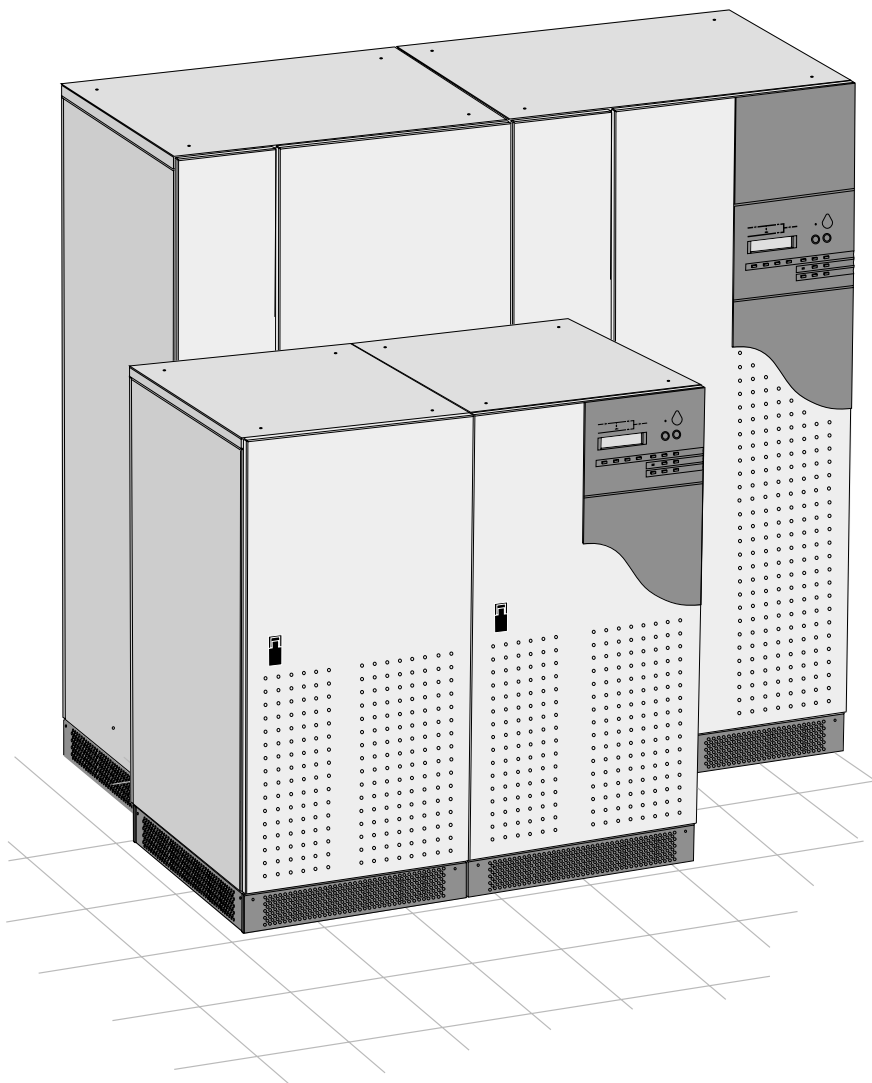


Galaxy PW™

20 - 200 kVA

**Battery and
auxiliary cubicles
supplied empty**

Installation manual



THE UNINTERRUPTIBLE POWER PROVIDER

M G E
UPS SYSTEMS



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Introduction

Cubicles are supplied empty for:

- ▶ installation of batteries not supplied by MGE UPS SYSTEMS or batteries delivered separately for transportation reasons;

- ▶ installation, in an auxiliary cubicle with the same appearance, height and depth as **Galaxy PW** cubicles, of user ancillary equipment used in conjunction with a **Galaxy PW** UPS.

Battery cubicles supplied empty (20 to 200 kVA UPS)

These cubicles are supplied with 3 shelves (1400 mm high cubicles) or 4 shelves (1900 mm high cubicles) to support the battery cells. The cubicles which are not supplied with a battery circuit breaker have a supplementary shelf at the bottom of the cubicle. These shelves are provisionally secured at the bottom of the cubicle for transportation purposes.

The cubicle structure consists of metal sections provided with square holes every 25 mm. These holes are used to secure the shelves in accordance with the heights of the battery cells to be installed. Two cross-members per shelf are supplied and are designed to be secured between the structure uprights on the sides of the cubicle to support the shelves.

Empty battery cubicles are available in 715 and 1015 mm wide and 1400 or 1900 mm high versions.

The 1015 mm wide cubicles have central uprights front and rear which, once small brackets are installed, prevent the shelves bending under the weight of the battery cells.

For ease of installation/fixing of shelves and connection of battery cells, it is recommended to install the battery cells before placing the battery cubicles in their final positions (the side and rear panels of the cubicle can be removed to improve access).

Each battery cubicle is designed to accommodate an optional Merlin Gerin circuit breaker as required which is supplied as a separate kit and is secured to the bottom grating using 2 screws. This kit comprises:

- ▶ the battery circuit breaker "QF1" and its connections;
- ▶ the system for securing the circuit breaker to the grating at the bottom of the cubicle;
- ▶ the auxiliary terminal block "XR1" and associated support, which:
 - ▷ receives the circuit breaker tripping voltage (from the **Galaxy PW** rectifier-inverter cubicle),
 - ▷ sends circuit breaker "QF1" position information (to the **Galaxy PW** rectifier-inverter cubicle).

