

FIRECLASS Ancillary Housings

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


Overview and Application

The ancillary housings are essentially the same housings used for FIRECLASS fire alarm control panels.

There are versions of the housings, each with an equivalent size control panel, as shown in Table 1.

Housing	Equivalent sized FIRE-CLASS Control Panels
ANC1(-D)	Lite and 32-1 (32-1 is deeper, but the width and height are the same)
ANC2(-D)	64-2 and 240-2
ANC3(-D)	64-4 and 240-4

Table 1: Housing/Control Panel equivalents

 Housing will typically be mounted adjacent to the alarm control panel.

The housings are available in the following versions:

- Without apertures.
For housing modules such as an IOB800, FC4 10DIM and so on. These are mounted on a backplate bolted to the rear of the housing.
- With apertures.
For mounting RBus “front door” ancillary modules, for indicating and/or user control (such as an ANN840).
The aperture versions can also accommodate modules mounted on a backplate.
For the two-aperture housings a blanking plate is supplied for use when only one aperture is used.

The housing order codes are shown in Table 2.

Housing	Apertures	Order Code
FIRECLASS ANC1	0	557.202.701
FIRECLASS ANC2	0	557.202.702
FIRECLASS ANC3	0	557.202.703
FIRECLASS ANC1-D	1	557.202.704
FIRECLASS ANC2-D	2	557.202.705
FIRECLASS ANC3-D	2	557.202.706

Table 2: Order codes

Document Holder

The non-aperture housings can be fitted with a document holder, part number 557.201.513.

This can accommodate A4 sized sheets, or in the larger housings (ANC2/3), a typical cardboard A4 paper wallet.

The document holder is supplied with its own installation documentation.

Door Ancillary Modules

Into each aperture can be mounted one of the door ancillary modules shown in Table 3

Module	Description
ANN840	40 pairs of red and yellow LEDs for fire zonal display.
ANN880	80 red LEDs for fire display.
COM820	20 LEDs and 20 switches for custom functions.
PRN800	Printer – 40 character width, thermal paper roll.

Table 3: Door Modules

These modules have their own documentation. Refer to this for further installation and configuration information (this housings leaflet only covers

the particular aspects of installing into the housings).

Interfacing the Door Modules

When installed in an FIRECLASS ancillary housing, the door modules must be interfaced to the fire alarm control panel using MPM800 modules.

(Excepting the PRN800 module, which has a serial link connection to COM1 of the panel FIM board.)

The MPM800 modules fit “piggy back” to the door modules themselves.

The MPM800 communicates with the fire panel over the RBus. Every MPM800 must have its own RBus address. For more details refer to the documentation for the MPM800 module.

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 4.

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

Table 4: Specifications

Item	Details
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 4: Specifications (cont.)

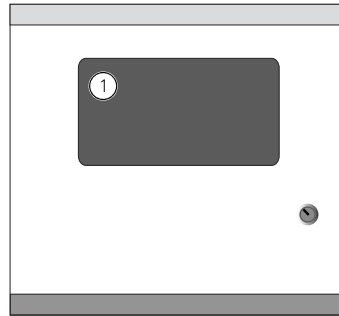


Fig. 1: ANC1-D Front
1– Aperture, not present on ANC1, otherwise identical

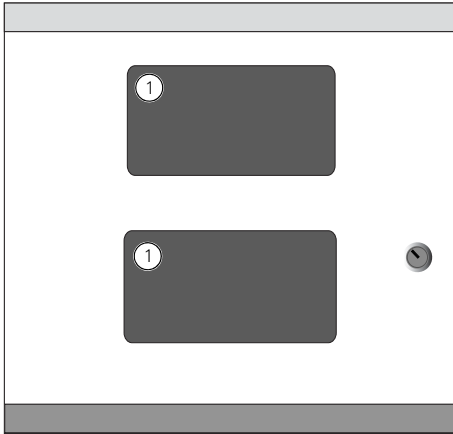


Fig. 2: ANC2-D/ANC3-D Front

1 – Apertures, not present on ANC2/ANC3, otherwise identical

Ordering Information

The order codes for the housings are shown in Table 2.

These codes are for the housings only.

You will need to separately order the modules to be fitted to the housing, for example the ANN840 and its required MPM800 module.

Mounting the housing

How to mount the housing

- 1 Ensure you will be complying with local regulations. The items these are expected to cover include the following:
 - Wiring specifications
 - Housing siting restrictions
 - Protective Earthing arrangements
 - Environmental conditions
 - Qualifications of personnel
 - 2 Check the installation location. The housing is not weatherproof. Check that the location is indoors, dry and free from excessive dust.
- 3 From the housing wall remove the appropriate knockout for cable routing. The cables will typically be a power cable, an earth wire and an RBus/COM 1 cable. Depending on the cable diameter, one or two knockouts may have to be removed.
 - 4 Decide on a wall mounting method (typically screws into wall plugs), and assess the required sizes of the fastenings. Take into account the type of wall (solid brick, wood and so on), and the weight of the assembled housing.
 - 5 For the upper (centre) mounting hole, mark on the wall the drill hole position. This mounting hole is Item 4 in Fig 5 on page 7 (for example). Now drill and plug this hole.
 - 6 Insert a screw to suspend the housing from the upper hole. For the ANC3(-D) housing, with a “keyhole” type mounting hole, you can insert the screw into the bare wall, then drop the housing onto the screw (rather than screwing with the housing in position, through the back wall).
 - 7 Ensure the housing is horizontal, then for the lower mounting holes, mark on the wall the drill hole positions. Drill and plug the bottom fixing holes.
 - 8 At this stage you might want to fit the door modules, as described in Step 2 of the procedure “How to install the RBus door modules” on page 8. It may be easier to install the ANN840 (for example) before mounting the housing to the wall, so the housing can be lying flat.
 - 9 Fix the housing to the wall using screws.
 - 10 Connect a protective earth between the control panel and ancillary housing. At the control panel connect this to earth terminal block (for more details see the control panel’s installation

Although the housing mounting position should already have been determined, as a double check, you can check the dimensions using the drawings in Figures 3 to 4, starting on page 5.

The drawings provide guidance on the cable entry points through the housing walls.

Note that the housing doors have their hinges on the left, and swing fully open, through more than 180°.

instructions). At the housing connect this to the the protective earth stud (Item 6 in Figure 6).

