H1E

External

(V1-April 2024 with Master Card)

Android & iOS

Stand-Alone Keypad & Proximity Card Reader

User Manual

Introduction

The H1E is a single relay multifunction standalone access control keypad suitable for either indoor or outdoor use. It is housed in a strong, sturdy and vandal resistant polished Zinc Alloy electroplated case. The electronics are fully potted making it extremely weather resistant and conforming to IP66

It supports up to 1000 users in a Card, PIN, or a Card + PIN option. (988 standard users, 2 panic users & 10 visitor users) The inbuilt card reader supports 125KHZ EM frequency card or key fob, and the Pin length is 4-6 digits

The relay can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines….etc)

The H1E has many extra features including Doorbell button, block enrollment, anti-tamper alarm & backlit keypad buttons in addition to Wi-Fi connection controlled via Tuya or Smartlife App
These features make the H1E an ideal choice for door access not only for small shops and domestic households but also for commercial and industrial applications such as factories etc

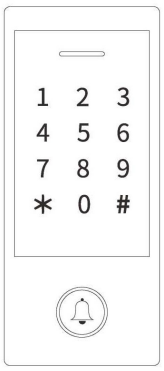
Features

- Wiegand output
- Weather resistant to IP66
- Strong Zinc Alloy Electroplated anti-vandal case – Vandal resistant
- Backlit Keypad buttons
- Multi-color LED status with touch screen display
- One Programmable Relay Output
- Up to 1000 Pin & Card holders (988 standard users, 2 panic users & 10 visitor users)
- Master Add/Delete card for quick adding/deleting users
- Integrated Alarm Buzzer & Output
- Low power consumption (60mA)
- Anti-Tamper Alarm
- Latch Mode/Toggle Mode
- Wi-Fi connection via Tuya or Smartlife App
- Bell Push can support a Doorbell feature or any other volt free input function
- 12-24V DC Power input
- 900mm sheathed cable tail

Specifications:

User Capacity Relay	**1000 Cards/PINS** (988 standard users, 2 panic users & 10 visitor users)
Operating Voltage Idle Current Active Current	**12-24V DC** 60mA 150mA
Keypad	**12 Key (3*4) Backlight options page 8**
Proximity Card Reader Radio Technology Read Range	**EM** 125KHz Industry Standard Proximity Card 20mm – 35mm
Wiring Connections	Electric Lock, Exit Button, Wiegand input/output DOTL, External Alarm, Door Bell
Relay Adjustable Relay Output Time Adjustable Alarm Output Time Lock Output Load Alarm Output Load	**(NO, NC, COM)** 0-99 Seconds (5 seconds default) 0-3 minutes (1 minute default) 2 Amp Maximum 2 Amp Maximum
Environment Operating Temperature Operating Humidity	**IP66** -34℃ - 60℃, or -40°F - 140°F 0% - 98% Non-Condensing
Physical Surface Finish Dimensions Unit Weight	**Zinc-Alloy Enclosure** Silver & Black H:143 x W:68 x D:25 (mm) 650g

Package contents



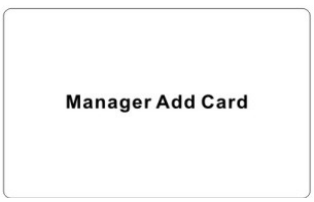
H1E Keypad

Diode IN4004 (For relay circuit protection)

