EAP01

Emergency Announcement Point

Installation Guide

This equipment is designed and manufactured to conform to the following EC standards:

EMC: EN55103-1/E1:1996, EN55103-2/E5:1996, EN50121-4:2006, ENV50204:1995

Safety: EN60065:2002 (pollution degree 2)

Voice Alarm: When installed in a Voice Alarm system designed in accordance with the ASL EN 54-16 & ISO 7240-16 System Design Guide (T-0667-0016), this equipment meets the requirement of EN 54-16:2008, ISO 7240-16:2007, BS 5839-8:2008, EN 54-4:1997, EN 54-4:1997/A1:2002 and EN 54-4:1997/A2:2006

Failure to use the equipment in the manner described in the product literature will invalidate the warranty.

A 'Declaration of Conformity' statement to the above standards, and a list of auxiliary equipment used for compliance verification, is available on request.

This product must be disposed of in accordance with the WEEE directive.

Contents

Additional User Documentation:

Additional reference information are available from the ASL's website at www.asl-control.co.uk

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QUALITY ASSURED FIRM
CERTIFICATE NUMBER 96-LON-AQ-041

Link-up ®

1 Installation

Technical Specification Summary

General

Supply Voltage Range ....18 – 40 V DC
Current Consumption
    Max., all LEDs on.. 125 mA @ 24 V DC supply
    Quiescent .... 110 mA @ 24 V DC supply
Audio Output ....0 dBu balanced (nominal)
Output Impedance...66 Ω
Surveillance Tone .... 20 Hz
Microphone Control Data... EIA RS485 / 19200 baud
Microphone .... Fist
Buttons ....PTT button on fist microphone acts as All Call select button
LEDs.. Zone Busy / Speak Now (twin) / Status / System Fault (twin)
Colour ....Red RAL3020

Dimensions and Weight

Dimensions (H x W x D) ....500 mm x 150 mm x 151.5 mm
Weight...10.4 kg

Environmental

Temperature (storage and operating) .... –20 °C to +55 °C (storage) / –10 °C to +55 °C (operation)
Humidity Range.. 0% to 95% Non-condensing
Ingress Protection IP65
With door closed, and back box fixing and cable entry holes sealed

EMC

EN61000-4-3 (80 MHz to 1 GHz) / EN61000-4-6 (0.15 MHz to 80 MHz)................................ ITU/R 562-3 Impairment level 3
In the close proximity to some radio frequency transmitters, the signal to noise ratio of this system may be reduced.
If this occurs, ensure adequate system RF earthing or re-locate the equipment or signal cables.
Full performance information available on request

Voice Alarm

Only EAP01 Build Standard 9 onwards is EN54-16 and EN 54-4:1997+A1:2002+A2:2006 certified.
Please refer to ASL for further details.

Front Panel Indicators and Controls

1

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┌───┐
│ 1 │
└───┘
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2	
FLASHING:	MICROPHONE IS HEALTHY
ON OR OFF:	NO POWER OR MICROPHONE FAULT

3	
ON:	SYSTEM READY (MAKE ANNOUNCEMENT NOW!)
OFF:	SYSTEM NOT READY

4	
ON OR FLASHING:	SYSTEM HAS A FAULT (ANNOUNCEMENT MAY STILL BE POSSIBLE)
OFF:	SYSTEM IS FULLY OPERATIONAL (ANNOUNCEMENT WILL BE POSSIBLE)

5	
ON:	SYSTEM IN USE (ANNOUNCEMENT MAY STILL BE POSSIBLE)
OFF:	SYSTEM NOT IN USE (ANNOUNCEMENT WILL BE POSSIBLE)

SPEAK NOW ● ● STATUS ● ●

SYSTEM FAULT

BUSY ●

1   Fist Microphone with integral PTT button

When the PTT button is pressed it activates the All-Call zone selection, opens the microphone channel, and triggers the pre-announcement chime (if programmed at the Router), ready for the paging announcement.

When the PTT button is released, the microphone channel is closed and the routes are terminated.

2   STATUS Indicator (green)

This flashes if the EAP01 is powered and healthy.

If the indicator is constantly off or on, then there is a fault with the EAP01 electronics, or loss of power.

3   SYSTEM FAULT Indicators (yellow)

These illuminate constantly on or flashing if any fault is present on the PA/VA system.

Note that this does not indicate that the EAP01 or the system is not operational, but it may indicate that it may not be fully operational. A fault may be present with a fully operational system, for example, if an amplifier has failed but has been automatically replaced by a standby amplifier.

4   BUSY Indicator (green)

This function can be optionally cabled.

When the BUSY indicator is lit it indicates that the zone (or one or more of the group of zones) addressed by the microphone is already in use by another input. The Emergency Announcement Microphone can normally still make an announcement as it normally has a high priority within the system.

5   SPEAK NOW Indicators (green)

When the Press To Talk button is pressed, and the chime (if programmed at the Router) has finished, the SPEAK NOW indicators illuminate to indicate that the announcement can be made.

