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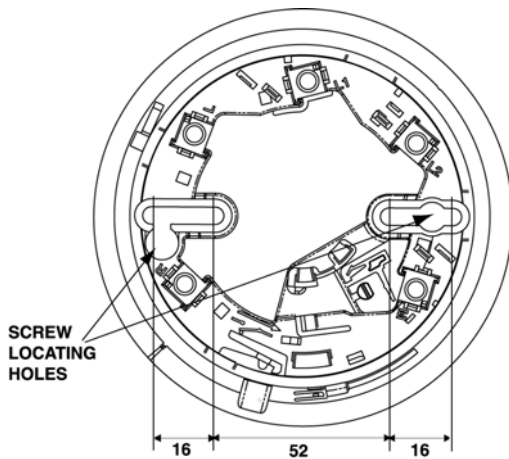
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**5B 5" UNIVERSAL DETECTOR BASE  
INSTALLATION INSTRUCTIONS**

**1. INTRODUCTION**

The 5B 5" Universal base is for use with the Series 600, 900 Series and 800 Series detectors. This document describes its use with the Series 600 detectors.



**Fig. 1 Fixing Dimensions for Detector Base**

The base may be fixed directly to:

- British (fixing centres 50mm) or European (fixing centres 70mm) conduit box
- DHM-5B Deckhead mounting
- EM-5B Euro Mounting Box
- 6" Base Adaptor
- Directly to the ceiling.

The base cannot be used with:

- MP69/SMP69 Duct Probe Units
- 800EM Euro Mounting Box
- DHM69 Deckhead Mounting

**2. DETECTOR LOCATION**

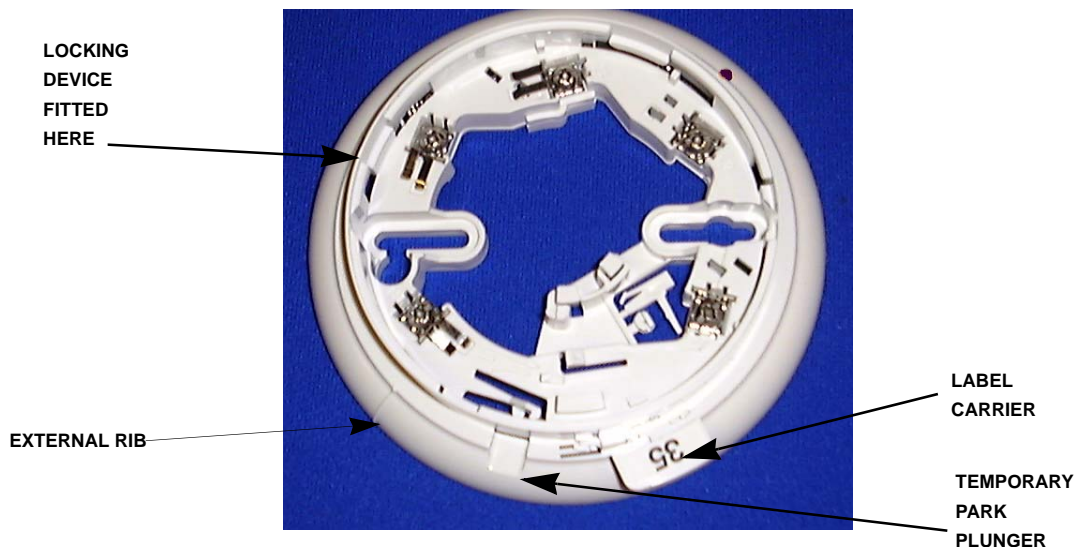
The location of each detector should have been determined at the system design stage in accordance with the site plan. The detector bases must be mounted in accordance with this plan. If problems arise, then reference to the system designer must be made.

The detector base does not need aligning as the detector LED is visible through 360°.

