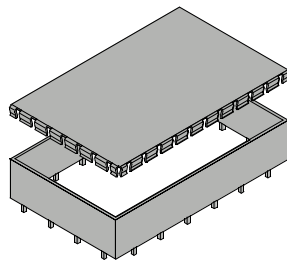
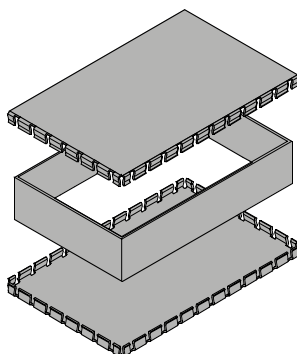
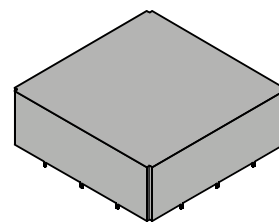
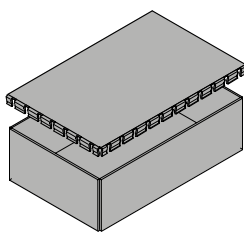


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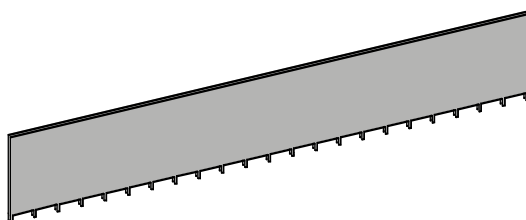
*2001 Edition*



**RFI/EMI  
METAL  
SCREENING  
ENCLOSURES**



**P**ERANCEA



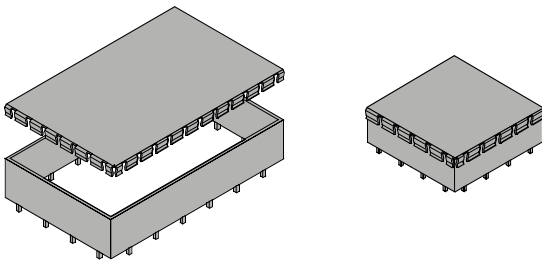
# INTRODUCTION

Our RFI/EMI Screening Enclosures are a cost effective and efficient method of specific board level shielding. As well as screening complete circuits and modules they can be used to screen individual components or circuits from other sensitive areas within a unit. The four standard styles give a choice between PCB Mounting for full or partial screening of a board, or Can and Open Frame styles for enclosing a complete circuit. Three styles have removable fingered lids which combine the advantage of access with optimum attenuation. The PCB Mounting Can versions offer a lower cost option where access to the components and circuitry is not required. Screening strips for creating partitioning inside the

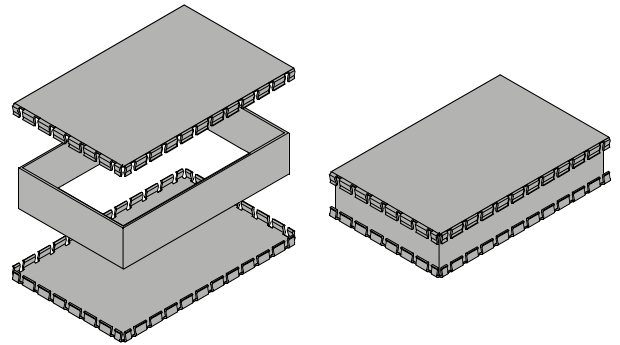
enclosure to segregate sensitive areas of circuitry and components; can be supplied loose or fitted to specification and where required complex labyrinths can be achieved. With our advanced technology we can produce **(without tooling charges)** virtually any "custom" size to meet your specification, allowing prototypes and low volumes to be economically produced. Additional features such as; holes, cut-outs, mounting brackets, etc., can be incorporated in manufacture to accommodate the requirements of your product design. Advice on what can be achieved is given on the back page and our technical staff will work with you to optimise cost efficient designs to suit your requirements.