Main Components

Figure 1   EAP01 Main Components

PRODUCT LABEL (example)

THE LAST SECTION OF THE BARCODE AFTER THE SECOND FORWARD SLASH (/) INDICATES THE MICROPHONE BUILD STANDARD VERSION. EXAMPLE: 6

FIST MICROPHONE WITH INTEGRAL PTT

DIN RAIL TERMINAL FOR FIELD CABLING

FLYING LEAD FOR CONNECTION TO THE ELECTRONICS ASSEMBLY

INTERNAL BAFFLE PLATE FOR PROTECTING THE DRAIN HOLE AT THE BOTTOM OF THE BACK BOX (*)

BACK BOX

FRONT PANEL & ELECTRONICS ASSEMBLY

DOOR

(*) ONLY PRESENT ON BS VERSION 5 OR LATER

ⓘ   • Pictures shown in Figure 1 are from EAP01 Build Standard version 5 or later, however similar main components are present in previous Build Standard versions.
   • The EAP01's preferred Line Replaceable Unit (LRU) is the whole front panel and the electronics assembly.

Figure 2   EAP01 Front Panel/Electronics Assembly
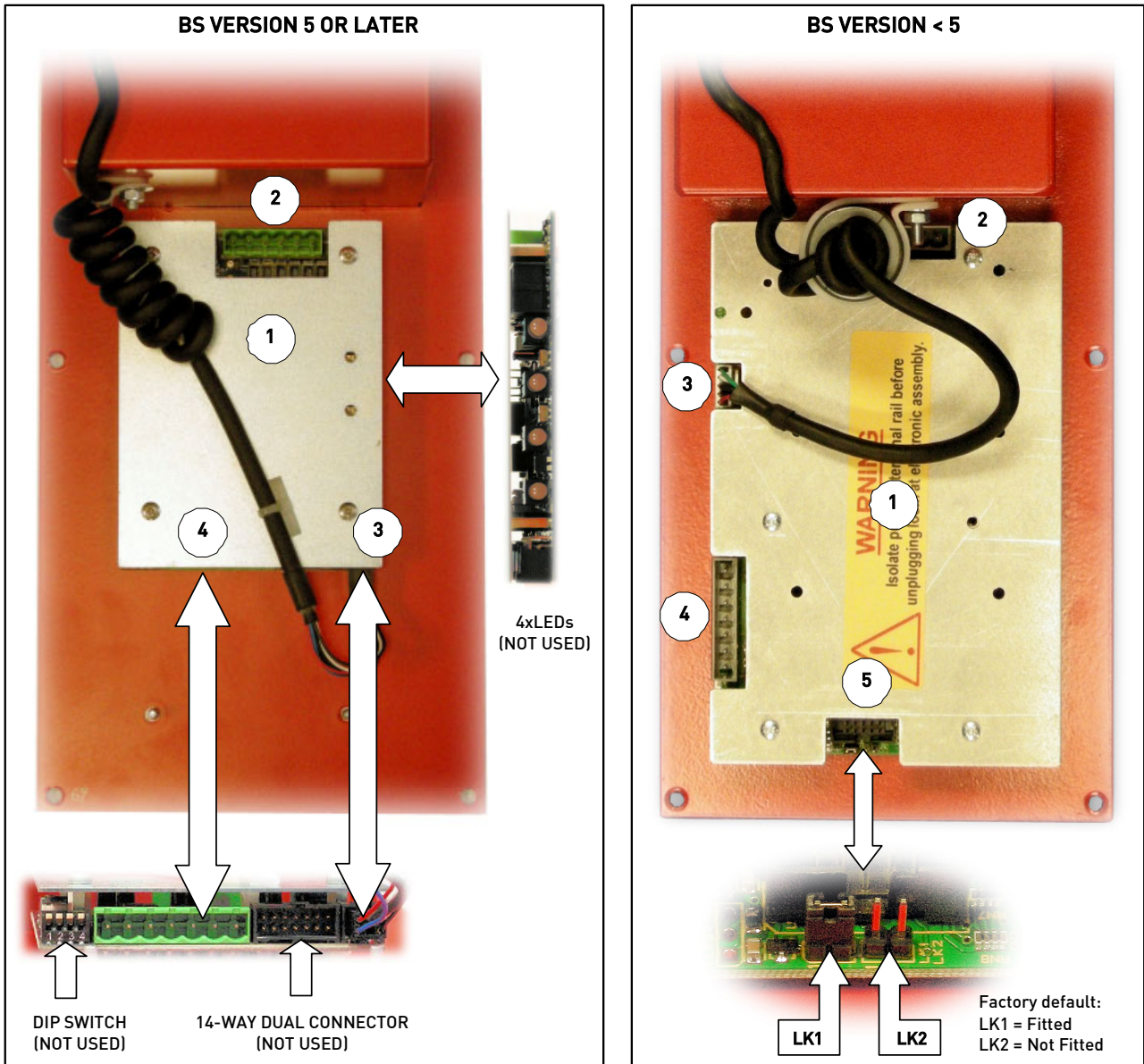
1   Microphone PCB protected by a metal plate.