Auxiliary cubicle supplied empty

This cubicle comprises the basic structure common to all **Galaxy PW** cubicles.

The cubicle structure consists of metal sections provided with square holes

every 25 mm. This provides for easy attachment of cross-members for supporting all types of equipment.

The lower level of the cubicle has two removable cross-members for

supporting heavy items (transformers for example).

The empty auxiliary cubicle is available in 715 mm wide and 1400 or 1900 mm high versions.

Installation

Refer to **Galaxy PW** installation manual n° 51028231XU for the handling and installation of **Galaxy PW** cubicles.

In particular, see the following sections:

- ▶ "positioning the cubicles";
- ▶ "floor loads";
- ▶ "cubicle layout on false floor or normal floor".

Mechanical characteristics

The battery cubicles are installed to the left of the **Galaxy PW** UPS rectifier-inverter cubicle. The cubicles are simply convection cooled with an air inlet at the front and an air outlet:

- ▶ at the top for the 1900 mm high cubicles (a minimum clearance of 400 mm at the top over the full width of the cubicle must be kept);

- ▶ at the rear for the 1400 mm high cubicles (a minimum clearance of 250 mm at the top over the full width of the cubicle must be kept).

The following figures show the front view (Fig. 1), cross-section AA (Fig. 2) and cross-section BB (Fig. 3), for a 715 mm or 1015 mm wide cubicle.

These figures show the installation positions of the shelves, battery circuit breaker and optional auxiliary connector "XR1", together with the openings provided for feeding the cables via the bottom.

battery cubicle width in mm L	outside dimensions in mm		inside dimensions in mm (see cubicle views)			cubicle weight in kg	max. weight of battery cells per shelf in kg
	H	D	M	N	I		
715	1400 ± 10	825	1165	610	710	145	350
	1900 ± 10	825	1665	610	710	180	350
1015	1400 ± 10	825	1165	910	710	185	375
	1900 ± 10	825	1665	910	710	230	375

Battery cubicles (cont.)

Views of cubicles

Example of a cubicle containing a battery circuit breaker. Cubicles not containing a battery circuit breaker have an additional row of cells at the bottom.

