



iCLASS® SE™ Readers



NEXT GENERATION HIGH-FREQUENCY ACCESS CONTROL

- **Supports Secure Identity Object™** – Multi-layer security beyond the card technology providing added protection to identity data.
- **Tamper proof** – EAL5+ certified secure element hardware for protection of keys and cryptographic operations to guard against security threats.
- **Trusted Identity Platform™ (TIP) enabled** – Provides trusted identity within a secure ecosystem of interoperable products.
- **Field programmable** – Provides secure upgrades for migration and extended lifecycle.
- **Intelligent Power Management** – Promotes environmental sustainability.

HID's Secure Identity Object™ delivers three key benefits: portability, security and extensibility.

- **Chip Independence** – SIOs can reside on any card technology, microprocessor-based cards, NFC smartphones, USB tokens, computer drives, and other formats.
- **Device Independence** – Providing an additional layer of security with additional key diversification, authentication and encryption.
- **Open** – SIOs are defined using open standards that can support any piece of data, including data for access control, biometrics, vending, time-and-attendance, and many other applications.

HID Global's next generation access control platform goes beyond the traditional smart card model to offer a secure, standards-based, technology-independent and flexible identity data structure based on Secure Identity Object™ (SIO), a new portable credential methodology from HID.

Building on the success of its flagship HID iCLASS® standard for 13.56 MHz contactless smart card technology, iCLASS SIO-Enabled (iCLASS® SE™) readers are part of the next-generation access control platform and open ecosystem based on HID's Trusted Identity

Platform (TIP) architecture for advanced applications, mobility and heightened security.

iCLASS SE readers enable a new class of portable identity credentials that can be securely provisioned and safely embedded into both fixed and mobile devices. Providing advanced security and performance, iCLASS SE readers also support Near Field Communication (NFC) card emulation, deliver enhanced functionality for future applications, and include intelligent power management and recycled content for sustainability.

HIGHER SECURITY:

- **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.
- **SIO Data Binding** – Inhibits data cloning by binding an object to a specific credential.
- **Expanded iCLASS Elite™ Program** – Extends private security by protecting uniquely keyed credentials, SIOs and programming update keys.

SUSTAINABILITY:

- **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.

PERFORMANCE:

- **SIO Media Mapping** – Simplifies deployment of third-part objects to multiple types of credentials.
- **Field Programmable Readers** – Provides secure upgrades for migration and extended lifecycle.
- **RGB LEDs** – Delivers increasing capability to notify users and troubleshooters regarding system state.

USABILITY OF APPLICATIONS:

- **Near Field Communication (NFC) Card Emulation** – Enables migration to HID access control on mobile devices.
- **SIO Portability** – Provides technology independence and portability to other smart card technologies.
- **Upgradeable Hardware Connection** – Allows all Wiegand-based communication readers to expand communication capabilities to OSDP, Hi-O and other bi-directional protocols.