2   Press to Talk (PTT), Speak Now indicator, and System Fault indicators' connector.

    For connection of the flying lead to the back box DIN rail terminals.

3   Fist Microphone connector.

    For connection of the microphone cable.

4   Microphone and power supply connector.

    For connection of the flying lead to the back box DIN rail terminals.

5   Box-header and links for programming only. These connector and links are for field firmware upgrade only, and these links should remain as supplied.

    Only on EAP01 Build Standard versions prior to 5.

Equipment and Tool Requirements

- The EAP01 unit.
- Suitable cable glands/conduit fixings, preferably with cable screen earthing facilities.
- A small flat bladed screwdriver.
- A 2.5 mm Allen key or driver.
- A pozidriv screwdriver (No 1).
- Suitable wire cutters, strippers and cable ferrules.
- A drill with bits and hole cutters suitable for cutting 2 mm mild steel, for the back box mounting holes and cable glands.
- Suitable fixings and tools for wall mounting.
- Sealant.

External Cabling Requirements

ⓘ	Refer to BS7671:2008 (Requirements for Electrical Installations) or other appropriate local standards for guidelines on maximum potential cable lengths given the actual installation parameters.

⚠	For EMC compliance: • All cable tails must be <3 cm. • Screened cables to be used where specified.

Cabling to a VAR Router

Signals	Cable Description	Suggested Type
Audio	1 x 2-core, twisted, screened, 1.0 mm	Low Smoke and Fume (LSF). For EN 54-16:2008, ISO 7240-16:2007, BS 5839-8:2008 compliance, fire rated cable (Pirelli FP200 or equivalent) must be used.
Data (for Busy indicator, optional)	1 x 2-core, twisted, screened, 1.0 mm	
Power	1 x 2 core, screened, 1.0 mm	
Other Signals	1 x 5-core, screened, 1.0 mm	

Cabling to a wall-mount Intellevac DAU or ACU

Please refer to the Intellevac DAU or ACU Installation Guide.

## Recommended Installation Procedure

> ⚠️ Please read and observe the instructions and guidelines in Section "4 Safety and Precautions" (page 15) prior to installation. Failure to follow these instructions and guidelines may cause personal injury and/or damage to the equipment.

1. Open the EAP01 door using the associated KABA key.

2. Remove the EAP01 door by compressing the hinge pin; see Figure 3.

    This can be done by inserting a small screwdriver into the holes in the pin, and sliding it upwards or downwards.

    Take care to ensure that the hinge pin's plastic bushes in the back box are not loosened.

Figure 3   EAP01 Door Removal

SLIDE THE HINGE PIN UPWARDS OR DONWARDS BY INSERTING A SMALL SCREWDRIVER INTO ONE OF THE HOLES IN THE PIN

⚠️ PLASTIC BUSHES TIGHTLY FITTED
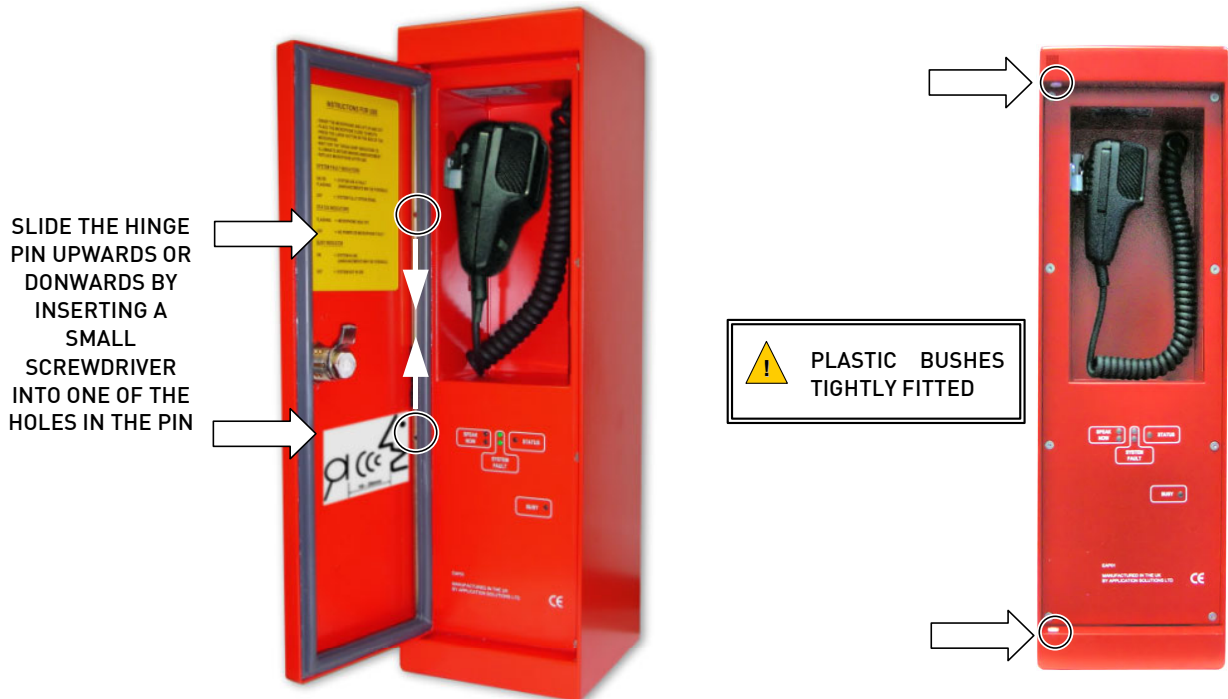
3. The EAP01 front panel/electronics assembly is normally supplied disconnected from the back box in a separate box. When the EAP01 electronics/front panel is supplied fitted to the back box it must be removed from the back box as follows:

    a. Remove the EAP01 front panel assembly by removing the 8 off M4 Allen screws.

    b. Disconnect the EAP01 front panel assembly by unplugging the flying lead from the multi-way connectors on the electronics assembly, and undoing the cable loop P-clip; see Figure 4.

Figure 4   Front Panel/Electronics Assembly
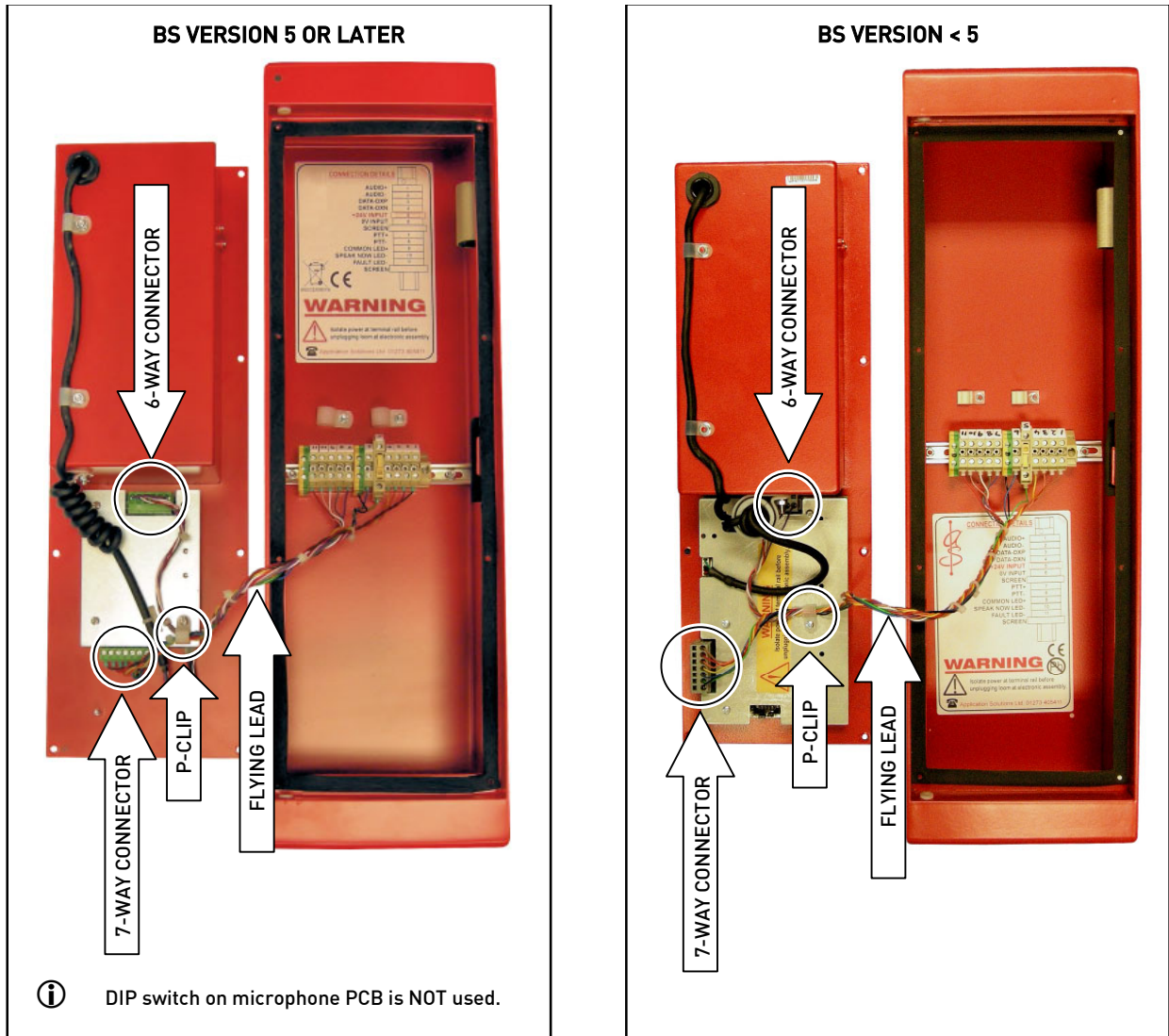
c.   Store the front panel assembly, door and fixing screws safely.