**3. FIXING THE DETECTOR BASE**

**3.1 TO A CONDUIT BOX**

The detector base is to be secured directly to the conduit box with two M4 pan head steel screws, zinc plated and passivated. The fixing slot allows the mounting to be fitted to both British conduit boxes having fitting points at 50mm centres and European conduit boxes with fitting points at 70mm centres. For ease of fixing, there are enlarged holes on the fixing slots, which allows the first fixing screw to be inserted loosely, the base is then fitted to the screw.



**Fig. 2 5B 5" Universal Base**

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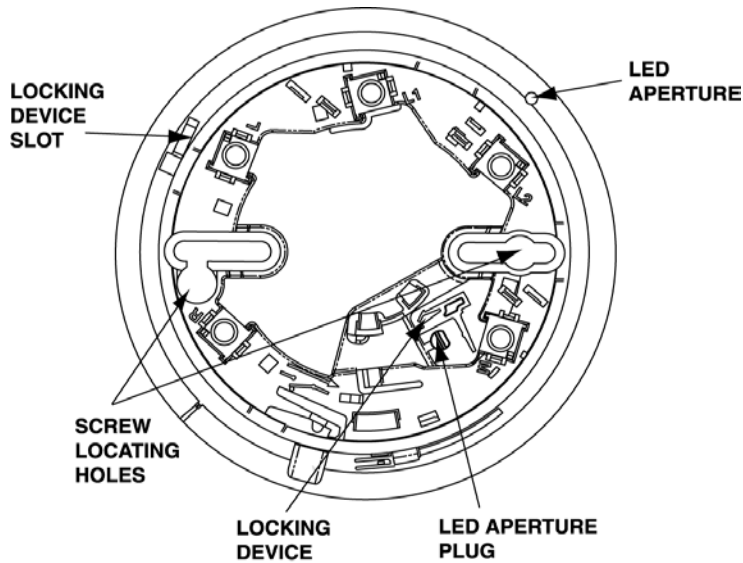


Fig. 3

## 3.2 TO OTHER SURFACES

The detector base is to be secured with two No. 8 x 1/2 inch pan head steel screws zinc plated and passivated or equivalent at the fixing centres shown in Fig. 1. The surface chosen for the mounting should be flat over the area of the base to ensure a stable fixing.

## 3.3 DHM-5B DECKHEAD MOUNTING

The Deckhead Mounting Kit is designed to be used with the Series 600 detectors when fitted in particularly damp or dirty environments.

The housing is to be secured with two No. 8 x 1 inch countersunk zinc plated and passivated steel screws (or equivalent) at the fixing centres shown in (Fig. 4). The surface chosen for the mounting should be flat over the area of the underside of the housing to ensure a stable fixing and strong enough to take the weight of the mounting, detector base and sensor.

The Deckhead Mounting Kit comprises:

- a) A housing having 20/25mm breakouts for conduit connection.
- b) Two 4.2 x 25mm long, self tapping posidrive pan head screws to secure the detector base.
- c) Sealing gasket.

*Note: The deckhead housing is normally aligned so that the arrow which is embossed in the bottom is in line with the direction required for visual inspection of the sensor LED. This is not a requirement for Series 600 detectors as the LED can be seen through 360 degrees.*

The deckhead mounting also has an option of being welded to metal ceilings via two 6.3 x 25mm (No. 14 x 1") pan head, steel, zinc coated, self tapping screws.

To weld a DHM-5B to a metal ceiling, proceed as follows (refer to Fig. 5):

Recommended accessories:

- High temperature masking tape
- Double-sided adhesive tape

- 1) Using a pair of pliers carefully break out the two thin plastic breakouts on the outer edge of the base on the DHM-5B.
- 2) Cut 2 strips from the high temperature masking tape roll approximately and affix centrally over the cutouts, remove the tape covering the cutouts with a knife. Leave the tape on until after the welding is finished. **This gives protection to the DHM plastic surface from weld splatter.**
- 3) Screw the 2 off welding screws into the holes provided in the base of the DHM until tight.
- 4) Break out cable gland ports (ØM20) to be used. Use a suitable hole cutter to increase the diameter of a ØM20 port to ØM25 when using M25 cable glands.

