

# FIRECLASS Expansion Housings

This leaflet is the sole documentation covering the FireClass expansion housings. This leaflet provides application notes, specifications and installation information.

## Overview and Application

The expansion housings are essentially the same housings used for FireClass fire alarm control panels but without electronics.

There are versions of the housings matching various control panels (so the FC-ANC has the same dimensions as an FC702S panel for example).

The housing will typically be mounted adjacent to the fire alarm control panel.

All the expansion housing enclosures are available without apertures. These are designed for mounting the various modules for example, IOB800s and FC410DIMs. These are mounted on a backplate bolted to the rear of the housing.

Additionally, batteries can be placed inside the expansion housings.

The housing order code is shown in Table 1.

Housing	Order Code
FC-ANC	557.200.960

Table 1: Order code

## Document Holder

The FC-ANC housing can be fitted with a document holder, part number 557.201.513.

This can accommodate A4 sized sheets, or, a typical cardboard A4 paper wallet.

The document holder is supplied with its own installation documentation.

## Power Calculation

The housing modules will be powered from the fire alarm control panel. Make sure this demand does not exceed the capacity of the panel, using FireClass Designer.

## Specifications

The specifications are shown in Table 2.

Item	Details
Environment	Indoor applications only
Operating temperature	-10 °C to +55 °C
Storage Temperature	-20 °C to +70 °C
Operating humidity	Up to 95% non-condensing
Earthing - electrical safety	Local regulations must be followed. Typically, the housing must be bonded to a protective earth if accidental contact to voltages greater than 70V peak is possible.
Earthing - EMC compatibility:	To maintain EMC compatibility of the installed modules an earth connection is required.
Material and Finish	Steel housing with painted finish. Colour RAL7035

Table 2: Specifications

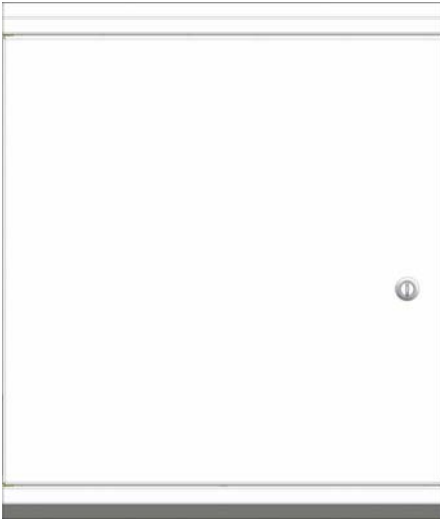


Fig. 1: FC-ANC Front View

## Ordering Information

The order code for the housings is shown in Table 1.

The code is for the housing only.

You will need to separately order the modules to be fitted to the housing, for example the IOB800.

## Mounting the Housing

After checking that the mounting location is suitable, you attach the mounting plate of the unit to the wall, then attach the panel to this plate.

- 1 Check the mounting location.
  - The housing is not weatherproof. Check that the location is indoors, dry and free from excessive dust.
  - Determine the mounting positions and as a double check, use the dimensions in Fig. 2.

- 2 Fix the mounting plate to the wall.



### Note

Ensure that the wall fixings are strong enough to support the weight of the mounting plate and panel. Note that the battery size has an impact on the housing weight.

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- Hold the mounting plate up to the wall and mark on the wall a position for the upper mounting hole. Make sure that the plate is the right way up. See the arrow pointing upwards on the mounting plate. Refer to Fig. 2.
  - Drill a hole to accept the supplied wall plug and insert the plug.
  - Fix the plate into the upper drill positions just enough to allow you to mark drill positions on the wall for the two lower holes.
  - Move the mounting plate out of the way and drill the two lower holes.
  - Insert the wall plugs and fix the mounting plate to the wall with the screws.
  - Tighten all of the screws and check that the mounting plate is secure.
- 3 Remove knockouts from the unit housings where necessary, as required by the cabling runs. Fit cable glands if necessary.
  - 4 Hang and fix the panel on the mounting plate.
    - Loosely screw the top two bolts on the mounting plate already on the wall.
    - Hang the panel on the loose screws and screw the bottom two bolts.
    - Tighten the four screws until the panel is fitted securely.

