

DOCUMENT CONTROL NUMBER /**INTRINSICALLY SAFE MINERVA BASE (MUBEx) & ACCESSORIES****INSTALLATION & COMMISSIONING INSTRUCTIONS****1. INTRODUCTION**

The M600Ex Series Detectors, as supplied, use a common Intrinsically Safe base MUBEx assembly.

Installation and commissioning of the M600Ex Series of detectors and base should only be carried out by competent personnel.

The base is classed as a simple apparatus, the detectors are certified:

ATEX code: Ex II 1 G

Cenelec code: EEx ia IIC T5

under ATEX certificate number BAS10ATEX1134X

These detectors are designed and manufactured to protect against other hazards as defined in paragraph 1.2.7 of Annex II of the ATEX Directive 94/9/EC.

1.1 DETECTOR USE

It is recommended that the base and detectors are used in conjunction with a suitable isolator or shunt diode safety barrier in a certified Intrinsically Safe system, ie, System 601.

Guidance on mounting and wiring for an MUBEx base is given in the following paragraphs.

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°.

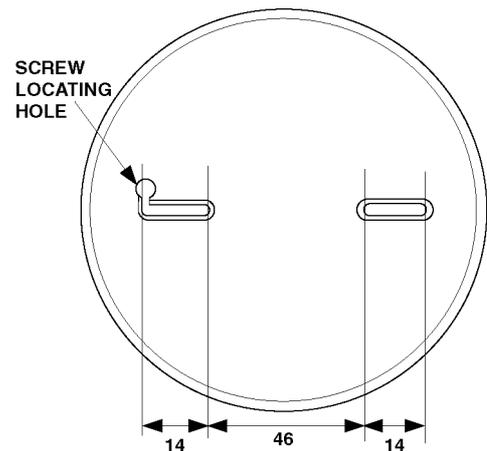
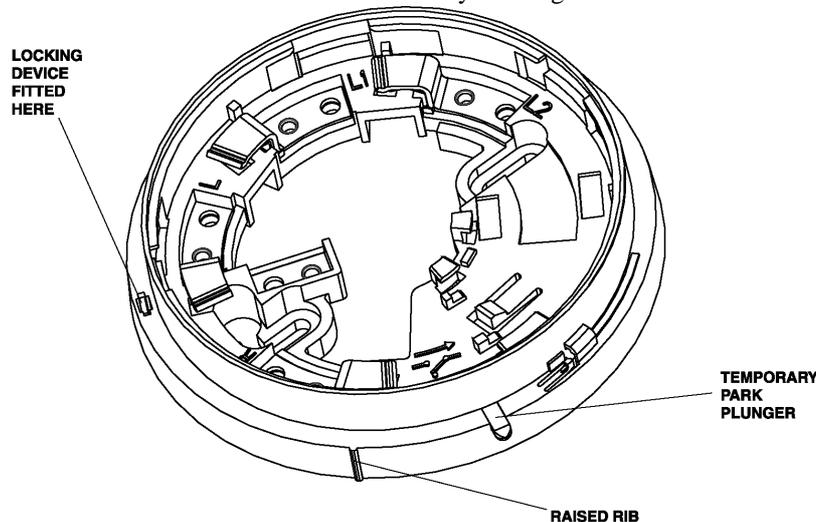


Fig. 1 Fixing Dimensions for Detector Base

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 B.E.S.A. conduit boxes having fitting points at 50mm centres and European conduit boxes with fitting points at 70mm centres. One of the fixing slots has an enlarged end, to allow a screw to be loosely placed in the conduit box, to allow easy locating of the base to the mounting holes.



THE FOLLOWING INFORMATION IS PRINTED ON THE SIDE OF THE BASE:

FOR Ex DETECTORS ONLY

ELECTROSTATIC HAZARD: CLEAN ONLY WITH A CLEAN DAMP CLOTH

Fig. 2 MUBEx Detector Base

3.2 DHM69 DECKHEAD MOUNTING

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

The housing is secured with two No. 8 x 38mm 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.

The Deckhead Mounting Kit comprises:

- A housing having 4 x 20mm breakouts for conduit connection,
- two M4 x 12mm long, pan head, zinc plated and passivated steel screws to secure the detector base,
- andan M4 x 8mm long pan head, zinc-plated and passivated steel screw with a brass cup washer and a brass plain washer.

Dimensions

Height:	40.5mm
Width:	145.5mm
Depth:	145.5mm



Fig. 3 DHM69

3.3 800EM EURO BOX

The 800EM Euro Box provides a matching backbox for the 801B base, which allows the standard 801B to be ceiling mounted with conduit entries of 2 x 18 and 2 x 21mm (see Fig. 4).