## Contents

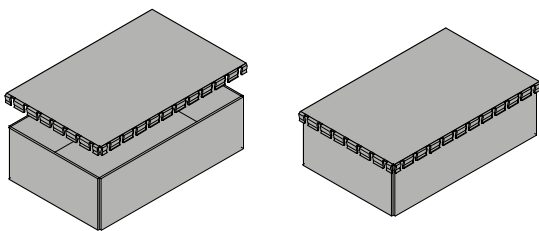
### PCB Frame & Fingered Lid - Page 3



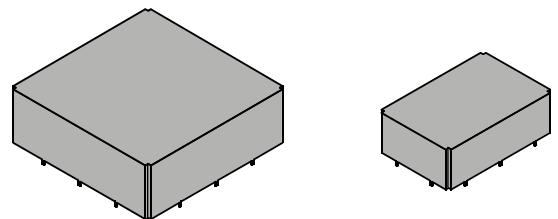
### Frame & Fingered Lids - Page 4



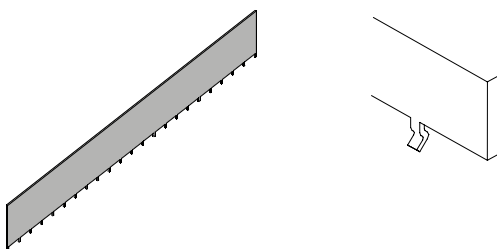
### Can & Fingered Lids - Page 5



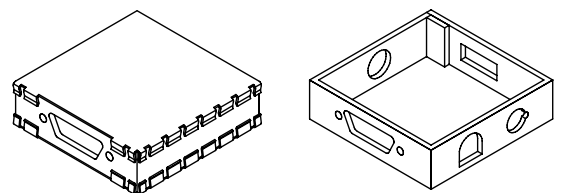
### PCB Mounting Can - Page 6



### Screening Strips & Locking Pin - Page 7



### Customising Options - Page 8

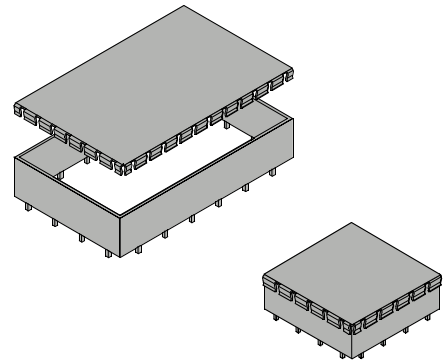


# PERANCEALTD

# PCB FRAME & FINGERED LID

Standard and custom PCB mounting enclosures offering individuality and functionality, ideally suited to board level screening applications where good RFI/EMI attenuation and accessibility are required.

- ◆ **Removable Fingered Lid**  
giving easy access and excellent attenuation
- ◆ **PCB Mounting Pins**  
Bright Acid Tin dipped for solderability
- ◆ **Locking Pins (optional)**  
for positive placement & retention (see page 7)  
ideal for reflow soldering applications
- ◆ **Internal Dividers (optional)**  
for discrete screening within the frame (see page 7)
- ◆ **Custom Sizes**  
can be manufactured without tooling charges  
making prototypes and low volumes viable
- ◆ **Additional Features**  
holes, brackets, cut outs, lid captivation, etc., can be incorporated during manufacture (see back page)
- ◆ **Alternative Materials/Finishes**  
copper, brass.



## Specification

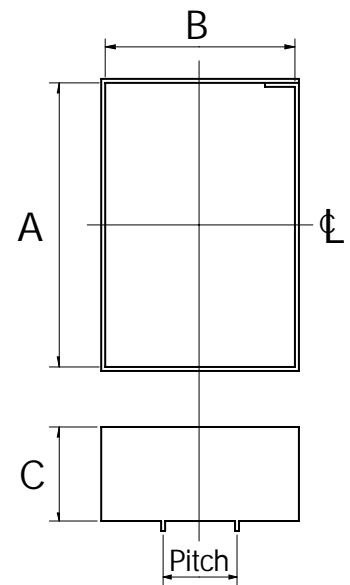
|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| <b>Material:</b>            | Bright steel BS1449 Pt.1 CR4                       |
| <b>Frames:</b>              | 20swg (0.914mm)                                    |
| <b>Lids:</b>                | 24swg (0.559mm)                                    |
| <b>Finish:</b>              | Good Commercial Grade<br>Bright Acid Tin           |
| <b>Surface resistivity:</b> | $20 \times 10^{-6} \Omega$ per square              |
| <b>Conductivity:</b>        | $5 \times 10^4$ mho                                |
| <b>Tolerance:</b>           | +/- 0.25mm (general)<br>+/- 0.10mm (PCB pin pitch) |
| <b>Pin Size:</b>            | 1mm x 2.25mm                                       |

All screen can ranges are compliant with the RoHS directive.