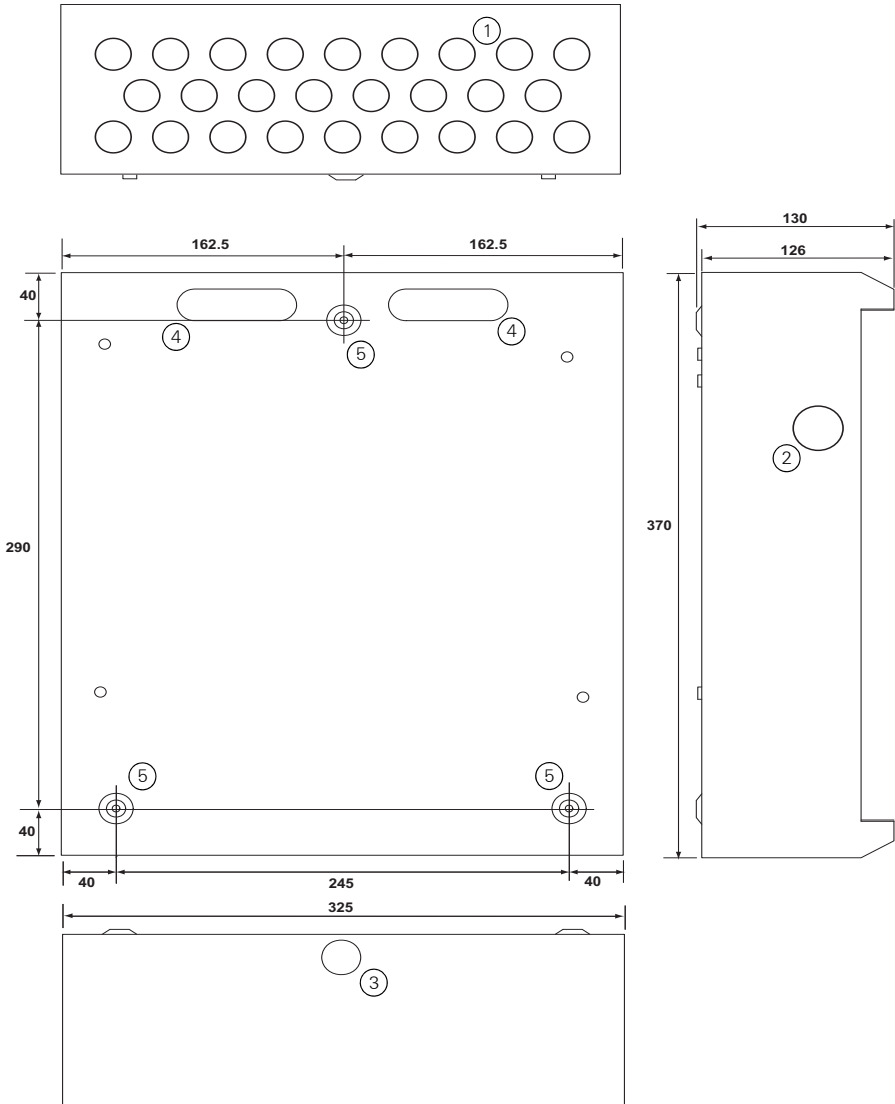


Fig. 3: Overall and Fixing Dimensions – ANC1(-D)

1– Knockouts \varnothing 20 mm (26x)

2– Knockout \varnothing 25 mm

3– Knockout \varnothing 20 mm)

4– Knockouts

5– Mounting hole \varnothing 5.5 mm (3x)

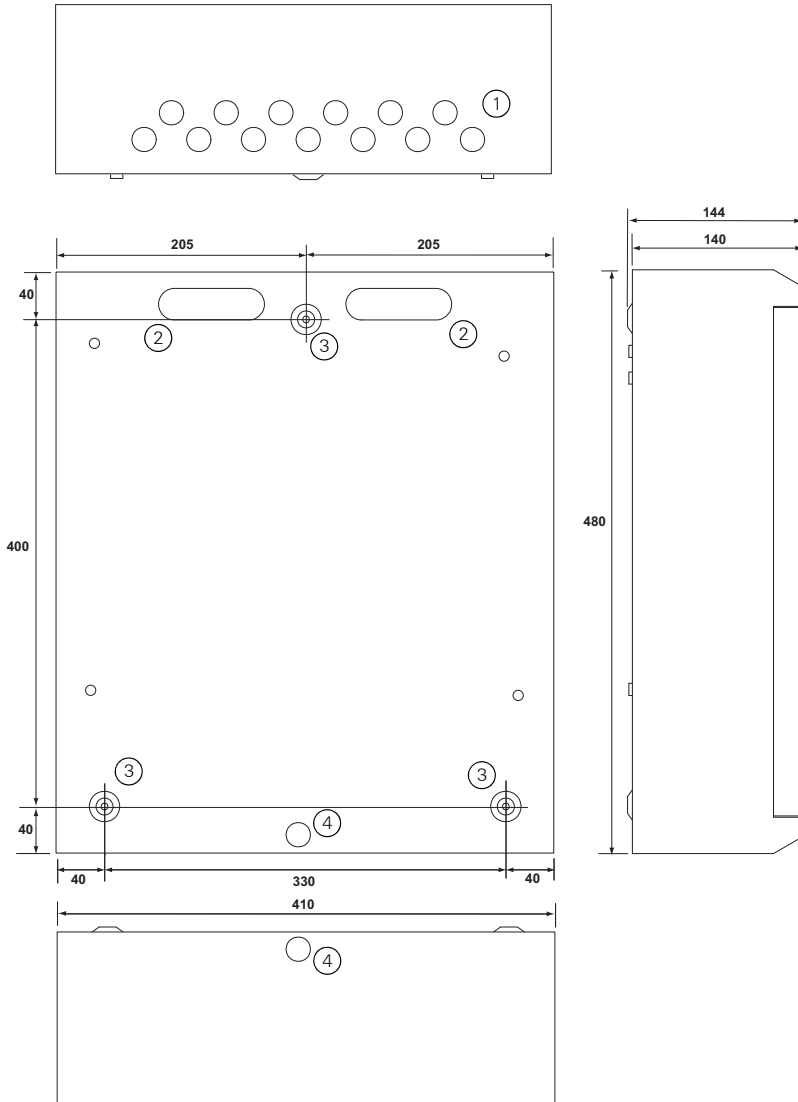


Fig. 4: Overall and Fixing Dimensions – ANC2(-D)

- 1– Knockouts \varnothing 20 mm (13x)
- 2– Knockouts
- 3– Mounting hole \varnothing 5.5 mm
- 4– Knockouts \varnothing 20 mm

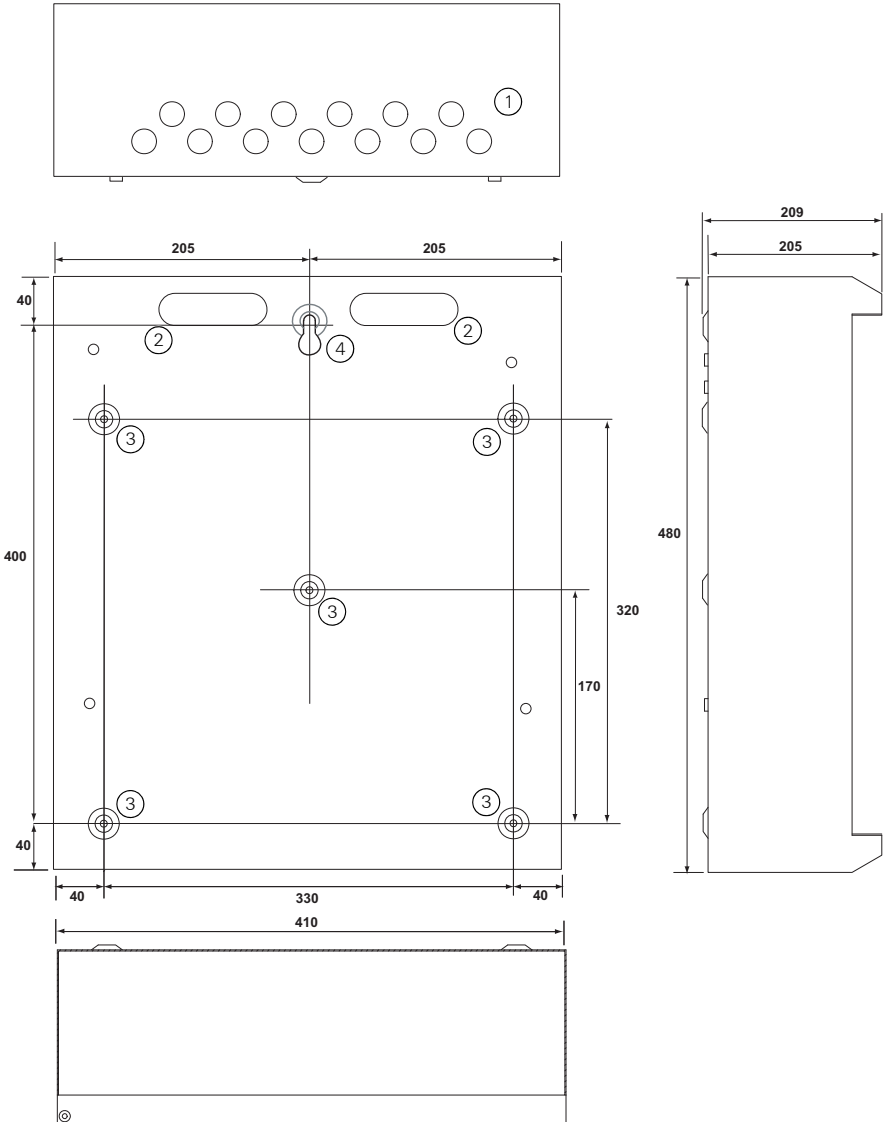


Fig. 5: Overall and Fixing Dimensions – ANC3(-D)