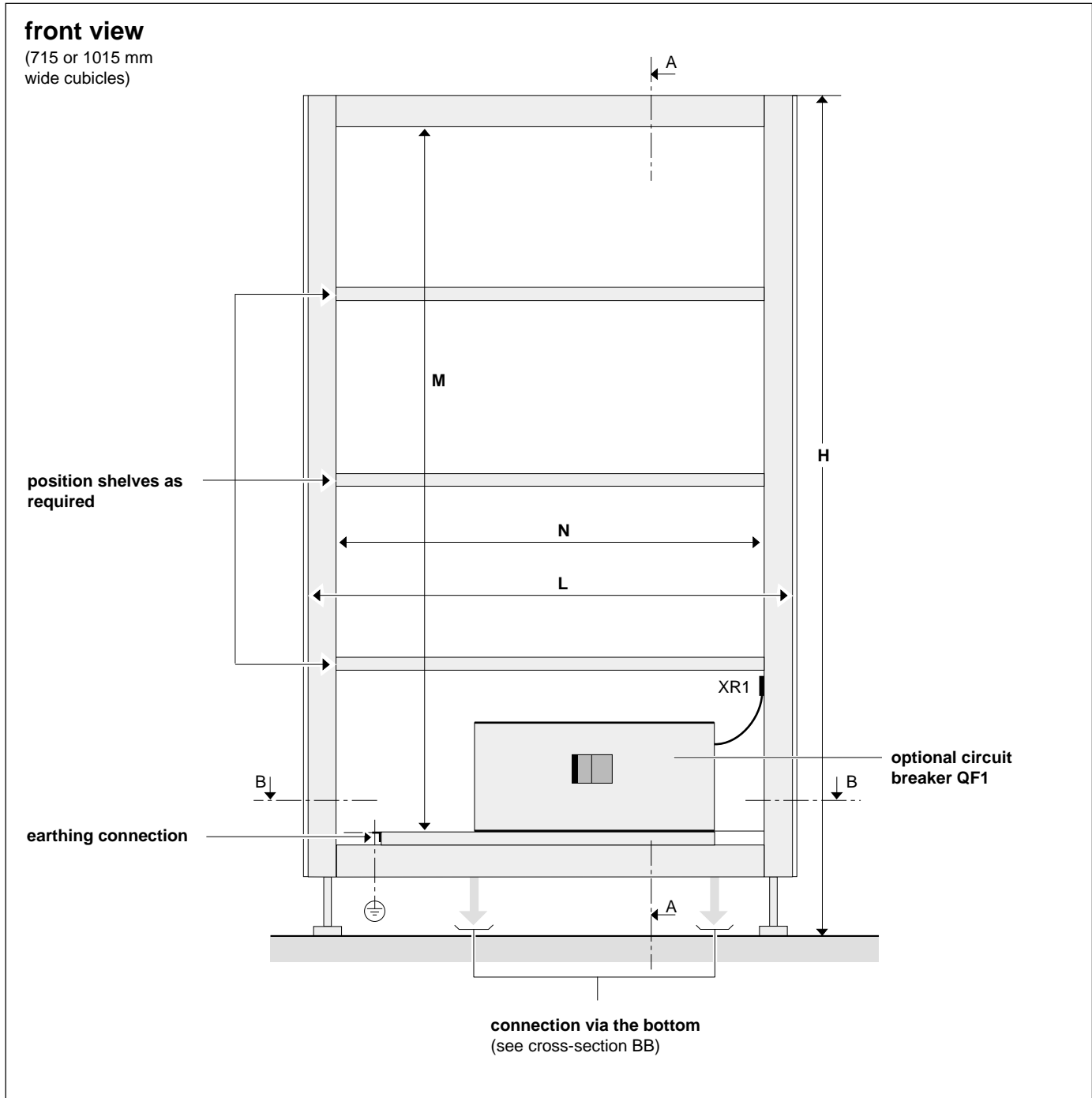


Fig. 1

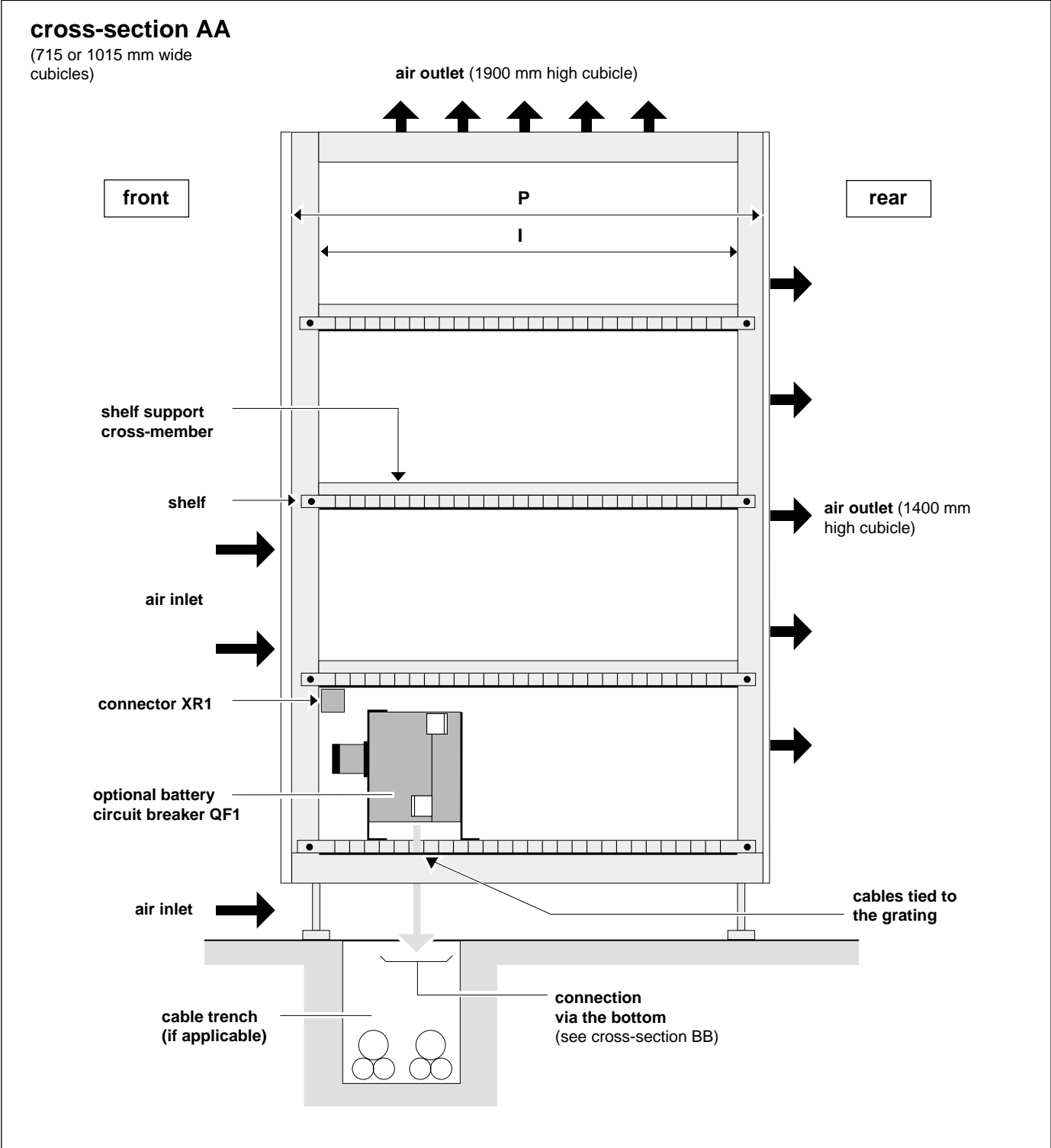


Fig. 2

Battery cubicles (cont.)