## STOCK SIZES - Internal & overall dimensions (mm)

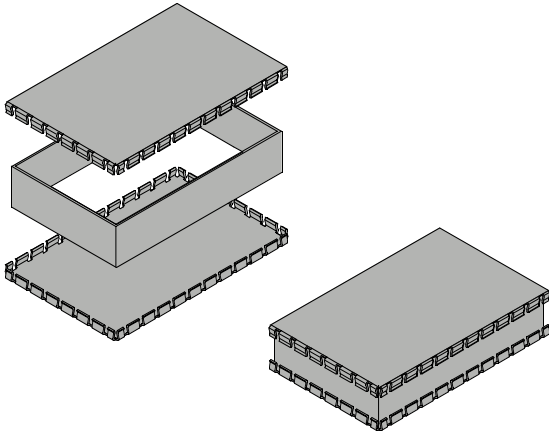
| Part No. | Dim. A | Dim. B | Dim. C | Nominal overall size including lid (excluding pins) | Number of Pins | Pin Pitch |
|----------|--------|--------|--------|-----------------------------------------------------|----------------|-----------|
| PFL1     | 20     | 20     | 10     | 25 x 25 x 11                                        | 4              | C/L       |
| PFL11    | 25     | 25     | 10     | 30 x 30 x 11                                        | 4              | C/L       |
| PFL5     | 30     | 30     | 15     | 35 x 35 x 16                                        | 8              | 10.5      |
| PFL12    | 40     | 40     | 15     | 45 x 45 x 16                                        | 8              | 20        |
| PFL2     | 50     | 25     | 15     | 55 x 30 x 16                                        | 10             | 10.5      |
| PFL6     | 50     | 50     | 15     | 55 x 55 x 16                                        | 8              | 20        |
| PFL9     | 75     | 50     | 15     | 80 x 55 x 16                                        | 12             | 20        |
| PFL3     | 75     | 50     | 25     | 80 x 55 x 26                                        | 12             | 20        |
| PFL7     | 75     | 75     | 25     | 80 x 80 x 26                                        | 16             | 20        |
| PFL4     | 100    | 50     | 25     | 105 x 55 x 26                                       | 12             | 20        |
| PFL8     | 125    | 75     | 25     | 130 x 80 x 26                                       | 20             | 20        |
| PFL10    | 160    | 100    | 35     | 165 x 105 x 36                                      | 24             | 20        |

**NOTE:** A4 dimensioned drawings for each part are available on request.



# PERANCEA LTD

# FRAME & FINGERED LIDS



## Specification

|                      |                                          |
|----------------------|------------------------------------------|
| Material:            | Bright steel BS1449 Pt.1 CR4             |
| Frames:              | 20swg (0.914mm)                          |
| Lids:                | 24swg (0.559mm)                          |
| Finish:              | Good Commercial Grade<br>Bright Acid Tin |
| Surface resistivity: | $20 \times 10^{-6} \Omega$ per square    |
| Conductivity:        | $5 \times 10^4$ mho                      |
| Tolerance:           | +/- 0.25mm (general)                     |

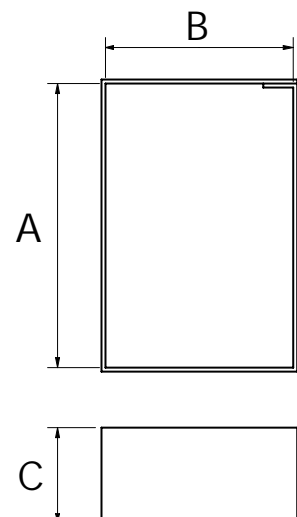
Open frame EMI/RFI housings with removeable lids in both standard and custom versions specifically designed for total board screening with excellent attenuation and access to both sides of the PCB.