- Remove any debris from the housing.

### **Key features of the Housings**

- Removable chassis plate allows easy fitting of internal expansion modules.
- Knockouts on top face align with the FireClass control panel's knockouts for easy coupling of boxes. Additionally the rear and bottom cable entry knockouts are also provided.
- Lift off door. See Fig.2 on page 4.

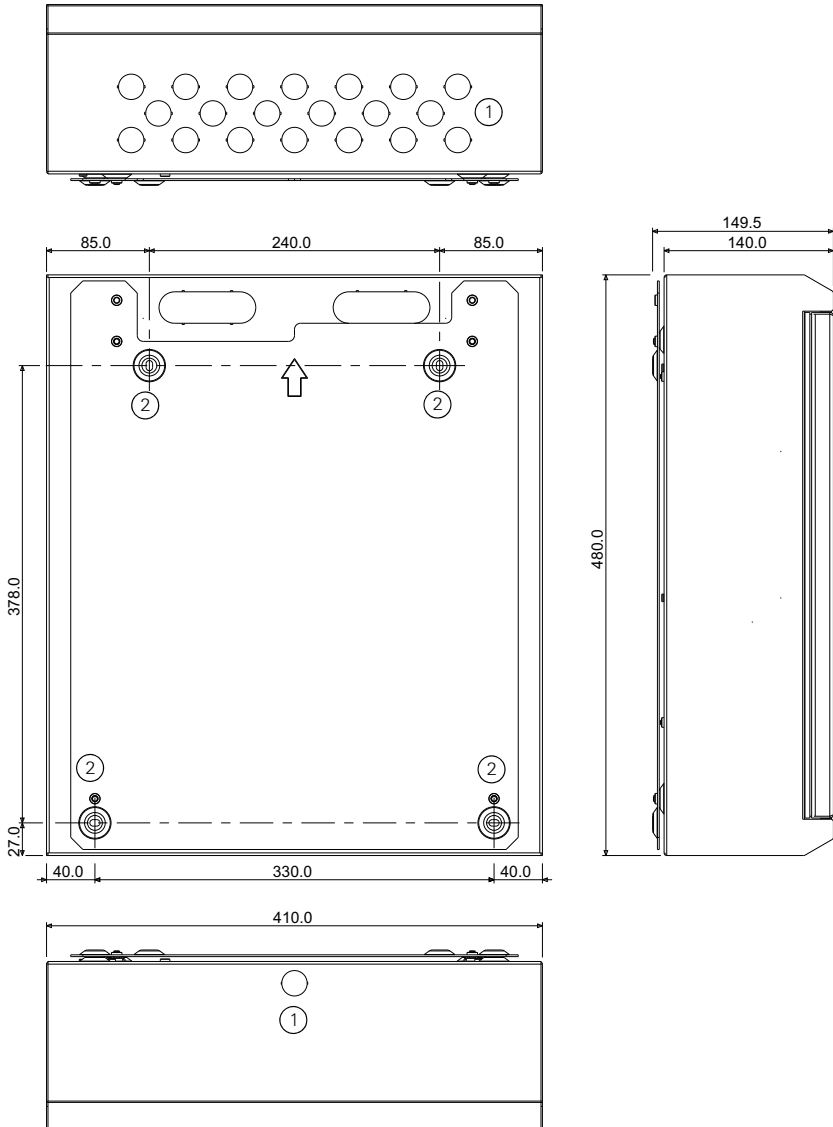


Fig. 2: Overall and Fixing Dimensions – FC-ANC

1– Knockouts

2– Mounting hole Ø 5.5 mm

## Installing Backplate Modules

### How to install backplate modules

- 1 Assess whether all the modules can be housed, and plan a layout for the modules on the backplate. For information see the section “The following factors affect the module layout on the backplate, and the number of modules that can be fitted:” on page 6.
- 2 Remove the appropriate knockouts from the top of the housing. Fit cable glands if necessary.
- 3 Attach the pillars to a module. Either snap in the quick-fit plastic pillars, or fix the threaded pillars with a M3 nylon screw through the board into the female end. When using stacking kit 557.180.095, use the metal pillars provided and insulating washers both sides of the module.
- 4 Place the module onto the backplate, in the approximate final position. The backplate is Item 1 in Fig. 3. Now adjust the position to find a set of holes in the backplate through which to push the pillars.
- 5 For the plastic quick-fit pillars, push these through the backplate holes. These will be large (4.8 mm diameter) backplate holes.  