4.   Drill holes in the back box for cable gland or conduit entry and wall mounting, according to the particular installation conditions.

a.   Wall mounting holes: refer to Figure 9 for EAP01 mechanical dimensions.

b.   Cable gland or conduit entry holes: observe the following recommendations.

> ⚠️   • The EAP01 is designed for top or bottom entry of cables.
>
>   The recommended cable gland or conduit entry hole positions are shown in Figure 5.
>
>   Please refer to ASL if a different cable entry positioning is required.
>
>   • Ensure that chosen cable entry locations and routing will not cause fouling when the front panel is refitted.

Figure 5   Recommended Positioning of Cable Glands or Conduits on the Top or Bottom
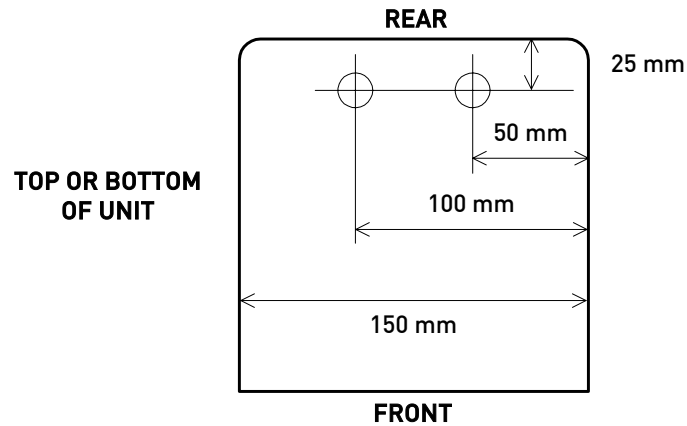
5.   Deburr all newly drilled holes in order to prevent any damage to the cabling.

6.   Mount the back box on the wall.

7.   Ensure that the power supply from the central equipment rack, or wall-mount Intellevac DAU or ACU is turned off.

8.   Feed the installation cables into the unit through the cable glands or conduit.

      Figure 6 gives an indication of the length of the cable required for connection within the EAP01.

Figure 6   DIN Rail Terminal Position
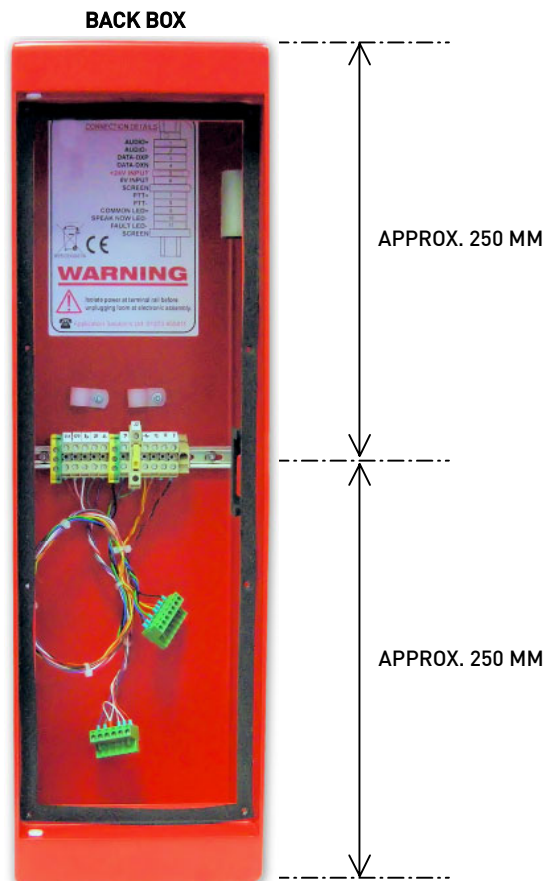
9. Seal the mounting holes and cable entry points.

> ⚠️ • Ensure that mounting holes and cable entry points are adequately sealed to preserve the unit's IP rating.
>
> • A drainage hole is provided on the bottom of the back box as standard on EAP01 Version 5 or later. This hole should also be sealed only if the cable entry is through the bottom of the back box.

