U-AXS

Elevator Access Control Device

User Manual

Version 2.0

ULTIMATRUE
ENGINEERING INDUSTRIES

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1.0 General Description

The U-AXS series is an elevator access control device that is fully designed and manufactured at Ultimatrue Engineering Industries. The U-AXS is a custom-based embedded system proximity reader designed for elevator applications. The U-AXS offers RFID technology modules that support 13.56 MHz smart card/fob format. In addition, the U-AXS adheres to the ISO 14443A Mifare standard communication protocol. The U-AXS supports an unlimited number of users, enabling the addition or removal of users using the associated wireless IR remote control through program codes. The U-AXS provides various software programs for both administrative and user functionalities. Ultimatrue Engineering Industries is a certified ISO 9001:2015 and ISO 45001:2018 company

1.1   Table of Locations

Pointer	Function
1	Power Supply and NO (Normally Open) Contact of Device Relay

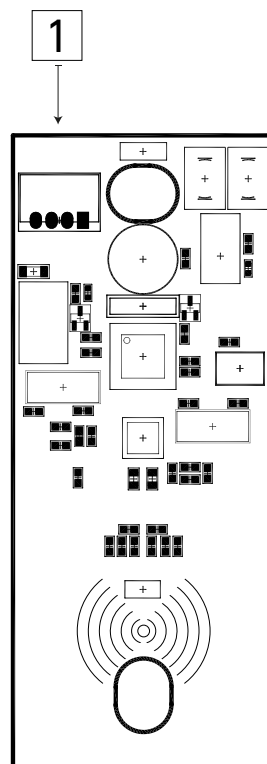**Table 1.0 – Device Table of Locations**

Figure 1.0 – Device Layout

Note:

Please head over to the Installation and connections section for more information on the individual inputs/outputs.

1.2   Safety Precautions

To fully benefit from using the U-AXS please read the user manual carefully before installation and initiating operation. Keep it nearby for future reference whenever necessary.

1.2.1   Transport and Inspection

The device delivered from the factory is ready for installation.

Upon receiving the U-AXS device, please check that the delivered equipment has not been damaged during transport. If any such damage occurs, a claim must be submitted to the carrier immediately.

After unpacking, the following must be checked:

-       The U-AXS device and extension board are not damaged.
-       The U-AXS package is sealed.
-       One IR remote control should be included.
-       Two RFID master cards should be included.

1.2.2   Storage

The U-AXS device must be stored under cover in a dry and well-ventilated area until it's installed and ready for operation.

1.2.3   Warnings and hazards

Before initiating operations, make sure that all connections, wiring, and board connectors are connected properly.

Warnings and Hazards
Never install the U-AXS device in places subject to rain, direct sunlight, or places with a degree of high dust.
Electricity must be turned OFF during the removal or the installation of the U-AXS device.

Table 2.0 - Warnings and Hazards

2.0 Technical Specifications

2.1 Product Description

Technical Specifications	Description
Board Dimensions	119 mm * 54 mm * 23 mm
Supply Voltage	12V DC
Operating Current	I ≤ 100 mA
Operating Distance	0-to-5 cm (Depending on tag/card type)
On-Delay Timer	3-to-99 s
Operating Temperature	10° C - 45° C
Storage Temperature	10° C - 60° C
Output Type	Free contact relay (2A/24V DC)
Device Type	Standalone
Device Capacity	Unlimited number of users (tags/cards)
Device Compatibility	A tag/card accesses up to ten U-AXS devices
Device Indicator Types	LED and Buzzer
Product Components	Two RFID Master cards and one IR remote control
Tags/Cards Standards	ISO 14443A Mifare - 13.56 MHz

Table 3.0 - Product Description

2.2   Basic Settings

Number	Basic Settings
1	All connections and terminals must be connected properly before initiating operations.
2	The device installer must be a qualified individual to guarantee safety and prevent any undesirable outcomes.
3	The operating voltage of the U-AXS must not be less than 12V DC.

Table 4.0 – Basic Settings

3.0 Installation and connections

The terminals of the U-AXS device are connected as illustrated in Figure 2.0.

- The +12V terminal of the U-AXS, illustrated by a red wire, is connected to the positive terminal of the 12V DC power supply.

- The GND terminal of the U-AXS, illustrated by a black wire, is connected to the negative terminal of the 12V DC power supply,

- The COM terminal of the U-AXS, illustrated by a white wire, is connected to the CCM (Car Calls Common) of the elevator control board in the main elevator panel.