For threaded pillars, fix these to the holes on the backplate with M3 nuts and washers. These will be small (3.3 mm diameter) backplate holes.
- 6 Mount the backplate to the rear of the housing. Use the appropriate screws in the threaded bosses of the housing. See Fig. 3.
- 7 Make sure the earth wire is connected (Item 2 in Fig. 3). This connects between the stud in the side wall of the housing, and the tag on the backplate.
- 8 Repeat steps 3 to 6 for each module.
- 9 Feed the cabling into the housing and attach this to the modules.

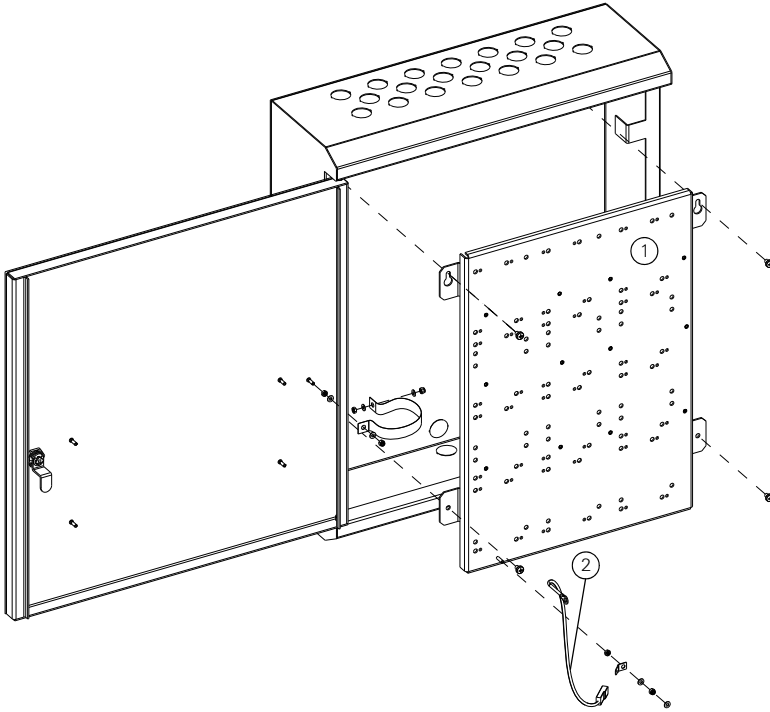


Fig. 3: Backplate Fitting-FC-ANC

1- Backplate  
2- Earth wire

## Planning the Backplate Module Layout

The following factors affect the module layout on the backplate, and the number of modules that can be fitted:

- The size of the backplate.
- The type of module to be fitted. For the purposes of this guide, these are allocated to various categories. Table 3 shows the modules in these categories.

- Whether the modules are stacked. However a single layer is preferable, so this will be assumed in this guide.
- Ease of access to the module screw terminals. For this reason, you are recommended to fit the modules to the backplate so that terminals are on the right. The housing door will not now impede access.

Table 5 on page 14 shows the numbers of the various modules that can be fitted, for some example combinations of modules.

For example layouts of modules on the backplate, refer to the figures set out in Table 4 on page 7.

For general guidance, Fig. 4, Fig. 5 and Fig. 6 show how some of the modules attach to the backplate.

