



# 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 (iCLASS<sup>®</sup> Seos<sup>®</sup>, iCLASS SE<sup>®</sup>, standard iCLASS<sup>®</sup>, MIFARE, and MIFARE DESFire<sup>®</sup> EV1 with custom data models) 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.

iCLASS SE readers include Open Supervised Device Protocol (OSDP), a new Security Industry Association (SIA) standard that together with Secure Channel Protocol (SCP) provides secure communications and central management.

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

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| <p><b>POWERFULLY SECURE:</b></p> <ul style="list-style-type: none"> <li>▪ Multi-Layered Security - Ensures data authenticity and privacy through the multi-layered security of HID's SIO.</li> <li>▪ EAL5+ Certified Secure Element Hardware - Provides tamper-proof protection of keys/cryptographic operations.</li> <li>▪ Secured communications using OSDP with Secure Channel Protocol.</li> <li>▪ Expanded iCLASS Elite™ Program - Extends private security by protecting uniquely keyed credentials, SIOs and programming keys.</li> </ul> <p><b>HIGHLY ADAPTABLE:</b></p> <ul style="list-style-type: none"> <li>▪ Mobile device support using iCLASS Seos - enabling HID access control.</li> <li>▪ Flexible to support future technologies.</li> <li>▪ Field Programmable Readers - Provides secure upgrades for migration and extended lifecycle.</li> </ul> | <p><b>SUSTAINABILITY AND MANAGEMENT:</b></p> <ul style="list-style-type: none"> <li>▪ Intelligent Power Management (IPM) - Reduces reader power consumption by as much as 75% compared to standard operating mode.</li> <li>▪ Recycled Content - Contributes toward building LEED credits.</li> </ul> <p><b>INTEROPERABLE:</b></p> <ul style="list-style-type: none"> <li>▪ SIO Media Mapping - Simplifies deployment of third-party objects to multiple types of credentials.</li> <li>▪ Industry standard communications using OSDP.</li> <li>▪ Custom programming support to read models on MIFARE and MIFARE DESFire EV1 credentials</li> </ul> |
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## SPECIFICATIONS