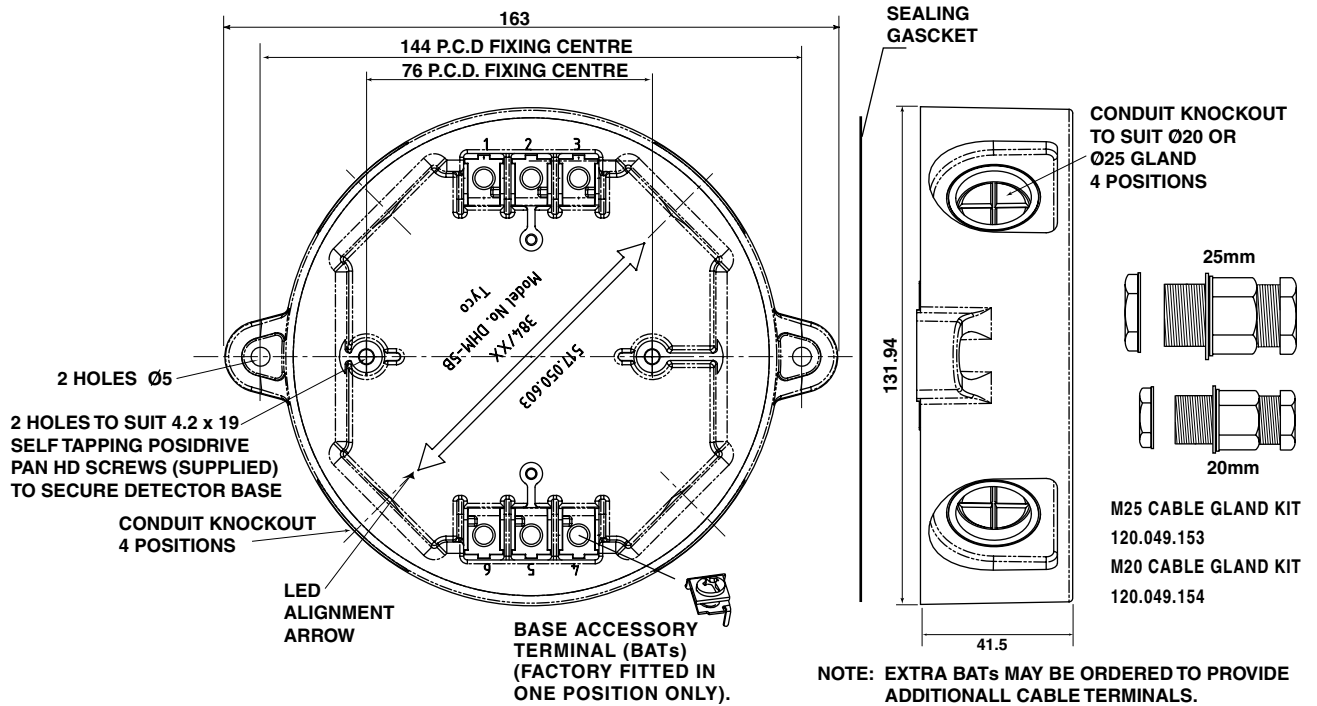


Fig. 4 DHM-5B Deckhead Mounting

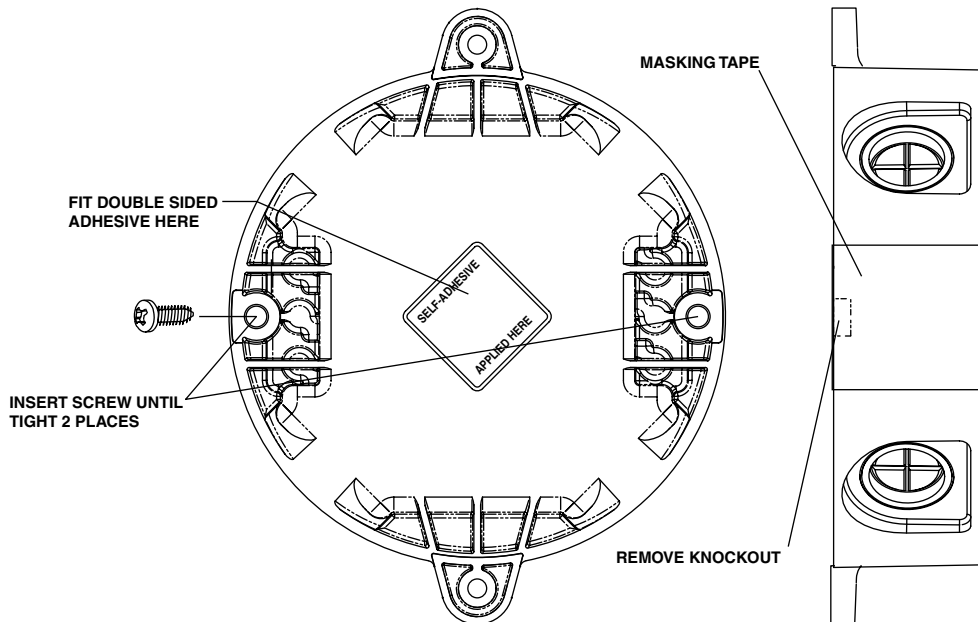


Fig. 5

- 5) Ensure that the adhering surface for the double-sided adhesive pad is free of grease. Remove the protective layer on one side of the double sided adhesive pad and affix it to the centre of the DHM-5B. Ensure that the surface where the DHM is to be

fixed is clean of any contaminants. Remove the second side of the double-sided pad. Carefully locate the DHM into its final position and press to the deckhead, now weld into position, using Mig/ Tig welding for approximately 1.5 seconds per weld.