Self Tapping Screws

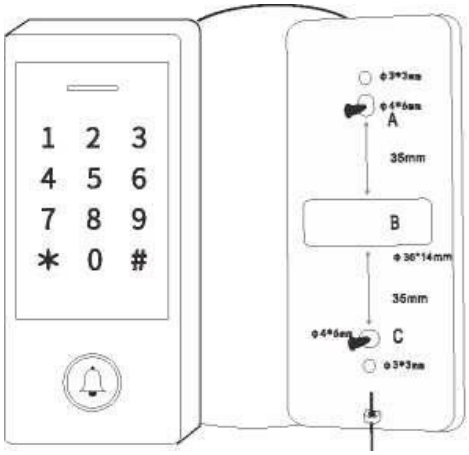
Wall Anchors

Screw Driver



Installation

- Remove the back cover from the unit
- Drill 2 holes (A,C) on the wall for the screws and one hole for the cable
- Knock the supplied rubber bungs to the screw holes (A,C)
- Fix the back cover firmly on the wall with 4 flat head screws
- Thread the cable through the cable hole (B)
- Attach the unit to the back cover



Wiring cable

Wire Insulation Colour	Function	Notes
Red	DC +	12-24V DC Regulated Power Input
Black	DC -	12-24V DC Regulated Power Input
Grey & Black	GND	Negative Pole
Blue & Black	NO	Normally Open relay output
White & Black	COM	Common Connection for relay output
Green & Black	NC	Normally Closed relay output
Yellow	OPEN	Request to Exit input
Advanced Input and Output Features		
Green	DATA 0	Wiegand output 0
White	DATA 1	Wiegand output 1
Brown & Black	Doorbell 'A'	Contact for doorbell/sounder
Yellow & Black	Doorbell 'B'	Contact for doorbell/sounder
Grey	Alarm output -	Alarm Negative output
Brown	Door contact input	Door Status Detecting input (Normally Closed)

Function Description

Relay operation (Pulse mode and Toggle mode)

The relay can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines….etc)

Every time a valid card/fob is presented or a Pin input is made in Pulse Mode, the relay will operate, for the pre-set relay pulse time

Every time a valid card/fob is presented or a Pin input is made in Toggle Mode, the relay changes state, which will not revert until a valid card/fob is re-presented or a Pin input is re-made

Master Card

The H1E is supplied with a Master Add/Delete card in order to allow rapid card enrollment

Anti-Tamper Alarm – Please refer to the last page for this

The H1E uses an L.D.R (Light Dependent Resistor) as an anti-tamper alarm. If the keypad facia is removed, or a sudden change in light source is detected by the L.D.R, the tamper alarm will bleep

Programming

Configure the Keypad

Change the configure settings according to your application (optional). Multiple configuration settings can be changed at one time: Enter program mode, change the desired settings, then exit program mode

Set Master Code

The 6 digit Master Code is used to prevent unauthorized access to the system. The administrator of the unit will need a Master Code **(Factory default code: *123456#)**. We recommend immediate update and recording of your Master Code

Programming Step	Keystroke Combination
1. Enter Program Mode	*** (Master Code default is 123456) #**
2. Update Master Code	**0 (New Master Code) # (Repeat New Master Code) #**
3. Exit Program Mode	*

User Settings

To enter programming mode	*** (Master Code) #**
To exit from programming mode	*
Note that to undertake all programming and/or settings, the Master Code must be entered first of all, enter the settings required and press * to Exit programming mode When adding users, if the card/fob or Pin user has been enrolled already, you cannot add it again, or the device will give a bleep as an error	

SET Access & Relay Configuration

- **Card or PIN (Default):** The user must present a valid card/fob to the H1E or enter their PIN code followed by the **#** key, in order to be granted access
- **Card + PIN:** The user must first present a valid card/fob to the H1E and then enter their PIN code followed by the **#** key, in order to be granted access

Programming Step	Keystroke Combination
1. Enter Program Mode before adding/deleting users or editing any keypad settings	*** (Master Code) #**
2. Card or PIN 3. Card + PIN	**43# (Default)** **42#**
4. Exit Program Mode	*

Relay Setting (Pulse mode, Toggle mode)

Pulse mode (Factory default)

Toggle mode is the relay will open upon presenting a PIN/Card and will not close until the PIN/Card is re-entered. Ideal for entrances in constant use yet maintaining access control functionality

