

# User Manual

## KR900 Series

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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](http://www.zkteco.com).

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It is an essential pre-requisite for the satisfactory operation and maintenance that the operating and maintenance personnel are fully familiar with the design and that the said personnel have received thorough training in operating and maintaining the machine/unit/equipment. It is further essential for the safe operation of the machine/unit/equipment that personnel have read, understood and followed the safety instructions contained in the manual.

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The product will be updated from time to time without prior notice. The latest operation procedures and relevant documents are available on <http://www.zkteco.com>.

If there is any issue related to the product, please contact us.

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To know more about our global branches, visit [www.zkteco.com](http://www.zkteco.com).

## 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 **KR900 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.

## Document Conventions

Conventions used in this manual are listed below:

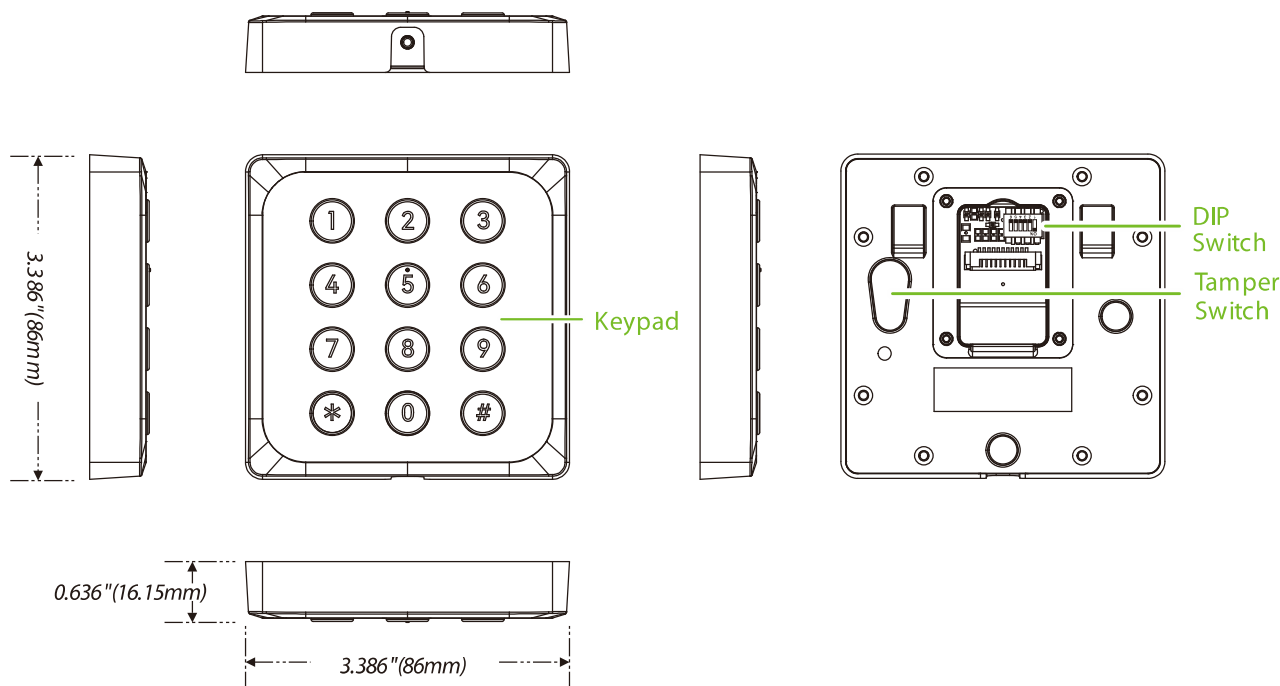
### GUI Conventions

| 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. |

KR904



1 Technical Specifications

| Model                 | KR901                                                                                                                                   | KR901S                                                                 | KR902                                                                     | KR902S                                                                    | KR903                                                                  | KR904                                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Hardware              | Physical Keypad: N/A<br>RFID Module: ID & IC<br>Tamper Switch: Support                                                                  | Physical Keypad: N/A<br>RFID Module: ID & IC<br>Tamper Switch: Support | Physical Keypad: 12keys<br>RFID Module: ID & IC<br>Tamper Switch: Support | Physical Keypad: 12keys<br>RFID Module: ID & IC<br>Tamper Switch: Support | Physical Keypad: N/A<br>RFID Module: ID & IC<br>Tamper Switch: Support | Physical Keypad: 12keys<br>RFID Module: ID & IC<br>Tamper Switch: Support |
| Authentication Method | Card                                                                                                                                    | Card                                                                   | Card / Password                                                           | Card / Password                                                           | Card                                                                   | Card / Password                                                           |
| Card Type             | ID Card@125kHz & IC Card@13.56MHz (Standard)                                                                                            |                                                                        |                                                                           |                                                                           |                                                                        |                                                                           |
| Verification Speed    | <0.3s @ Card                                                                                                                            |                                                                        |                                                                           |                                                                           |                                                                        |                                                                           |
| Recognition Distance  | <4cm @ Card                                                                                                                             |                                                                        |                                                                           |                                                                           |                                                                        |                                                                           |
| Communication         | Wiegand output only (W34 / 66) Or RS485 (ZK-RS485) & Wiegand output (W34 / 66)<br>Note: Support Wiegand format switching (Default: W34) |                                                                        |                                                                           |                                                                           |                                                                        |                                                                           |