The housing is secured with two No. 8 x 38mm 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.



Fig. 4 800EM Euro Box

Dimensions

Height:	85mm
Width:	125mm
Depth:	125mm

3.4 TO OTHER SURFACES

The detector base is to be secured with two No. 8 x 13mm 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.

3.5 DETECTOR PROTECTIVE CAGE

The detector cage (Fig. 5) is designed to be fitted in areas where there is a high risk of mechanical damage to a detector. The cage baseplate is fitted after the detector base has been wired in. Use fixing screws suitable for the mounting location.

Dimensions

Height:	85mm
Width:	125mm
Depth:	125mm



Fig. 5 Detector Protective Cage

3.6 INITIAL WIRING CHECKS

Carry out continuity and insulation tests in accordance with publication 26A-02-I1.

3.7 CONNECTOR IDENTIFICATION

Loop cabling is connected to base terminals as follows:

L	-VE
L1	+VE IN
L2	+VE OUT
R	Remote LED Drive

3.8 FITTING/REMOVAL OF A DETECTOR

If required, fit a locking pin before fitting a detector (see Fig. 2).

To fit a detector, proceed as follows:

- Place the detector onto the base and turn until it locates on the base, then turn clockwise until fully located (the raised ribs of the base and detector are aligned).
- If a locking pin has been fitted to the base, the detector may only be removed by using a lock release tool to depress the locking pin.
- The temporary park plunger is used to allow the detector to be placed in a park position once mounted to the base. This allows the detector to be turned anti-clockwise past the location position to break electrical contact with the base. This means the cabling to the detector may be tested with the detector mounted to the base.
- A shorting adaptor may be fitted to the base and is used to short terminals L and L1 to allow cable resistance checks to be carried out.

3.9 COMMISSIONING

WARNING:

NO DEVICES LIKELY TO CAUSE A SPARK OR FLAME MUST BE USED TO TEST DETECTORS IN THE HAZARDOUS AREA.

Carry out the detector circuit commissioning tests for the type of control equipment used.

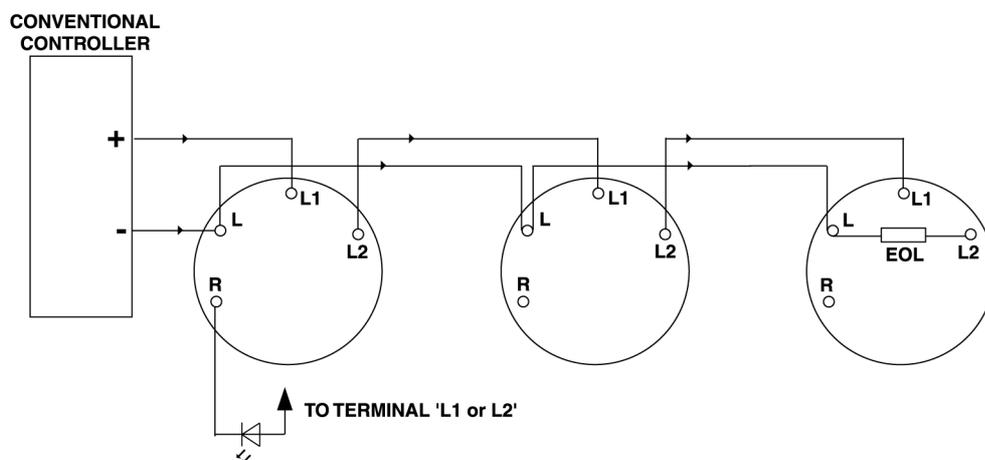


Fig. 6 Simplified Schematic Wiring Diagram

4. REPLACING AN M300Ex SERIES DETECTOR WITH AN MUBEx DETECTOR

An MUBEx has the same mounting fixing centres as an M300Ex base and can be installed in place of the M300Ex base.

To replace the detector, proceed as follows:

- a) Remove the M300Ex detector from its base.
- b) Using the M300 Skirt Changer remove the skirt from the base.
- b) Undo the two screws securing the base and replace with the MUBEx base. Fit the 600Ex detector (refer to Section 3.8).

In the event of an M300Ex detector being fitted to a DHM35 Deckhead Mounting, this mounting will have to be changed to a DHM69 Deckhead Mounting. The fixing details of both DHMs are identical.

4.1 STOCKCODE NUMBERS

MUBEx Base for use with Ex Detectors:	517.050.610
DHM69 Deckhead Mounting:	517.001.231
800EM Euro Box:	516.800.921
W500 Protective Cage:	517.050.011
Detector Locking Pin:	517.050.005
Shorting Adaptor:	517.050.002.A/T
T35 M300/400/500 Skirt Changer:	517.025.026

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23rd January 2003