1– Knockouts \varnothing 20 mm (13x)

2– Knockouts

3– Mounting holes \varnothing 5.5 mm

4– Mounting hole \varnothing 7.5 mm

Installing Door Modules

How to install the RBus door modules

- 1 Note that this procedure only applies to the RBus door modules, not the PRN800. The PRN800 is supplied with its own installation details, that you should refer to.
- 2 Note that the item numbers in this procedure refer to Figure 6.
If not already fitted, fit the door ancillary module(s).
- 3 If a blanking plate is fitted to the required aperture, remove this. First unscrew the fixing bolts and remove the clamp frame (Item 2). Store the frame for re-use.
- 4 Offer up the ancillary module (Item 1) to the door aperture, positioned between the projecting studs.
Place the clamp frame over the studs. Fix the frame by screwing down the supplied nuts over the studs.
- 5 Configure the ancillary module, as described in the separate documentation for the module.
- 6 Now start to fit the MPM800. Onto the four innermost threaded studs of the ancillary module, fit the four threaded spacers supplied with the MPM800.
Then complete the installation and configure, following the documentation for the MPM800.
- 7 Ensure that the earth lead between the front door and the housing (Item 5) is fitted and secure.
If local regulations require an earth bond test, make sure you do this before connecting the rest of the cables below.
- 8 Run 24 V DC power to the installed MPM800.
As the power comes from the nearby fire alarm control panel, the voltage drop will be low. The

recommended conductor size is 0.5 mm² or larger, in a twin core cable.

At the fire alarm control panel, locate the PMM800 and connect the cable to a "24 V" and "0 V" output terminal pair. Make sure the output is fitted with a 1 A fast blow fuse.

At the housing connect the cable to the "PWR" connector of the MPM800.

If there are two MPM800 modules fitted, interconnect "PWR" between the two.

- 9 Connect the RBus.
On the fire alarm control panel locate the FIM module and its "RBus" connector. Connect the "RBus" cable to this. At the ANC housing connect the cable to the "RBus" connector on the MPM800. If there are two MPM800 modules, interconnect "RBus" between them.
- 10 If necessary, fit the blanking plate to unused apertures.
- 11 Finish off as follows:
 - Ensure that fixings are secure.
 - Ensure cables are tidy.
 - Install cable retaining clips as required.
 - Ensure the modules are secure.

Commissioning Door Modules

How to commission door modules

- 1 Power up the panel.
- 2 Open the door of the Ancillary housing and check that on the MPM800, the green power LED is activated.
- 3 After the panel has finished initializing check for faults.
The Lamp Test function can be used to check that all LEDs are working.
For any COM820 modules fitted, check the switch inputs are operating correctly.

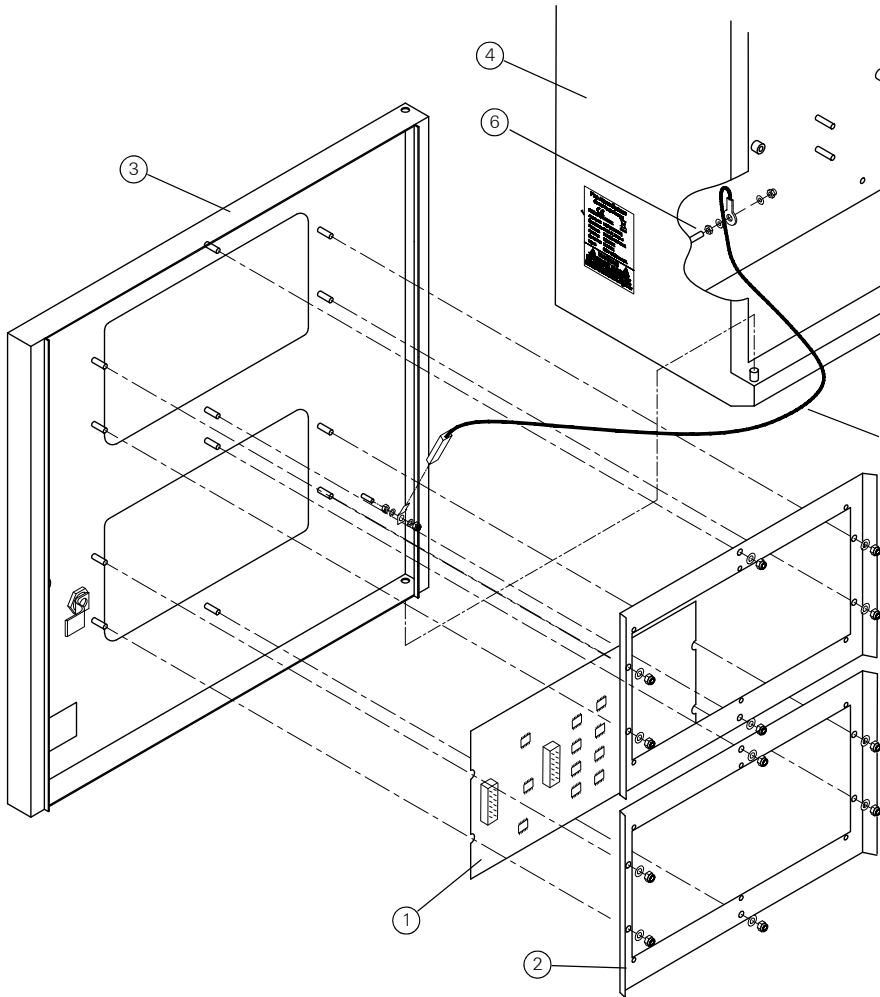


Fig. 6: Door Modules – Clamp Frame Fitting

1 – Ancillary module

2 – Clamp frame

3 – Door

4 – Housing

5 – Earth wire

6 – Earth stud

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 "Planning the Backplate Module Layout" on page 11.
- 2 Remove the appropriate knockouts from the top of the housing. Fit cable glands if necessary.
- 3 For mounting modules in a single layer use the quick-fit plastic pillars as follows:
 - a) Snap four quick-fit plastic pillars through the board.
 - b) Offer up the module to the backplate, in the approximate final position. The backplate is Item 1 in Figure 7. Now adjust the position to find a set of large (4.8mm diameter) backplate holes through which to push the pillars.
 - c) Push the pillars through the backplate.
- 4 For stacked module mounting use mounting kits 557.201.518 for the bottom module and 557.180.095 for the top module as follows:
 - a) Fix the 50mm threaded pillars with an M3 nylon screw through the top level board into the female end. Ensure a nylon washer is fitted between the spacer and module.
 - b) Fit the lower module to the threaded spacers fitted in a) and screw the 10mm threaded pillars onto the 50mm pillars securing the modules together.
 - c) Offer up the modules to the backplate, in the approximate final position. The backplate is Item 1 in Figure 7. Now adjust the position to find a set of small holes in the backplate through which to fit the spacers.
 - d) Fix the 10mm spacers to the holes on the backplate with M3 Nyloc nuts and washers.
Note: for each pillar used you will have one crinkle washer and one Nylon nut left over.
- 5 Mount the backplate to the rear of the housing. Use the appropriate screws in the threaded bosses of the housing. See Figure 7.
- 6 Make sure the earth wire is connected (Item 2 in Figure 7). This connects between the stud in the side wall of the housing, and the tag on the backplate.
- 7 Repeat steps 3 and 4 for each module.
- 8 Feed the cabling into the housing and attach this to the modules.

