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ARD-RK40-09 iCLASS PIN Reader

- **Elegant curved faceplate design**
- **PIN keypad**
- **Distinct audio and visual indicators**
- **Enhanced security**
- **Flexible installation options**
- **Suitable for exterior and interior installations**
- **Wiegand output**

The RK40 iCLASS® PIN Reader offers the benefits of contactless smart card technology *and* a personal identification number (PIN). Smart card technology provides enhanced security and a 13.56 MHz platform for speed. Use contactless credentials (cards, tokens, tags) with larger memory and the capacity for special applications such as biotechnology. The PIN keypad provides security and flexibility. Configure access control systems to require a credential followed by a PIN to confirm and authenticate a user's identity. Or, configure the access control system to require only a credential or only a PIN.

Note A credential's capacity for special applications depends on memory size. See Compatibility Information for details.

System Overview

The keypad interfaces with the access control system by sending keypad data over the data output lines, or from a direct connection to the keypad interface.

Functions

PIN Keypad

There are keys for numbers 0 through 9, for the number symbol (#), and for the asterisk symbol (*). The keys are covered in silicone rubber and have vandal resistant metal keycaps. The key for number 5 has a raised tactile mark for visually-impaired users. The keypad emits a beep when any key is pressed. The numbers above each key are illuminated according to one the following choices:

- Always On
- Always Off
- Triggered by Card Read
- Triggered by Key Press

Distinct Audio and Visual Indicators

Different tone sequences indicate status conditions such as access granted, access denied, power up, and diagnostics. The light bar at the top of the reader provides visual status indication in red, green, or yellow light. The light is high-intensity so the color remains visible in bright sunlight. The audio and visual indicators help visually-impaired users to more easily distinguish between access granted and access denied.

Enhanced Security

The RK40 iCLASS PIN Reader uses enhanced security techniques to reduce the risk of compromised data or duplicated cards. Access control data transmits over a radio frequency (RF) between a credential and a reader. The RK40 iCLASS PIN Reader and its compatible iCLASS credentials have standard 64-bit authentication keys (code) that must match in order to begin the RF data transmission. A secure algorithm encrypts the data during the RF transmission, making the data harder for an unauthorized person to decipher and misuse.

Flexible Installation Options

The RK40 iCLASS PIN Reader has a mounting plate that attaches to a single-gang wall-switch electrical enclosure (back box), a 2 in. to 2.4 in. (5.2 cm to 6.0 cm) screw hole spacing (vertical or horizontal), or a flat surface. Attaching the RK40 iCLASS PIN Reader to metal surfaces affects only slightly the read range.

Suitable for Exterior and Interior Installations

The durable, weatherized, polycarbonate enclosure can tolerate harsh environments and resist vandalism. The enclosure also has a permanent built-in magnet. With a magnetic reed switch, the magnet facilitates a tamper alarm.

ISO Compliant Credentials

The RK40 iCLASS PIN Reader uses credentials that comply with the ISO standards for contactless smart card technology.

Wiegand Output

The reader's Wiegand output easily interfaces with most existing Wiegand protocol access control panels. The reader reads standard proximity format data from iCLASS cards and sends the data as encoded.

Certifications and Approvals

UL Standards Pending	UL294, Access Control System Units cUL
Approvals Pending	CE (Europe), New Zealand, Australia c-Tick Canada Certification FCC

Installation/Configuration Notes

Compatibility information

Reader	RK40 iCLASS PIN Reader
26-bit Credentials	ACD-IC2K26-50 iCLASS 2K Wiegand Card ACD-IC16K26-50 iCLASS 16K Wiegand Card ACD-IC16KP26-50 iCLASS 16K Dual Wiegand Card ACT-IC2K26-10 iCLASS 2K Wiegand Token ACT-IC16K26-10 iCLASS 16K Wiegand Token ACA-IC2K26-10 iCLASS 2K Wiegand Adhesive Tag ACA-IC16K26-10 iCLASS 16K Wiegand Adhesive Tag
37-bit Credentials*	ACD-IC2K37-50 iCLASS 2K Wiegand Card ACD-IC16K37-50 iCLASS 16K Wiegand Card ACD-IC16KP37-50 iCLASS 16K Dual Wiegand Card ACT-IC2K37-10 iCLASS 2K Wiegand Token ACT-IC16K37-10 iCLASS 16K Wiegand Token ACA-IC2K37-10 iCLASS 2K Wiegand Adhesive Tag ACA-IC16K37-10 iCLASS 16K Wiegand Adhesive Tag
System	Access Easy Controller (AEC) Building Integration System (BIS) ReadykeyPRO®

**Although the RK40 iCLASS PIN Reader works with the systems listed above, functionality may vary by product. Please contact Technical Support with any application specific questions.*

Wiring Considerations

- 22 AWG for 500 ft (150 m)
- 24 AWG for 300 ft (91.44 m)
- Recommended cable is six-conductor stranded with overall shield or equivalent
- Additional conductors may be needed to use all desired functions.