Category	Modules	Notes
A	FC410CIM FC410DIM FC410LI  FC410SIO FC410DDM FC410RIM FC410SNM SB520* BTM800 FC410TSM	Mount using plastic quick-fit pillars in 4 positions.  *The SB520 needs M3 male/female threaded pillars with screws, nuts and washers, part number 557.201.518  As an alternative mounting, may be stacked using the Minerva ancillary mounting kit (uses all threaded pillars). The kits are 557.201.518 (stacks two modules together), and 557.180.095 (stacks up to 8 modules together). Order multiple kits for larger stacks.
B	FC410MIO	Mount using quick-fit pillars or stack, as for Category A.
C	CCU3 RS800	Use the 'Comms Interface Mounting Plate' 557.201.519.

Table 3: Module Categories

Category	Modules	Notes
D	QMO850 QIO850	Use plastic boxes attached to a DIN rail.  Cut the DIN rail to suit and drill fixing holes to match.

Table 3: Module Categories (cont.)

**i** **Mounting Modules in P-ANC-X**  
The MPM800, IOB800 and XIOM800 can be mounted in any combination totalling to a maximum count of 2.  
The MPM800 and the XIOM800 can be mounted as a pair. On the chassis plate, firstly mount the XIOM800 and then mount the MPM800 above it.

Figure	Modules (number x category)
Fig. 6	2 x C
Fig. 7	8 x A+1 x C
Fig. 8	3 x B+1 x C
Fig. 9	9 x B
Fig. 10	12 x A