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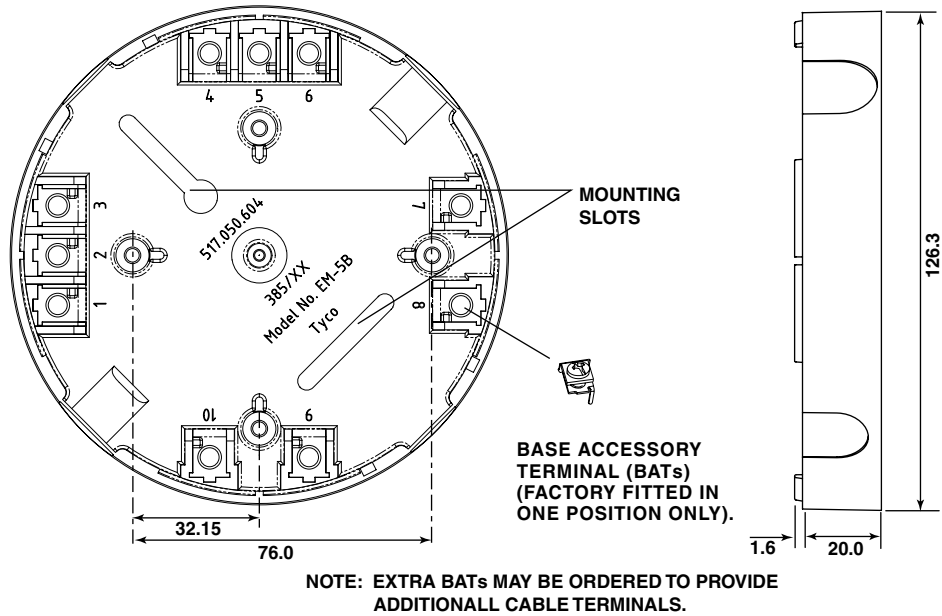


Fig. 6 EM-5B Euro Mounting Box

- 6) When satisfied with the weld joint, **remove the masking tape** and clean away any shooting caused by the welding.
- 7) Remove the backing from the Neoprene rubber gasket (supplied with the DHM-5B) and carefully place it on the front surface of the DHM, ensuring that the gasket is not stretched or damaged whilst sticking it down.