|                              |                                                                                                             |
|------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Visual Indicator</b>      | LED Indicators Power On:Blue = Standby<br>Status: Green = Verification successful Red = Verification failed |
| <b>Audio Indicator</b>       | Buzzer                                                                                                      |
| <b>Tamper Switch</b>         | Support                                                                                                     |
| <b>Operating Environment</b> | Indoor/Outdoor                                                                                              |
| <b>Power Supply</b>          | 9V~12V DC                                                                                                   |
| <b>Operating Temperature</b> | -20°C to 60°C                                                                                               |
| <b>Operating Humidity</b>    | 10%-90% RH (Non-condensing)                                                                                 |

## 2 Terminal Description

|        |        |                 |
|--------|--------|-----------------|
| +9~12V | Red    | } Power In      |
| GND    | Black  |                 |
| D1     | White  | } Wiegand Out   |
| D0     | Green  |                 |
| 485A   | Pink   | } RS485         |
| 485B   | Blue   |                 |
| BEEP   | Purple | } Beeper        |
| RLED   | Brown  | } LED Indicator |
| GLD    | Grey   |                 |
| SWITCH | Yellow | } W34/66        |
| TAMPER | Orange | } Tamper Switch |

| Name               | Interface | Colour | Description                                                                                                            |
|--------------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------|
| <b>Power In</b>    | +9~12V    | Red    | +9~12V DC Input<br><b>Note:</b><br><i>Minimum AC adapter:12V, 0.5A,<br/>           Recommended AC adapter:12V, 1A.</i> |
|                    | GND       | Black  |                                                                                                                        |
| <b>Wiegand Out</b> | D1        | White  | Wiegand Output1                                                                                                        |
|                    | D0        | Green  | Wiegand Output0                                                                                                        |
| <b>RS485</b>       | 485A      | Pink   | RS-485 Communication Interface                                                                                         |
|                    | 485B      | Blue   |                                                                                                                        |
| <b>Beeper</b>      | BEEP      | Purple | Beep Input                                                                                                             |

| Name                 | Interface | Colour | Description                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LED Indicator</b> | RLED      | Brown  | Red LED Input                                                                                                                                                                                                                                                                                                                                                                         |
|                      | GLED      | Grey   | Green LED Input                                                                                                                                                                                                                                                                                                                                                                       |
| <b>W34/66</b>        | SWITCH    | Yellow | Used to switch the Wiegand format.<br>The default ungrounded is W34.<br>Grounded to W66.                                                                                                                                                                                                                                                                                              |
| <b>TAMPER</b>        | TAMPER    | Orange | <p>Used for the tampering alarm function.</p> <p><b>Note:</b><br/> <i>RS485 tamper alarm, compatible with the latest controllers <b>C3 Plus</b>, <b>inBio Pro Plus</b>, and <b>EC16</b> elevator control, Wiegand tamper alarm compatible with <b>EC16</b>.</i> </p> <p><b>Cancel Alarm:</b><br/> <i>The tamper alarm is deactivated after a magnet is placed for 5 seconds.</i> </p> |

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## Attachment 1

"Hereby, ZKTECO CO.,LTD declares that this Product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

"This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter."

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