



ENC-LGE Large Enclosure Installation Manual

Copyright	<p>©2025 Aritech, All rights reserved. Specifications are subject to change without prior notice. All trademarks are the property of their respective owners.</p> <p>KGS Fire and Security Australia Pty Ltd trading as Aritech is a part of Kidde Global Solutions.</p>
Trademarks and patents	<p>The Challenger name and logo are trademarks of KGS Fire and Security Australia Pty Ltd.</p> <p>Other trade names used in this document may be trademarks or registered trademarks of the manufacturers or vendors of the respective products.</p>
Manufacturer	<p>Made in China by KGS Safety System (Hebei) Co., Ltd. No. 80, Changjiang East Road, QETDZ, Qinhuangdao, Hebei, P. R. China 066004</p> <p>Imported by KGS Fire and Security Australia Pty Ltd Suite 4.01, 2 Ferntree Place, Notting Hill, Victoria, 3168, Australia</p>
Product warnings and disclaimers	<p>THESE PRODUCTS ARE INTENDED FOR SALE TO AND INSTALLATION BY QUALIFIED PROFESSIONALS. KGS FIRE AND SECURITY AUSTRALIA PTY. LTD. CANNOT PROVIDE ANY ASSURANCE THAT ANY PERSON OR ENTITY BUYING ITS PRODUCTS, INCLUDING ANY "AUTHORIZED DEALER" OR "AUTHORIZED RESELLER", IS PROPERLY TRAINED OR EXPERIENCED TO CORRECTLY INSTALL FIRE AND SECURITY RELATED PRODUCTS.</p> <p>For more information on warranty disclaimers and product safety information, please check https://aritech.com.au/aritech-product-warranty/ or scan the QR code.</p>
WEEE compliance	<p>For proper recycling, dispose all the batteries and the packaging as required by local ordinances or regulations</p>
Contact information	<p>For contact information, see www.aritech.com.au</p>



Contents

Important information	4
Limitation of liability	4
Agency compliance	4
Contact information	4
Package contents	5
Product overview	6
Specifications	6
Enclosure Door	7
Enclosure Base	8
Transformer	10
Power Entry Guard Plate.....	11
Cable Entry Guard Plate	11
Tamper Kit	11
Transformer Retainer	11
Installing the enclosure	12
Installation guidelines	12
Mounting the Enclosure Base to a Wall.....	13
Enclosure Access Restrictions	13
Tamper Bracket Installation.....	13
Installing the Cam Lock	15
Earthing the Enclosure	15
Earthing Challenger Devices	15
Installing the Power Cable Guard Plate	16
Installing the Cable Entry Guard Plate.....	17
Installing Radio Antenna.....	17
Batteries.....	17
Mounting Devices	18
Mounting Locations.....	19
Appendix A: Transformer	26
Warnings and restrictions	26
Transformer Specifications	26
Transformer Installation.....	27
Fuse Replacement	27

Important information

Limitation of liability

To the maximum extent permitted by applicable law, in no event will Aritech be liable for any lost profits or business opportunities, loss of use, business interruption, loss of data, or any other indirect, special, incidental, or consequential damages under any theory of liability, whether based in contract, tort, negligence, product liability, or otherwise. Because some jurisdictions do not allow the exclusion or limitation of liability for consequential or incidental damages the preceding limitation may not apply to you. In any event the total liability of Aritech shall not exceed the purchase price of the product. The foregoing limitation will apply to the maximum extent permitted by applicable law, regardless of whether Aritech has been advised of the possibility of such damages and regardless of whether any remedy fails of its essential purpose.

Installation in accordance with this manual, applicable codes, and the instructions of the authority having jurisdiction is mandatory.

The customer is responsible for testing and determining the suitability of this product for specific applications. The customer is responsible for testing the product at least once every three months.

While every precaution has been taken during the preparation of this manual to ensure the accuracy of its contents, Aritech assumes no responsibility for errors or omissions.

Agency compliance

This product conforms to the standards set by Standards Australia on behalf of the Australian Communications and Media Authority (ACMA).

Ensure that enclosure covers are fitted to maintain ACMA compliance.

Notice! This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Contact information

For contact information, see www.aritech.com.au

Package contents

If any components are damaged or missing, do not use the unit; contact the supplier immediately. The original shipping box must be used for returns.

Table 1: ENC-LGE Large Enclosure shipping list

Quantity	Item
1	ENC-LGE Large Enclosure
1	Enclosure door, attached to enclosure
1	Mains transformer, installed in enclosure
2	M6 x 12 button socket cap screws (attaching door to enclosure)
1	ENC-LGE Large Enclosure Installation Manual
1	Mains power cable
1	Power cable grommet
1	Power entry guard plate
1	Cable entry guard plate
4	M4 hex nuts for guard plates
4	M4 washers for guard plates
1	Tamper switch
1	Tamper switch bracket
2	Tamper lead
1	Tamper switch wall screw (4.2 mm x 32 mm pan head) and wall plug

Product overview

This installation manual applies to the ENC-LGE Large Enclosure.

The ENC-LGE Large Enclosure allows for mounting of a wide variety of devices, including TS1016 Challenger10, the TS-CHPLUS Challenger*Plus* and the TS1066 Network Access Controller.

Specifications

Dimensions	Size(mm)	W 409 x H 593 x D 120
	Weight	12 kg
Storage	Temperature	-20 to +80°C
Operating Environment	Room temperature	0 to 50°C
	Relative humidity	0 to 95% non-condensing
Conduit	Size (mm)	(50 x 50) or (50 x 25)
Mounting Screws	Max head diameter	10 mm
	Max shank diameter	5 mm
Batteries	Quantity	2
	Type	Rechargeable sealed lead acid (SLA)
	Compliance	AS/NZS 2201.1:2007 Appendix C
	Voltage	12 V
	Capacity	≥ 7Ah
	Size (mm)	(65 x 151 x 100) or (98 x 151 x 100)
	Terminals	4.75 x 0.8 mm
Cam Lock (not supplied)	Diameter	19 mm (16 mm across flats)
	Barrel length	16 mm
	Cam length	30 – 40 mm
Antenna Knockouts (x2)	Diameter	12.7 mm

Enclosure Door

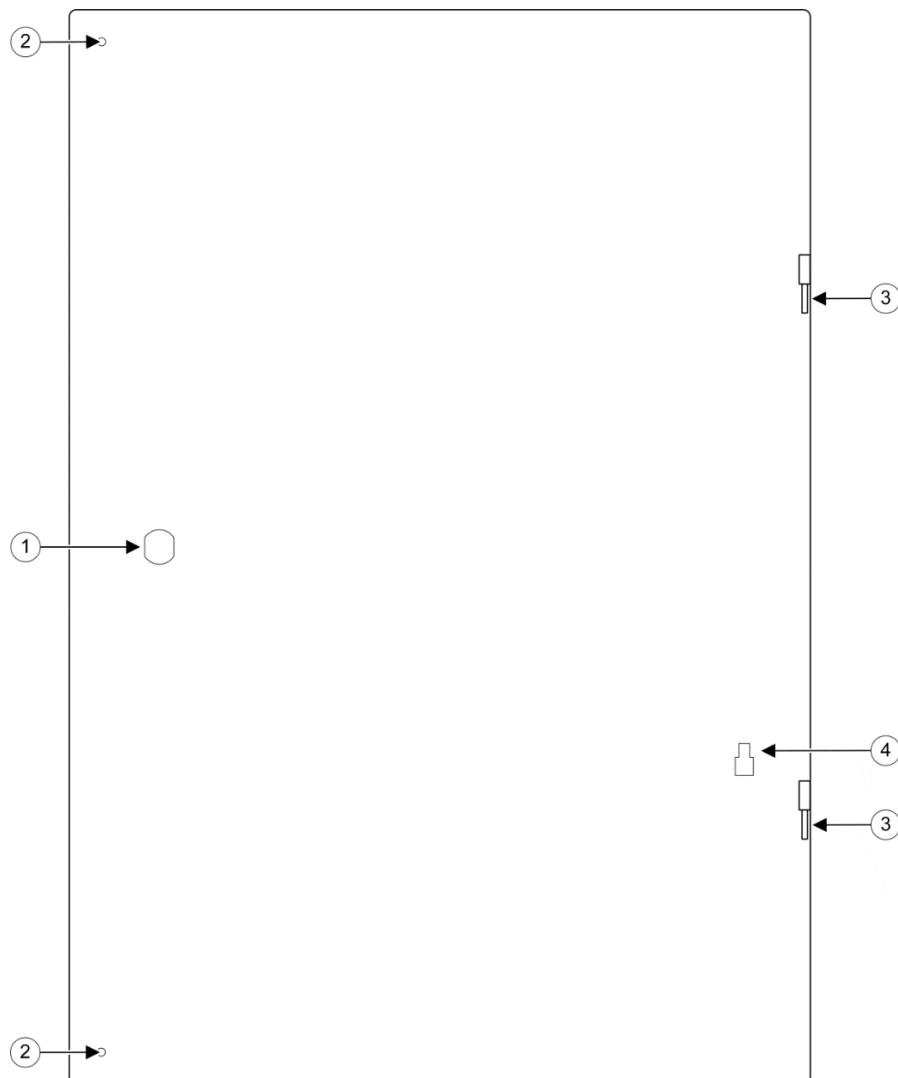
To remove the door:

- Remove the two M6 x 12 knurled button socket cap screws.
- Open the door.
- Disconnect the earth cable.
- Lift the door to separate it from the hinges.