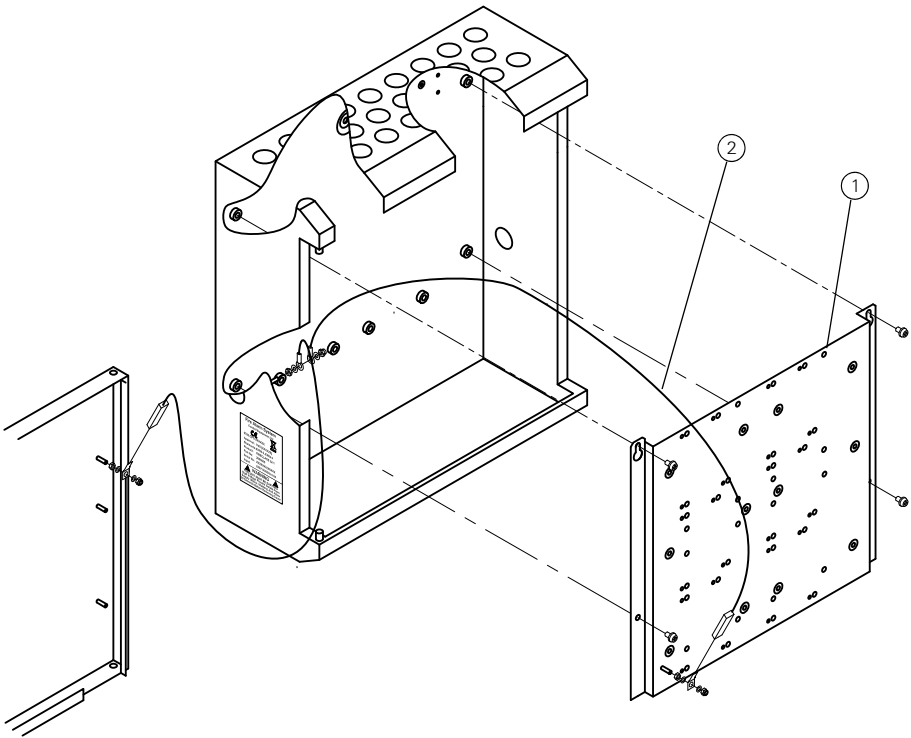


Fig. 7: Backplate Fitting

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. There is a small backplate for the 'ANC1' size housings, and a larger backplate for the larger housings.
- The type of module to be fitted. For the purposes of this guide, these are allocated to various categories. Table 5 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 7 on page 24 shows the numbers of the various modules that can be fitted, for some example combinations of modules.

For some example layouts of modules on the backplate, refer to the figures set out in Table 6 on page 12.

For general guidance, Figure 8, Figure 9 and Figure 10 show how some of the modules attach to the backplate.

Category	Modules	Notes
A	FC4 10CIM FC4 10DIM FC4 10LI FC4 10SIO FC4 10DDM FC4 10RIM FC4 10SNM SB520* BTM800	Mount using plastic quick-fit pillars in 4 positions. * SB520 needs M3 male/female threaded pillars with screws, nuts and washers, part number 557.201.5 18 As an alternative mounting, may be stacked using the ancillary mounting kit (uses all threaded pillars). The kits are 557.201.5 18 (mounts the bottom module of a stack), and 557.180.095 (mounts the second and subsequent modules in a stack). Order multiple kits for larger stacks.
B	MIO800	Mount using quick-fit pillars or stack, as for Category A.

Table 5: Module Categories

Category	Modules	Notes
C	CCU3 IOB800	Use the 'Comms Interface Mounting Plate' 557.201.5 19.
D	QMO800 QIO800	Use plastic boxes attached to a DIN rail. Cut the DIN rail to suit and drill fixing holes to match.
Door	ANN840 ANN880 COM820 PRN800	Interfaced to the RBus using an MPM800.

Table 5: Module Categories (cont.)

Figure	Modules (number x category)	Backplate
Figure 11	2 x C	Large
Figure 12	8 x A+1 x C	Large
Figure 13	3 x B+1 x C	Large
Figure 14	9 x B	Large
Figure 15	12 x A	Large
Figure 16	3 x A+ 1 x C	Small
Figure 17	2 x B+ 1 x C	Small
Figure 18	4 x B	Small
Figure 19	6 x A	Small
Figure 20	2 x C	Small