- ◆ **Removable Fingered Lids**  
giving easy access and excellent attenuation
- ◆ **Lid Fingering Clearance**  
selective fingers can be omitted for clearance around components mounted through the frame wall
- ◆ **PCB Locations (optional)**  
lancings or brackets can be specified to act as guides or supports (see back Page)
- ◆ **Internal Dividers (optional)**  
for discrete screening within the frame (see page 7)
- ◆ **Custom Sizes**  
can be manufactured without tooling charges making prototypes and low volumes viable
- ◆ **Additional Features**  
holes, brackets, cut outs, lid captivation, etc., can be incorporated during manufacture (see back page)
- ◆ **Alternative Materials/Finishes**  
copper, brass

## STOCK SIZES - Internal & overall dimensions (mm)

| Part No. | Dimension A | Dimension B | Dimension C | Nominal overall size including lids |
|----------|-------------|-------------|-------------|-------------------------------------|
| FFL6     | 20          | 20          | 10          | 25 x 25 x 12                        |
| FFL7     | 30          | 30          | 15          | 35 x 35 x 17                        |
| FFL1     | 50          | 50          | 15          | 55 x 55 x 17                        |
| FFL5     | 75          | 50          | 15          | 80 x 55 x 17                        |
| FFL8     | 75          | 50          | 25          | 80 x 55 x 27                        |
| FFL9     | 75          | 75          | 25          | 80 x 80 x 27                        |
| FFL2     | 100         | 50          | 25          | 105 x 55 x 27                       |
| FFL10    | 125         | 75          | 25          | 130 x 80 x 27                       |
| FFL3     | 160         | 100         | 35          | 165 x 105 x 37                      |
| FFL4     | 220         | 100         | 50          | 225 x 105 x 52                      |

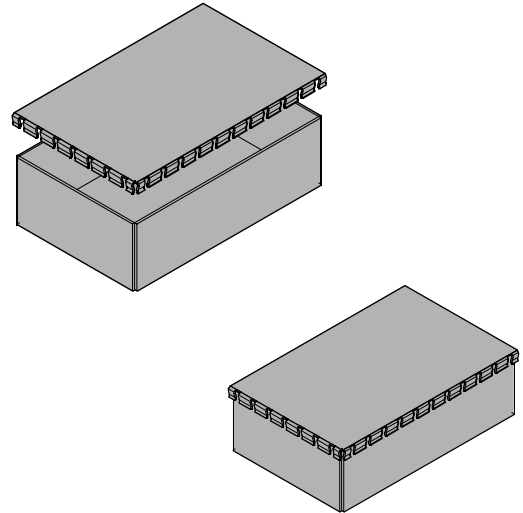
**NOTE:** A4 dimensioned drawings for each part are available on request.



# CAN & FINGERED LID

A range of standard and custom RFI/EMI cans that offer good attenuation and accessibility where screening of complete boards or circuits is required.

- ◆ **Removable Fingered Lid**  
giving easy access and excellent attenuation
- ◆ **Lid Fingering Clearance**  
selective fingers can be omitted for clearance around components mounted through the frame wall
- ◆ **Component/PCB Locations (optional)**  
lancings or brackets can be specified to act as guides or supports (see back page)
- ◆ **Butt Jointed Corners**  
Bright Acid Tin dip finish allows corners to be easily soldered for increased screening
- ◆ **Internal Dividers (optional)**  
for discrete screening within the can (see page 7)
- ◆ **Custom Sizes**  
can be manufactured without tooling charges making prototypes and low volumes viable
- ◆ **Additional Features**  
holes, brackets, cut outs, lid captivation, etc., can be incorporated during manufacture (see back page)
- ◆ **Alternative Materials/Finishes**  
copper, brass,