Pulse mode - Door relay time setting	**3 1-99 #** The door relay time is between 1-99 seconds, the factory default setting is 5 seconds **(1-99 is number of seconds)**
Toggle mode	**30 #**

Strike-Out Alarm

The strike-out alarm will engage after 10 failed entry attempts (Default is OFF)

It can be set to deny access for 10 minutes after engaging. To override this requires a valid card/fob or entering the Master code

1. Strike-Out OFF	**60 #** (Factory default)
2. Strike-Out ON	**61 #** Access will be denied for 10 minutes – Exit button will still work
3. Strike-Out alarm buzzer ON	**62 #**
4. Set alarm buzzer time	**5 (0-3) #** (Factory default is 1 minute) The door relay time is between 1-99 seconds, the factory default setting is 5 seconds **(0-3 is number of minutes)**

Door Alarm

Door Open Detection

Door Open Too Long (DOTL) warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the internal buzzer will bleep automatically to remind people to close the door and continue for 1 minute before switching off automatically if the door is closed or a valid card/PIN or Master code is entered or it will continue to sound for the duration of any preset alarm timer programmed

Door Forced Open warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is forced open, the internal buzzer and alarm output will both operate unless a valid card/PIN or Master code is entered or it will continue to sound for the duration of any preset alarm timer programmed

1. Disable door open detection	**63 # (Default)**
2. Enable door open detection	**64 #**
3. Set alarm buzzer time	**5 (0-3) #** (Factory default is 1 minute) The door relay time is between 1-99 seconds, the factory default setting is 5 seconds **(0-3 is number of minutes)**

Set Audio sound & Visual LED display

LED status always **OFF** LED status aways **ON**	**72** **#** **73** **#** **(Default)**
Keypad back lit always **OFF** Keypad back lit always **ON** Keypad back lit **Automatic OFF**	**74** **#** **75** **#** **We recommend this setting** **76** **#** **(Default)** After 20 seconds the keypad backlight will go off and only return to normal mode upon pressing any button
Enable sound Disable sound	**71** **#** **(Default)** **70** **#**

Adding Users Ensure each user is issued a User ID Number and please record these numbers in the event you wish to delete them ****Please Note** User ID Numbers do not have to be proceeded with a leading zero digit **Common users** require User ID Numbers 0-987 **Panic users** require User ID Numbers 988-989 **Visitor users** require User ID Numbers 990-999	
To **add PIN** users 8888 is reserved and cannot be used	**1** **User ID number** **#** **PIN** **#** The User ID number is any number from 0-987 Additional users can be added continuously before the last **#** button is pressed
To **delete PIN** users	**2** **User ID number** **#** **Or** **2** **Enter PIN** **#** Additional users can be deleted continuously before the last **#** button is pressed
To change the **PIN** of a PIN/Panic user	***** **User ID number #** **Old PIN #** **New PIN #** **Repeat new PIN #** (Note: This step must be done outside of programming mode)
To add a **PANIC PIN (Emergency PIN)** 8888 is reserved and cannot be used	**1** **User ID number** **#** **PIN** **#** The User ID number is any number from 988-999
To add Card users To add a **PANIC Card (Emergency Card)**	**1** **User ID number** **#** **Card** **#** The User ID number can be any number from 0-987 The Panic User ID number can be any number from 988-989 **For PANIC (Emergency Cards)** **1** **User ID number** **#** **Card** **#** **Or** **1** **Enter the 8 digit card/fob number** **#**

To delete Card users by cards	**2** **Read Card** **#** This function can automatically identify the card Additional users can be deleted continuously before the last **#** button is pressed
To delete Card users by their User ID number This option can be used when a user has lost their card	**2** **User ID number** **#**
To delete card users by card number	**2** **Enter the 8 digit card/fob number** **#** Additional users can be deleted continuously before the last **#** button is pressed

