User Manual

Full Height Turnstile Series

Applicable Models: FHT2300 Series, FHT2300D Series, FHT2400 Series, FHT2400D Series

Date: March 2022

Doc Version: 1.3

English

Thank you for choosing our product. Please read the instructions carefully before operation. Follow these instructions to ensure that the product is functioning properly. The images shown in this manual are for illustrative purposes only.

For further details, please visit our Company's website www.zkteco.com.

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About the Company

ZKTeco is one of the world's largest manufacturer of RFID and Biometric (Fingerprint, Facial, Finger-vein) readers. Product offerings include Access Control readers and panels, Near & Far-range Facial Recognition Cameras, Elevator/floor access controllers, Turnstiles, License Plate Recognition (LPR) gate controllers and Consumer products including battery-operated fingerprint and face-reader Door Locks. Our security solutions are multi-lingual and localized in over 18 different languages. At the ZKTeco state-of-the-art 700,000 square foot ISO9001-certified manufacturing facility, we control manufacturing, product design, component assembly, and logistics/shipping, all under one roof.

The founders of ZKTeco have been determined for independent research and development of biometric verification procedures and the productization of biometric verification SDK, which was initially widely applied in PC security and identity authentication fields. With the continuous enhancement of the development and plenty of market applications, the team has gradually constructed an identity authentication ecosystem and smart security ecosystem, which are based on biometric verification techniques. With years of experience in the industrialization of biometric verifications, ZKTeco was officially established in 2007 and now has been one of the globally leading enterprises in the biometric verification industry owning various patents and being selected as the National High-tech Enterprise for 6 consecutive years. Its products are protected by intellectual property rights.

About the Manual

This manual introduces the operations of **Full Height Turnstile Series**.

All figures displayed are for illustration purposes only. Figures in this manual may not be exactly consistent with the actual products.

Features and parameters with ★ are not available in all devices.

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Document Conventions

Conventions used in this manual are listed below:

GUI Conventions

For Software	
Convention	**Description**
Bold font	Used to identify software interface names e.g. **OK**, **Confirm**, **Cancel**.
>	Multi-level menus are separated by these brackets. For example, File > Create > Folder.
For Device	
Convention	**Description**
< >	Button or key names for devices. For example, press <OK>.
[ ]	Window names, menu items, data table, and field names are inside square brackets. For example, pop up the [New User] window.
/	Multi-level menus are separated by forwarding slashes. For example, [File/Create/Folder].

Symbols

Convention	Description
	This represents a note that needs to pay more attention to.
	The general information which helps in performing the operations faster.
	The information which is significant.
	Care taken to avoid danger or mistakes.
	The statement or event that warns of something or that serves as a cautionary example.

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1 Product Introduction

1.1 Model Number and Access Control

Model \ Access	No	C3-200 with two KR101E reader	inBIO260 with two FR1200/ID reader
FHT2300	√		
FHT2311		√	
FHT2322			√
FHT2400	√		
FHT2411		√	
FHT2422			√

1.2 Structures and Dimensions

FHT2300 series and FHT2400 series has stainless steel casing, which provides corrosion resistance and durability.

FHT2300's appearance and dimensions are as shown in figure 1-2A:

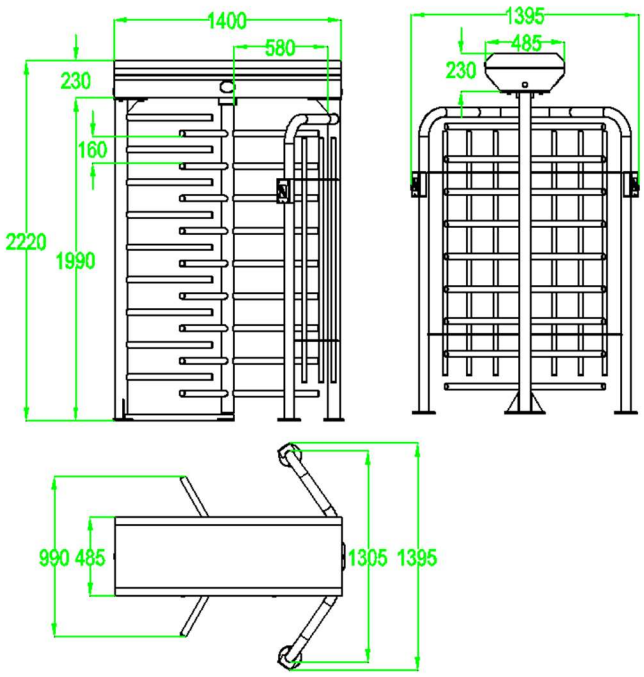

Figure 1-2A

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FHT2400's appearance and dimensions are as shown in figure 1-2B:

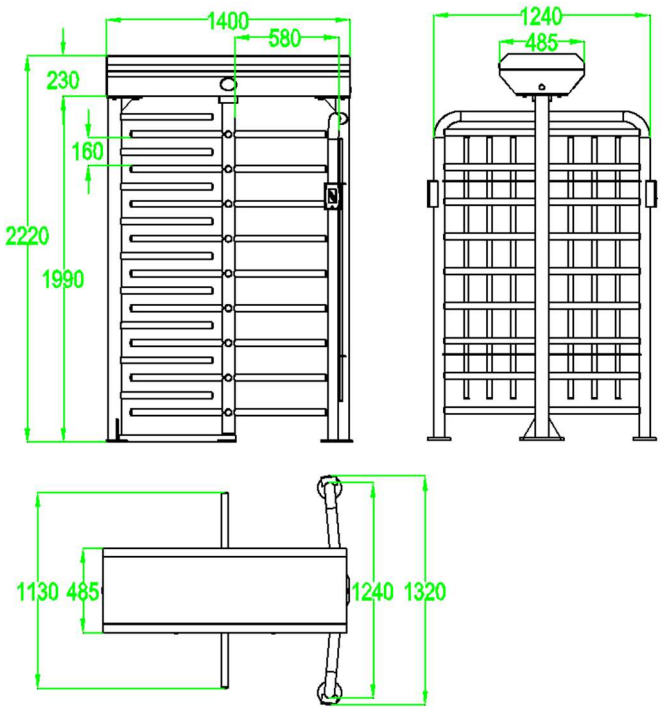

Figure 1-2B

1.3 Mechanical System of FHT2300&FHT2400 Series

The mechanical system of the full height turnstiles includes a mainframe box and a frame.

The direction indicator, core, control panel, access controller and lock are installed in the mainframe box. The core component mainly consists of two solenoids, a spring and a transmission mechanism. The frame supports the entire mainframe box.

1.4 Electronic Control System

The electronic control system of the full height turnstile is composed of reader, control panel, access controller, direction indicator, speaker, and transformer.

Reader: The reader reads the data from the card and sends it to the controller.

Control panel: The control panel is the system's control center that receives signals from the controller. After the signals have been processed by the control panel, the control panel will deliver commands to the indicator.

Direction indicator: This indicator displays the current status of the sign at the channel, and directs the pedestrian to pass the channel.

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1.5 The Working Principle of Full Height Turnstiles

1. After the power is turned on, the system will perform self-check. If no fault is detected, the device will operate as usual. If a fault is detected, the system will display the related messages on the LCD screen. This can be useful for error checking and troubleshooting.

2. When the reader detects a valid signal, the buzzer will give pedestrians a voice prompts to remind pedestrians have been successful credit card. And then, the reader sends signals to the access controller to request permission to pass through the passage. After the access controller send the signals to the control panel, the control panel will send out a pass.

3. After receiving the signal from the access controller, the control panel sends signals to the direction indicator and solenoid. Then the direction arrow will turn green. Also the solenoid will loose that the pedestrian can push the rod to pass the passage.

1.6 Technical Specifications

Feature	Specification
Dimensions (mm)	FHT2000: L=1400, W=1310, H=2200 FHT2400: L=1400, W=1370, H=2200
Communication Interface	Relay
Input Control Signal	Switching signal
Working Environment	Indoor/Outdoor (if sheltered)
Temperature	-28 °C to 60°C
Input Voltage	AC 100 - 120V/200 - 240V, 50 - 60Hz
Output Voltage	DC 24V
Relative Humidity	25% to 75%
Pass Speed	RFID: Maximum 30/minute Fingerprint: Maximum25/minute Face: Maximum 15/minute Vein: Maximum 15/minute

