# R40 Reader

## Contactless Smart Card Reader
## 6120 • Read Only • U.S./EU/Asian Back Box Size

***iCLASS*** smart readers and cards make access control applications more powerful, more versatile, and most importantly, offer enhanced security through encryption and mutual authentication.

At the same time, ***iCLASS*** is user-friendly, delivering the convenience, affordability and reliability of proximity technology, for which HID is known worldwide.

Using the 13.56 MHz technology platform, the ***iCLASS*** R40 read only contactless smart card reader combines the longer read range of proximity with the power and heightened security of smart card technology, making it ideal for access control applications.

Featuring crisp architectural styling, the reader has an elegantly curved faceplate.
The high intensity, three-color light bar provides clear, visual feedback even in direct sunlight.
Selectable, distinct tone sequences indicate status conditions.

### Experience enhanced versatility:

- Use one reader to read standard proximity format data from HID ***iCLASS*** credentials, or unique serial numbers from MIFARE® cards.
- Confidently install the reader knowing that the Wiegand output easily interfaces with most existing Wiegand protocol access control panels.

### Appreciate advanced security:

- All RF data transmission between the card and reader is encrypted using a secure algorithm.
- By using industry-standard encryption techniques and advanced key management systems, ***iCLASS*** reduces the risk of compromised data or duplicated cards.

### Be secure in knowing:

- ***iCLASS*** complies with the ISO 15693 standard for contactless smart card technology. Standards are important in smart card technology because they make it possible for many equipment and application developers to work with the smart card technology and create a broader range of uses for the card.
- ***iCLASS*** technology can extend the use of your access control credential into other applications today and tomorrow.

***iCLASS™ by***

HID®

**Smart • Powerful • Trusted**

# iCLASS™ R40 Reader

## Contactless Smart Card Reader - Read Only

## Features

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

**Programming/Configuration**
Key management is made easy! All cards are shipped with unique diversified keys, and readers are shipped with compatible keys. All keys are derived from the HID Standard transport key. While cards and readers with Standard keys are interchangeable, the keys are highly secure, and cards can be made unique by ordering with ***iCLASS*** Elite formatting.

Cards and readers with site specific Custom keys are also optionally available from the factory, or the ***iCLASS*** CP400 Programmer can be used to create site-specific keys and a reader configuration card, allowing the user to re-key cards and readers on-site. The programmer also enables users to protect card data with DES or triple DES encryption. Custom keys provide the highest level of security by uniquely matching cards and readers to individual sites or customers, and are non-interchangeable.

**Easily Interfaced**
The readerís Wiegand output easily interfaces with most existing Wiegand protocol access control panels. The reader reads standard proximity format data from HID ***iCLASS*** cards, and will output data as encoded.

When reading MIFARE® cards, the reader can be configured to output 26-bit, 32-bit, 34-bit or 40-bit Wiegand formats based on the card serial number.

**Card Compatibility**
The ***iCLASS*** R40 reader is compatible with all ***iCLASS*** credentials. The readerís versatility allows it to read credentials meeting several ISO standards:

- 15693 - read only; 2Kbits (256Bytes) and 16Kbits (2KBytes) ***iCLASS*** credentials
- 14443A - read only; MIFARE® (serial number)
- 14443B2 - read only; 16Kbits (2KBytes) ***iCLASS*** credentials

**Audiovisual Indication**
Audio transducer provides various tone sequences to signify access granted, access denied, power up and diagnostics. Visually impaired cardholders can easily distinguish between access granted and access denied.

A high-intensity light bar provides a clear visual status indication in red, green or amber, even in bright sunlight.

**Mounting**
A three-part reader makes installation easier! Mounting plate attaches to U.S./ EU/ Asian back box, 52- 60 mm screw hole spacing (vertical or horizontal), or to any flat surface. Reader body snaps onto mounting plate. Cover snaps over reader body, secured with a screw. Mounts on metal with minimal read range impact.

**Indoor/Outdoor Design**
Rugged, weatherized polycarbonate enclosure, designed to withstand harsh environments, provides reliable performance and resistance to vandalism. Permanent magnet built into housing facilitates tamper alarm when used with a magnetic reed switch.

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

**Part Numbers**
Base Part Number: 6120
Options:
Color - Black, Gray
Key Management - Standard or Custom
Selectable Output Type (for MIFARE® cards)
Standard Termination - 18" (.5 m) cable pigtail
Programmable LED/Beeper operation
Accessory - Security Tool; 04-0001-03

## Specifications:

**Typical Maximum Read Range***
2.5-4.5" (6.3-11.4 cm) with HID ***iCLASS*** Card
1.0"(2.5 cm) with HID ***iCLASS*** Key
1.0" (2.5 cm) with HID ***iCLASS*** Tag
1.5-2.0" (3.8-5.0 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 2Kbits (256Bytes) or 16Kbits (2KBytes) configuration.

**Dimensions**
3.30" x 4.80" x .85" (8.38 cm x 12.19 cm x 2.16 cm)

**Material**
UL94 Polycarbonate

**Power Supply**
10 - 16 VDC reverse voltage protected
Linear supply recommended

**Current Requirements (Avg/Peak)**
80/260 mA @ 12 VDC

**Operating Temperature**
-31º to 150º F (-35º to 65º C)

**Operating Humidity**
5% to 95% relative humidity non-condensing

**Weight**
8.8 oz (249.5 g)

**Transmit Frequency**
13.56 MHz

**Certifications**
UL 294/cUL, FCC Certification, Canada Certification
CE Mark (Europe), New Zealand, Australia c-Tick

**Pending Certifications**
Taiwan, Singapore, Germany VdS

**Cable Distance**
Wiegand Interface - 500 feet (150 m)
Recommended cable is ALPHA 1295 (22AWG) 5-conductor stranded with overall shield or equivalent. Additional conductors may be required to connect all outputs.

Specifications subject to change without notice.


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