

# iCLASS® RK40 and RWK400 Readers

Read only contactless smart card reader  
with keypad • 6130  
Read/write contactless smart card reader  
with keypad • 6131



## ACCESS flexibility.

### HID introduces the newest products in the iCLASS product portfolio:

- ▶ The iCLASS RK40 read only contactless smart card reader with keypad
- ▶ The iCLASS RWK400 read/write contactless smart card reader with keypad

Using 13.56 MHz contactless smart card technology, the iCLASS RK40 and RWK400 provide a powerful solution. Combine a contactless card presentation with a personal identification number (PIN) to support dual authentication of identity. Or, configure the panel for single-factor authentication, using only a card or a PIN.

The PIN can be verified either at the access control panel or locally by the keypad reader. When verified locally, the PIN must be programmed into the iCLASS card.

The RWK400 offers the same features as the RK40, with the extended ability to read/write user data to HID iCLASS credentials. Read/write applications include the storage/retrieval of data such as biometric templates, health records, time and attendance, and digital cash. The possibilities are endless!

Featuring crisp architectural styling, the keypad reader and reader/writer have an elegantly curved faceplate. The 12-position weatherproof keypad uses discrete switches to provide positive tactile response, optionally reinforced by an audible tone. The keypad also features a waterproof silicone rubber boot, vandal-resistant metal keycaps, and backlit numbering.

The units are equipped with a Wiegand output that easily interfaces with most existing access control panels. The RWK400 is also equipped with a bi-directional serial port configurable for RS-232 or RS-485 operation to provide connection to a PC or microcontroller.

The iCLASS RK40 and RWK400 are compatible with all iCLASS credentials. The units can read or read/write to credentials compatible with several ISO standards:

The iCLASS RK40 read only contactless smart card reader with keypad:  
I5693 - read only; 2k bit (256 Byte) and 16k bit (2k Byte) iCLASS credentials  
I4443A - read only; MIFARE® Standard (serial number)  
I4443B2 - read only; 16k bit (2k Byte) iCLASS credentials

The iCLASS RWK400 read/write contactless smart card reader with keypad:  
I5693 - read/write; 2k bit (256 Byte) and 16k bit (2k Byte) iCLASS credentials  
I4443A - read only; MIFARE Standard (serial number)  
I4443B2 - read/write; 16k bit (2k Byte) iCLASS credentials

# Features

# Specifications

## Data Output Formats

The keypad reader reads standard proximity format data from HID iCLASS® cards, and will output data as encoded. When reading MIFARE® cards, the keypad reader can be configured to output 26-bit, 32-bit, 34-bit, or 40-bit Wiegand formats based on the card serial number.

Wiegand keypad data format can be configured for transmission of individual key presses as ASCII encoded Hex digits, or for buffering and transmission of the PIN as a card number in SLA 26-bit format with a configurable facility code.

Additionally, the RWK400 offers a bi-directional serial port that communicates at data rates up to 57.6 Kbaud. Using the ISO 7816 protocol, the standard for contact smart card applications, the RWK400 allows connection to a PC or microcontroller to support read/write applications.

## Keypad

Twelve discrete switches are covered with a silicone rubber boot and vandal resistant metal keycaps. Raised tactile mark on "5" key for visually impaired users. Configurable audio feedback. Backlit numbers in bezel overlay, above each key. Lighting is configurable: "Always On", "Always Off", "Triggered by Card Read", or "Triggered by Key Press".

## Security

64-bit authentication keys are extremely secure. Readers and cards require matching keys to function. All RF data transmission between the card and keypad reader is encrypted, using a secure algorithm. The key management system reduces the risk of compromised or duplicated cards.

Cards and keypad readers with site-specific keys are optionally available from the factory. Alternatively, the iCLASS CP400 Field Programmer® can be used to create site-specific keys. The programmer also allows users to create a keypad reader configuration card, which is used to re-key cards and keypad readers on site.

## Programming/Configuration

All cards are shipped with unique diversified keys; keypad readers are shipped with compatible keys. All keys are derived from the HID Standard key. While cards and keypad readers with Standard keys are interchangeable, the keys are highly secure. Further enhance security by ordering with iCLASS Elite formatting.

## Audiovisual Indication

Audio transducer provides configurable tone sequences to signify access granted, access denied, power up, and configuration card read. A light bar provides a clear visual status indication in red, green, or amber.

## Open Collector Output (RWK400 Only)

Normally Open logic output, controlled via serial port. Switches up to 50mA at 12VDC. Use interposing relay for larger loads. Configurable to latch momentarily upon successful local verification of PIN stored on the card.

## Mounting

Mounting plate attaches to U.S./EU/Asian back box, 52-60 mm screw hole spacing (vertical or horizontal). Keypad reader housing latches onto mounting plate, secured with a screw. An optional spacer can be used for surface mount installations. Mounting on metal can affect optimal read range and we recommend the use of our spacer to maximize read range.

## Indoor/Outdoor Design

Rugged, weatherized polycarbonate enclosure designed to withstand harsh environments provides reliable performance and resistance to vandalism.

## Warranty

Warranted against defects in materials and workmanship for life. (See complete warranty policy for details.)

## Base Part Number

RK40 Read Only Keypad: 6130  
RWK400 Reader/Writer Keypad: 6131

## Options

Color - Black, Gray  
Key Management - Standard or High Security  
Selectable Output Type (for MIFARE cards)  
Termination - removable connector with miniature screw terminals or 18" (45.72 cm) wire pigtail.  
Programmable LED/Beeper operation  
Accessory - Security Tool; 04-0001-03

## Typical Maximum Read Range\*

2-3.5" (5.0-8.9 cm) with HID iCLASS Card  
1.5-2.0" (3.8-5.0 cm) with HID iCLASS Key  
1.5-2.0" (3.8-5.0 cm) with HID iCLASS Tag  
1.5-1.8" (3.8-4.5 cm) with HID iCLASS Prox  
1-2" (2.5-5.0 cm) with MIFARE Card (serial number only)

\*Using ISO 15693 mode (except MIFARE). Dependent upon installation conditions.

Please note that all iCLASS credentials are available in either a 2k bit (256 Byte) or 16k bit (2k Byte) configuration.

## Dimensions

3.30" x 4.80" x 0.9" (8.38 cm x 12.19 cm x 2.286 cm)

## Material

UL94 Polycarbonate

## Power Supply

10 - 16VDC reverse voltage protected  
Linear supply recommended

## Current Requirements (Avg/Peak)

72/244 mA @ 12VDC

## Operating Temperature

-31° to 150° F (-35° to 65° C)

## Operating Humidity

5% to 95% relative humidity non-condensing

## Weight

Approximately 10 oz (283.49 g)

## Transmit Frequency

13.56 MHz

## Certifications

FCC, Canada, CE Mark (EU), C-Tick for Australia and New Zealand.  
Pending - UL294/cULus, Korea, China, Taiwan, Japan

## Cable Distance

Wiegand Interface-500 feet (150 m); RS-232-50 feet (15 m); RS-485 - 4000 feet (1220 m)  
Recommended cable is ALPHA 1299 (22AWG)  
9-conductor stranded with overall shield or equivalent. Additional conductors may be required to connect all outputs.

\*Dependent upon installation conditions.

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MKT-RK40\_RWK400-DS-EN



# ACCESS experience.

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