Table 6: Example layout figures

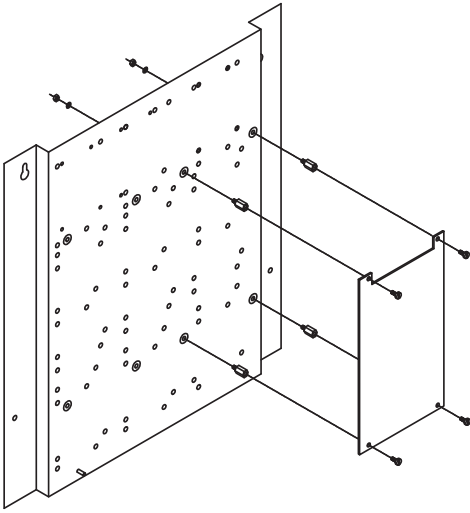


Fig. 8: Category C mounting, large backplate

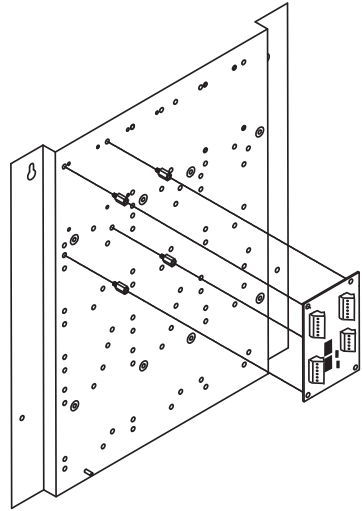


Fig. 9: Category A mounting, large backplate

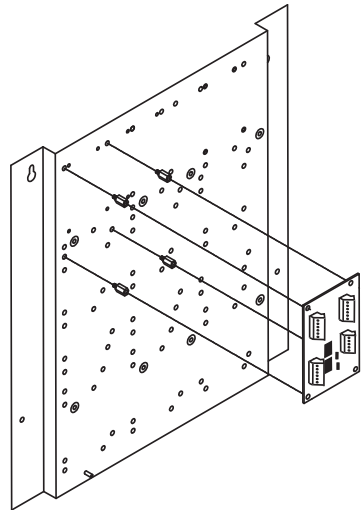


Fig. 10: Category B mounting, large backplate

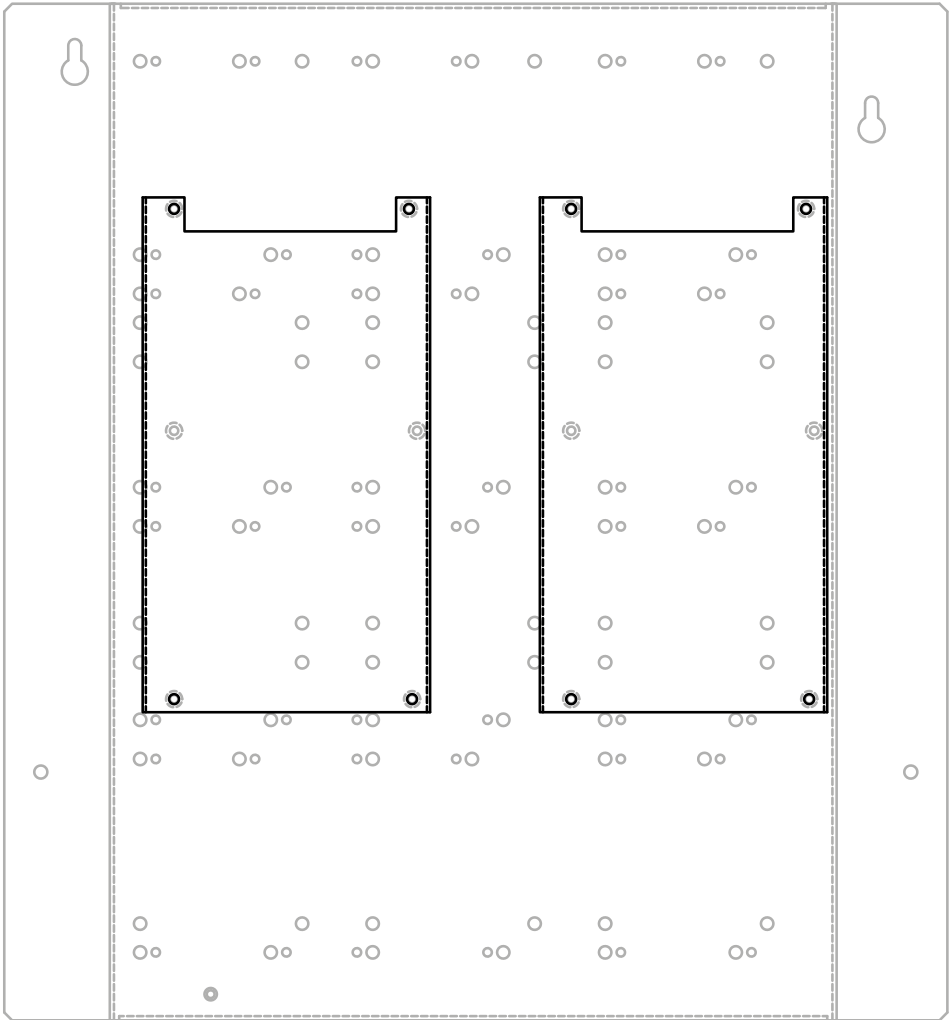


Fig. 11: Example Layout, 2 category C modules, large backplate

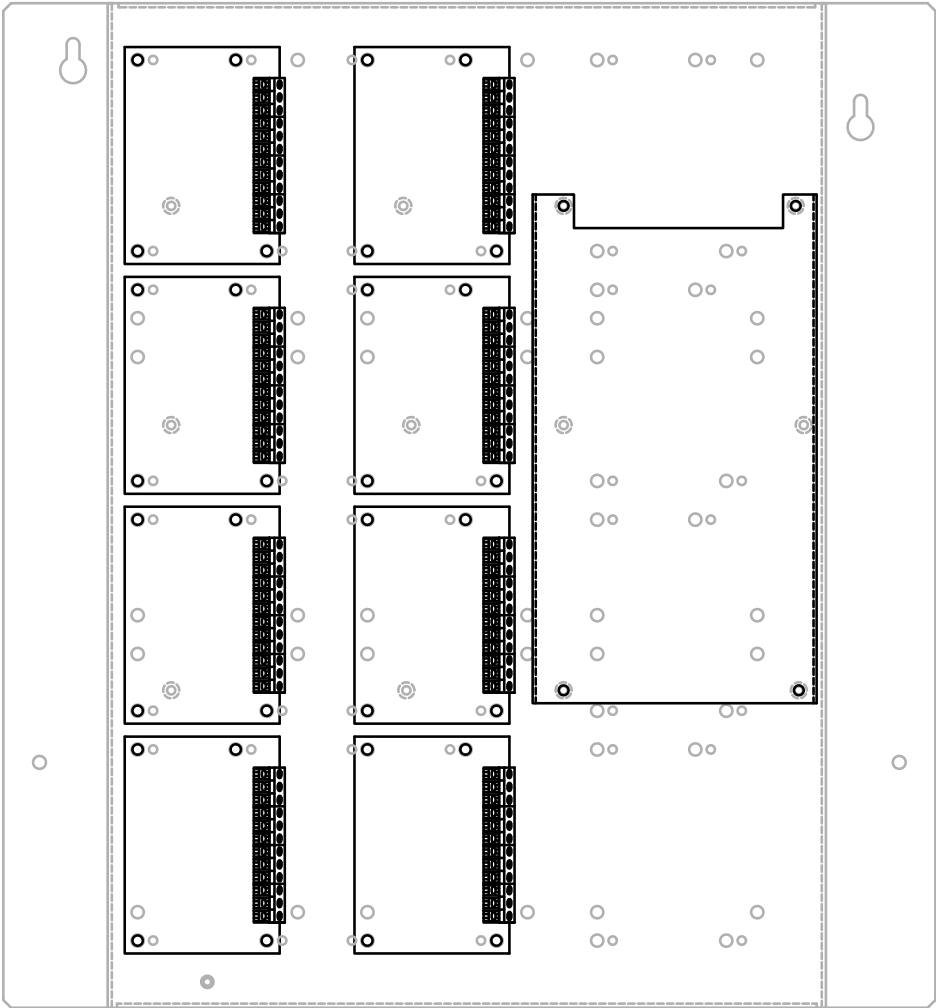


Fig. 12: Example Layout, 8 category A modules, 1 category C module, large backplate

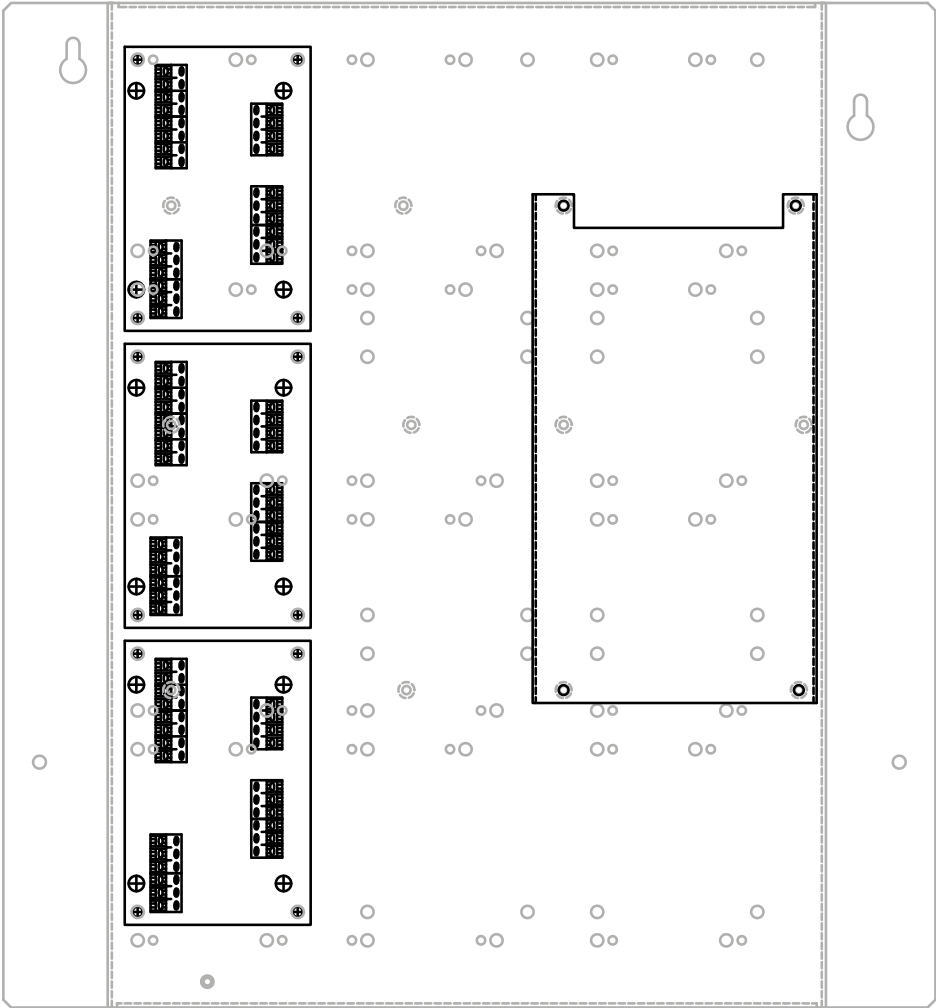


Fig. 13: Example Layout, 3 category B modules, 1 category C module, large backplate