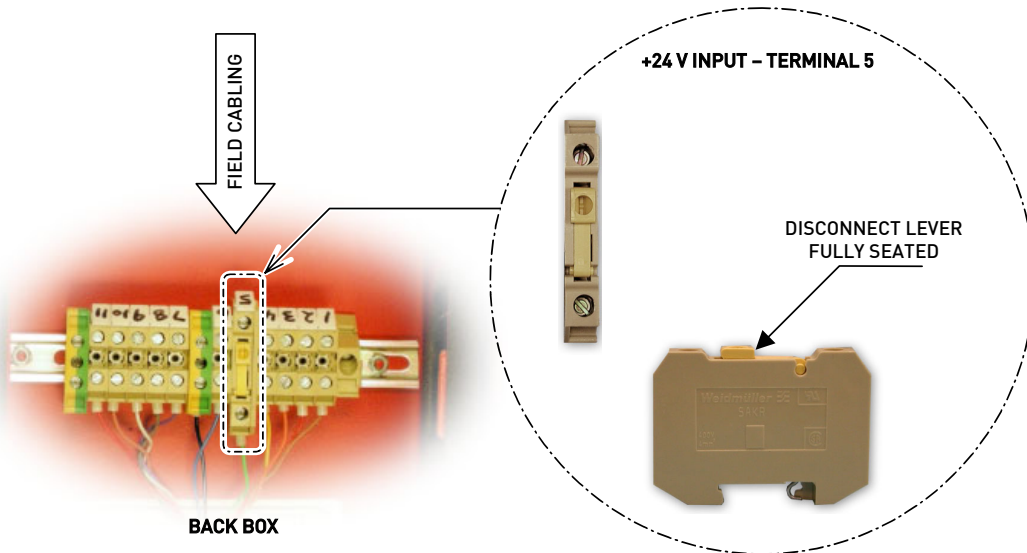10. Connect the field cabling to the DIN rail.

    Refer to Section "2 Connections" (page 13).

11. Ensure all swarf is removed from the enclosure.

12. Ensure that the power supply disconnect terminal (TERMINAL 5) is fully seated, if provided, as shown in Figure 7.
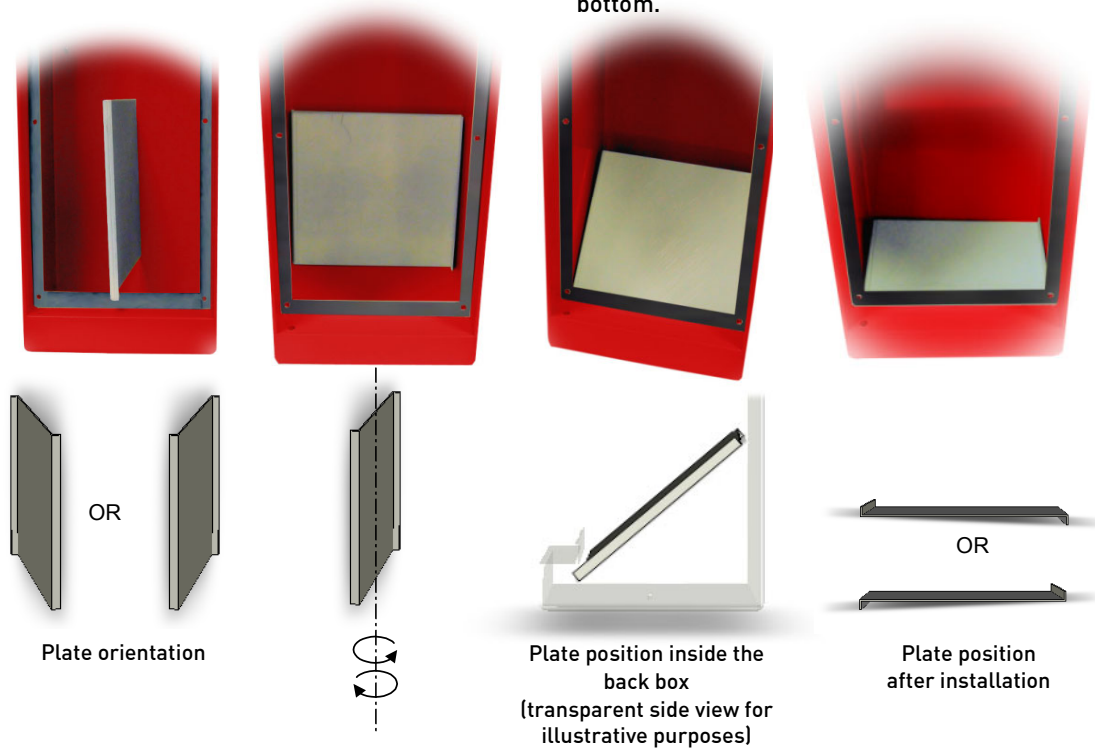
    Figure 7   Power Supply Terminal

13. A baffle plate is provided as standard on EAP01 Build Standard Version 5 or later for protecting the drainage hole on the bottom of the back box.

    If the baffle plate is provided, and the cable entry is not through the bottom of the back box, fit the baffle plate into the back box, as shown in Figure 8.

Figure 8   EAP01 Baffle Plate Installation

| **1.** Insert the plate into the back box observing plate orientation. | **2.** Rotate the plate. | **3.** Fit the plate underneath the back box front edge at the bottom. | **4.** Drop the plate. It will easily fit to the back box bottom. |

OR

Plate orientation

Plate position inside the back box
(transparent side view for illustrative purposes)

OR

Plate position after installation

14. Reconnect the front panel assembly as follows, see Figure 4:

  a.   Plug the flying leads to the multi-way connectors on the electronics assembly.

  b.   Secure the flying leads to the front panel using the P-clip removed in step 1.b.