Reverse this process when reattaching the door.

Always ensure that the door is earthed by reconnecting the earth cable (supplied) between the door (Figure 1: Door overview (inside view), item 4) and enclosure (Figure 3: Enclosure overview, item 11).

Figure 1: Door overview (inside view)

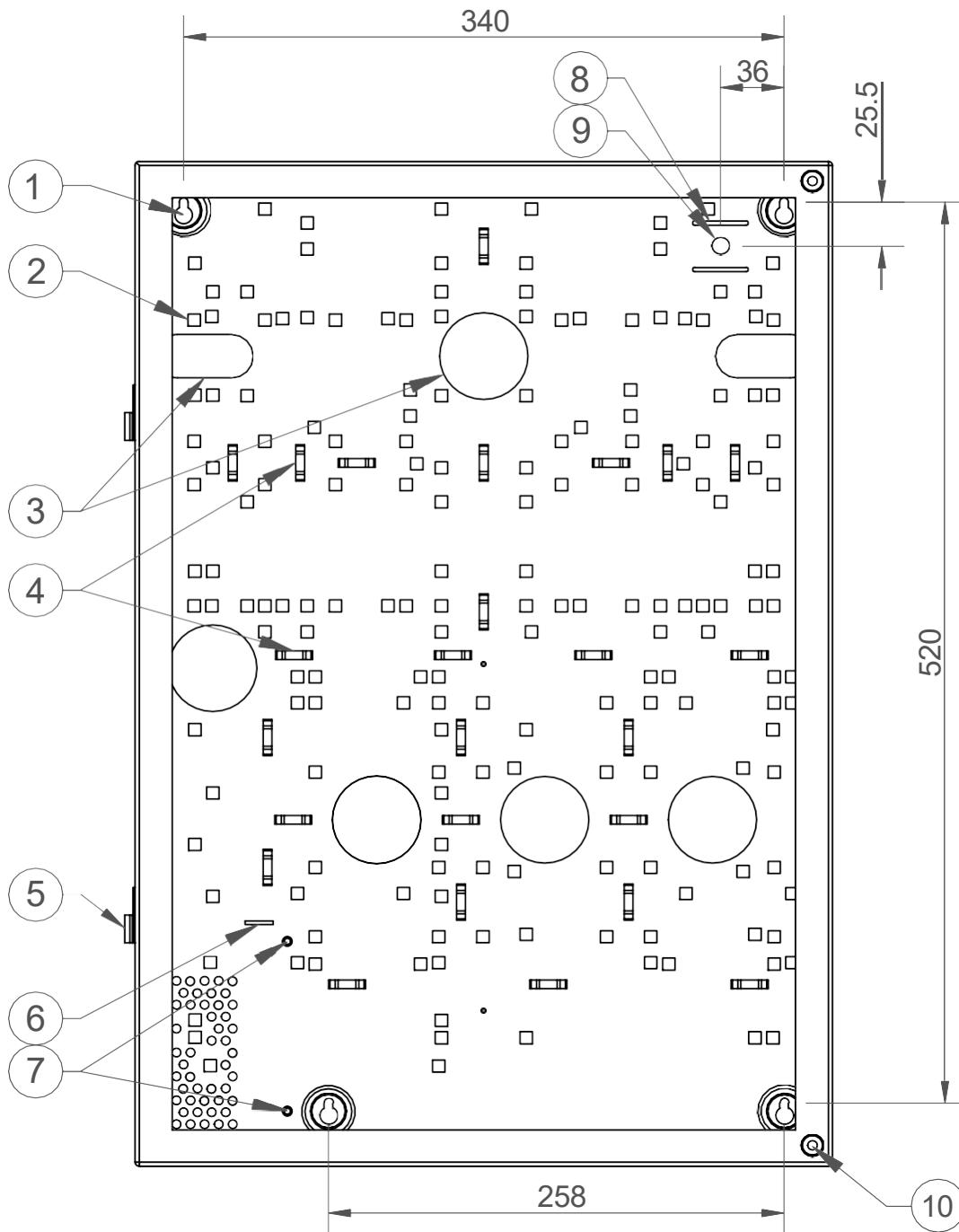


1. Knockout for cam lock
2. Door close points

3. Door hinge pins
4. Door earth tab

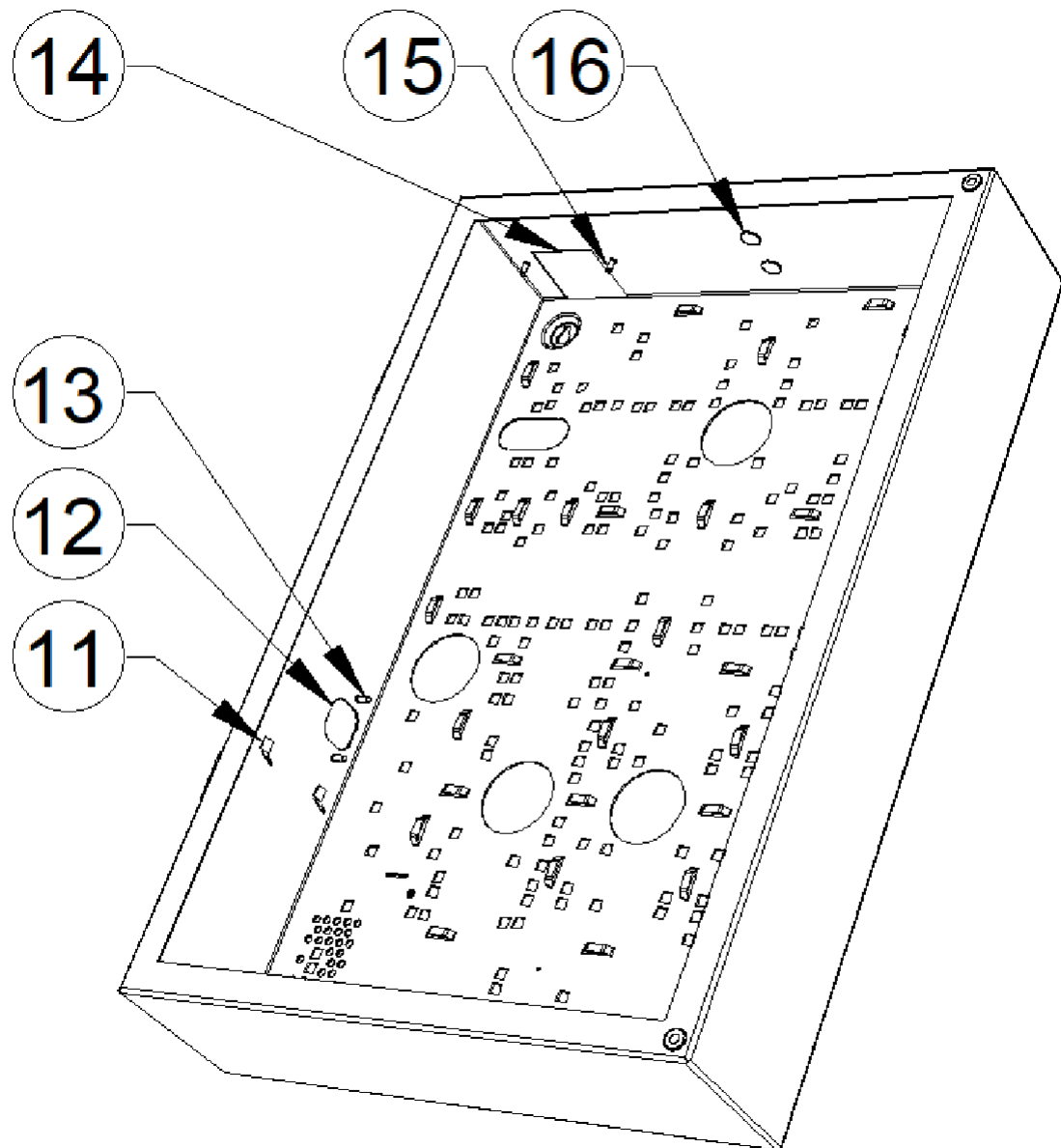
Enclosure Base

Figure 2: Enclosure overview



- | | |
|------------------------------|--|
| 1. Wall mounting points | 6. Transformer bracket location slot |
| 2. Device mounting points | 7. Transformer bracket mounting points |
| 3. Rear cable entry cut-outs | 8. Tamper bracket slots |
| 4. Cable tie points | 9. Tamper bracket mounting point |
| 5. Door Hinge | 10. Door close point |