Table 4: Example layout figures

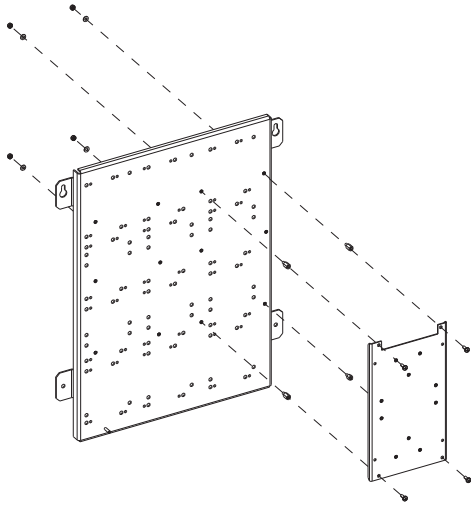


Fig. 4: Example of Module Mounting Procedure Using Metal Pillars and Screws

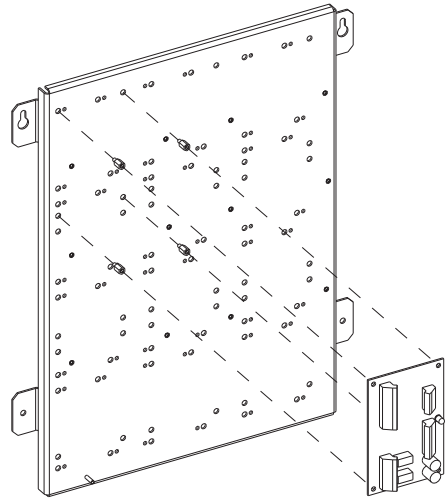


Fig. 5: Example of Module Mounting Procedure Using Plastic Pillars