15. Fix the front panel assembly back in place using the 8 off M4 Allen screws.

16. Re-fit the door.

> ⚠ Ensure that BOTH plastic bushes are tightly fitted to the door fixing holes in order to preserve the unit's IP rating.

17. Power the unit on from the central equipment rack, or wall-mount Intellevac DAU or ACU.

18. The installation is complete and ready for commissioning.

19. After commissioning the microphone, close and lock the door using the KABA key.
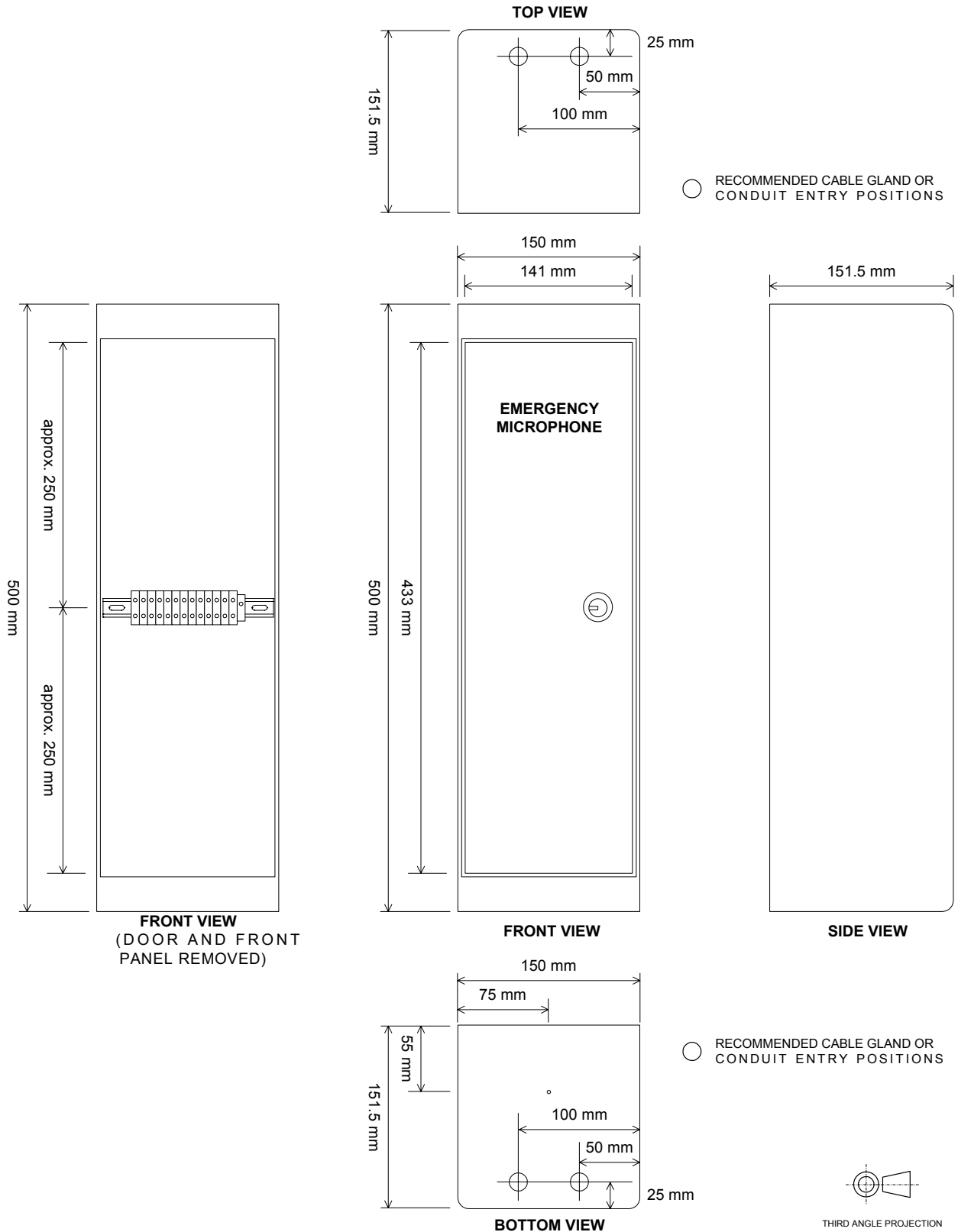
2   Connections