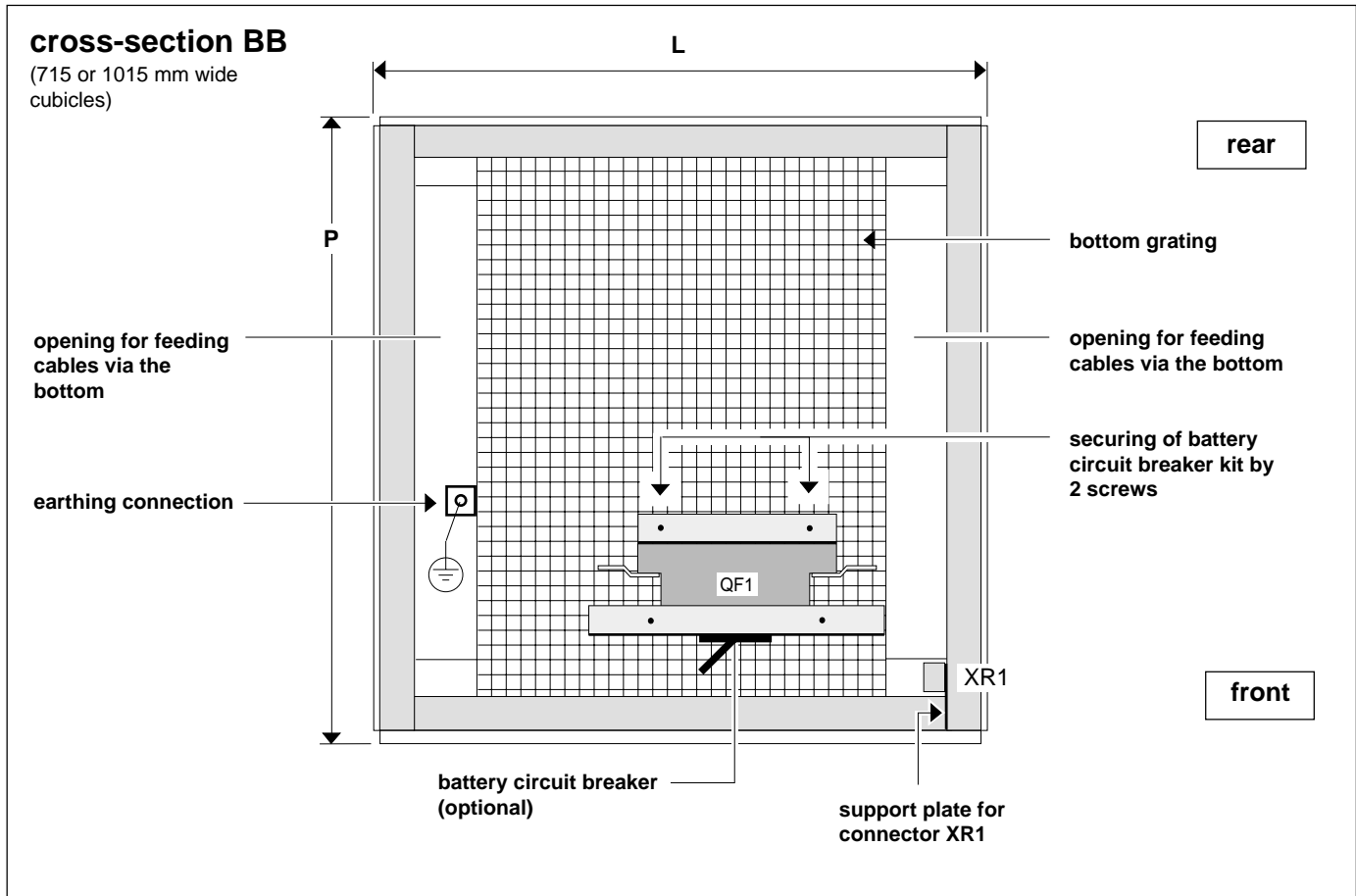


Fig. 3

Installation

- ▶ remove the shelves stacked at the bottom of the cubicle for transportation purposes;
- ▶ prepare the bag of mounting hardware and the support cross-members used to install the shelves;
- ▶ for 1015 mm wide cubicles, remove the front central upright for shelves installation;
- ▶ if the cubicle is to include the separately supplied battery circuit breaker, this circuit breaker should be installed first at the bottom of the cubicle.

Installing the optional battery circuit breaker

- ▶ the circuit breaker is secured directly to the grating at the bottom;
- ▶ position the battery circuit breaker support and secure by means of 4 screws as shown in the Fig. 4;
- ▶ bolt the support of connector XR1 to the front RH upright of the cubicle structure (see Fig. 3).