Figure 3: Enclosure overview



- 11. Earth Tabs
- 12. Power cable entry cut-out
- 13. Power entry studs

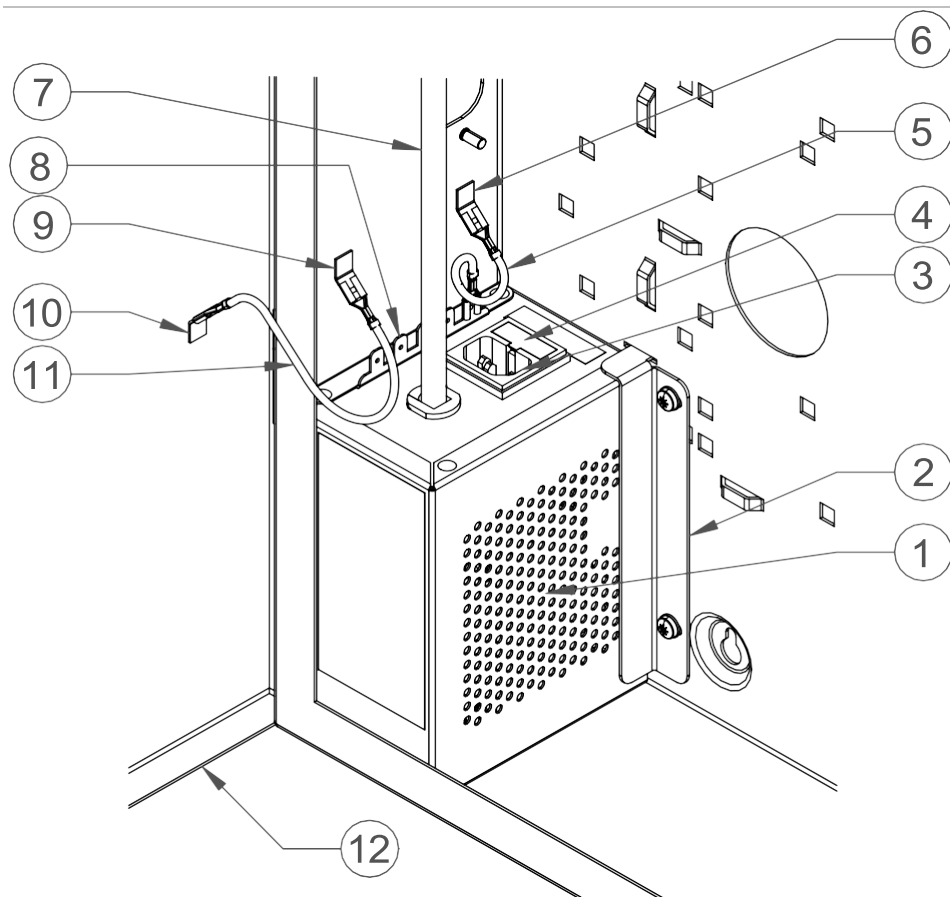
- 14. Top cable entry cut-out
- 15. Top cable entry studs
- 16. Antenna knock-outs

Transformer

A transformer (model TS1066TF) is pre-installed in the bottom left corner of the enclosure.

Important: Fit the terminal block to the output lead of the transformer prior to applying power. See Appendix A: Transformer.

Figure 4: Transformer overview



- | | |
|---|-----------------------------------|
| 1. Transformer | 7. Output lead |
| 2. Transformer bracket | 8. Earth tabs for devices |
| 3. Power Inlet | 9. Earth tab (enclosure) |
| 4. Fuse holder | 10. Earth tab (door) |
| 5. Earth lead (transformer - enclosure) | 11. Earth lead (enclosure - door) |
| 6. Earth tab (enclosure) | 12. Door |

The transformer has five tabs to provide an earth connection for the enclosure and installed devices.

See Appendix A: Transformer on page 26 for more information on the transformer.

Power Entry Guard Plate

The Power entry guard plate is used to close out the cable entry cut-out. The entry can be completely blocked or partially block to allow the power cable to enter the enclosure.

Cable Entry Guard Plate

The cable entry guard plate is used to close out the cable entry cut-out. The entry can be configured, using this plate, to accept 50x50, 50x25 conduit or to be blocked completely.

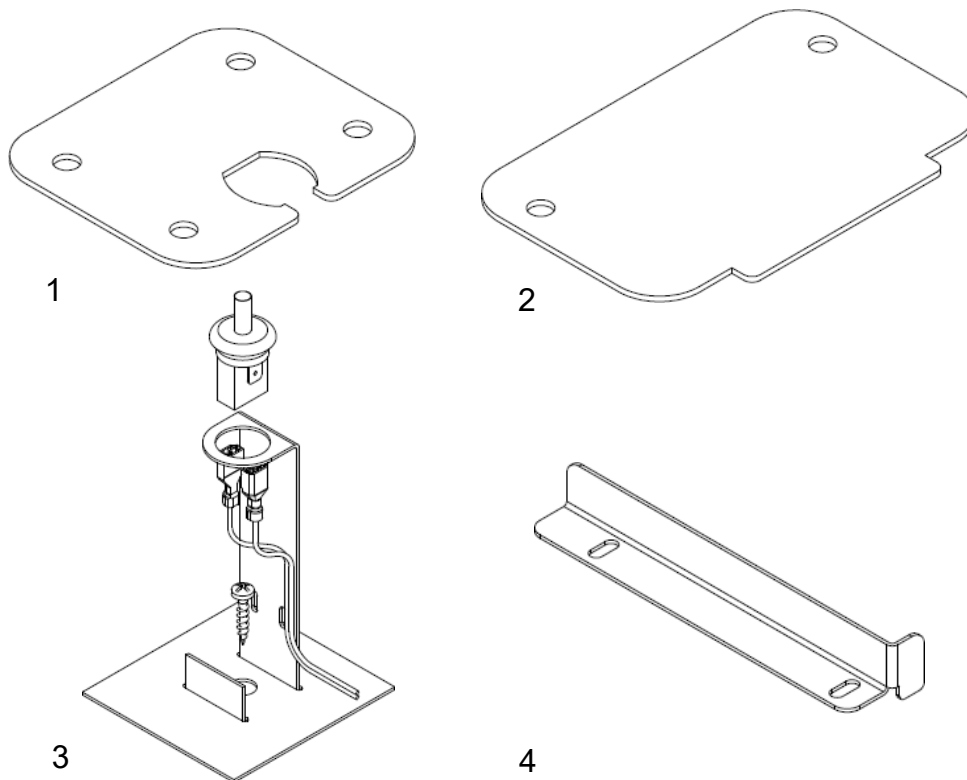
Tamper Kit

The tamper kit can be installed so that an alarm is raised if the enclosure is opened or removed from the wall.

Transformer Retainer

The Transformer retainer is used to hold the transformer in place.

Figure 5: Accessory Items



1. Power Entry Guard Plate
3. Tamper Kit

2. Cable Entry Guard Plate
4. Transformer Retainer

Installing the enclosure

Notice! Only a qualified service person, complying with all applicable codes, should perform all required hardware installation. In addition to the general installation guidelines, installers must adhere to all country dependent requirements and local applicable standards.

The enclosure has been designed and certified for use with the Challenger devices and configuration shown herein.

The installer takes full responsibility for system compliance (safety, electrical and electromagnetic) when other devices or systems are fitted or when deviating from installation instructions provided by Aritech.

Installation guidelines

Challenger devices must comply with safety, emissions and immunity requirements of current applicable codes.