Technical Specifications

Environmental

Operating Temperature	-40°F to +150°F (-40°C to +65°C)
Operating Humidity	5% to 95% relative humidity non-condensing
Range	1.25 in. (3.2 cm) to 4 in. (10.1 cm), depending on whether you use a card, token, or tag. Cards typically provide the longest read range.

Electrical

Current Requirements (Average/Peak)	Average: 85 mA Peak: 116 mA
Power Supply	5 VDC to 16 VDC reverse voltage protected Linear supply recommended
Transmit Frequency	13.56 MHz

Mechanical

Dimensions	3.30 in. x 4.80 in. x 0.9 in. (8.38 cm x 12.19 cm x 2.286 cm)
Material	UL94 Polycarbonate
Weight	10 oz (283.49 g)

Trademarks

iCLASS® is a registered trademark of HID Corporation.
ReadykeyPRO® is a registered trademarks of Bosch Security Systems in the United States.

Ordering Information

ARD-RK40-09 iCLASS PIN Reader Provides contactless smart card technology and proximity technology, curved faceplate design, distinct audio and visual indicators, PIN keypad, and Wiegand output. Suitable for exterior and interior installations.	**ARD-RK40-09**
Accessories	
iCLASS 2K Wiegand Card (26-bit) A 13.56 MHz contactless smart card programmed to Wiegand 26-bit format. It has two 1 Kb application areas (256 Byte capacity). Each package contains 50 cards.	**ACD-IC2K26-50**
iCLASS 2K Wiegand Card (37-bit) A 13.56 MHz contactless smart card programmed to Wiegand 37-bit format. It has two 1 Kb application areas (256 Byte capacity). Each package contains 50 cards.	**ACD-IC2K37-50**
iCLASS 16K Wiegand Card (26-bit) A 13.56 MHz contactless smart card programmed to Wiegand 26-bit format. It has sixteen 1 Kb application areas (2K Byte capacity). Each package contains 50 cards.	**ACD-IC16K26-50**
iCLASS 16K Wiegand Card (37-bit) A 13.56 MHz contactless smart card programmed to Wiegand 37-bit format. It has sixteen 1 Kb application areas (2K Byte capacity). Each package contains 50 cards.	**ACD-IC16K37-50**
iCLASS 16K Dual Wiegand Card (26-bit) A contactless smart card programmed to Wiegand 26-bit format. It operates at 125 kHz or 13.56 MHz. It has sixteen 1 Kb application areas (2K Byte capacity). Each package contains 50 cards.	**ACD-IC16KP26-50**
iCLASS 16K Dual Wiegand Card (37-bit) A contactless smart card programmed to Wiegand 37-bit format. It operates at 125 kHz or 13.56 MHz. It has sixteen 1 Kb application areas (2K Byte capacity). Each package contains 50 cards.	**ACD-IC16KP37-50**
iCLASS 2K Wiegand Token (26-bit) A contactless token with smart card technology programmed to Wiegand 26-bit format. It operates at 13.56 MHz. It is 2K (256 Byte) with two application areas. Each package contains ten tokens.	**ACT-IC2K26-10**
iCLASS 2K Wiegand Token (37-bit) A contactless token with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 2K (256 Byte) with two application areas. Each package contains ten tokens.	**ACT-IC2K37-10**

Ordering Information

iCLASS 16K Wiegand Token (26-bit) A contactless token with smart card technology programmed to Wiegand 26-bit format. It operates at 13.56 MHz. It is 16K (2K Byte) with 16 application areas. Each package contains ten tokens.	**ACT-IC16K26-10**
iCLASS 16K Wiegand Token (37-bit) A contactless token with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 16K (2K Byte) with 16 application areas. Each package contains ten tokens.	**ACT-IC16K37-10**
iCLASS 2K Wiegand Adhesive Tag (26-bit) A contactless adhesive tag with smart card technology programmed to Wiegand 26-bit format. It operates at 13.56 MHz. It is 2K (256 Byte) with two application areas. Each package contains ten tags.	**ACA-IC2K26-10**
iCLASS 2K Wiegand Adhesive Tag (37-bit) A contactless adhesive tag with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 2K (256 Byte) with two application areas. Each package contains ten tags.	**ACA-IC2K37-10**
iCLASS 16K Wiegand Adhesive Tag (26-bit) A contactless adhesive tag with smart card technology programmed to Wiegand 26-bit format. It operates at 13.56 MHz. It is 16K (2K Byte) with 16 application areas. Each package contains ten tags.	**ACA-IC16K26-10**
iCLASS 16K Wiegand Adhesive Tag (37-bit) A contactless adhesive tag with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 16K (2K Byte) with 16 application areas. Each package contains ten tags.	**ACA-IC16K37-10**

Americas:
Bosch Security Systems, Inc.
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 800 289 0096
Fax: +1 585 223 9180
security.sales@us.bosch.com
www.boschsecurity.us

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: + 31 40 2577 284
Fax: +31 40 2577 330
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Robert Bosch (SEA) Pte Ltd, Security Systems
11 Bishan Street 21
Singapore 573943
Phone: +65 6258 5511
Fax: +65 6571 2698
apr.securitysystems@bosch.com
www.boschsecurity.com

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