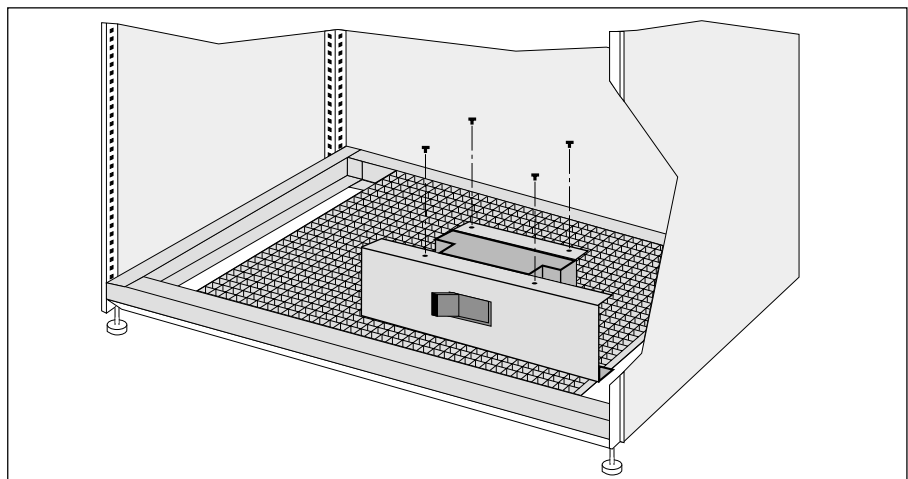


Fig. 4

Installing the shelves

- ▶ install the cage nuts in the square holes in the structure uprights at the required height for each of the shelf support cross-members (4 nuts per cross-member);
- ▶ bolt the shelf support cross-members at the required heights (in accordance with the battery cell dimensions) to the structure uprights (see Fig. 5);
- ▶ for 1015 mm wide cubicles, install the small brackets in the slots provided in the rear central upright at the required height;
- ▶ install and connect together the battery cells on the shelves before installing the shelves in the cubicle;
- ▶ install the shelves together with the associated battery cells sliding them along the cross-members;
- ▶ bolt imperatively the shelves at the **front and rear** to the structure uprights and the cross-members (remove the cubicle rear panel if necessary);
- ▶ for 1015 mm wide cubicles, reinstall the front central upright after fitting it with small brackets (supporting the shelves) in the slots provided for this purpose.

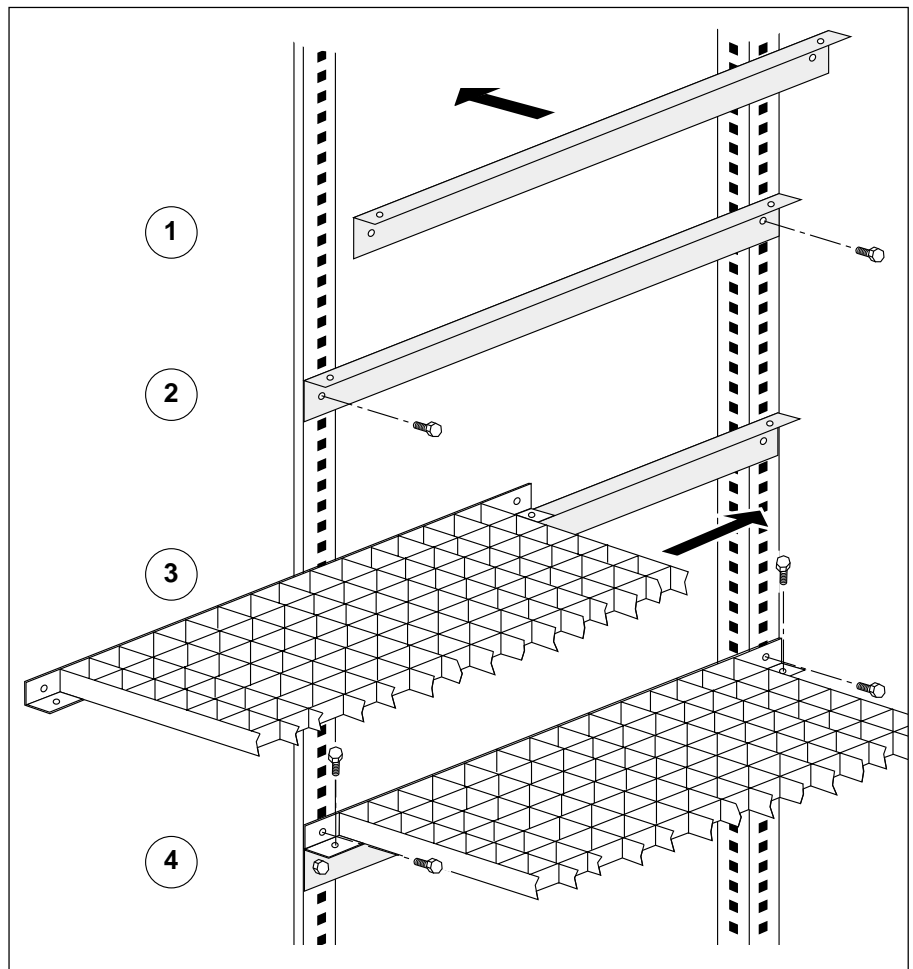


Fig. 5

Connections

- ▶ connect the cubicle interconnection cables;
- ▶ reconnect all the cables, leads and bars (removed for transport) between the battery cells, starting from the bottom shelf and finishing with the top shelf;
- ▶ the cables providing connections between shelves should be routed in the space provided between the shelves and the side panels at either end of the shelves;
- ▶ the cables providing connections between cubicles are routed via the bottom:
 - ▷ via an opening in a false floor or cable trench,
 - ▷ or via the cubicle rear or side base plates removed or drilled for this purpose;

- ▶ refer to **Galaxy PW** installation manual n° 51028231XU for the cross-sections of cables to be used and the location of the connecting points in the **Galaxy PW** rectifier-inverter cubicle (power and auxiliaries).

note: the connecting cables are not supplied.