- Installation location and environment must comply with Specifications, on page 6. These limits may be reduced accordingly to the specifications of devices installed in the Enclosure.
- Several cut-outs are provided in the rear face to allow cable entry through the mounting wall. A cut-out in the top face is also provided for cases where it is not practical to trunk cables via wall cavities. Always use appropriate conduit and junction boxes as dictated by applicable codes.
- A 240V general power outlet (GPO) is required near the enclosure to supply the installed transformer/power supply.
- The enclosure and its door must be earthed. See Earthing the Enclosure, on page 15.
- Each Challenger device, that has an earth terminal, must be earthed. See Earthing Challenger Devices, on page 15.
- Circuit separation, conduit materials, and workmanship must comply with all applicable codes. All wires entering the enclosure should be tied near point of entry. Avoid loops of wire. Route cables so that they do not lie on top of or underneath any device. Use cable ties to improve neatness of wiring.

Mounting the Enclosure Base to a Wall

The enclosure base is intended to be hung on a wall from the 4 mounting holes (Enclosure Base, on page 8). Fasteners required will depend on the installation and are not supplied.

Before drilling into a wall consider cables, voids, studs and other hazards that may be behind the wall face.

Before mounting the enclosure, it is advisable to remove the door. See Enclosure Door, on page 7.

NOTE: The tamper switch (if used) must be installed prior to mounting the enclosure to a wall. Tamper bracket installation may require a hole to be pre-drilled in the wall. See Tamper Bracket Installation, below.

Figure 2: Enclosure overview shows the location of the four mounting holes. Select wall fasteners of a suitable size to take the weight of the enclosure at final fit out. Refer to Specifications, on page 6. Refer to mounting requirements of applicable standards.

Use safe lifting practices when lifting the enclosure to the wall.

Enclosure Access Restrictions

To comply with AS/NZS 60950-1 access to the interior of the enclosure must be restricted to suitably trained and qualified technicians. Access must require a tool. Compliance can be achieved by implementing at least one of the following options:

- Fit a lock to the enclosure and lock the unit when unsupervised.
- Tighten the door screws $\frac{1}{4}$ turn beyond finger tight (i.e. $> 2\text{Nm}$) using a tool.
- Secure the door with M6 tamper proof screws (not supplied), firmly tightened.

Tamper Bracket Installation

Challenger Controllers provide tamper monitoring that generates alarms if someone opens the enclosure or removes the enclosure from the wall. The tamper bracket must be installed before mounting the enclosure to a wall. For additional security the tamper bracket can be screwed to the wall with the screw provided.

To install the tamper bracket:

1. (Optional) Pre-drill a hole in the wall for the screw that will hold the tamper bracket. See Figure 3: Enclosure overview, on page 9 for location.
2. From the back of the enclosure, insert the round end of the tamper bracket through one of the slots (Figure 3: Enclosure overview, item 6).
3. Rotate the bracket and continue to push the bracket forward until the square end comes through the other slot. (Figure 6: Tamper Bracket Installation)
4. At this point the enclosure can be mounted to a wall.

5. (Optional) Screw the tamper bracket to the wall. The head of the screw must pass through the hole in the enclosure so that the action of lifting the enclosure base from the wall would leave the bracket attached to the wall.
6. Push fit the tamper switch into the tamper bracket as shown in Figure 7: Tamper Bracket Assembly.
7. Attach the two tamper leads to the tamper switch.
8. Attach the other ends of the tamper leads to the Challenger Controller that will be used to monitor the tamper condition. Refer to the installation manual of the appropriate controller.

Figure 6: Tamper Bracket Installation

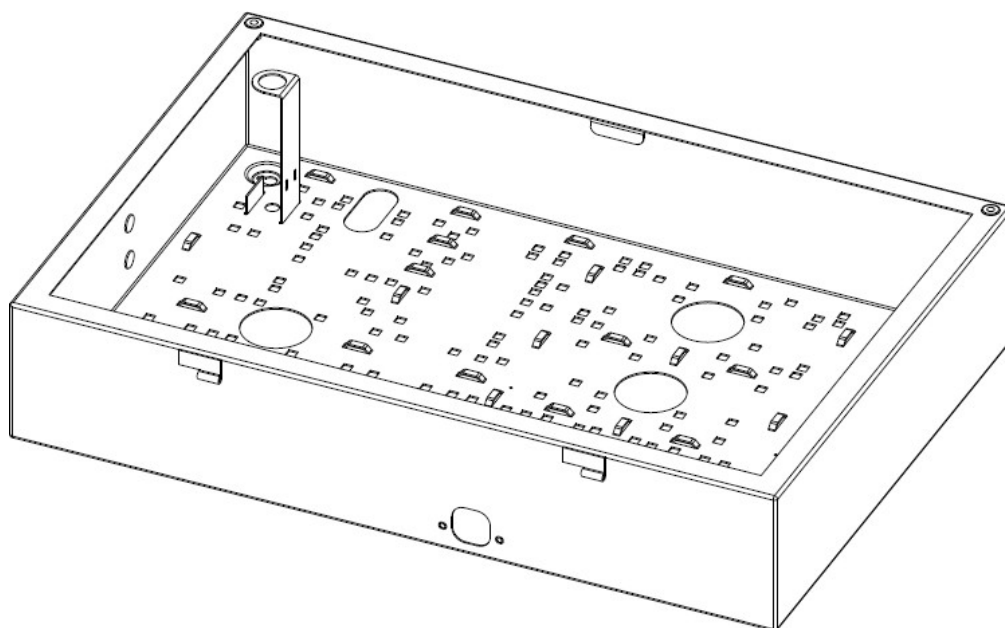
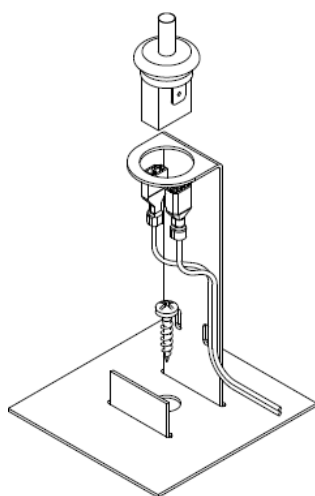


Figure 7: Tamper Bracket Assembly

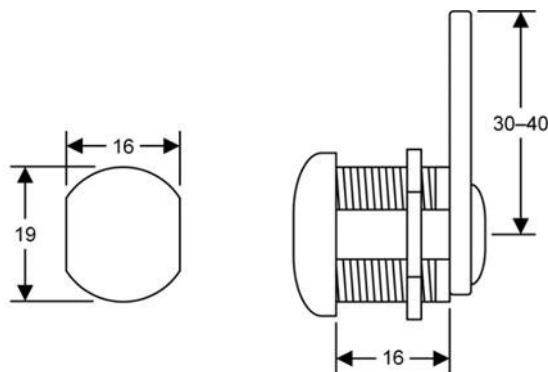


Installing the Cam Lock

The door has a 19mm x 16mm knock-out to accept a cam lock (not supplied). The cam lock must have a barrel length of 16 mm and use a cam with length in the range 30 – 40 mm. See Figure 8 below.

- Remove the cam and retaining nut from the lock.
- Punch out the knockout in the door.
- Insert the lock in the hole from the outside face of the door.
- Tighten the retaining nut.
- Attach the cam.

Figure 8: Cam lock hole and cam lock dimensions (mm)



Earthing the Enclosure

To comply with safety regulations the enclosure base and door must be earthed.

An external earth connection is provided by the transformer. If the transformer is not fitted, or not used, an alternative electrical earth must be provided.

To earth the enclosure base, attach the earth cable (provided) to the tab inside the enclosure and to one of the transfer earth tabs.

To earth the door, attach the earth cable (provided) to the remaining tab inside the enclosure and then to the tab inside the door.

Earthing Challenger Devices

Each device that will occupy the enclosure, that provides an earthing point, must be earthed. The transformer provides several earth tabs for this purpose.

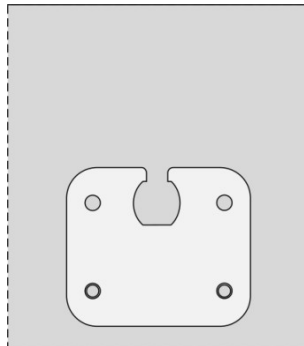
To earth the device, attach an earth cable to its earth terminal and then to one of the available tabs on the transformer. The transformer tabs are compatible with 6.35mm x 0.8mm terminals.

Installing the Power Cable Guard Plate

The power entry guard plate can be installed to either block the power entry cut-out or to retain the power cable.