Adding Visitor Users Ensure each user is issued a User ID Number and please record these numbers in the event you wish to delete them. Up to 10 Visitor Users can be added and allowed no more than ten times of usage until they are automatically invalid ****Please Note** Visitor User ID Numbers require User ID Numbers 990-999	
To add Visitor Card users **To add Visitor PIN** users 8888 is reserved and cannot be used	**1** **User ID number** **#** **(0-9)** **#** **Card** **#** **Or** **1** **User ID number** **#** **(0-9)** **#** **Enter the 8 digit card/fob number** **#** **1** **User ID number** **#** **(0-9)** **#** **PIN** **#** **(0-9)** Means the number of usage times – 0=10 times
To change a **PIN** in card and PIN mode (Method 1)	***** **Read Card** **Old PIN #** **New PIN #** **New PIN #** (Note: This step must be done outside of programming mode)
To change a **PIN** in card and PIN mode (Method 2)	***** **User ID number #** **Old PIN #** **New PIN #** **New PIN #** (Note: This step must be done outside of programming mode)

Master Add/Delete Card

Using the Master Add/delete cards provide a faster way of adding cards/fob/Pins. The keypad will automatically allocate a User ID Number

To add Card or PIN	1. Present the Master card 2. Present your card or input the PIN code followed by **#** **Repeat step 2 for additional users before exiting** 3. Re-present the Master card
To delete Card or PIN	1. Present the Master card twice within 5 seconds 2. Present your card or input the PIN code followed by **#** **Repeat step 2 for additional users before exiting** 3. Re-present the Master card

Reset to Factory Default & adding Master Card

1. To reset to factory default, power off, press the exit button or short circuit the Black (GND) and Yellow (Open) wires, and then power on

2. There will be two bleeps, release the exit button and the LED light will turn orange

3. Then present any 125KHz EM card/fob or the Master card

4. The LED will turn red to confirm factory default is successful

Erase all Users **

This will delete ALL User data

1. Enter Program Mode: ***(Master Code)#**
2. Enter: 2 (Master Code) **#**
3. Exit: ***

*** All configuration data & Master card is retained*

Sound and LED indication

Operation Status	**Red LED**	**Green LED**	**Orange LED**	**Sounds**
Power On	ON			Short Single Bleep
Standby	ON			
Press Keypad	Flashing			Short Single Bleep
Enter Master Code Entry Mode	Flashing			Short Single Bleep
In program mode			ON	Short Single Bleep
Entered Program Step Successfully	Flashing			Short Single Bleep
Entered Program Step Incorrectly				3 Short Bleeps
Exit Programming Mode	ON			Short Single Bleep
Entry Granted for Relay		ON		Short Single Bleep
Alarm Mode Engaged	Flashing			Alarm

H1E - Simplified Instruction

Function Description	**Operation**
Enter the Programming Mode	*** (Master Code) #** *(123456 is the default factory master code)*
Change the Master Code	**0（New Master Code）#（Repeat New Master Code）#** *(Code: 4-6 digits)*
Add Card User	**1 (Present Card) #**
Add PIN User	**1 (User ID number 0-987) # (PIN)#** *The PIN is any 4-6 digits between 0000 - 999999*
Delete User	**2 (Present Card) #** **2 (Enter User ID number or PIN code) #**
Exit	*
How to be granted access	
Card User	**Present card/fob**
PIN User	**Enter (PIN) #**

Anti-Tamper Alarm

The H1E's alarm trigger is activated by an LDR (Light Dependant Resistor) which is located to the lower side of the unit as illustrated below

The alarm function is designed as an 'Anti-Theft' facility. Forceful removal of the installed keypad or a sudden change in light source will trigger the keypad to bleep constantly. The keypad will also be "Blocked" from use

The function cannot be disabled but it can be stopped by presenting a valid card or key fob to the reader or entering the Master Code followed by the **#** sign

Alternatively, you can prevent the alarm from future activation by covering the LDR with a non-light absorbent substance in addition to sealing around all edges of the keypad

The image below shows the K401-E keypad, however, the H1E is the same