dripping or splashing water.

3.1 Open cover (Fig. 1)

1 - Slacken cover screw ❷.
2 - Remove cover.

3.2 Product overview (Fig. 1)

- Housing ❸.
- Power supply assembly circuit board SMP 20 ❽.
- Transformer SMU 31 ❼.
- Mains supply terminals ❺ with fuse.
- Eye ❾ for sealing.
- Tamper contact ❿.
- Cable inlet ❻.
- Mounting holes for SMT 11 or SMR 11 circuit boards (optional) ❶.
- Space for battery ❹.
- Cover screws ❷.

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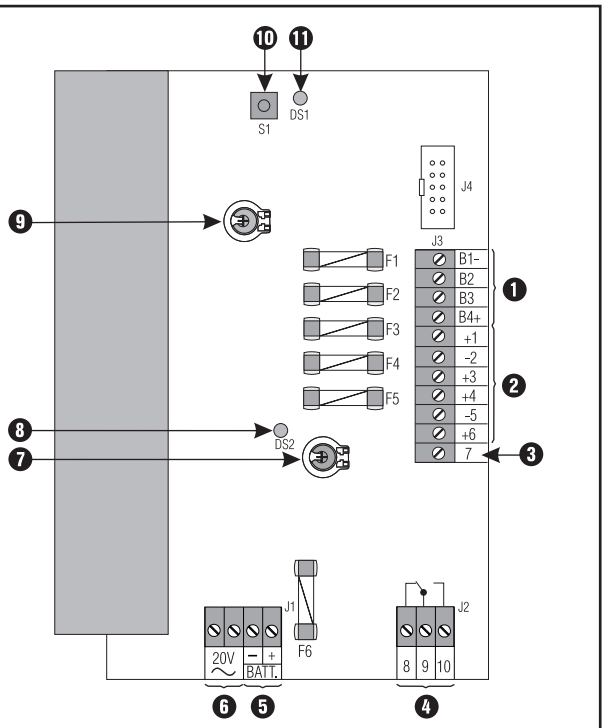

Fuses			
No.	Terminal	Function	Type
F1	B4+	E-Bus	F2AL
F2	+1	+12V	F2AL
F3	+3	+12V	F2AL
F4	+4	+12V	F2AL
F5	+6	+12V	F2AL
F6	+ Batt.	Battery	T2AL

Fig. 2

3.2.1 Power supply unit circuit board SMP 20 (Fig. 2)

- Transformer terminal ❻ 20V, 50Hz.
- Relay ❹ which can be programmed from the central control unit.
- Four +12 V voltage outputs ❷ (+1, +3, +4, +6) each of which is protected by a fuse (F2 to F5).
- Output ❸ for mains supply indication (not fused).
- E-Bus connection to central control unit ❶ (B1-, B2, B3, B4+). B4+ is protected by fuse F1.
- Pre-wired battery terminal ❺ is protected by fuse F6.
- Address key ❿.
- LED ⓫ flashes if the E-Bus communication is correct.
- LED ❽ for mains supply indication.
- The adjustment of potentiometer ❼ ,❾ must not be disturbed.

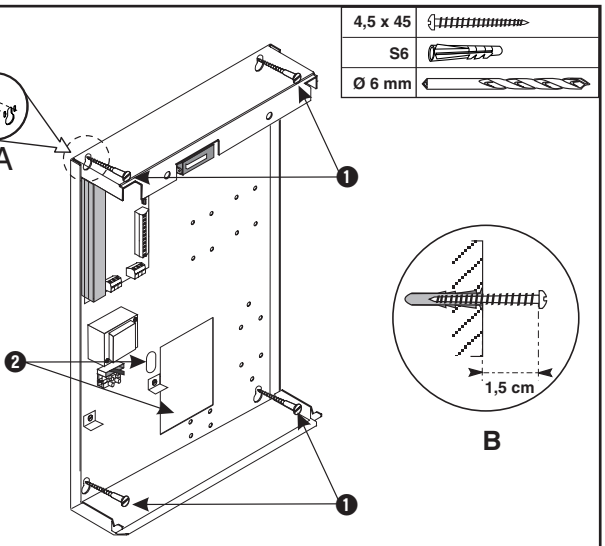

Fig. 3

3.3 Fit housing (Fig. 3)

1 - Mark the drilling position for the four mounting holes ❶.
2 - Drill the holes and insert plugs.
3 - Screw in the screws leaving approximately 1.5 cm proud (Fig. 3B).
4 - From the back, snap the spacers into the slots provided at the four mounting holes (Fig. 3A).
5 - Pass the connecting cable through the opening ❷ provi ded and hang the housing base on the screws
6 - Tighten the mounting screws.