SPECIFICATIONS

Model Name	R10	R15	R30	R40	RK40
Base Part Number	900N	910N	930N	920N	921N
Typical Read Range* (Inches)	13.56 MHz Single Technology ID-1 Credentials (Cards) – SIO Data Model				
	iCLASS® SE™: 2.8" (7.1 cm) SE for DESFire® EV1: 1.6 (4.1 cm) SE for MIFARE® Classic: 2.6" (6.6 cm)	iCLASS SE: 2.6" (6.6 cm) SE for DESFire EV1: 1.6 (4.1 cm) SE for MIFARE Classic: 2.5" (6.4 cm)	iCLASS SE: 3.3" (8.4 cm) SE for DESFire EV1: 1.6 (4.1 cm) SE for MIFARE Classic: 2.7" (6.9 cm)	iCLASS SE: 3.5" (8.9 cm) SE for DESFire EV1: 1.8" (4.6 cm) SE for MIFARE Classic: 2.8" (7.1 cm)	iCLASS SE: 3.4" (8.6 cm) SE for DESFire EV1: 1.6 (4.1 cm) SE for MIFARE Classic: 2.9" (7.4 cm)
Mounting	13.56 MHz Single Technology Tags/Fobs – SIO data Model				
	iCLASS SE: 1.5" (3.8 cm) SE for MIFARE Classic: 1.2" (3.0 cm)	iCLASS SE: 1.1" (2.8 cm) SE for MIFARE Classic: 0.8" (2.0 cm)	iCLASS SE: 1.7" (4.3 cm) SE for MIFARE Classic: 1.2" (3.0 cm)	iCLASS SE: 1.8" (4.6 cm) SE for MIFARE Classic: 1.4" (3.6 cm)	iCLASS SE: 1.4" (3.6 cm) SE for MIFARE Classic: 0.5" (1.3 cm)
Color	Black or Gray				
Keypad	No				Yes (4x3)
Dimensions	1.9" x 4.1" x 0.9" 4.8 cm x 10.3 cm x 2.3 cm	1.9" x 6.0" x 0.9" 4.8 cm x 15.3 cm x 2.3 cm	3.3" x 3.3" x 0.9" 8.4 cm x 8.4 cm x 2.3 cm	3.3" x 4.8" x 1.0" 8.4 cm x 12.2 cm x 2.4 cm	3.3" x 4.8" x 1.1" 8.5 cm x 12.2 cm x 2.8 cm
Product Weight (Pigtail)	3.9 oz (113g)	5.3 oz (151g)	5.2 oz (148g)	7.7 oz (220g)	9.0 oz (256g)
Product Weight (Terminal Strip)	2.9 oz (84g)	4.2 oz (120g)	4.0 oz (116g)	7.5 oz (215g)	8.0oz (226g)
Operating Voltage Range	5-16 VDC, Linear supply recommended				
Current Draw - Standard Power Mode*** (mA)	45	45	65	65	100
Current Draw - Intelligent Power Management (IPM) Mode*** (mA)	25	25	25	25	65
Peak Current Draw - Standard Power or IPM Mode*** (mA)	75	75	105	105	130
NSC** Power Consumption - Standard Power Mode (W @ 16VDC)	0.7	0.7	1	1	1.6
NSC** Power Consumption - w/ IPM (W @ 16VDC)	0.4	0.4	0.4	0.4	1
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	IP55				
Transmit Frequency	13.56 MHz				
13.56 MHz Card Compatibility	Secure Identity Object™ (SIO) on iCLASS SE/SR, SE for MIFARE DESFire EV1 and SE for MIFARE Classic (On by Default) Non-default programmable options include: additionally support - standard iCLASS Access Control Application (order with Standard interpreter) -ISO14443A (MIFARE) CSN, ISO14443B CSN, ISO15693 CSN -ISO14443A/B (FIPS-201 Transparent FASC-N Read) (order -F model with FIPS interpreter)				
Cable Distance	Wiegand/Clock-and-Data Interface 500ft (150m) (22AWG) - Use Shielded cable for best results				
Panel Connection	Pigtail or Terminal Strip				
Certifications	UL294/cUL**** (US), FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRCC (China), MIC (Korea), NCC (Taiwan), iDA (Singapore), RoHS, FIPS-201 Transparent FASC-N Reader				
Crypto Processor Hardware Common Criteria Rating	EAL5+				
Patents	US7124943, US6058481, US6337619				
Housing Material	UL94 Polycarbonate				
Manufactured with % of recycled content (Pigtail)	10.5%	11.0%	11.0%	10.5%	10.9%
Manufactured with % of recycled content (Terminal Strip)	11.0%	11.5%	10.5%	11.0%	12.4%
UL Ref Number	R10D	R15D	R30D	R40D	RK40D
Warranty	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

*** Measured in accordance with UL294 standards

**** UL294 functionally certified for Wiegand output only

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