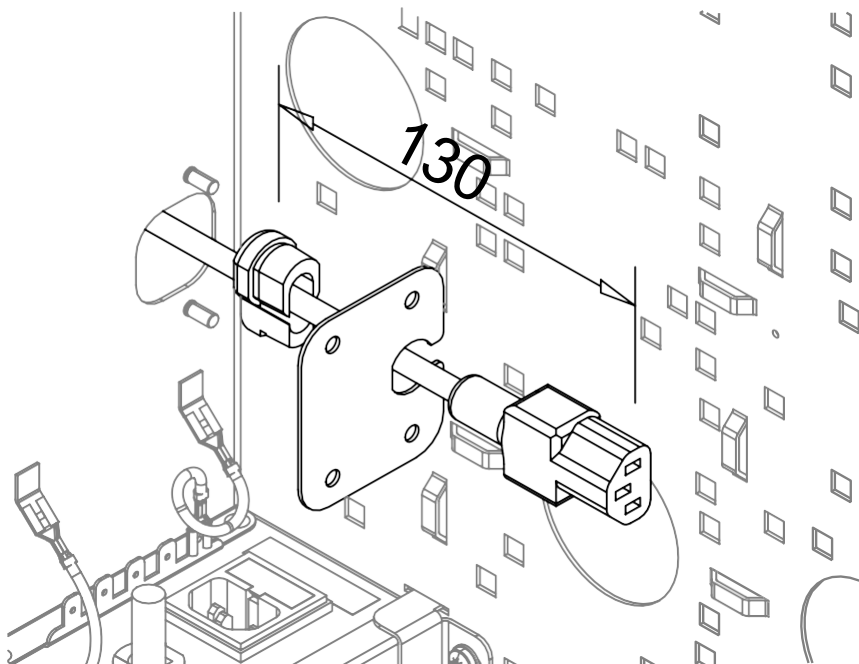
When the power cable is routed into the enclosure through one of the rear holes the power entry cut-out can be blocked by placing the power entry guard plate over the studs inside the enclosure, as shown in Figure 7: Tamper Bracket Assembly, and fastening in place with the nuts and washers provided.

Figure 9: Power entry guard plate installed to block power entry cut-out



When the power cable is routed into the enclosure through the power entry cut-out the power entry guard plate provides strain relief to the cable.

- Pass the cable through the cut-out.
- Place the grommet around the cable approximately 130mm from its end.
- Push the grommet, with cable, through the opening in the plate.
- Place the power entry guard plate assembly over the studs inside the enclosure and fasten in place with the nuts and washers provided.
- Insert the end of the power cable into the transformer power inlet.



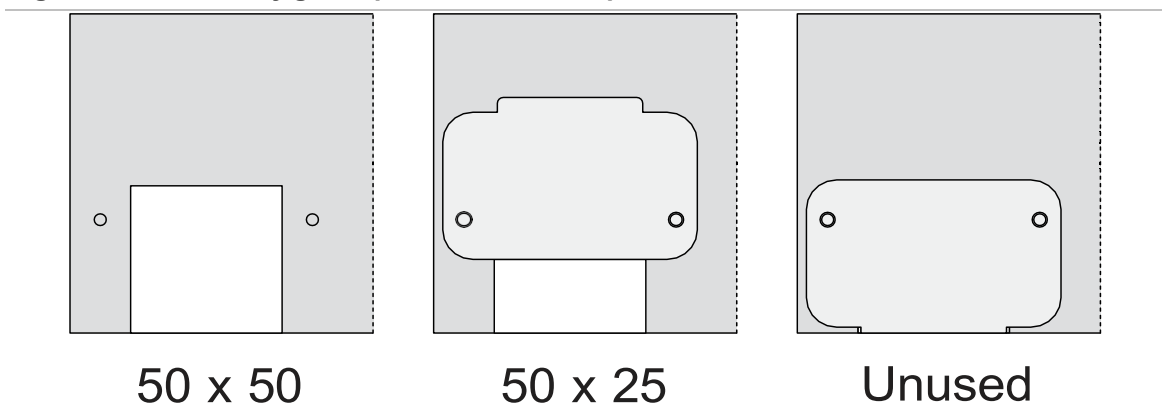
Installing the Cable Entry Guard Plate

When 50 x 50 mm conduit is used the cable entry guard plate is not required.

When 50 x 25 mm conduit is used the cable entry guard plate can be placed over the studs either side of the cable entry cut-out, as shown in Figure 10: Cable entry guard plate installation options and fastened using the nuts and washers provided.

When the cable entry cut-out is not required it can be blocked by inverting the cable entry guard plate. Place the tongue of the plate in the cut-out while the holes go over the studs and fasten in place with the nuts and washers provided.

Figure 10: Cable entry guard plate installation options



Installing Radio Antenna

There are two 12.7mm diameter knockouts on the top of the enclosure to allow the leads of radio antenna to pass into the enclosure. A soft grommet (not supplied) should be used to protect the antenna lead.

Please refer to the installation manuals of the following products for more information.

- TS1053 – 3G Communications Module
- TS1054 – 4G Communications Module
- TS1054-SIM – 4G Communications Module with SIM

Batteries

The Enclosure supports up to two sealed lead acid (SLA) batteries. Refer to the Specifications on page 6 for details. Batteries must comply with AS/NZS 2201.1:2007 Appendix C.

To reduce the risk of harm, batteries should only be placed in the Enclosure once all other installation and wiring activities have been completed.

When batteries are fitted, access to the Enclosure tray by general users must be restricted, refer to Enclosure Access Restrictions, on page 13

Refer to the relevant installation manual for the device that the battery or batteries will be attached to.

Use the battery leads that are supplied with the device.

Mounting Devices

The enclosure is pre-cut to support various devices. Each device is supplied with stand-offs to be located within the enclosure.

- Refer to the Mounting Locations guide below to identify where the standoffs should be installed to support the device.
- Insert the standoffs by squeezing the legs together and inserting the standoff into the square hole. Allow the standoff to spring back into shape to grip the enclosure.
- Remove the device from its antistatic bag.
- Use the M3 screws supplied with the device to fasten it to the standoffs.