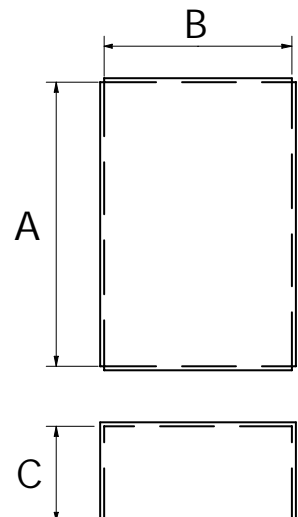
## Specification

|                             |                                          |
|-----------------------------|------------------------------------------|
| <b>Material:</b>            | Bright steel BS1449 Pt.1 CR4             |
| <b>Frames:</b>              | 20swg (0.914mm)                          |
| <b>Lids:</b>                | 24swg (0.559mm)                          |
| <b>Finish:</b>              | Good Commercial Grade<br>Bright Acid Tin |
| <b>Surface resistivity:</b> | $20 \times 10^{-6} \Omega$ per square    |
| <b>Conductivity:</b>        | $5 \times 10^4$ mho                      |
| <b>Tolerance:</b>           | +/- 0.25mm (general)                     |

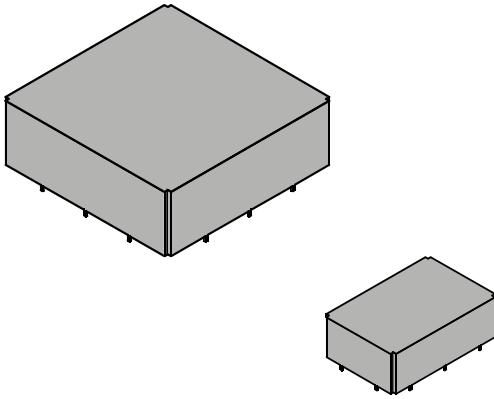
## STOCK SIZES - Internal & overall dimensions (mm)

| Part No. | Dimension A | Dimension B | Dimension C | Nominal overall size including lid |
|----------|-------------|-------------|-------------|------------------------------------|
| CFL5     | 20          | 20          | 10          | 25 x 25 x 12                       |
| CFL6     | 30          | 30          | 15          | 35 x 35 x 17                       |
| CFL7     | 50          | 25          | 15          | 55 x 30 x 17                       |
| CFL1     | 50          | 50          | 15          | 55 x 55 x 17                       |
| CFL2     | 75          | 50          | 25          | 80 x 55 x 27                       |
| CFL8     | 75          | 75          | 25          | 80 x 80 x 27                       |
| CFL3     | 100         | 50          | 35          | 105 x 55 x 37                      |
| CFL4     | 160         | 100         | 50          | 165 x 105 x 52                     |

**NOTE:** A4 dimensioned drawings for each part are available on request.



# PCB MOUNTING CAN



## Specification

|                      |                                                    |
|----------------------|----------------------------------------------------|
| Material/Finish:     | Good Commercial Grade B.A.T.                       |
| Thickness:           | 0.54mm                                             |
| Surface resistivity: | $20 \times 10^{-6} \Omega$ per square              |
| Conductivity:        | $5 \times 10^4$ mho                                |
| Tolerance:           | +/- 0.25mm (general)<br>+/- 0.10mm (PCB pin pitch) |
| Pin Size:            | 1mm x 2.25mm                                       |

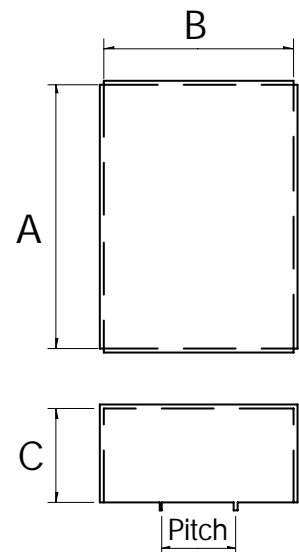
A low cost range of single piece PCB mounting cans giving good attenuation for applications where board level RFI/EMI screening is required, available in standard or custom options.