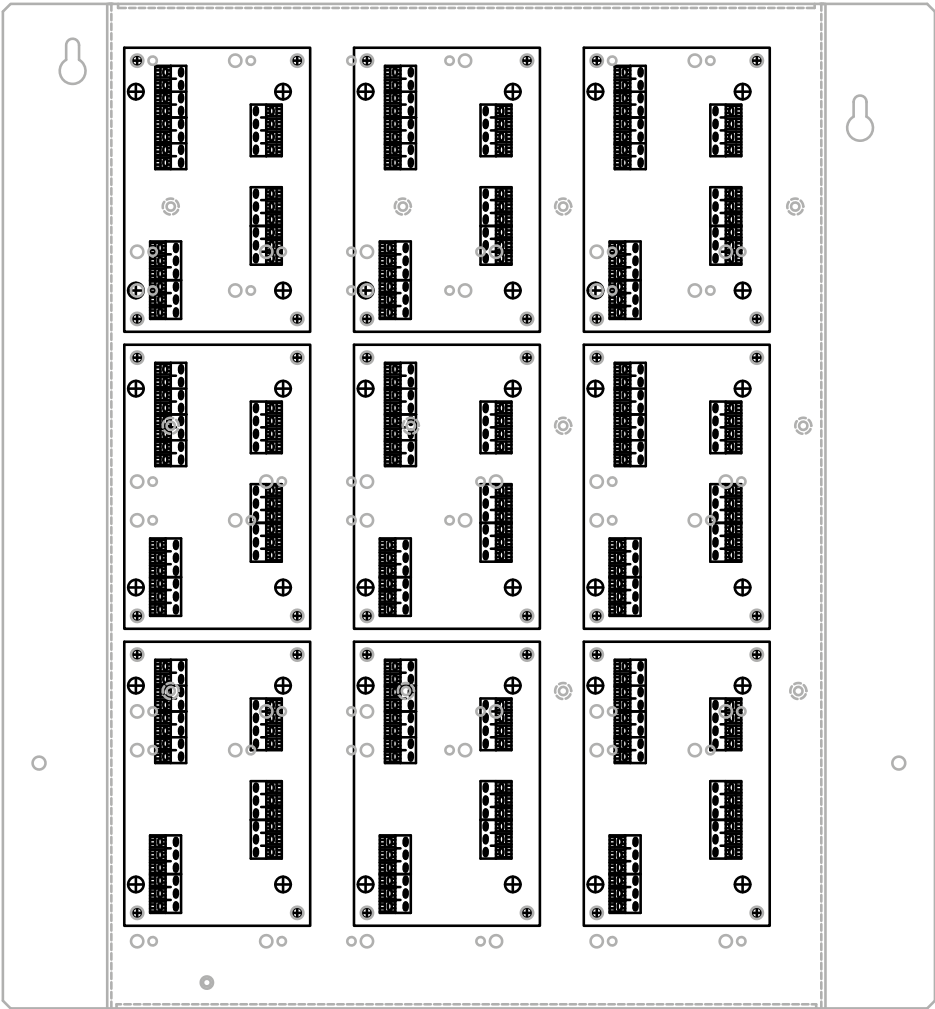


Fig. 14: Example Layout, 9 category C modules, large backplate

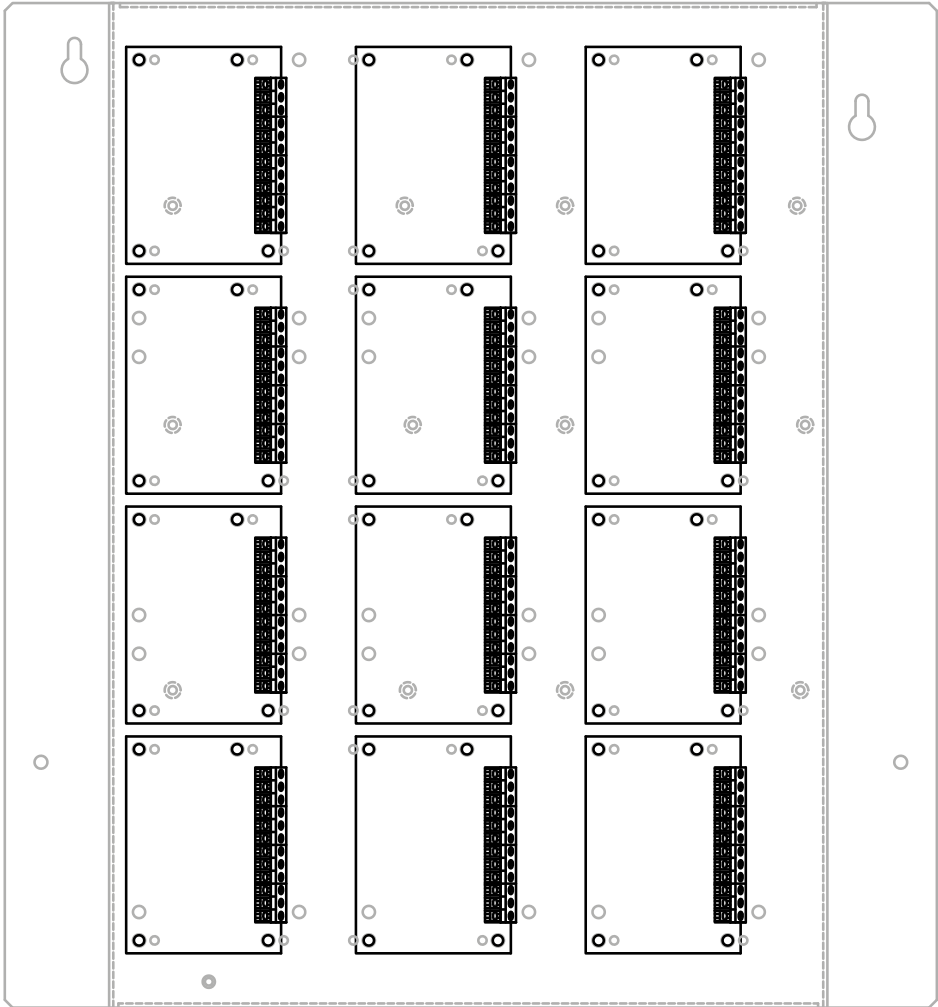


Fig. 15: Example Layout, 12 category A modules

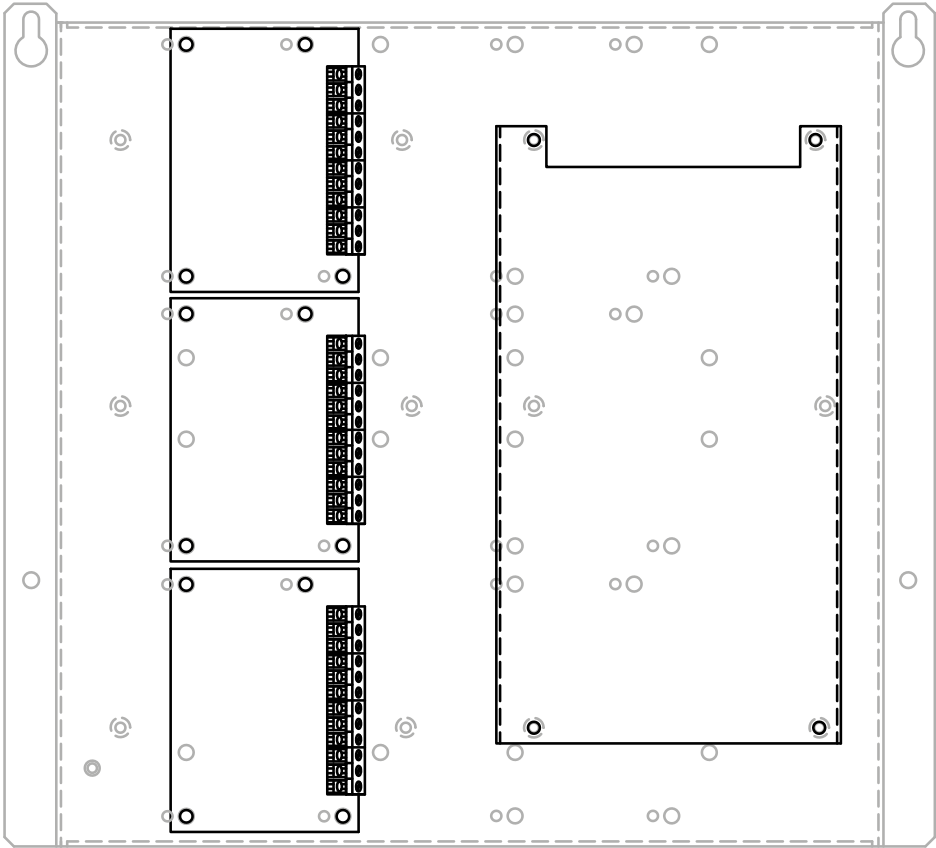


