



# iCLASS SE<sup>®</sup> Readers



## HIGHLY ADAPTABLE AND SECURE HIGH FREQUENCY ACCESS CONTROL SOLUTION

- **Powerfully Secure** – Provides layered security beyond the card media for added protection to identity data using SIOs.
- **Adaptable** – Interoperable with a growing range of technologies and form factors including mobile devices utilizing Seos<sup>®</sup>.
- **Interoperable** – Open Supervised Device Protocol (OSDP) for secure, bidirectional communication.
- **Versatile** - Extended read range is available for applications such as parking and gate control solutions.

HID Global's iCLASS SE<sup>®</sup> platform goes beyond the traditional smart card model to offer a secure, standards-based and flexible platform that has become the new benchmark for highly adaptable, interoperable and secure access control solutions.

Supervised Device Protocol (OSDP) standard which also ensures secure transmission of data from the reader to the controller.

Additionally, iCLASS SE readers support mobile devices utilizing Seos, enabling a new class of portable identity credentials that can be securely provisioned and safely embedded into both fixed and mobile devices.

### Manage, Upgrade and Configure via Mobile App

iCLASS SE<sup>®</sup> Readers can be easily and securely managed in-field through the HID Reader Manager Mobile App. With the addition of our Bluetooth Smart Module or Bluetooth Smart/OSDP upgrade kit, you can update firmware, LED color, beeper response and credential keys or upgrade existing readers to support HID Mobile Access<sup>®</sup>.

As part of HID Global's iCLASS SE platform for advanced security, the readers utilize state-of-the-art authentication through the platform's Secure Identity Object (SIO) data model for trusted and secure communication between the card and reader to prevent unauthorized access. The iCLASS SE reader line is built on the Security Industry Association (SIA) Open

#### POWERFULLY SECURE:

- Multi-Layered Security – Ensures data authenticity and privacy through the multi-layered security of HID's SIO.
- EAL5+ Certified Secure Element Hardware – Provides tamper-proof protection of keys/cryptographic operations.
- Secured communications using OSDP with Secure Channel Protocol.
- Expanded iCLASS Elite™ Program – Extends private security by protecting uniquely keyed credentials, SIOs and programming keys.

#### HIGHLY ADAPTABLE:

- Mobile device support using iCLASS Seos - enabling HID access control.
- Flexible to support future technologies.
- Field Programmable Readers - Provides secure upgrades for migration and extended lifecycle.

#### SUSTAINABILITY AND MANAGEMENT:

- Intelligent Power Management (IPM) – Reduces reader power consumption by as much as 75% compared to standard operating mode.
- Recycled Content – Contributes toward building LEED credits.

#### INTEROPERABLE:

- SIO Media Mapping – Simplifies deployment of third-party objects to multiple types of credentials.
- Industry standard communications using OSDP.
- Custom programming support to read models on MIFARE and MIFARE DESFire EV1 credentials