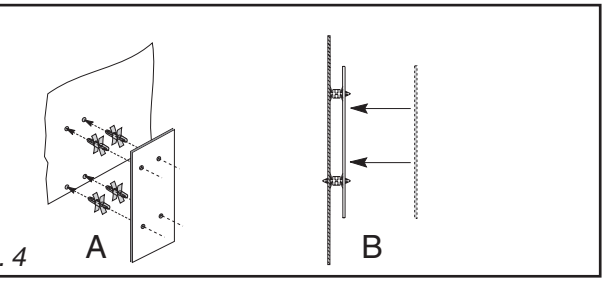

Fig. 4

3.4 Fit circuit boards SMT 11 or SMR 11 "optional" (Fig.4)

1 - Engage the mounting studs (provided with the circuit boards) in the holes provided (Fig. 4A).
2 - Fit circuit boards (Fig. 4B).

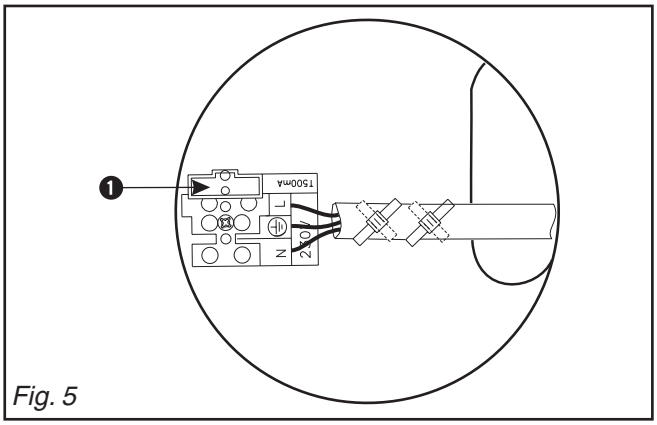

Fig. 5

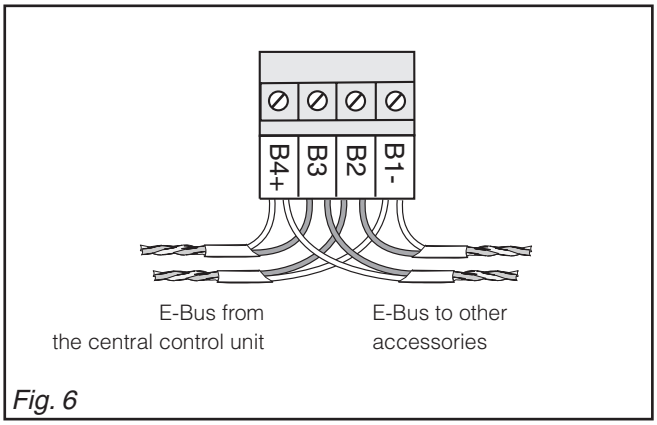

Fig. 6

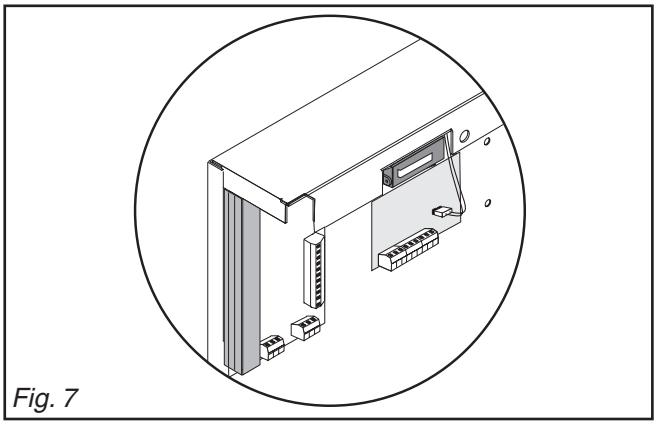

Fig. 7

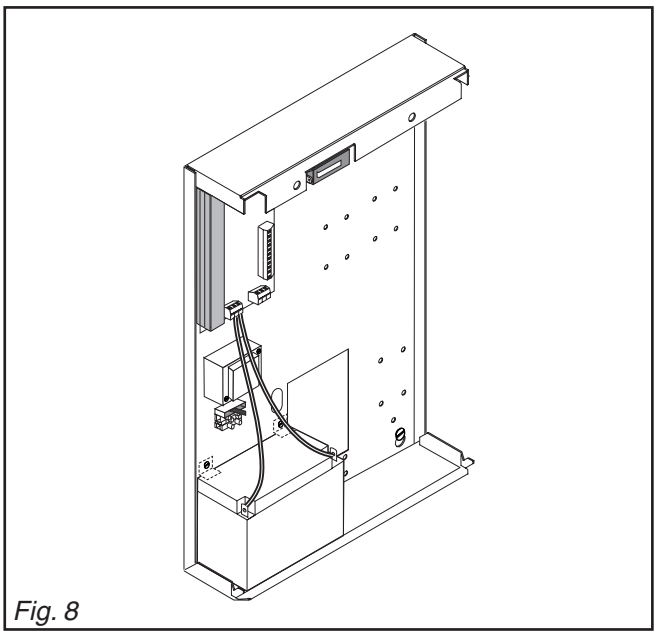

Fig. 8

4. Wiring

The terminals can be seen in Fig. 2 or in the wiring diagram glued to the inside of the housing cover.