| Model Name  | R10   | R15   | R30   | R40  | RK40  | R90  |
|---|---|---|---|--|---|--|
| Base Part Number  | 900N  | 910N  | 930N  | 920N   | 921N  | 940N   |
| <b>Typical Read Range* (inches)</b>                                   | 13.56 MHz Single Technology ID-1 Cards - SIO Data Model   |   |   |  |   |  |
|   | iCLASS SE <sup>®</sup> : 3" (7.6 cm)<br>SE for DESFire <sup>®</sup> EV1: 2" (5.1 cm)<br>SE for MIFARE <sup>®</sup> Classic: 2.3" (5.8 cm)   | iCLASS SE: 3" (7.6 cm)<br>SE for DESFire EV1: 2" (5.1 cm)<br>SE for MIFARE Classic: 2.3" (5.8 cm) | iCLASS SE: 3.5" (8.9 cm)<br>SE for DESFire EV1: 2" (5.1 cm)<br>SE for MIFARE Classic: 3" (7.6 cm) | iCLASS SE: 4.5" (11.4 cm)<br>SE for DESFire EV1: 3.3" (8.4 cm)<br>SE for MIFARE Classic: 3.5" (8.9 cm) | iCLASS SE: 5" (12.7 cm)<br>SE for DESFire EV1: 2.3" (5.8 cm)<br>SE for MIFARE Classic: 4.5" (11.4 cm) | iCLASS: 15.0" (39.37 cm)<br>SE for DESFire EV1: 6.5" (17.5 cm)<br>SE for MIFARE Classic: 10.0" (26.4 cm)   |
| <b>Mounting</b>   | 13.56 MHz Single Technology Tags/Fobs - SIO data Model  |   |   |  |   |  |
|   | iCLASS SE: 1.3" (3.3 cm)<br>SE for MIFARE Classic: 0.5" (1.3 cm)  | iCLASS SE: 1.3" (1.3 cm)<br>SE for MIFARE Classic: 0.5" (1.3 cm)                                  | iCLASS SE: 2" (5.1 cm)<br>SE for MIFARE Classic: 1.5" (3.8 cm)                                    | iCLASS SE: 1.8" (4.6 cm)<br>SE for MIFARE Classic: 1.5" (3.8 cm)                                       | iCLASS SE: 1.8" (4.6 cm)<br>SE for MIFARE Classic: 1.5" (3.8 cm)                                      | iCLASS: 8.0" (20.32 cm)<br>SE for MIFARE Classic: 4.1" (10.4 cm)   |
| <b>Color</b>  | Black or Gray   |   |   |  | Black or Gray   | Black  |
| <b>Keypad</b>   | No  |   |   |  | Yes (4x3)   | No   |
| <b>Dimensions</b>   | 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 3.3" x 0.9"<br>8.4 cm x 8.4 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  | 3.3" x 4.8" x 1.1"<br>8.5 cm x 12.2 cm x 2.8 cm   | 13.1" x 13.1" x 1.55"<br>33.3cm x 33.3cm x 3.9cm   |
| <b>Product Weight (Pigtail)</b>                                       | 3.9 oz (113g)   | 5.3 oz (151g)   | 5.2 oz (148g)   | 7.7 oz (220g)  | 9.0 oz (256g)   | N/A  |
| <b>Product Weight (Terminal Strip)</b>                                | 2.9 oz (84g)  | 4.2 oz (120g)   | 4.0 oz (116g)   | 7.5 oz (215g)  | 8.0oz (226g)  | 4lb 1oz (1844g)  |
| <b>Operating Voltage Range</b>  | 5-16 VDC  |   |   |  | 5-16 VDC  | 12 VDC or 24 VDC   |
| <b>Current Draw - Standard Power Mode*** (mA)</b>                     | 60 @ 16V  | 60 @ 16V  | 65 @ 16V  | 65 @ 16V   | 85 @ 16V  | 110 @ 12V  |
| <b>Current Draw - Intelligent Power Management (IPM) Mode*** (mA)</b> | 35 @ 16V  | 35 @ 16V  | 40 @ 16V  | 40 @ 16V   | 60 @ 16V  | 30 @ 12V   |
| <b>Peak Current Draw - Standard Power or IPM Mode*** (mA)</b>         | 200 @ 16V   | 200 @ 16V   | 200 @ 16V   | 200 @ 16V  | 220 @ 16V   | 30 @ 12V   |
| <b>NSC** Power Consumption - Standard Power Mode</b>                  | 1.0 @ 16V   | 1.0 @ 16V   | 1.0 @ 16V   | 1.0 @ 16V  | 1.4 @ 16V   | 1.3 @ 12V  |
| <b>NSC** Power Consumption - w/ IPM</b>                               | 0.6 @ 16V   | 0.6 @ 16V   | 0.6 @ 16V   | 0.6 @ 16V  | 1 @ 16V   | .4 @ 12V   |
| <b>Operating Temperature</b>  | -31° to 150° F (-35° to 65° C)  |   |   |  |   |  |
| <b>Storage Temperature</b>  | -67° to 185° F (-55° to 85° C)  |   |   |  |   |  |
| <b>Operating Humidity</b>   | 5% to 95% relative humidity non-condensing  |   |   |  |   |  |
| <b>Environmental Rating</b>   | Indoor/Outdoor IP55; IP65 if installed with optional gasket   |   |   |  | Indoor/Outdoor IP55; IP65 if installed with optional gasket   | IP65   |
| <b>Transmit Frequency</b>   | 13.56 MHz   |   |   |  |   |  |
| <b>13.56 MHz Card Compatibility</b>                                   | Secure Identity Object™ (SIO) on iCLASS Seos, iCLASS SE/SR, MIFARE DESFire EV1 and MIFARE Classic (On by Default)<br>- MIFARE 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 |   |   |  |   |  |
| <b>Communications</b>   | Wiegand, Clock-and-Data, Open Supervised Device Protocol (OSPD) via RS485   |   |   |  |   |  |
| <b>Panel Connection</b>   | Pigtail or Terminal Strip   |   |   |  |   | Terminal Strip   |
| <b>Certifications</b>   | UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, FIP5201 Transparent FASC-N Reader, MIC (Japan)  |   |   |  |   | UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), RCM (Australia, New Zealand), SRRC (China), KCC (Korea), NCC (Taiwan), iDA (Singapore), RoHS |
| <b>Crypto Processor Hardware Common Criteria Rating</b>               | EAL5+   |   |   |  |   |  |
| <b>Patents</b>  | www.hidglobal.com/patents   |   |   |  |   |  |
| <b>Housing Material</b>   | UL94 Polycarbonate  |   |   |  |   |  |
| <b>Manufactured with % of recycled content (Pigtail)</b>              | 10.5%   | 11.0%   | 11.0%   | 10.5%  | 10.9%   | N/A  |
| <b>Manufactured with % of recycled content (Terminal Strip)</b>       | 11.0%   | 11.5%   | 10.5%   | 11.0%  | 12.4%   | 11.00%   |
| <b>UL Ref Number</b>  | R10E  | R15E  | R30E  | R40E   | RK40E   | R90E   |
| <b>Warranty</b>   | Limited Lifetime  |   |   |  |   |  |

\* Typical read range achieved in air. Different types of metal will cause some degradation (typically up to 20%).

Use spacers to space product off metal and improve read range if required.

\*\* NSC = Normal Standby Current; See Installation Guide for Details

\*\*\* Measured in accordance with UL294 standards; See Installation Guide for Details



hidglobal.com

North America: +1 512 776 9000

Toll Free: 1 800 237 7769

Europe, Middle East, Africa: +44 1440 714 850

Asia Pacific: +852 3160 9800

Latin America: +52 55 5081 1650

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2015-04-21-hid-i-class-se-readers-ds-en PLT-00230

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