## SPECIFICATIONS

| Model Name   | R10   | R15   | R40  | RK40  | R90  |
|--|---|---|--|---|--|
| Base Part Number   | 900N  | 910N  | 920N   | 921N  | 940N   |
| Typical Read Range <sup>1</sup>  | 13.56 MHz Single Technology ID-1 Cards – SIO Data Model   |   |  |   |  |
|  | iCLASS Seos: 2.4" (6 cm)<br>iCLASS: 3.6" (9 cm)<br>MIFARE Classic: 2.4" (6 cm)<br>MIFARE DESFire EV1/EV2: 2.4" (6 cm)   | iCLASS Seos: 2.4" (6 cm)<br>iCLASS: 3.6" (9 cm)<br>MIFARE Classic: 2.4" (6 cm)<br>MIFARE DESFire EV1/EV2: 2.4" (6 cm) | iCLASS Seos: 3.2" (8 cm)<br>iCLASS: 5.2" (13 cm)<br>MIFARE Classic: 3.9" (10 cm)<br>MIFARE DESFire EV1/EV2 3.2" (8 cm) | iCLASS Seos: 2.0" (5 cm)<br>iCLASS: 5.5" (14 cm)<br>MIFARE Classic: 5.1" (13 cm)<br>MIFARE DESFire EV1/EV2 2.0" (5 cm)  | iCLASS Seos: 4.7" (12 cm)<br>iCLASS: 14.2" (36 cm)<br>MIFARE Classic: 9.4" (24 cm)<br>MIFARE DESFire EV1/EV2: 5.9" (15 cm) |
| Mounting   | 13.56 MHz Single Technology Tags/Fobs – SIO data Model  |   |  |   |  |
|  | iCLASS: 1.6" (4 cm)<br>MIFARE Classic: 1.2" (3 cm)  | iCLASS: 1.6" (4 cm)<br>MIFARE Classic: 1.2" (3 cm)  | iCLASS: 2.8" (7 cm)<br>MIFARE Classic: 2.0" (5 cm)   | iCLASS: 3.1" (8 cm)<br>MIFARE Classic: 2.0" (5 cm)  | iCLASS: 6.7" (17 cm)<br>MIFARE Classic: 3.1" (8 cm)  |
| Mounting Spacer  | Ideally suited for million-mounted door installations or any flat surface   |   |  | Wall Switch Size; designed to mount and cover single gang switch boxes primarily used in the Americas and includes a slotted mounting plate for European and Asian back box spacing |  |
| Color  | Black   |   |  |   |  |
| Keypad   | No  |   |  |   |  |
| Dimensions   | 1.9" x 4.1" x 0.9"<br>4.8 cm x 10.3 cm x 2.3 cm   | 1.9" x 6.0" x 0.9"<br>4.8 cm x 15.3 cm x 2.3 cm   | 3.3" x 4.8" x 1.0"<br>8.4 cm x 12.2 cm x 2.4 cm  | Yes (4x3)<br>3.3" x 4.8" x 1.1"<br>8.5 cm x 12.2 cm x 2.8 cm  | No<br>13.1" x 13.1" x 1.55"<br>33.3cm x 33.3cm x 3.9cm   |
| Product Weight (Pigtail)   | 3.9 oz (113g)   | 5.3 oz (151g)   | 7.7 oz (220g)  | 9.0 oz (256g)   | N/A  |
| Product Weight (Terminal Strip)  | 2.9 oz (84g)  | 4.2 oz (120g)   | 7.5 oz (215g)  | 8.0oz (226g)  | 4lb 1oz (1844g)  |
| Operating Voltage Range  | 5-16 VDC  |   |  | 5-16 VDC  | 12 VDC or 24 VDC   |
| Current Draw - Standard Power Mode <sup>2</sup> (mA)                     | 60 @ 16V  | 60 @ 16V  | 65 @ 16V   | 85 @ 16V  | 110 @ 12V  |
| Current Draw - Intelligent Power Management (IPM) Mode <sup>2</sup> (mA) | 35 @ 16V  | 35 @ 16V  | 40 @ 16V   | 60 @ 16V  | 30 @ 12V   |
| Peak Current Draw - Standard Power or IPM Mode <sup>2</sup> (mA)         | 200 @ 16V   | 200 @ 16V   | 200 @ 16V  | 220 @ 16V   | 300 @ 12V  |
| NSC <sup>3</sup> Power Consumption - Standard Power Mode                 | 1.0 @ 16V   | 1.0 @ 16V   | 1.0 @ 16V  | 1.4 @ 16V   | 1.3 @ 12V  |
| NSC <sup>3</sup> Power Consumption - w/ IPM                              | 0.6 @ 16V   | 0.6 @ 16V   | 0.6 @ 16V  | 1 @ 16V   | .4 @ 12V   |
| Operating Temperature  | -31° to 150° F (-35° to 65° C)  |   |  |   |  |
| Storage Temperature  | -67° to 185° F (-55° to 85° C)  |   |  |   |  |
| Operating Humidity   | 5% to 95% relative humidity non-condensing  |   |  |   |  |
| Environmental Rating   | Indoor/Outdoor IP55; IP65 if installed with optional gasket   |   |  |   | IP65   |
| Transmit Frequency   | 13.56 MHz   |   |  |   |  |
| 13.56 MHz Card Compatibility   | Secure Identity Object™ (SIO) on iCLASS Seos, iCLASS SE/SR, MIFARE DESFire EV1 and MIFARE Classic (On by Default)<br>- MIFARE Classic and MIFARE DESFire EV1 custom data models<br>- standard iCLASS Access Control Application (order with Standard interpreter)<br>- ISO14443A (MIFARE) CSN, ISO14443B CSN, ISO15693 CSN<br>- FeliCa™ CSN, CEPAS <sup>4</sup> CSN or CAN<br>- MIFARE DESFire EV2 via EV1 backward compatibility |   |  |   |  |
| Communications   | Wiegand, Clock-and-Data, Open Supervised Device Protocol (OSPD) via RS485   |   |  |   |  |
| Panel Connection   | Pigtail or Terminal Strip   |   |  |   | Terminal Strip   |
| Reader Management  | HID Reader Manager Mobile App for HID Mobile Access / OSDP in-field upgrade, configuration, firmware upgrade and diagnostics  |   |  |   |  |
| Certifications   | UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, MIC (Japan) <sup>4</sup>   |   |  |   |  |
| Crypto Processor Hardware Common Criteria Rating                         | EAL5+   |   |  |   |  |
| Patents  | www.hidglobal.com/patents   |   |  |   |  |
| Housing Material   | UL94 Polycarbonate  |   |  |   |  |
| Manufactured with % of recycled content (Pigtail)                        | 10.5%   | 11.0%   | 10.5%  | 10.9%   | N/A  |
| Manufactured with % of recycled content (Terminal Strip)                 | 11.0%   | 11.5%   | 11.0%  | 12.4%   | 11.00%   |
| UL Ref Number  | R10E  | R15E  | R40E   | RK40E   | R90E   |
| Warranty   | Limited Lifetime  |   |  |   |  |

<sup>1</sup> Read range listed is statistical mean rounded to nearest whole centimeter. HID Global testing occurs in open air. Some environmental conditions, including metallic mounting surface, can significantly degrade read range and performance; plastic or ferrite spacers are recommended to improve performance on metallic mounting surfaces.

<sup>2</sup> Measured in accordance with UL294 standards; See Installation Guide for Details

<sup>3</sup> NSC = Normal Standby Current; See Installation Guide for Details

<sup>4</sup> Not available on R90 Model



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2020-12-04-pacs-iclass-se-reader-family-ds-en PLT-00230

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