### 3.4 EM-5B EURO MOUNTING BOX

The European Mounting Box (Fig. 6) is designed to be used with the 600 Series detectors in EC countries using 18mm and 21mm cable breakouts.

The housing is secured with two No. 8 x 1 inch countersunk zinc plated and passivated steel screws (or equivalent).

The surface chosen for the mounting should be flat over the area of the underside of the housing to ensure a stable fixing and strong enough to take the weight of the mounting, detector base and sensor.

### 3.5 6" BASE ADAPTOR

The 6" Base Adaptor (Figs. 7 and 8) gives a larger area coverage than the 5B 5" Base and can be used eg, when an older larger detector is being replaced where re-decoration would have to be carried out.

Two screws suitable for the mounting location, eg, British/European back boxes or a flat surface are used to secure the 6" Base Adaptor.

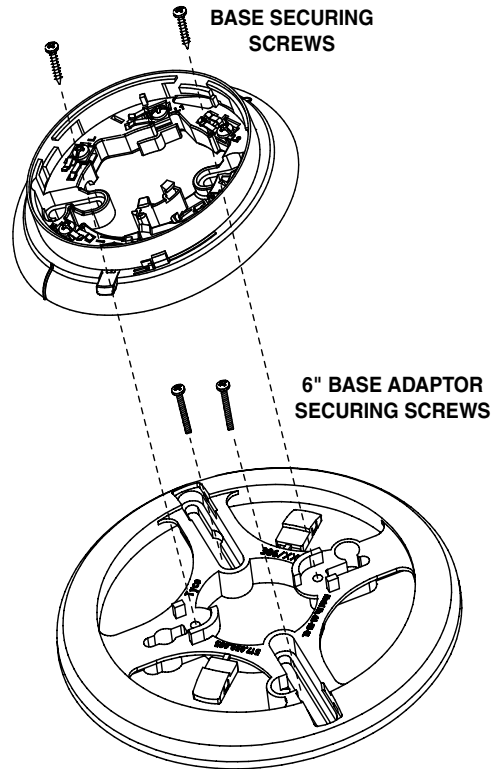
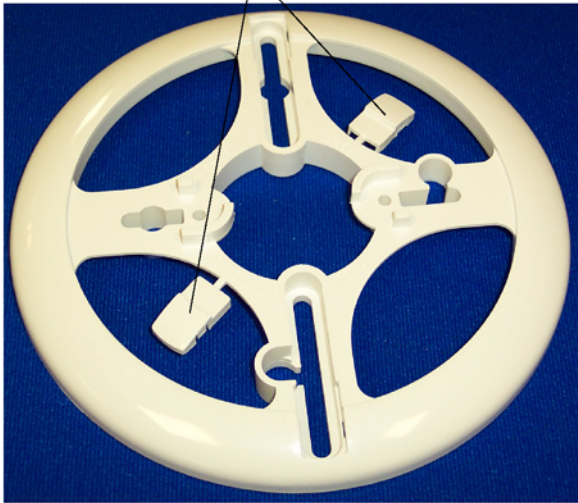


Fig. 7 6" Base Adaptor

REMOVE THE TWO SLOT COVERS



WHEN THE 6" ADAPTOR HAS BEEN MOUNTED,  
FIT THE TWO SLOT COVERS AS SHOWN



**Fig. 8**

When the 6" Base Adaptor has been mounted, break off the the two slot covers from the adaptor sprues, and fit to the adaptor as shown in (Fig. 8). Secure the 5B 5" Base to the adaptor using the two self-tapping screws (supplied with the adaptor)

### 3.6 FITTING OF LOCKING DEVICE/LED APERTURE PLUG

To fit the locking key, break it off from the sprue connecting it to the body moulding. Fit the locking device in the orientation shown in Fig. 9 and push firmly in.