Auxiliary connecting cables XR1

Terminals 1 to 4 of this terminal block must be connected to connector XR3 of the "Media Contacts 11" board of the **Galaxy PW** rectifier-inverter cubicle to provide the functions for automatic opening of battery circuit breaker "QF1" (in case of emergency shutdown for example) and detection of the battery circuit breaker position for the UPS. Details of these connections are given in **Galaxy PW** installation manual n° 51028231XU, section "connection of Media Contacts 11 standard auxiliary circuits".

Auxiliary cubicle

Mechanical characteristics

auxiliary cubicle width in mm	outside dimensions in mm		inside dimensions in mm (see cubicle views)			cubicle weight in kg
	H	P	M	N	I	
715	1400 ± 10	825	1170	610	710	100
715	1900 ± 10	825	1670	610	710	120
1015	1400 ± 10	825	1170	910	710	110
1015	1900 ± 10	825	1670	910	710	135

Views of cubicles

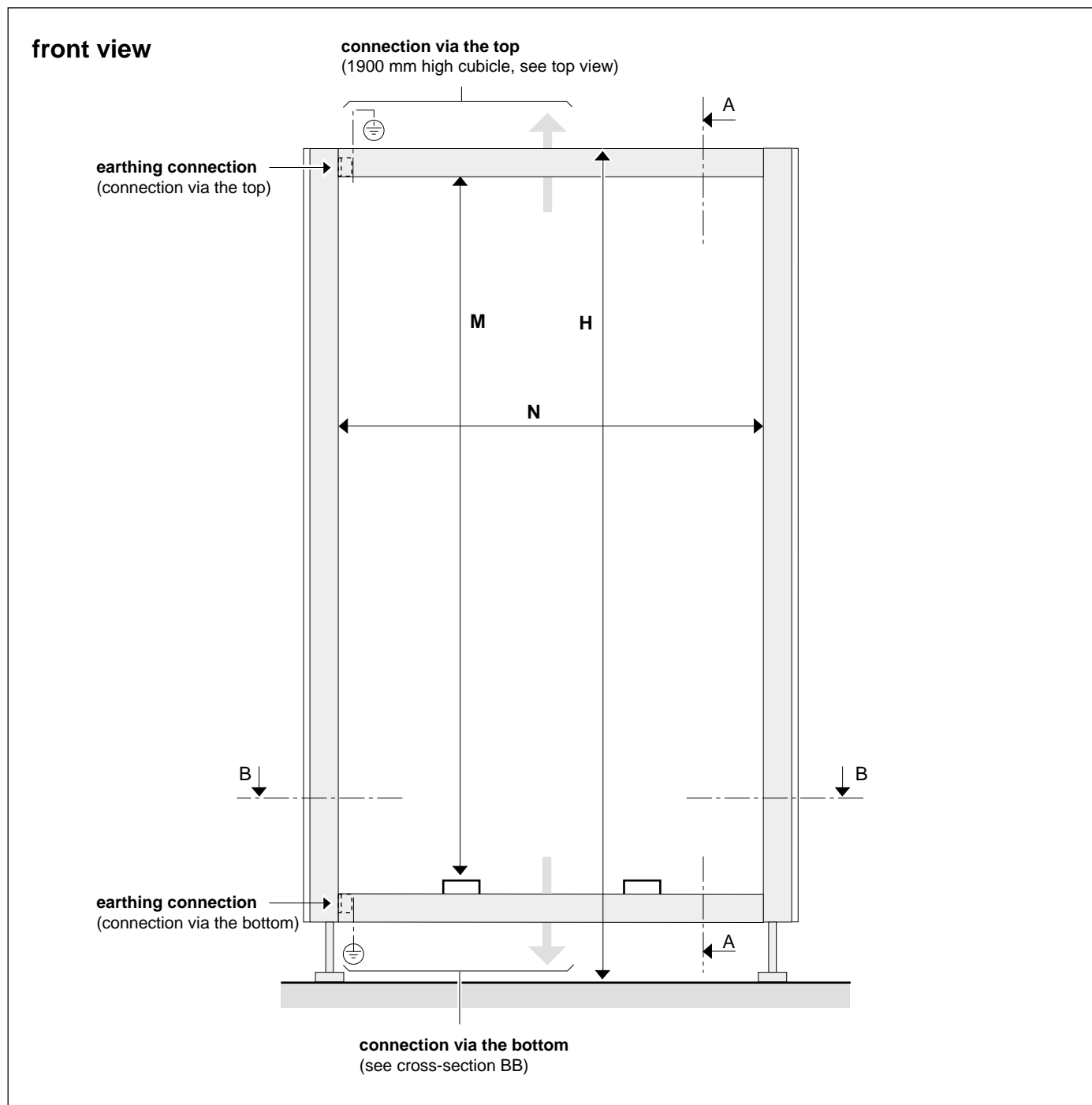


Fig. 6

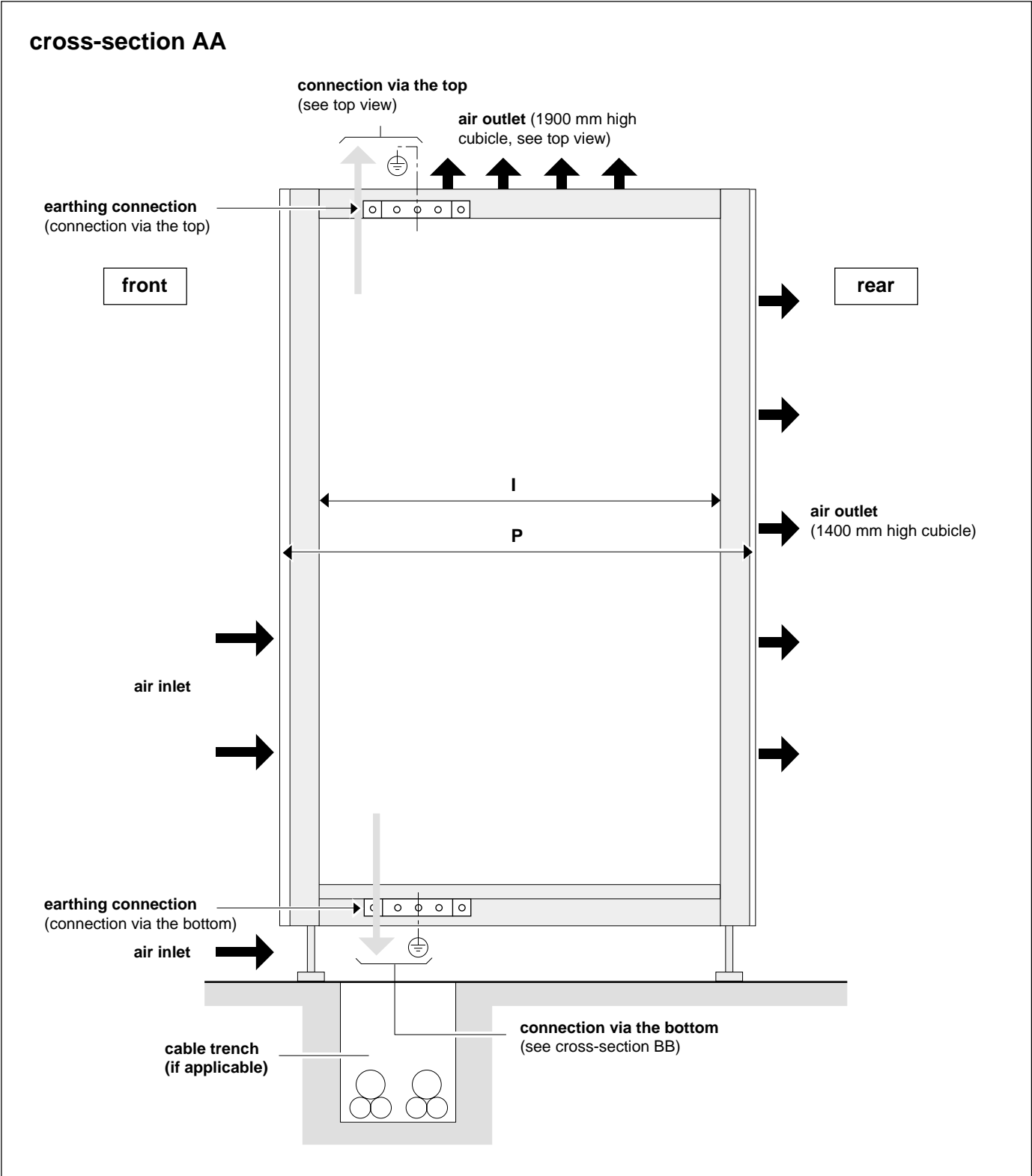


Fig. 7

Auxiliary cubicle (cont.)