4.1 Mains supply (Fig. 5)

The external mains supply should preferably be connected through a separate unswitched fused spur.
Cable type 3 x 1.5 mm² is recommended.

1 - Ensure that the mains supply terminal is de-energised.
2 - Remove mains supply fuse F7 ❶.
3 - Check the protective conductor connection to the base of the housing.
4 - Connect the mains to the mains supply terminals (neutral N, live L and earth).
5 - Secure the cable to the clips in the rear wall using cable ties.

4.2 E-Bus (Fig. 6)

Cable type 24 AWG 7 x 0.2 mm is recommended. The total length of the E-Bus cable must not exceed 500 m.
The power supply unit circuit board SMP 20 and the options (SMT 11, SMR 11) must be connected to the central control unit via the E-Bus (B1-, B2, B3, B4+). It may be routed in parallel to other accessories. If shielded cable is used, the shield may not be laid on the housing of the SAP 20. The shields of all cables must be connected at one point, e.g. at one of the NC terminals of SMT 11 or SAR 11.

4.3 Tamper contact (Fig. 7)

The tamper contact of the housing must be connected to the SMT 11 circuit board. Refer also to the installation instructions for the SMT 11.

4.4 Back tamper contact

For the back tamper use the option SMZ 91.

5. Powering up the system

5.1 Switch on the 240V mains supply

1 - Ensure that everything is correctly connected and wired and then switch on the mains supply.
2 - Refit fuse F7.

5.2 Connect battery (Fig. 8)

1 - Place the battery in the space provided in the base of the housing.
2 - Connect the pre-installed battery cables (- blue, + red).

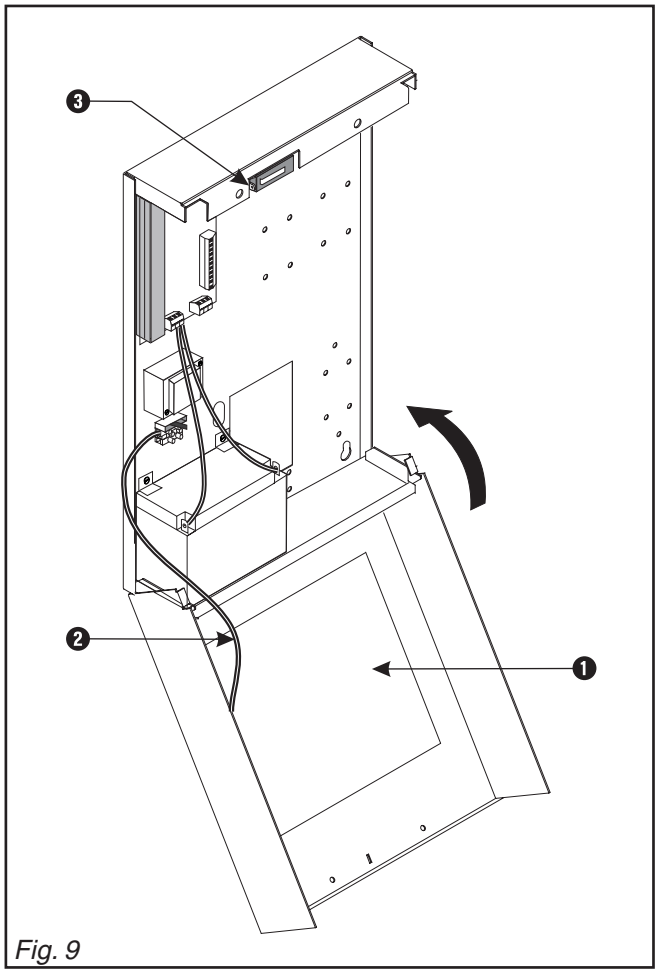

Fig. 9

6. Close and seal the housing (Fig. 9)

1 - Glue the circuit diagram to the inside of the cover ❶.
2 - Engage the cover in the retainer.
3 - Connect the earthing lead ❷ to the cover.
4 - Lightly lift and close the cover.
5 - Tighten cover retaining screws.
6 - Use eye ❸ to seal.

When the cover is opened again, e.g. for servicing, there is no need to remove it completely. After slackening the screws, the cover can be lifted gently, swung downwards and suspended in the base.

7. Technical data

Mains voltage	240V, 50Hz
Power consumption (230V)	230mA
Mains supply fuse	500 mA slow-blowing
Output power	$12V_{DC}$, 2.3 A
Max. ripple at 2.3 A	$60mV_{pp}$
Relay, single-pole changeover	48V, 5A
Battery min V-2 (optional)	12V, 24Ah
Operating temperature	-10°C to +40°C
Steel housing	1.5 mm
Dimensions in mm	H 500 x W 365 x D 133
Safety class	IP 30
Environmental class	II
Weight without battery	8.4 kg