To fit the LED aperture plug, break it off from the sprue connecting it to the body moulding. Using a standard 3mm flat blade screwdriver, insert the plug into the slot and push it firmly into the LED aperture on the underside of the base.

*Note: The LED aperture plug does not affect the functionality of the base but can be fitted where required for aesthetic reasons.*



**Fig. 9 Fitting Locking Device**

## 4. DETECTOR BASE WIRING

Detectors will normally be connected in zones. All detectors on a zone are connected in parallel and some form of end-of-line device, fitted at the last detector must be used to monitor line continuity. The number of detectors permitted per zone and the type of end-of-line device are dependent on the type of controller installed.

The detector base is to be wired as shown in Fig. 10 and with reference to the controller documentation.

A maximum of two 1.5mm<sup>2</sup> cables may be connected at any one terminal. A remote LED should be wired if specified. Breakouts are provided at the outer flanges for surface cable mounting.

Care must be taken not to overtighten the terminal screws when connecting the base to the circuit wiring.

### 4.1 INITIAL WIRING CHECKS

Carry out continuity and insulation tests in accordance with the controller documentation. Use the continuity and shorting plugs to check the cable parameters.

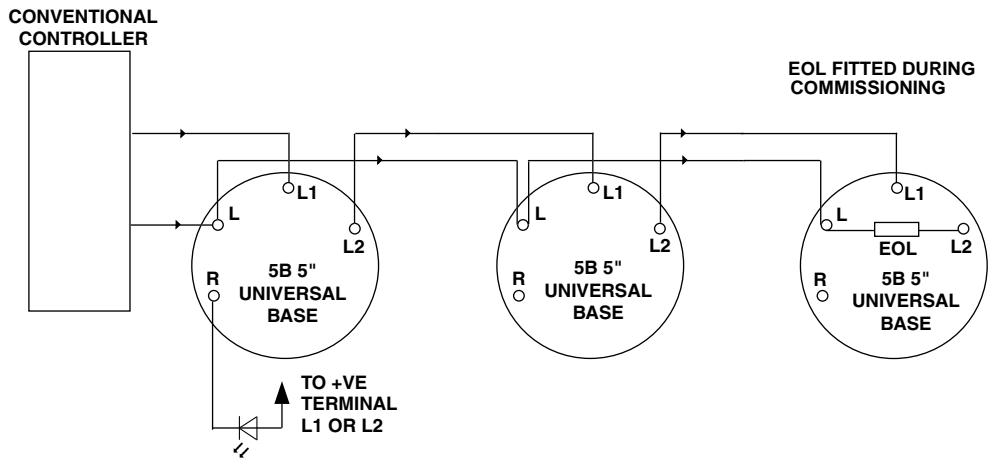
### 4.2 TERMINAL IDENTIFICATION

R	Remote LED connector
L	Line B IN/OUT -ve
L1	Line A IN +ve
L2	Line A OUT +ve

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**Fig. 10 Simplified Circuit Diagram**

5B 5" Universal Base:	517.050.017
Head Removal Tool:	517.050.004
Lock Release Tool:	Local Manufacture
Shorting Adaptor:	517.050.002.A
Continuity Adaptor:	517.050.003.A/T
DHM-5B Deckhead Mounting:	517.050.603
EM-5B Euro Mounting Box:	517.050.604
6" Base Adaptor:	517.050.605
Base Accessory	
Terminal (pack of 10):	517.050.612
M20 Cable Gland Kit:	120.049.154
M25 Cable Gland Kit:	120.049.153

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16<sup>th</sup> March 2005