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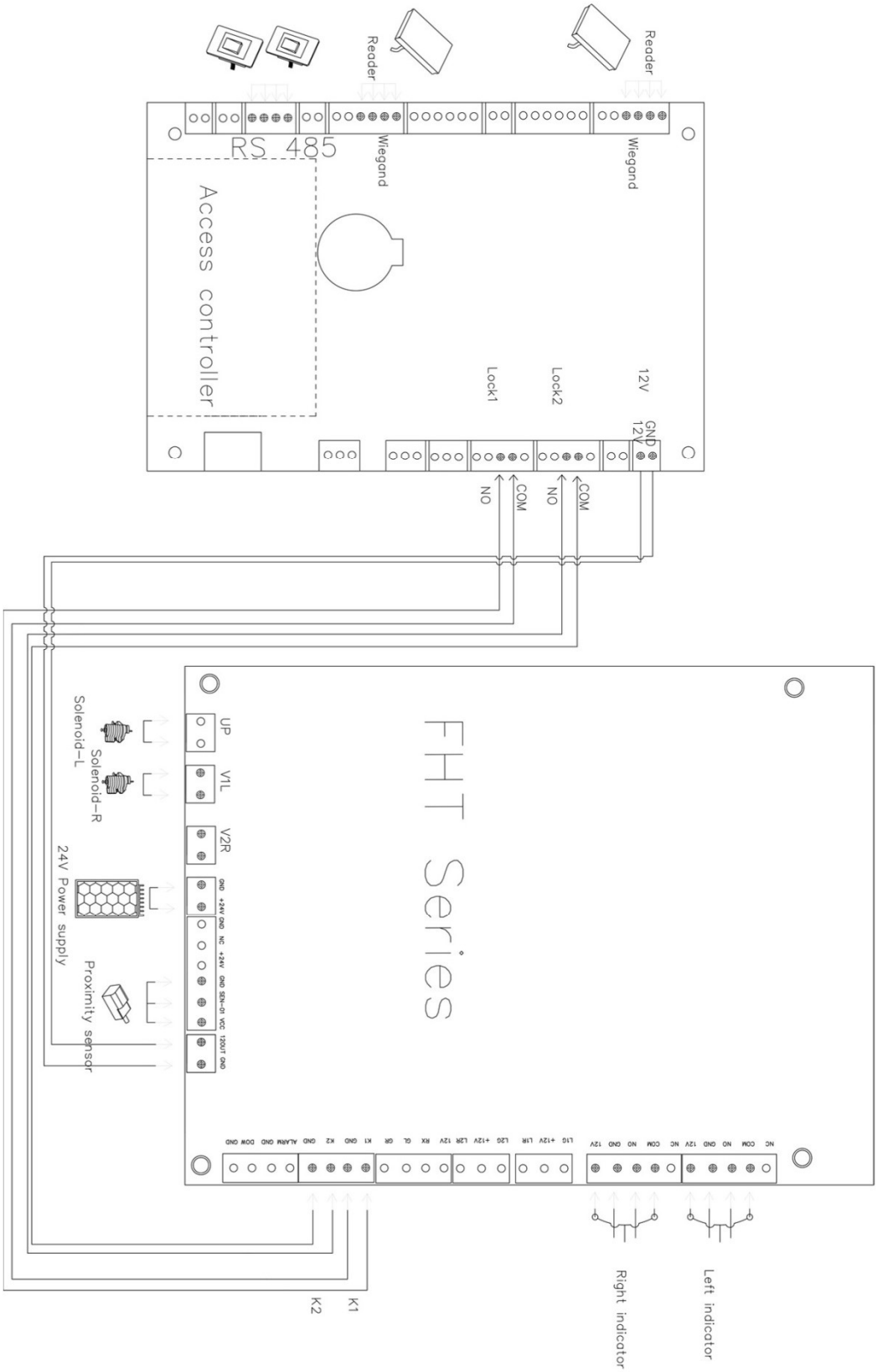
2 Wiring Diagram

Check circuit according to the following wiring diagram:



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3 DIP Switch

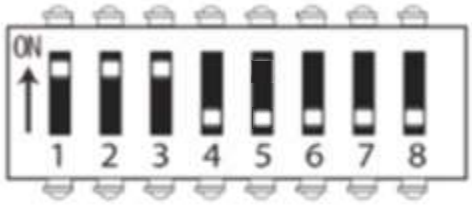

Figure3-1

Pin	1	2	3	4	5	6	7	8
Function setting	Opening duration			Direction indicator		Memory function		Testing mode
Default	1	1	1	0	0	1	0	0

3.1 Setting the turnstile opening duration

Opening duration			
Bit setting	Duration	Bit setting	Duration
111	5s	011	30s
110	10s	010	40s
101	15s	001	50s
100	20s	000	60s

Note: The turnstile opening duration is set to 5s by default

3.2 Setting the turnstile direction indicator

Direction indicator	
Bit setting	Direction
00	passing is allowed in both directions
01	one way traffic ,right passing is allow
11	one way traffic ,left passing is allow
10	both ways forbidden

3.3 Setting the memory function

Memory function	
Bit setting	Mermory
00	unable mermory function
10	allow mermory function

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3.4 Setting the testing mode

Testing mode	
Bit setting	Solenoid automatically open and close
0	unable auto testing
1	allow auto testing

4 Product Maintenance

4.1 Cabinet Maintenance

The cabinet is made of 304 stainless steels. So after a long period of operation, its surface may have some stains. It can use gauze to clean the Cabinet. In order to protect the lines of surface, please wipe along the lines direction. It's best to polish and wax.

4.2 Movement Maintenance

Cut off power supply before maintenance. Open the barriers and clean the dust on surface, add lubricating oil to the transmission mechanism. Check and tighten others connection parts.

4.3 Power Maintenance

Cut off power supply before maintenance. Check whether the plug is loose, if loose, it needed to tightly it. Please do not replace the connection position at random. Check whether the external power supply is exposed and wrap it. Check whether there is any leakage, found to be timely processing. Check the technical parameters at the interface are regular and replace the old electronic components in time.

(Attention: Above full height turnstile maintenance must be maintained by professional personnel. Especially the movement and the electric control part, first cut off the power supply, ensure the operation safety.)

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