Table 1   EAP01 Terminal Allocation
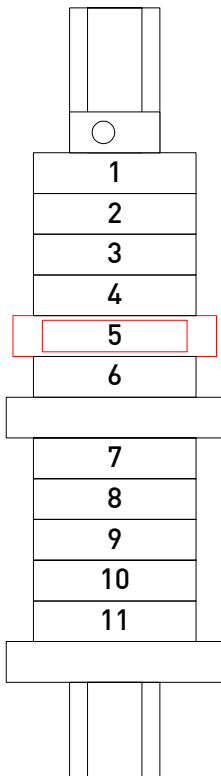
Terminal	Connection	Description
1	AUDIO +	+VE Balanced Audio Output Level: 0 dBu (nominal) Output impedance: 66 Ω
2	AUDIO –	–VE As above
3	DATA-DXP	Data+ Microphone control data EIA RS485 19200 baud Required for optional Busy indicator only.
4	DATA-DXN	Data– As above Required for optional Busy indicator only.
5	+24V INPUT	18 V – 40 V Supply Input (VAR4/VAR12/VAR20/VAR8/ VAR8-ACU: Not the power supply from the Router input)
6	0V INPUT	Supply 0 V
	SCREEN	Connection for cable screen (bonded to DIN rail)
7	PTT +	Connection from Press To Talk button (fitted internally with 6k8/470 Ω resistors)
8	PTT –	As above
9	COMMON LED +	Connection to Anode of Speak Now and System Fault indicators
10	SPEAK NOW LED –	Connection to Cathode of Speak Now indicators (built-in series resistor)
11	SYSTEM FAULT LED –	Connection to Cathode of System Fault indicators (built-in series resistor)
	SCREEN	Connection for cable screen (bonded to DIN rail)

3 Mechanical Dimensions

Figure 9 Mechanical Dimensions

TOP VIEW

151.5 mm

25 mm

50 mm

100 mm

RECOMMENDED CABLE GLAND OR
CONDUIT ENTRY POSITIONS

150 mm

141 mm

151.5 mm

EMERGENCY MICROPHONE

500 mm

433 mm

500 mm

approx. 250 mm

approx. 250 mm

FRONT VIEW
(DOOR AND FRONT PANEL REMOVED)

FRONT VIEW

SIDE VIEW

150 mm

75 mm

55 mm

151.5 mm

100 mm

50 mm

25 mm

RECOMMENDED CABLE GLAND OR
CONDUIT ENTRY POSITIONS

BOTTOM VIEW

THIRD ANGLE PROJECTION

4 Safety and Precautions

Environmental

The temperature and humidity ranges shown in the specifications for this product must not be exceeded.

This equipment must not be installed in an area that is subject to a corrosive atmosphere.

When installed in accordance to the instructions in this document, the unit with door closed provides IP65 ingress protection.

EMC

In the close proximity of some radio frequency transmitters, the signal to noise ratio of this product may be reduced. If this occurs, re-location of the equipment or the signal cables is recommended.

Electrical Safety

⚠️	Ensure power supply cabling is adequately rated for the unit's operating current.

⚠️	Always replace blown fuses with the correct type and rating.

ESD Precautions

This product contains static-sensitive devices. Observe ESD precautions when handling this product.

Unpacking and Handling

The equipment should be unpacked and inspected immediately on receipt. If damage has occurred please advise your carrier or supplier.

⚠️	This equipment contains electronic devices that are sensitive to electrostatic discharge. Please take precautions to avoid damage to the electronics by static electricity.

It is advisable to retain the original equipment packing in the event that the equipment ever needs returning for service.

Ensure that the name and address of the Authorised Distributor from whom you purchased the unit is recorded on the "Service and Warranty" page of this manual for future reference.

Packing for Return for Repair

⚠️	All electronics assemblies must be properly packed in ESD protective packing for transport, to prevent physical and ESD damage.

⚠️	The filler material used for packing for return for repair must be antistatic or static dissipative, as this may come into contact with exposed connectors, wiring, or PCB assemblies. The use of non-conductive filler material may cause damage to the electronic assemblies reducing their operational life, or even destroying them.

Advice on packing the product for return can be provided by ASL.

Service and Warranty

Name and Address of Authorised Distributor:

This product carries a full warranty. For full details of warranty and service agreements, please contact the Authorised Distributor who supplied the product to you.

Exclusions

The warranty does NOT cover:

1. Customer misuse, including incorrect installation.
2. Damage other than manufacturing defects.
3. Transit / Courier damage.
4. Incorrect voltage or power supply used.
5. Incorrect input signal.
6. Abnormal environmental operating conditions.
7. Damage incurred by accident, fire, lightning or other hazard.
8. Modification to the unit or inexpert / attempted repair.
9. No fault found – where no fault can be found after extensive testing, indicating user error or failure in ancillary equipment.
10. Electronic assemblies which are improperly packed when returned for repair or service.

Should any of the above apply, Application Solutions (Safety and Security) Limited reserves the right to raise any relevant charges to the customer.

Application Solutions (Safety and Security) Limited shall not be liable for any indirect, special or consequential loss or damage (including without limitation any loss of profits) arising from the use of this product or for any breach of this warranty.

In the interest of continual product development, Application Solutions (Safety and Security) Limited reserves the right to make changes to product specification without notice or liability.