Fig. 16: Example Layout, 3 category A modules, 1 category C module, small backplate

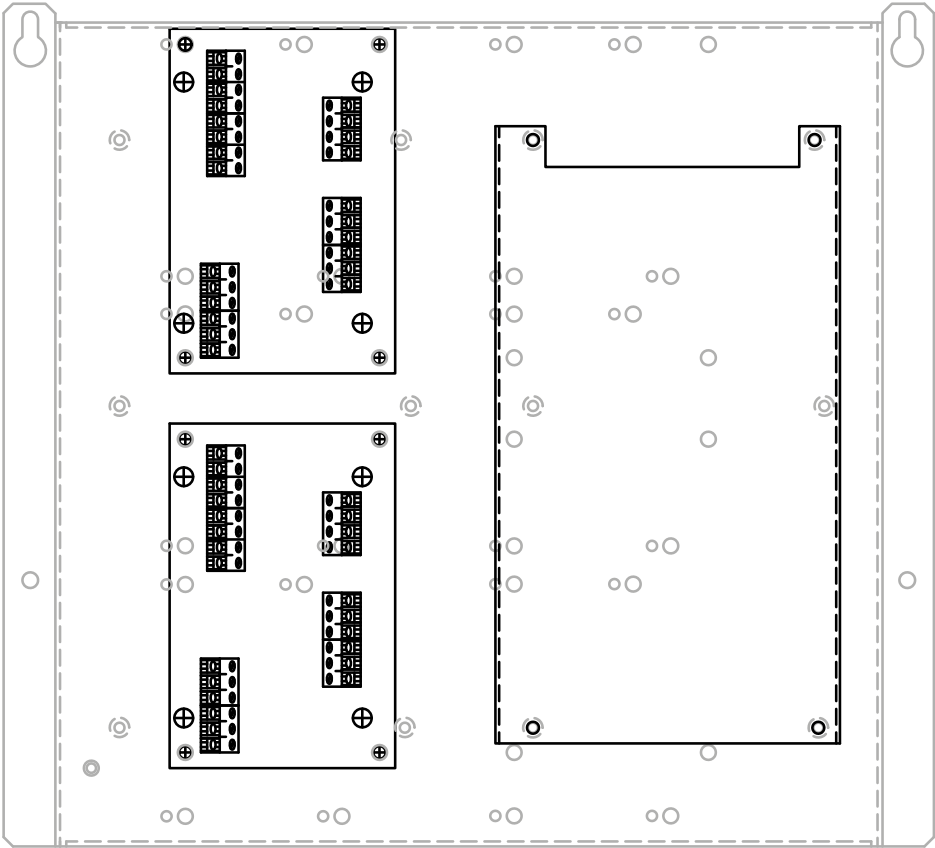


Fig. 17: Example Layout, 2category B modules, 1 category C module, small backplate