- ◆ **PCB Mounting Pins**  
Bright Acid Tin finish for solderability
- ◆ **Locking Pins (optional)**  
for positive placement & retention (*see next page*)  
ideal for reflow soldering applications
- ◆ **Butt Jointed Corners**  
Bright Acid Tin finish allows corners to be easily soldered for increased screening
- ◆ **Custom Sizes**  
can be manufactured without tooling charges making prototypes and low volumes viable
- ◆ **Additional Features**  
holes, cut outs, etc., can be incorporated during manufacture (*see back page*)
- ◆ **Alternative Materials**  
copper, brass, steel,
- ◆ **Alternative Finishes**  
Bright Acid Tin,

## STOCK SIZES - Internal & overall dimensions (mm)

| Part No. | Dim. A | Dim. B | Dim. C | Nominal overall size | Number of Pins | Pin Pitch |
|----------|--------|--------|--------|----------------------|----------------|-----------|
| PCMC1    | 20     | 20     | 15     | 21 x 21 x 16         | 4              | C/L       |
| PCMC2    | 25     | 25     | 15     | 26 x 26 x 16         | 8              | 10.5      |
| PCMC3    | 30     | 25     | 20     | 31 x 26 x 21         | 8              | 10.5      |
| PCMC4    | 30     | 30     | 15     | 31 x 31 x 16         | 8              | 10.5      |
| PCMC5    | 40     | 30     | 15     | 41 x 31 x 16         | 10             | 10.5      |
| PCMC6    | 40     | 35     | 20     | 41 x 36 x 21         | 12             | 10.5      |
| PCMC7    | 40     | 40     | 15     | 41 x 41 x 16         | 8              | 20        |
| PCMC8    | 50     | 50     | 15     | 51 x 51 x 16         | 8              | 20        |
| PCMC9    | 60     | 40     | 20     | 61 x 41 x 21         | 10             | 20        |
| PCMC10   | 70     | 50     | 25     | 71 x 51 x 26         | 10             | 20        |
| PCMC11   | 75     | 75     | 25     | 76 x 76 x 26         | 12             | 20        |
| PCMC12   | 100    | 50     | 25     | 101 x 51 x 26        | 12             | 20        |

**NOTE:** A4 dimensioned drawings for each part are available on request.

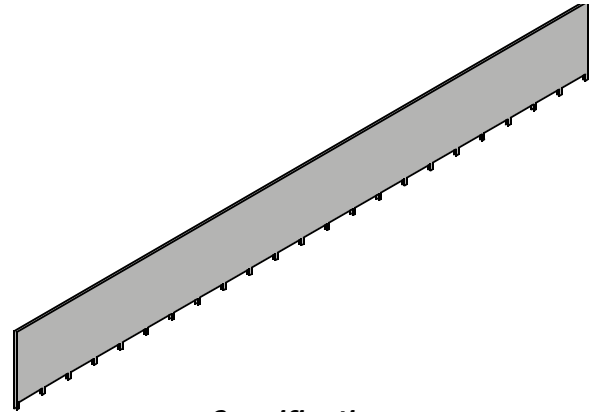


# PERANCEALTD

# SCREENING STRIPS

An ideal solution for the segregating of sensitive components or circuitry to eliminate or minimise interference between different parts of the circuit.

- ◆ **Range of Heights**  
to suit standard enclosures
- ◆ **Adaptable**  
easily cut to length, bent and soldered
- ◆ **Custom Fit**  
can be supplied pre-fitted by either spot welding in position or by tab and slot location
- ◆ **Labyrinths**  
multi segmented areas optimise discrete screening
- ◆ **Custom Sizes**  
no tooling costs makes prototypes and low volumes viable
- ◆ **Alternative Materials/Finishes**  
copper, brass, steel,

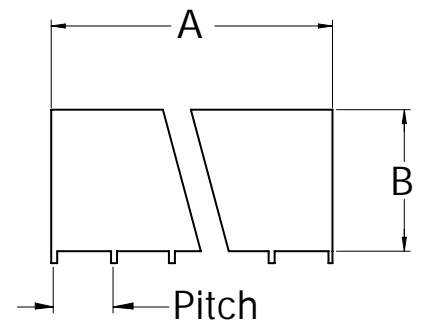


## Specification

|                             |                                                    |
|-----------------------------|----------------------------------------------------|
| <b>Material/Finish:</b>     | Good Commercial Grade B.A.T.                       |
| <b>Thickness:</b>           | 0.54mm                                             |
| <b>Surface resistivity:</b> | $20 \times 10^6 \Omega$ per square                 |
| <b>Conductivity:</b>        | $5 \times 10^4$ mho                                |
| <b>Tolerance:</b>           | +/- 0.25mm (general)<br>+/- 0.10mm (PCB pin pitch) |
| <b>Pin Size:</b>            | 1mm x 2.25mm                                       |