Mounting Locations

'A' size devices

TS1020B – Analogue Data Gathering Panel

Figure 11: 'A' size device mounting locations on page 20

'B' size devices

TS0021 – 8 Input Expansion Module

TS0827 – 4 Input DGP

TS0840 – 4 Way Relay Board

TS0842 – 16-way Open Collector Board

TS0844 – Power Distribution Board

TS0893 – LAN Isolation Interface

TS0896B – RS485-Fibre Interface

TS1021 – 8 Input expander

Figure 12: 'B' size device mounting locations

'BB' size devices

TS0098 – Challenger IP LAN Adaptor Interface

TS0841 – 8 Way Board

TS1041 – Eight-Way Clocked Relay Card

Figure 12: 'B' size device mounting locations

'C' size devices

TS1016B – Challenger10 Control Panel

TS-CHPLUSB – ChallengerPlus Control Panel

Figure 13: 'C' size device mounting locations

'D' size devices

TS0867B – Intelligent Four-Door Controller

TS0869B – Intelligent Four-Lift Controller

TS1067B* – NAC with Wiegand

Figure 14: 'D' size device mounting locations

'E' size devices

TS1066* – Network Access Controller

Figure 15: 'E' size device mounting locations

'F' size devices

TS1061 – Dual Wiegand Interface

Figure 16: 'F' size device mounting locations

* includes all variants of the base SKU

Figure 11: 'A' size device mounting locations

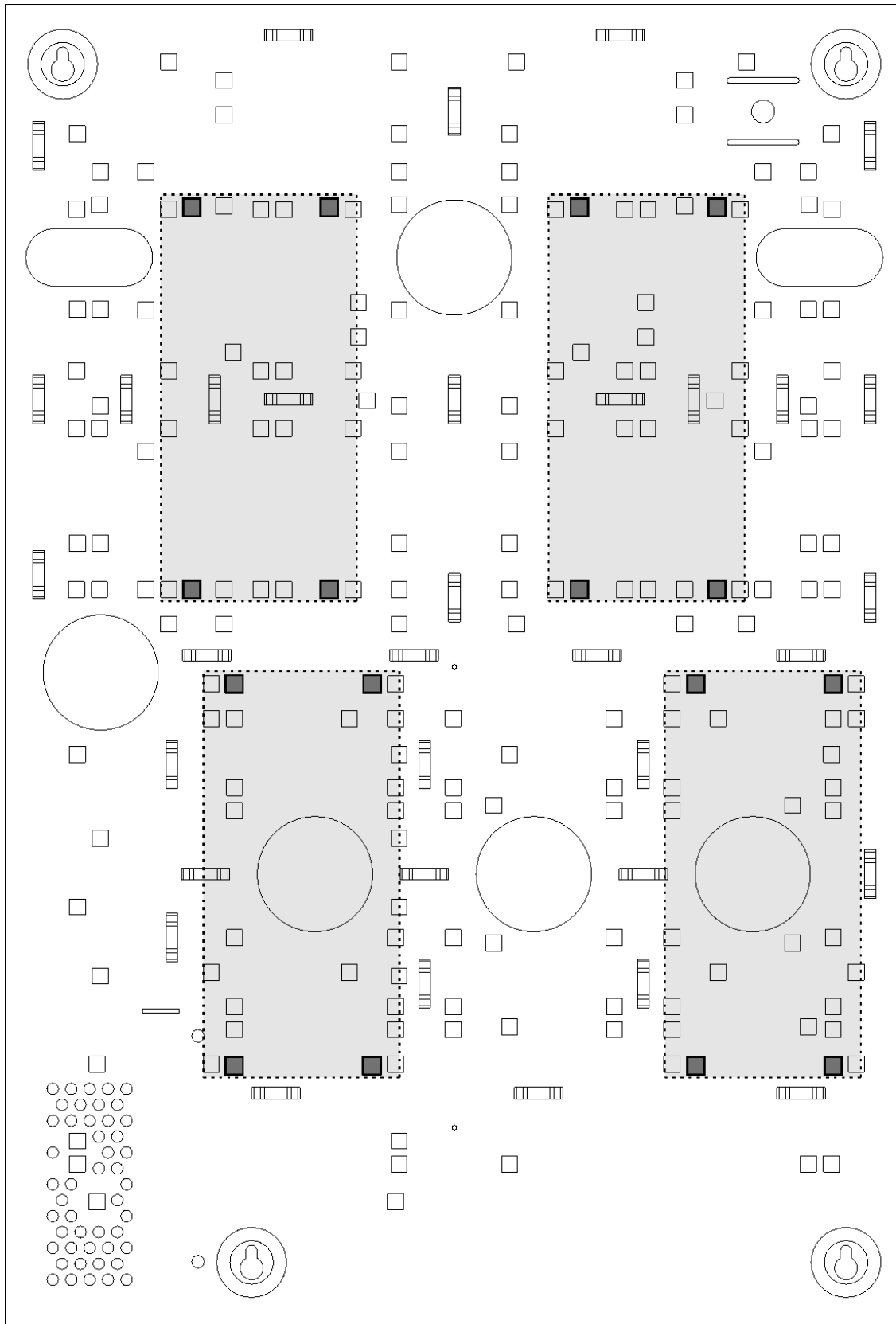


Figure 12: 'B' size device mounting locations

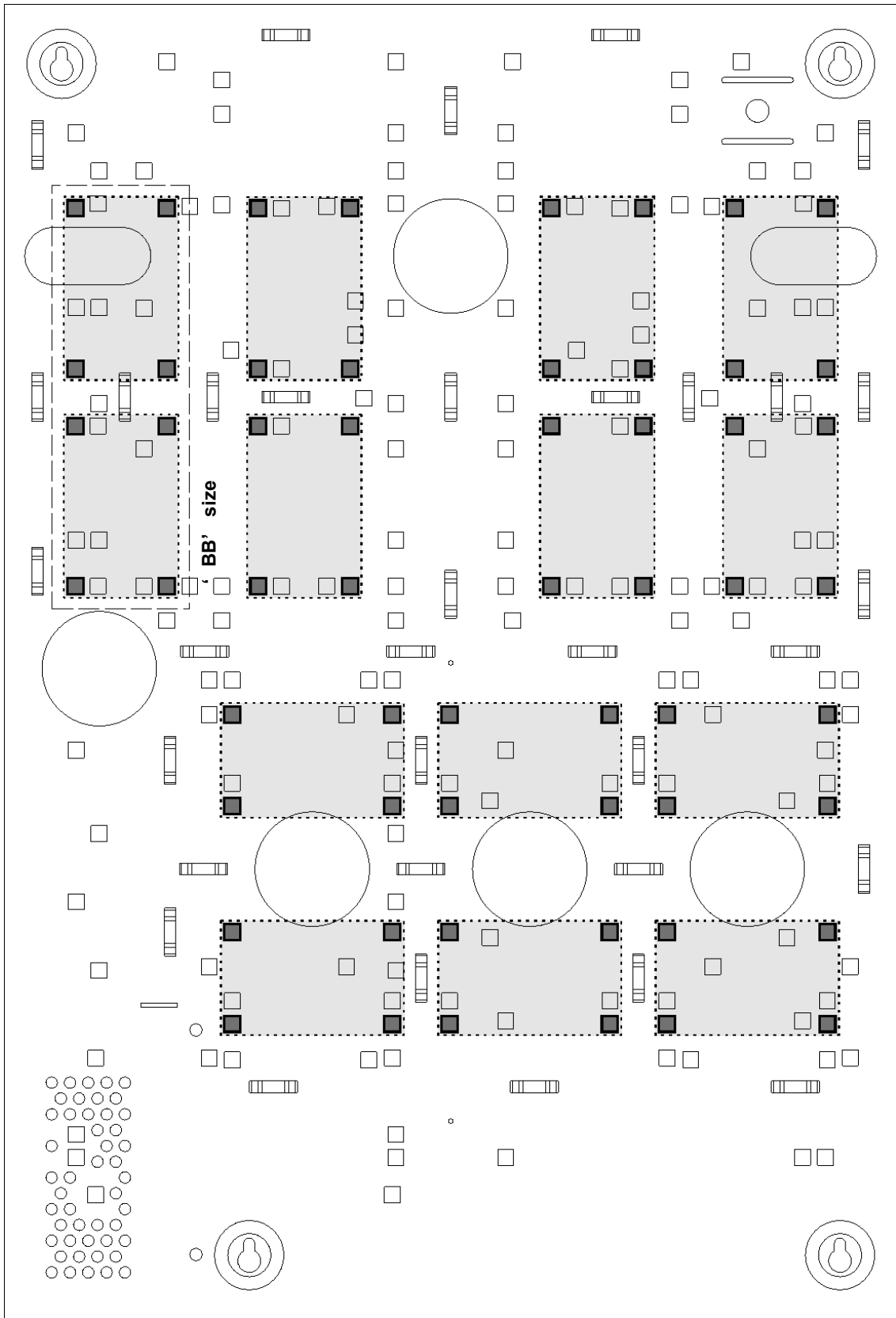


Figure 13: 'C' size device mounting locations

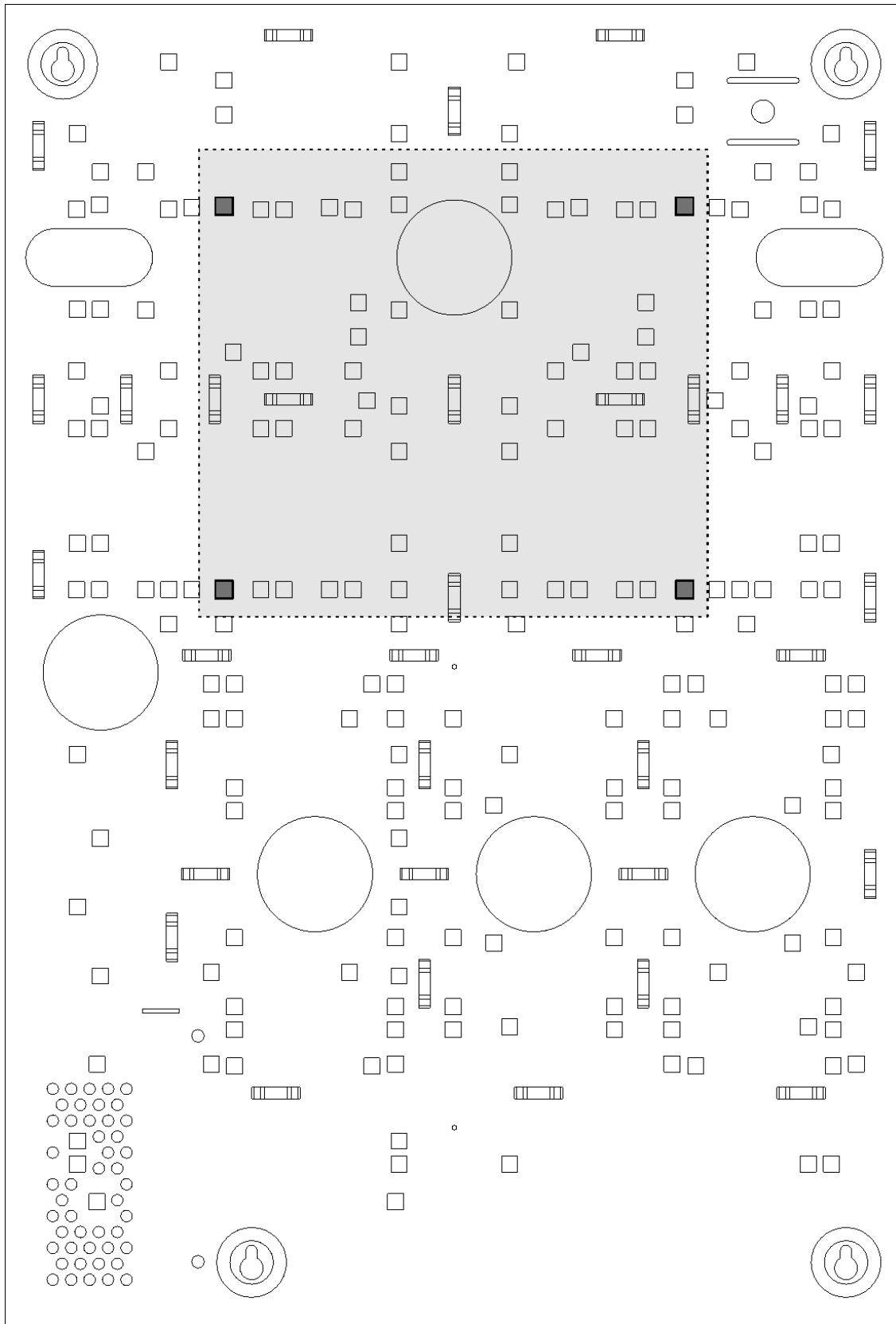


Figure 14: 'D' size device mounting locations

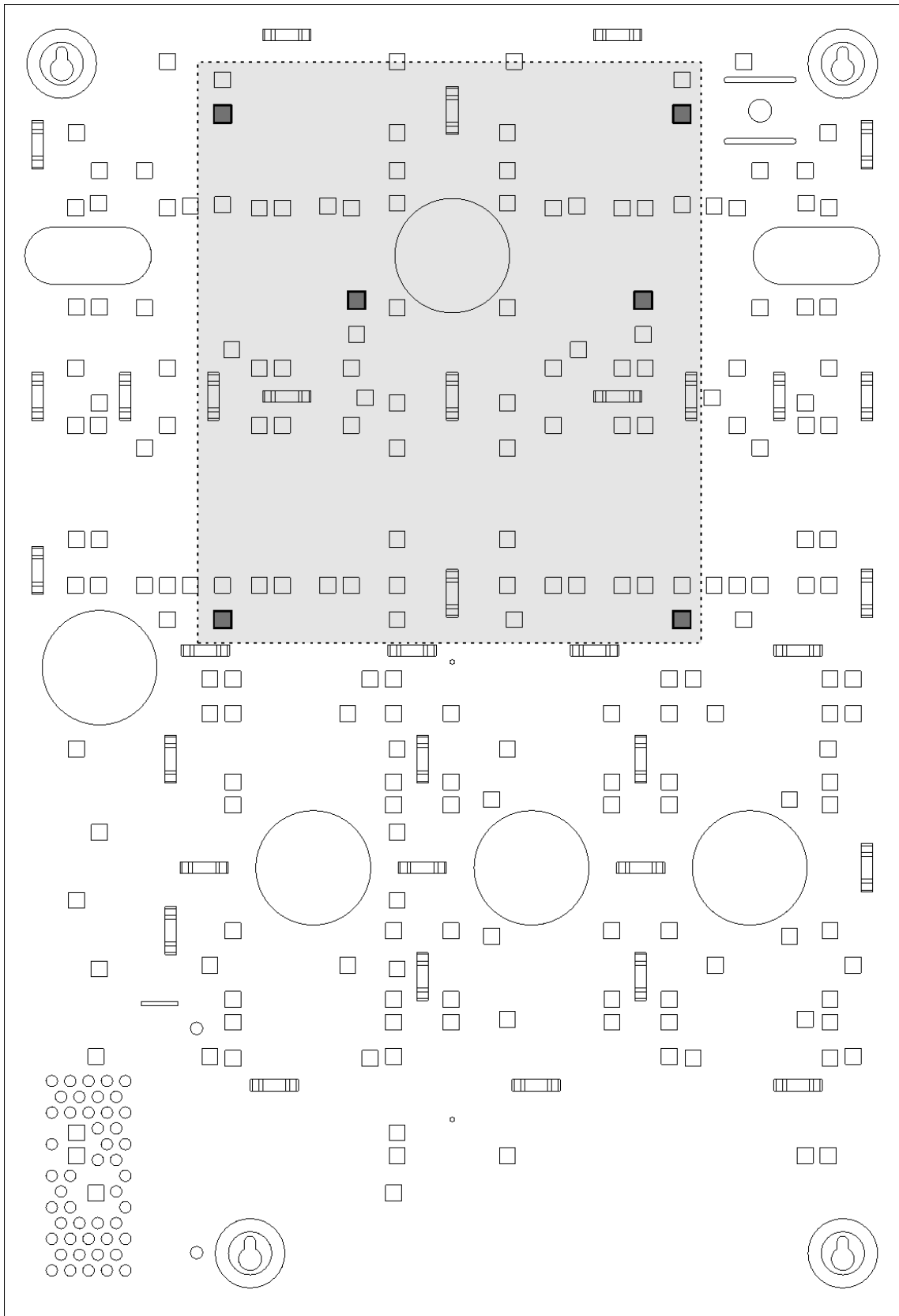