- The NO (Normally Open) terminal, illustrated by a yellow wire, is connected to the COM (Common) terminal of the COP (Car Operating Panel).
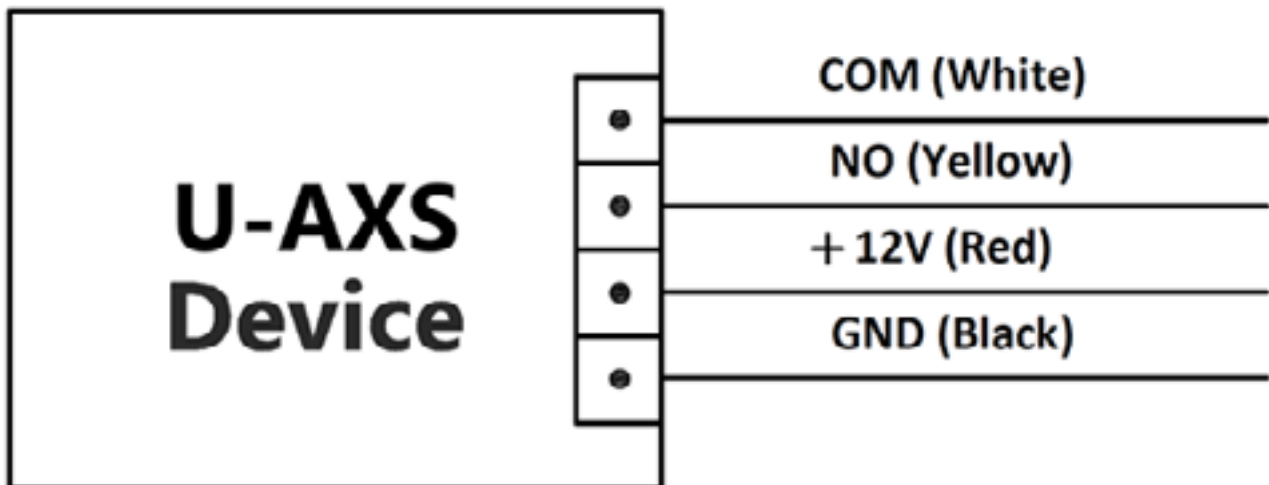

Figure 2.0 - Installation and Connections

4.0   General Programs

The U-AXS device will automatically switch to the programming mode when the master card is passed on, the LED starts blinking red and green alternately as an indicator. To proceed to the programming modes, the designated IR remote control is required.

4.1   Program P1: Standby Mode

This program facilitates relay activation in Standby Mode.

-      Pass the registered tag/card over the U-AXS device in standby mode.

-      The U-AXS device's LED blinks green to indicate the detection of a registered tag/card.

-      The buzzer sound is generated after passing the registered tag/card.

-      The relay is activated, otherwise, the U-AXS device's red LED switches on.

4.2   Program P2: Allocation of Users

This program facilitates the addition of users through their allocation of tags/cards. The users are allocated tags/cards based on their unit number. An infinite number of tags/cards can be registered for each separate unit.

-      Pass the master card over the U-AXS device to enter the program mode.

-      Insert the Allocation of Users program code using the designated IR remote control.

$$\boxed{* \; 1 \; * \; [Unit\ Number] \; \#}$$

-      The U-AXS device's LED blinks green to indicate the activation of allocating the unit to it's designated floor.

-      Pass the number of tags/cards required for the allocation of the specific unit.

-      The buzzer sound is generated after passing each tag/card.

-      Press 'OK' on the designated IR remote control to save and select another program.

-      Pass the master card to exit and return to Standby mode.

4.3 Program P3: Deallocation of Users

This program facilitates the removal of users through their deallocation of tags/cards , without the need of passing tags/cards over the U-AXS device.

- Pass the master card over the U-AXS device to enter the programming mode.

- Insert the Deallocation of Users program code using the designated IR remote control.

> * 0 * [Unit Number] #

- The U-AXS device's LED blinks red to indicate the deactivation of the specific unit on it's designated floor.

- Press 'OK' on the designated IR remote control to save and select another program.

- Pass the master card to exit and return to Standby mode.

4.4 Program P4: Reallocation of Users

This program facilitates the reallocation of removed users through their designated tags/cards. The users are reallocated tags/cards based on their unit number without requiring to repeat tag/card allocation processes.

- Pass the master card over the U-AXS device to enter the programming mode.

- Insert the Allocation of Users program code using the designated IR remote control.

```
* 1 * [Unit Number] #
```

- The U-AXS device's LED blinks green to indicate the reallocation of the specific unit on the designated floor.

- Press 'OK' on the designated IR remote control to save and select another program.

- Pass the master card to exit and return to Standby mode.

4.5   Program P5: On-Delay Timer

This program facilitates the relay operating time. The On-Delay Timer can be adjusted from 3-to-99 seconds.

- Pass the master card over the U-AXS device to enter the programming mode.

- Insert the On-Delay Timer program code using the designated IR remote control.

> * 2 * [Time in Seconds] #

- Press 'OK' on the designated IR remote control to save and select another program.

- Pass the master card to exit and return to Standby mode.

4.6   Program P6: Deactivation Mode

This program deactivates all tags/cards registered on the U-AXS device.

- Pass the master card over the U-AXS device to enter the programming mode.

- Insert the deactivation program code using the designated IR remote control.

```
* 3 * 33 #
```

- Press 'OK' on the designated IR remote control to save and select another program.

- Pass the master card to exit and return to the Standby mode.

Note:

To reactivate the tags/cards again, each unit should be activated separately, using the following program code:

```
* 1 *  [Unit Number] #
```

5.0   Disclaimer

The manufacturer shall have no obligation for damage, injury, or any legal responsibility incurred directly or indirectly from the use of any of the products. The user shall observe safe and lawful practices including, but not limited to, those set forth in this document. Should further information be desired or should particular obstacles arise which are not specifically covered for the client's purposes, the matter should be referred to Ultimatrue Engineering Industries.

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6.0   Warranty

Ultimatrue Engineering Industries warrants U-AXS elevator access control device against all manufacturing defects for a period of one year after the date of installation and operation, provided that the user strictly adheres to all technical specifications and instructions illustrated in the user manual. The Warranty is not valid in the following cases:

1.   Defects caused by failures or mistakes in the U-AXS device installations and onnections.

2.   Defects caused by high or low voltage.

3.   Defects caused by misuse and non-compliance with the illustrated operating instructions in the user manual.

4.   Defects caused by intended damages or fire.

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As standards, specifications, and design vary over periods of time, please ask for confirmation of the information provided in this publication.

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