## STOCK SIZES - Internal & overall dimensions (mm)

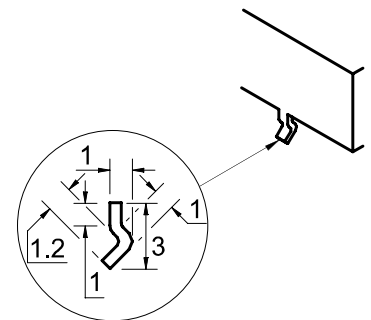
| Part No. | Dimension A | Dimension B | Number of Pins | Pin Pitch |
|----------|-------------|-------------|----------------|-----------|
| SS232/10 | 232         | 10          | 23             | 10.5      |
| SS232/15 | 232         | 15          | 23             | 10.5      |
| SS232/20 | 232         | 20          | 23             | 10.5      |
| SS232/25 | 232         | 25          | 23             | 10.5      |
| SS232/35 | 232         | 35          | 23             | 10.5      |
| SS232/50 | 232         | 50          | 23             | 10.5      |



**NOTE:** A4 dimensioned drawings for each part are available on request.

## LOCKING PIN

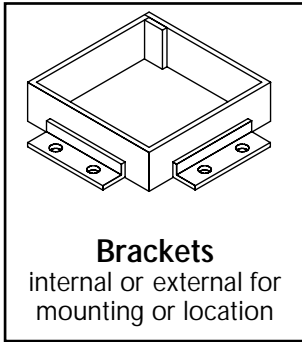
This special pin has been designed to retain the enclosure securely in place on the PCB during reflow soldering ensuring full contact between the frame or can edge and the solder paste. An extremely reliable solder joint with optimum screening is therefore achieved. The pin design is such that only minimal force is required to place the enclosure on the board making it ideally suited to pick and place applications. This unique concept in PCB mounting also has hand soldering advantages as the operator is ensured that the enclosure is held in position during soldering, giving increased reliability and the potential for higher production rates. This new Locking Pin can be offered as a standard feature on all sizes of PCB mounting frames and cans.



**PERANCEA LTD**

# CUSTOM OPTIONS

## DESIGN YOUR OWN ENCLOSURES CHOOSING FROM OUR STANDARD STYLES

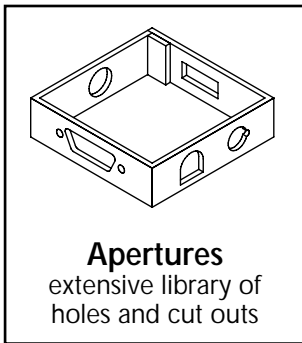
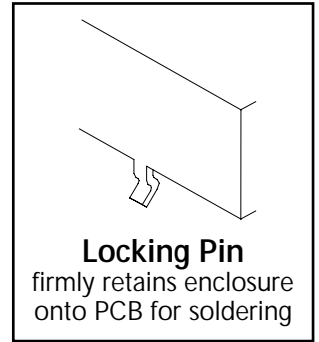


**STYLE.** Specify CFL, FFL, PFL or PCMC (*see prev. pages*).

**DIMENSIONS.** Specify length, width & height as internal.  
Others dimensions from centre lines.

**MATERIAL.** Options: steel; copper; brass.  
Specify thickness or gauge.

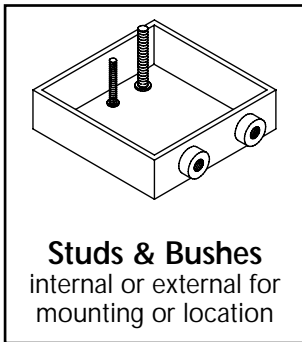
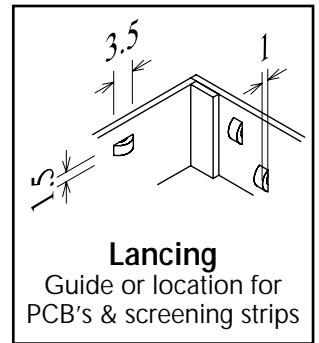
**MOUNTING.** **Brackets:** specify size and position.  
**Bushes:** specify thread and position.  
**Studs:** specify thread, length and position.