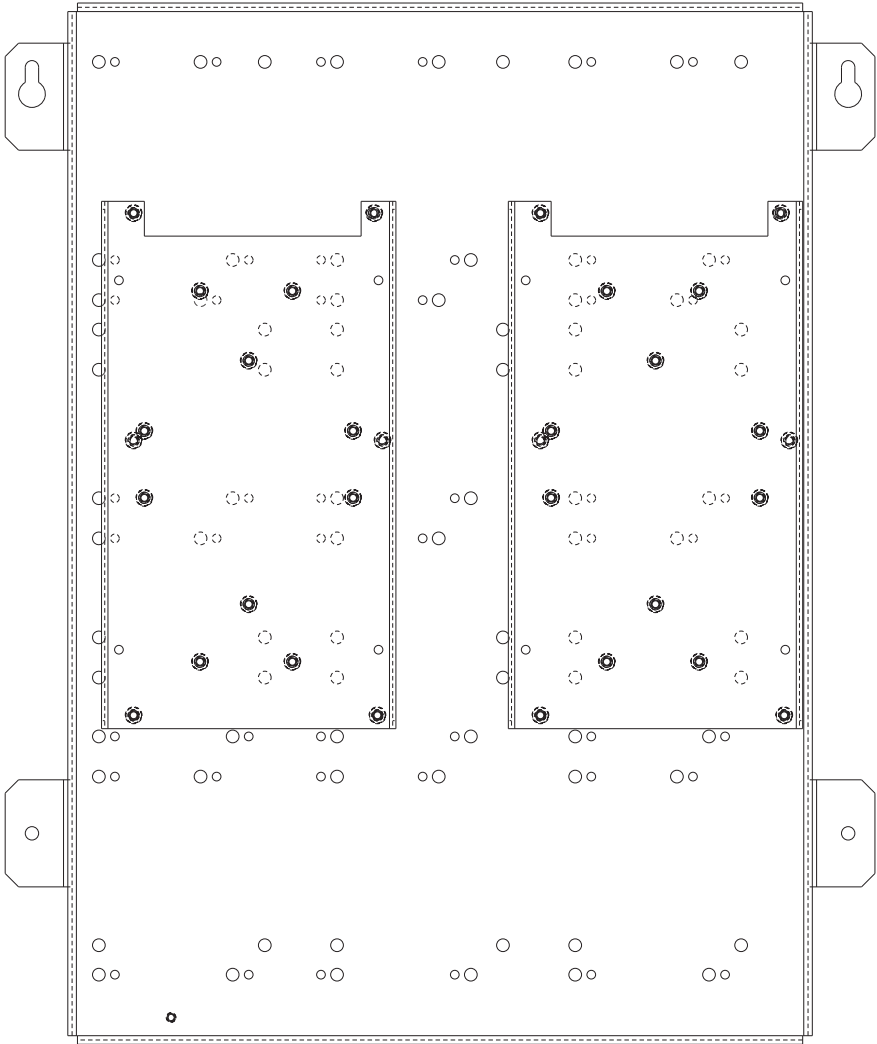


Fig. 6: Example Layout, 2 category C modules, backplate

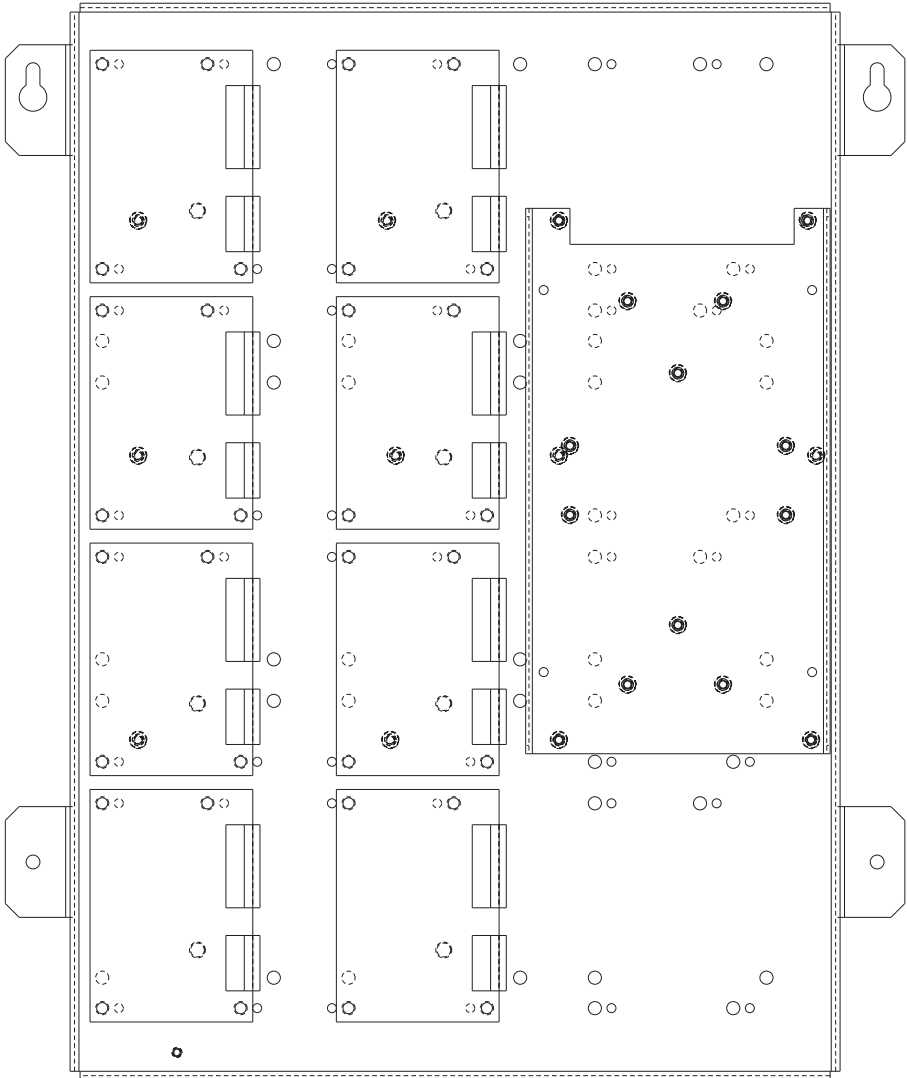


Fig. 7: Example Layout, 8 category A modules, 1 category C module, backplate

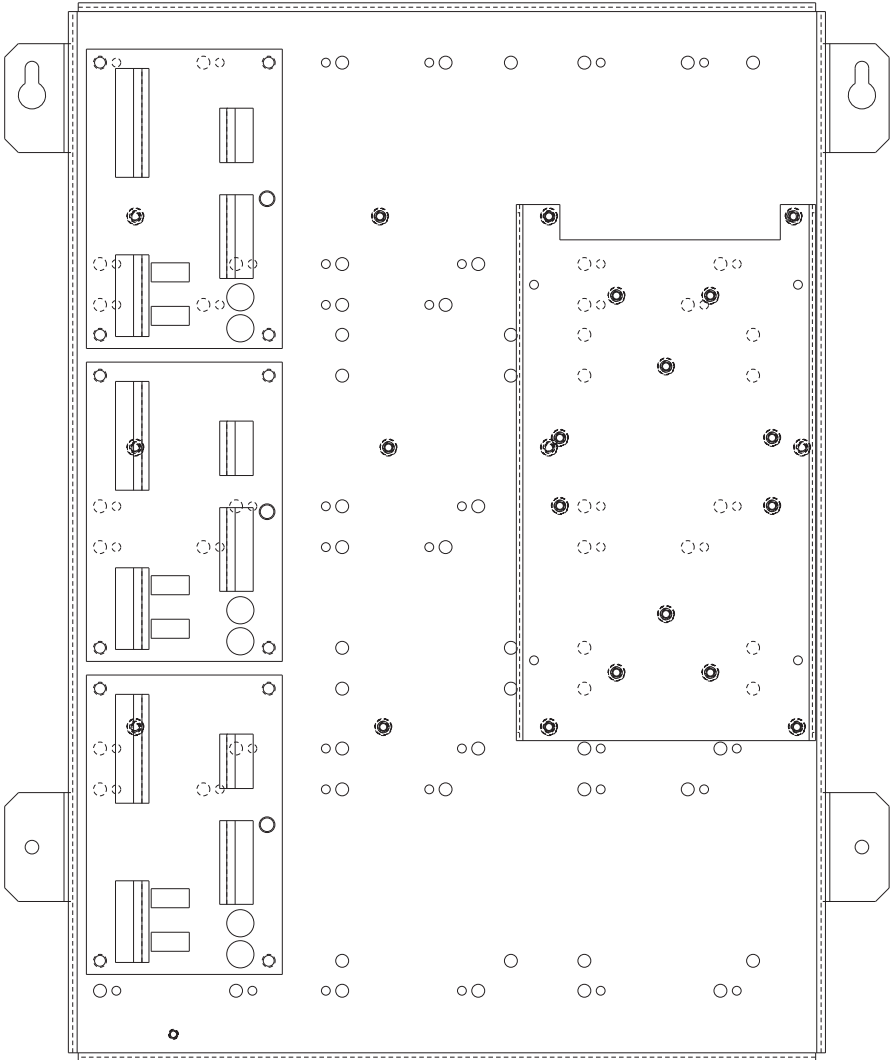