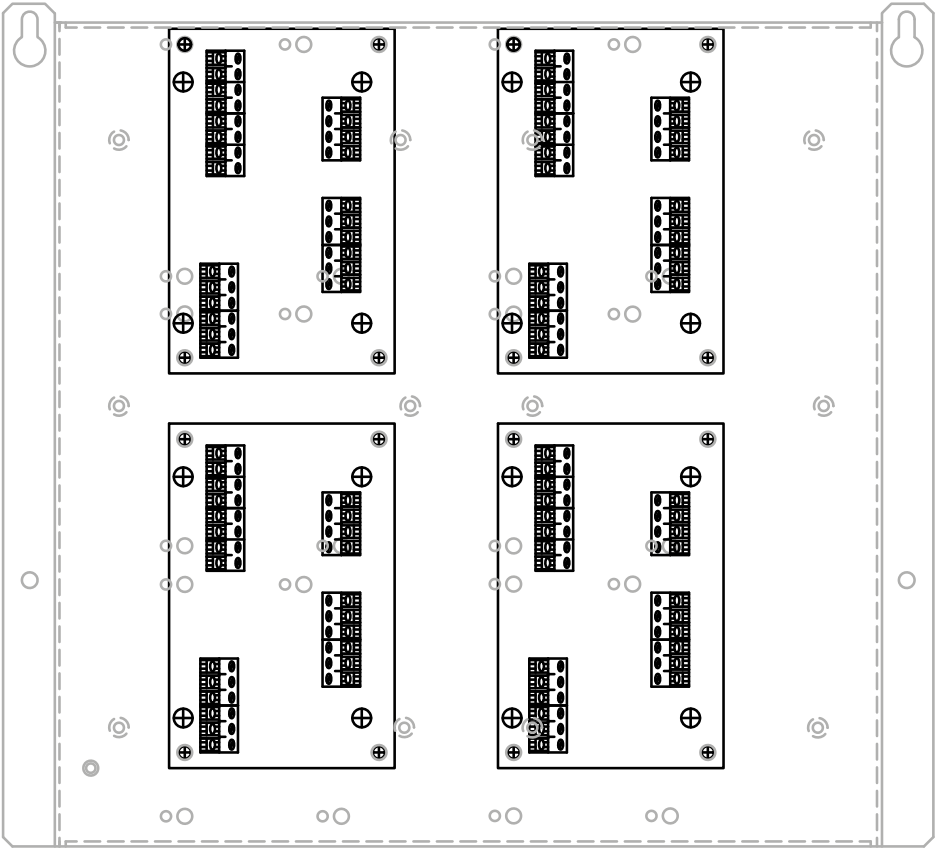


Fig. 18: Example Layout, 4category B modules, small backplate

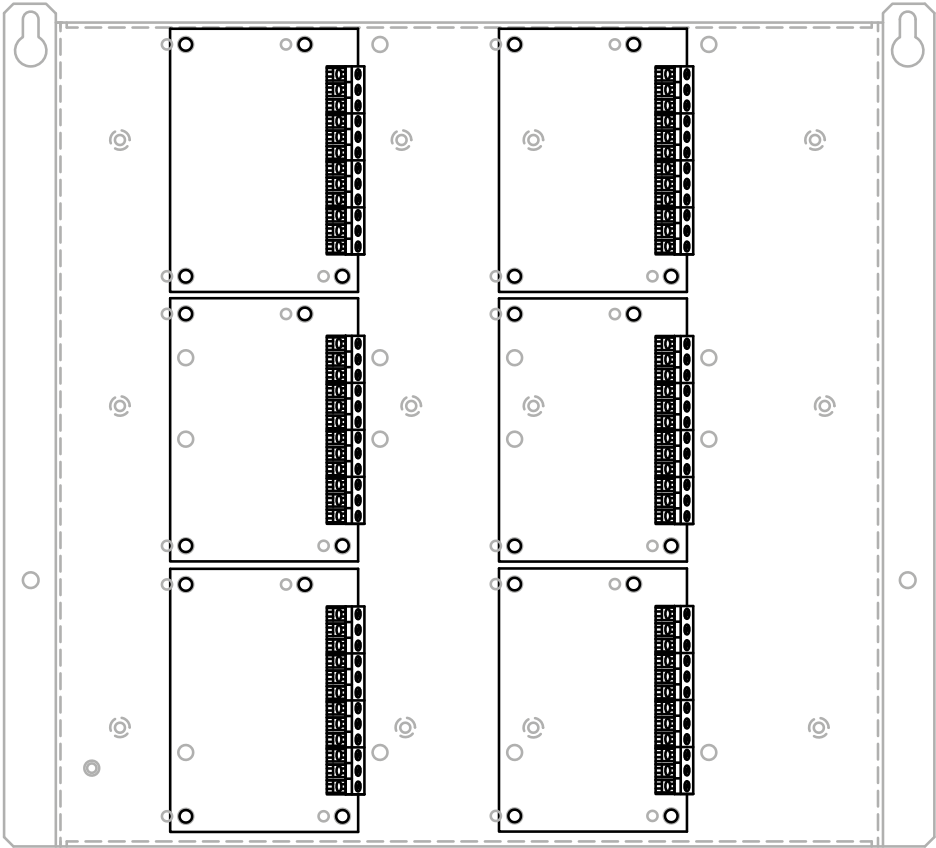


Fig. 19: Example Layout, 6category A modules, small backplate

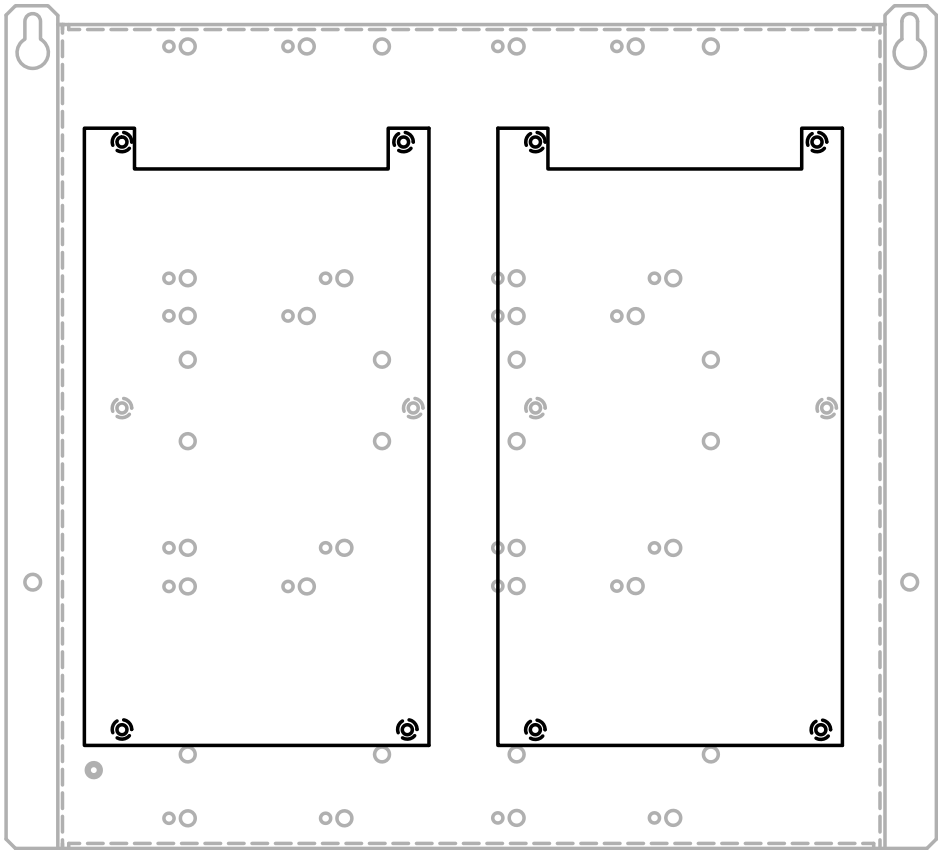


Fig. 20: Example Layout, 2 category B modules, small backplate

	Typical numbers of modules by category				
Housing	A	B	C	D	Door
ANC1	6	0	0	0	N/A
	3	2	0	0	N/A
	0	4	0	0	N/A
	3	0	0	1	N/A
	0	0	2	0	N/A
	3	0	1	0	N/A
	0	2	1	0	N/A
	0	0	1	1	N/A
	0	0	0	2	N/A
	ANC2	12	0	0	0
8		3	0	0	N/A
4		6	0	0	N/A
0		9	0	0	N/A
8		0	0	2	N/A
0		0	2	0	N/A
8		0	1	0	N/A
0		3	1	0	N/A
0		0	1	2	N/A
0		0	0	4	N/A

Table 7: Module Quantities

These are example combinations – other combinations of modules are possible

	Typical numbers of modules by category					
Housing	A	B	C	D	Door	
ANC3	12	0	0	0	N/A	
	8	3	0	0	N/A	
	4	6	0	0	N/A	
	0	9	0	0	N/A	
	8	0	0	2	N/A	
	0	0	2	0	N/A	
	8	0	1	0	N/A	
	0	0	1	0	N/A	
	0	0	1	2	N/A	
	0	0	0	4	N/A	
	ANC1-D	6	0	0	0	1
		3	2	0	0	1
0		4	0	0	1	
3		0	0	1	1	
0		0	2	0	1	
3		0	1	0	1	
0		2	1	0	1	
0		0	1	1	1	
0		0	0	2	1	

Table 7: Module Quantities (cont.)

These are example combinations – other combinations of modules are possible

	Typical numbers of modules by category				
Housing	A	B	C	D	Door
ANC2-D	12	0	0	0	2
	8	3	0	0	2
	4	6	0	0	2
	0	9	0	0	2
	8	0	0	2	2
	0	0	2	0	2
	8	0	1	0	2
	0	3	1	0	2
	0	0	1	2	2
	0	0	0	4	2
ANC3-D	12	0	0	0	2
	8	3	0	0	2
	4	6	0	0	2
	0	9	0	0	2
	8	0	0	2	2
	0	0	2	0	2
	8	0	1	0	2
	0	3	1	0	2
	0	0	1	2	2
	0	0	0	4	2

*Table 7: Module Quantities (cont.)
 These are example combinations – other combinations of modules are possible*