**APERTURES.** Holes or cut outs. Specify style, size and position.  
Most component sizes are available as standard.

**CORNER OVERLAP.** For frames specify corner. Minimum is 5mm.  
External option available.

**INTERNAL DIVIDERS.** Specify as required. Can be supplied loose, spot welded or with tabs to mate with slots in wall. Multi compartments can be achieved by a labyrinth of dividers.



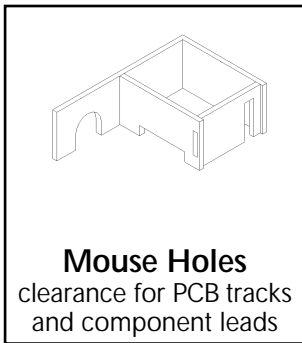
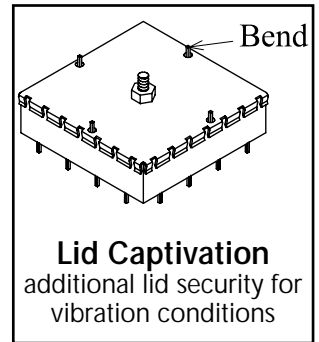
**PCB LOCATIONS.** Lancings can be horizontal or vertical for PCB supports or staggered to act as guides (*see diagram*).

**PCB PINS.** Specify size and position. Min. size 0.75mm x 1mm.

**EARTH TERMINALS.** Specify type, size, and position.  
Options: push-on/solder tags; studs; earth symbol.

**LID FINGERING.** Size and style is standard, fingers can be omitted for clearance around through wall components.

**MARKING.** Alpha numeric 2mm impressed characters available as standard. Also earth symbol. Specify position.

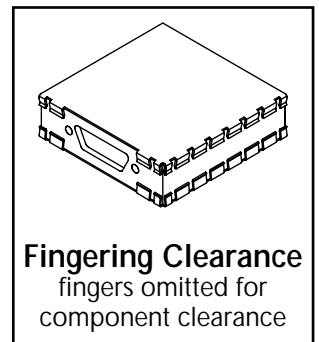
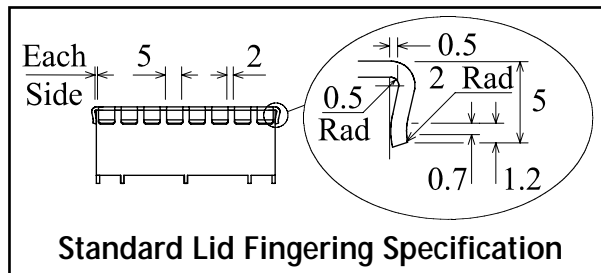
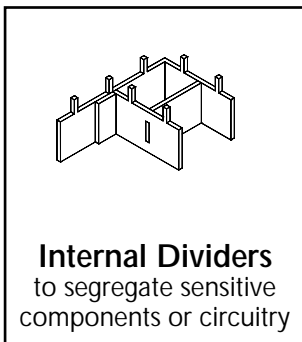
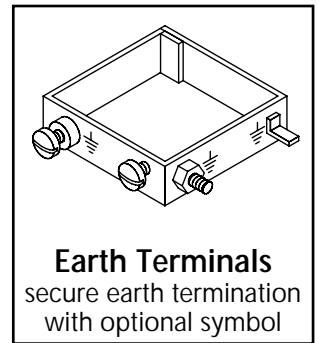


**MOUSE HOLES.** Walls and dividers can have small cut outs on the edges to clear PCB tracks and component leads.

**LANCINGS.** For mounting component leads or location points.

**LOCKING PIN.** Locates and retains enclosure on PCB for soldering (*see page 7*).

**LID CAPTIVATION.** Locking devices for additional lid security.



**PERANCEALTD**