Fig. 8: Example Layout, 3 category B modules, 1 category C module, backplate

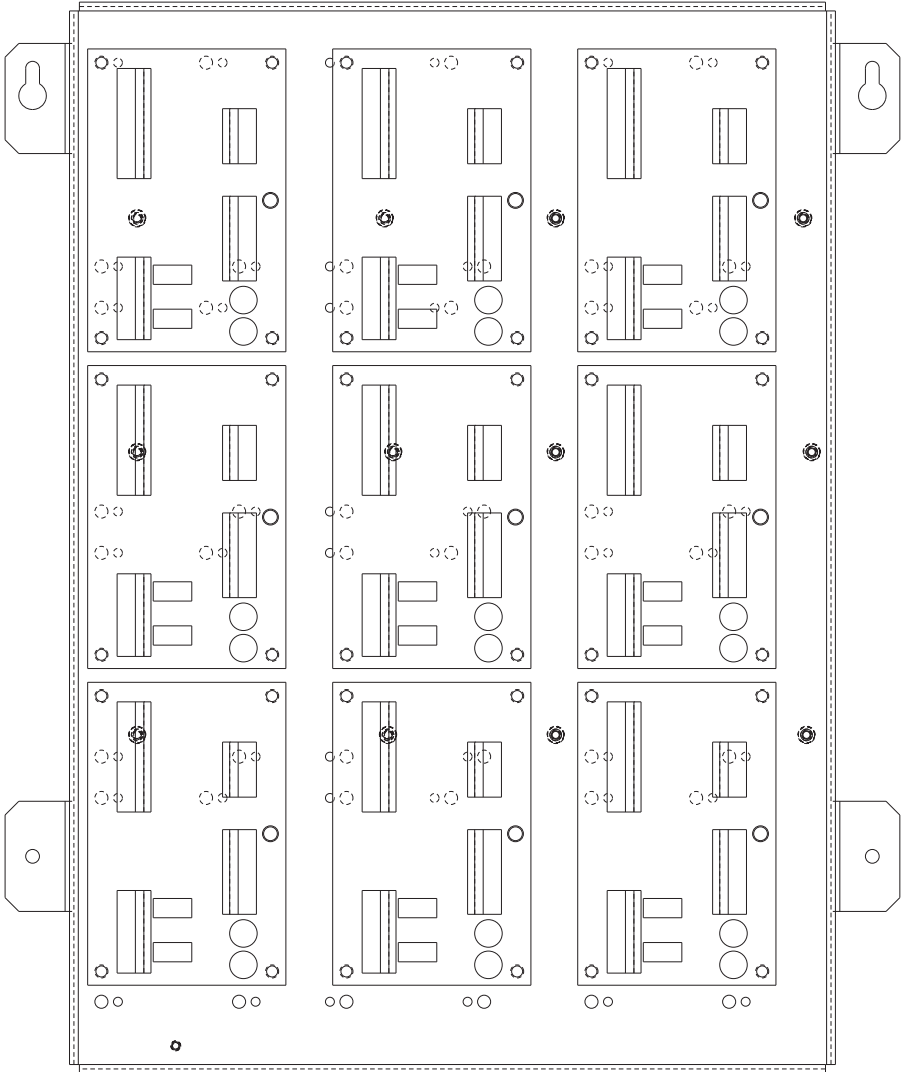


Fig. 9: Example Layout, 9 category B modules, backplate

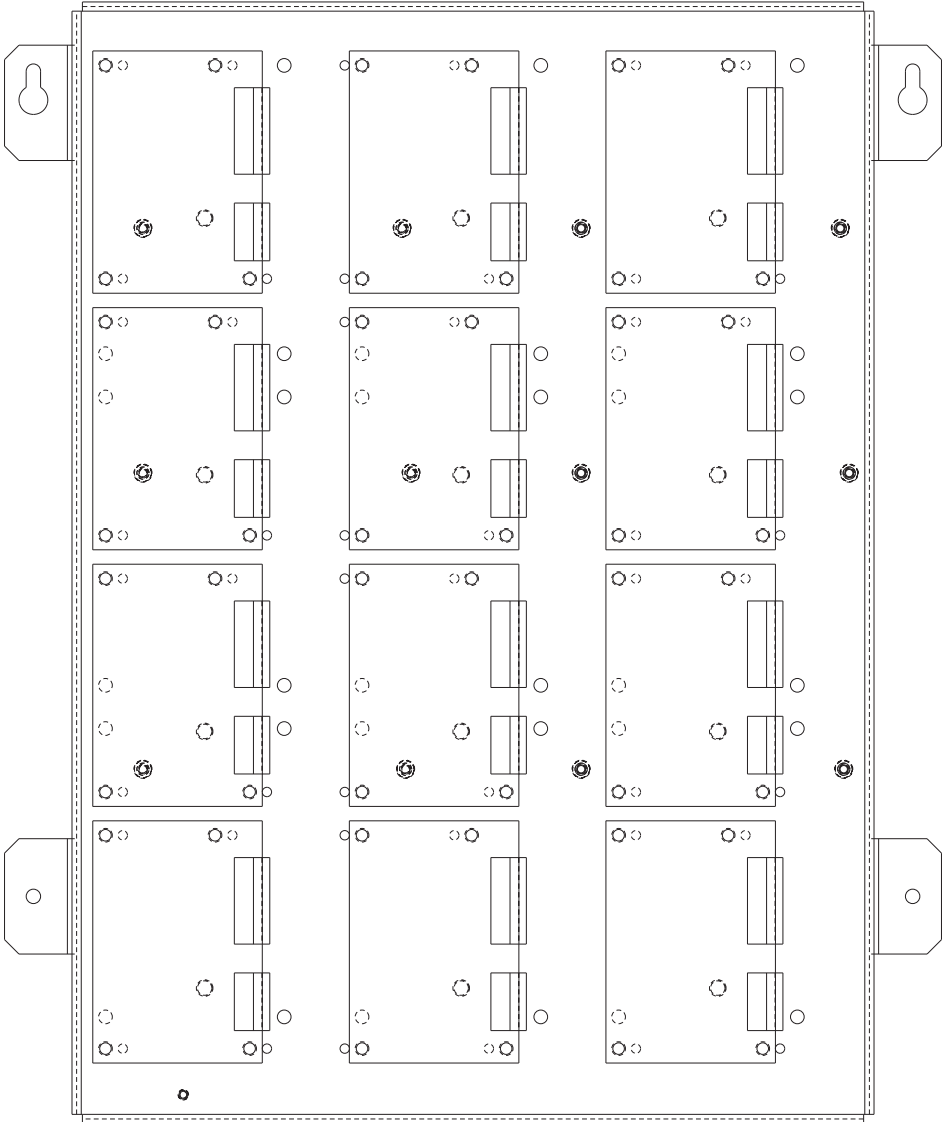


Fig. 10: Example Layout, 12 category A modules

Housing	Typical numbers of modules by category			
	A	B	C	D
FC-ANC	14	0	2	0
	10	3	2	0
	6	6	2	0
	0	9	2	0
	10	0	2	2
	2	0	4	0
	10	0	3	0
	2	3	3	0
	2	0	3	2
	2	0	2	4

*Table 5: Module Quantities*  
*These are example combinations – other combinations of modules are possible*