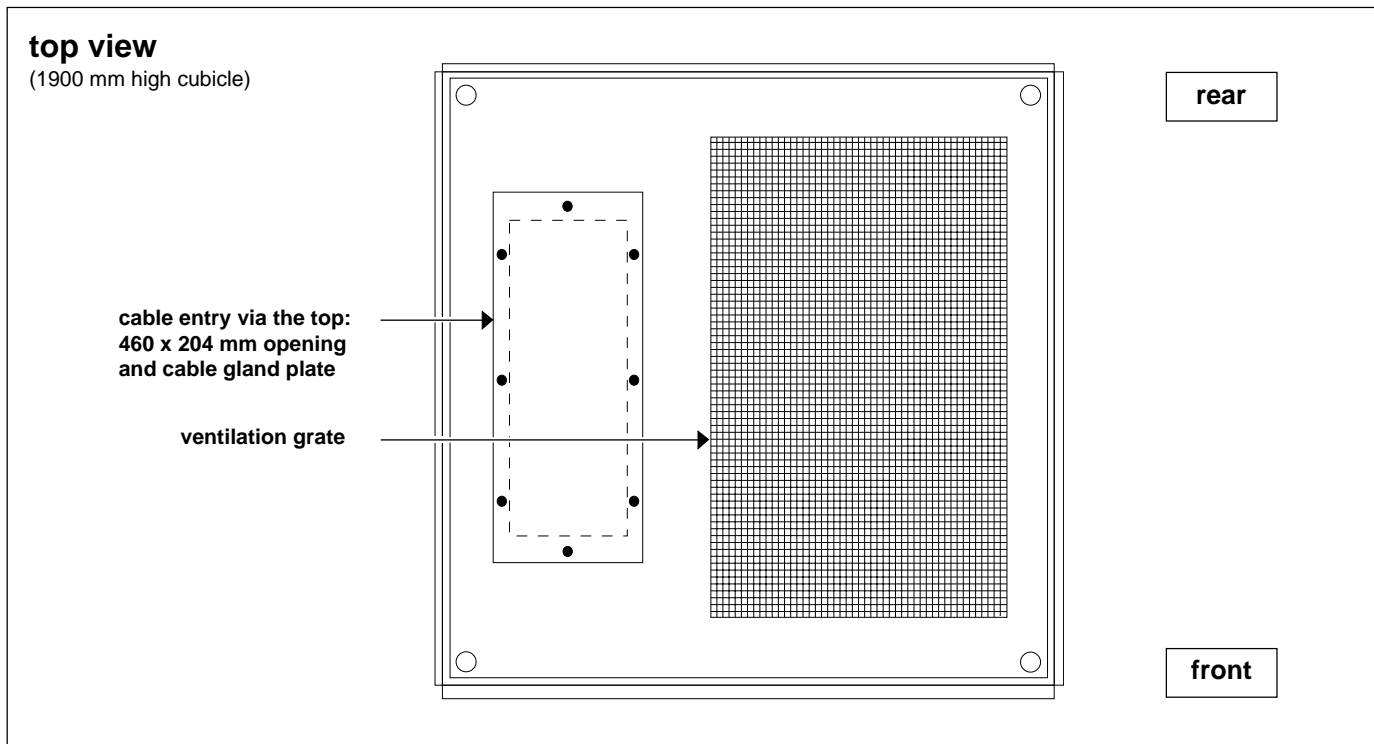


Fig. 8

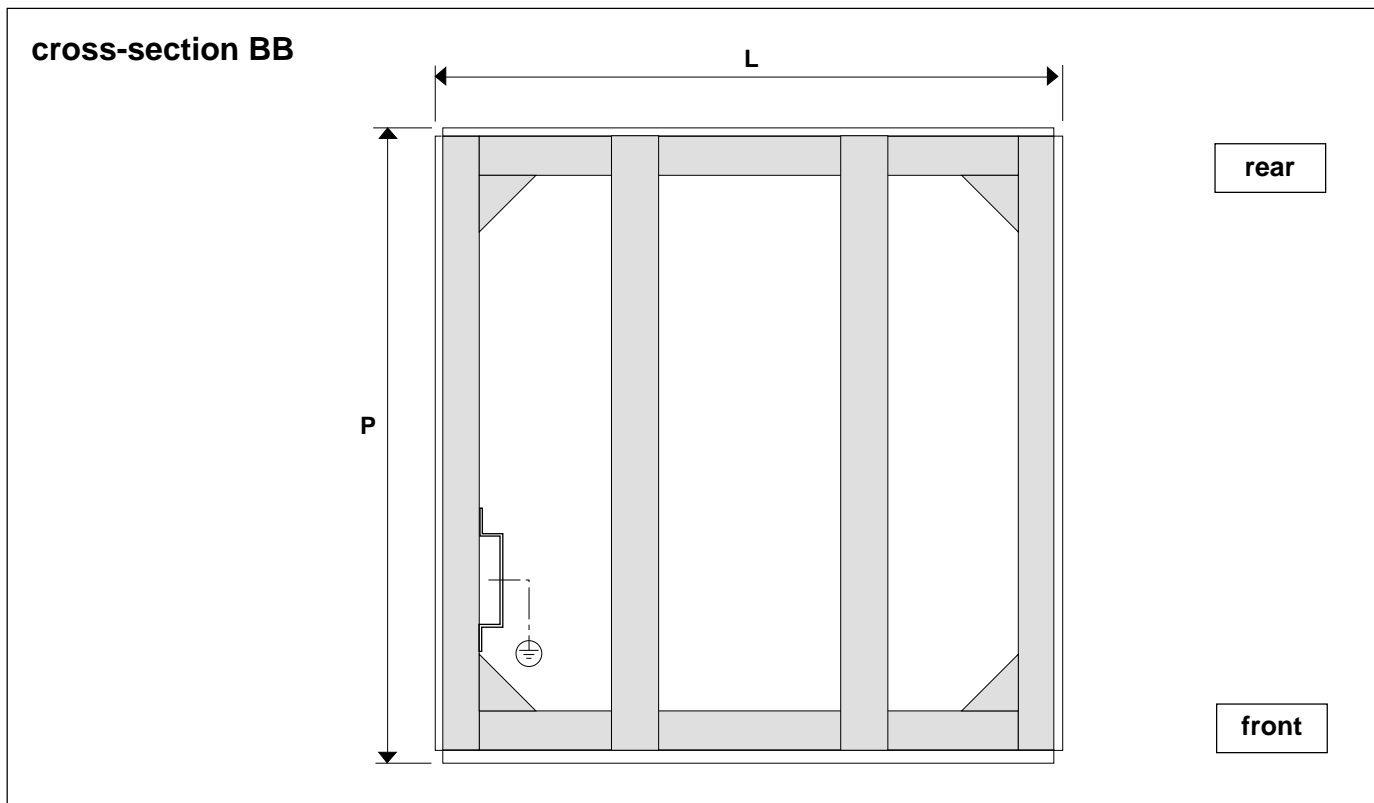


Fig. 9