Figure 15: 'E' size device mounting locations

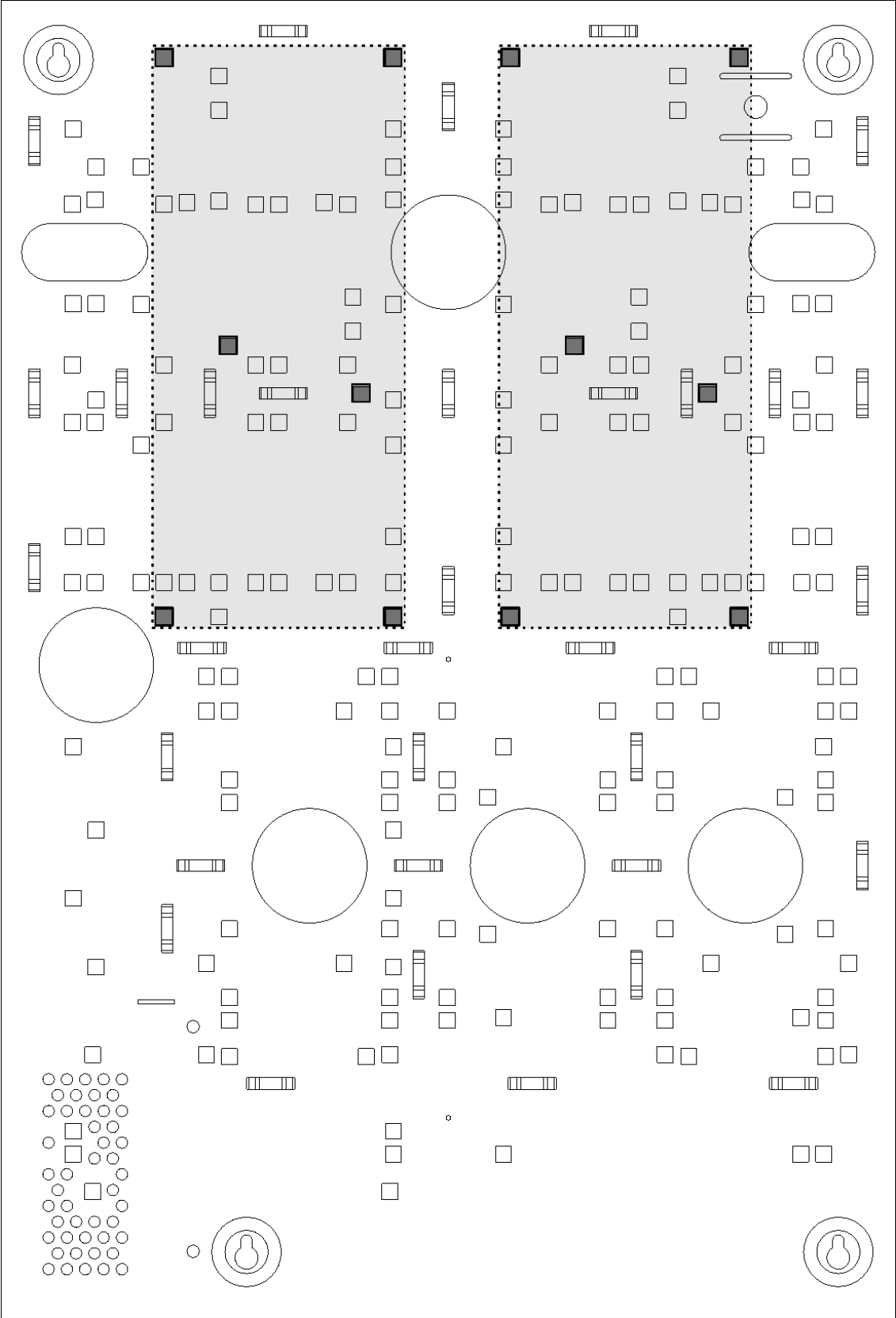
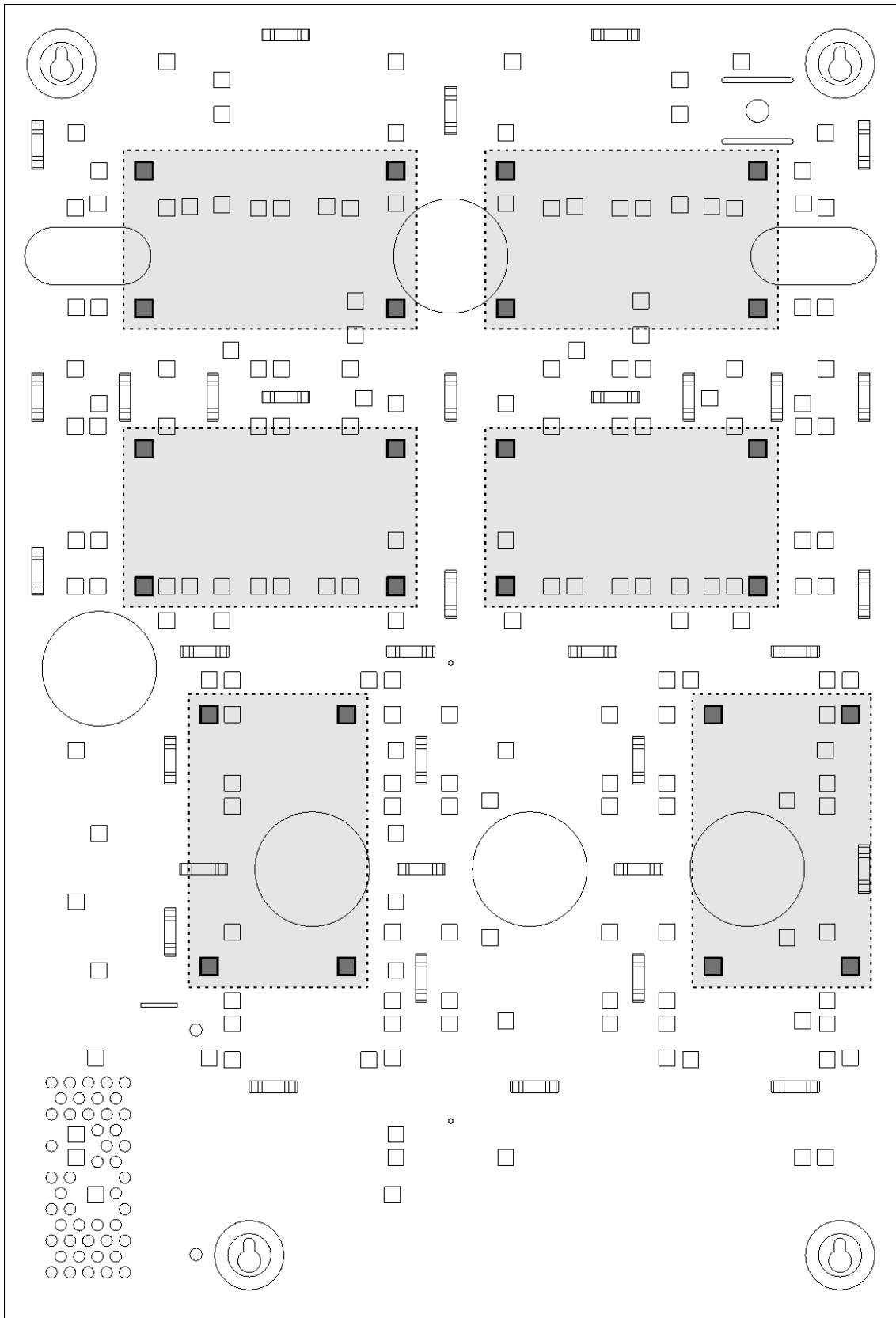


Figure 16: 'F' size device mounting locations



Appendix A: Transformer

Warnings and restrictions

Use only a model TS1066TF transformer in the ENC-LGE Large Enclosure.

Warning: The transformer is for indoor use only.

Warning: This transformer has high voltage inside and contains no serviceable parts. Do not open the transformer housing.




Warning: Ensure that the output contacts do not short circuit to each other or other items by fitting the terminal block prior to applying power (see Transformer Installation). Do not operate if the output lead is damaged. To avoid hazard, seek a replacement from the manufacturer or their service agent.

Warning: Exercise caution in handling the transformer. The transformer may be hot, heavy and/or have sharp edges. Do not hold the transformer by the leads.



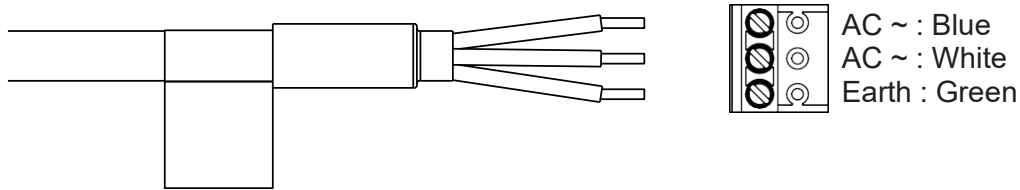
Transformer Specifications

Storage	Temperature	-20 to +80°C
Dimensions	Size	75 x 140 x 109
	Weight	12kg
Operating environment	Room temperature	0 to 40°C
	Relative humidity	0 to 95% non-condensing
	Altitude	≤ 2000m
	Pollution Class	≤ 2
Input	Voltage	240 V _{AC}
	Frequency	50 Hz
	Power	100 VA
Mains power cable	RCM Compliant	HO5VV-F cable 3x0.75mm ²
		
Output	Voltage	19.5 V _{AC}
	Power	70 VA
		SELV Class I Power Limited
Fuse	Size	M205 (5 x 20 mm)
	Voltage	250 V _{AC} RMS
	Trip Current	1 A
	Trip Time	Slow Blow (time lag)
	Class	IEC 60127-2 sheet 5
	Suitable replacements	Littlefuse 0215001.MXP Bel Fuse 5HT 1-R Schurter 0001.2504

Transformer Installation

The transformer is pre-installed. Connect the wires of the output lead to a terminal block supplied with the device as shown.

Figure 22: Transformer output lead termination



If the transformer needs to be replaced

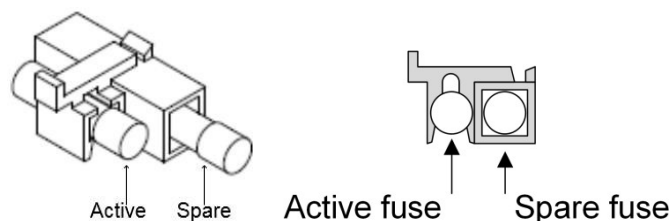
- Disconnect the mains lead.
- Disconnect the output lead from the device that it is supplying power to.
- Remove all earth connections from the transformer earth tabs.
- Undo the screws and remove the transformer retainer.
- Remove the old transformer and replace with the new transformer.
- Reverse the process.

Fuse Replacement

The transformer is fused to protect against over current conditions.

Warning: If the transformer output fails due to a blown fuse, identify and remove the cause of the failure before replacing the fuse. If the fault repeats, then seek advice from the manufacturer or their service agent. Do NOT repeatedly replace the fuse. Only use replacement fuses that meet the requirements set out in Transformer Specifications on page 26.

Figure 17: Fuse holder



Follow these steps to replace the active fuse with the spare fuse:

- Disconnect the power lead from the power inlet of the transformer.
- Carefully remove the fuse holder using the tip of a flat head screwdriver.
- Discard the active fuse and replace with the spare fuse. Figure 17 above.
- Push the fuse holder back into the slot below the power inlet.
- Reinsert the power lead into the power inlet.

