A&E Specification for iRox Pro™ RFID Reader with HID® iCLASS SE®

Information for Specifiers:

Overview: The iRox Pro series of RFID smart card readers, manufactured by Essex Electronics in Carpinteria, CA., include mullion, single and double gang switch plate size form factors. These readers provide unique physical features including a very low profile, ligature resistant design and a ruggedized metal faceplate. More specifically, the faceplate is made of stainless steel which protrudes only 0.19" (.5cm) when properly mounted. An optional ligature resistant bezel (LRB-2) is available for the single gang reader.

Applications: The rugged, vandal resistant design of the iRox Pro reader delivers superior durability needed in environments such as behavioral health, education, manufacturing, retail and mass transit. Because of the very low profile of the stainless steel faceplate, the iRox Pro reader meets ligature resistant requirements making it especially useful in behavioral health facilities as well as correctional institutions. Environments where rolling carts are used such as equipment carts, hospital gurneys and rolling trash bins also benefit from the nearly flush mounting of the iRox Pro reader by reducing maintenance costs of accidental damage by the carts.

Compatibility: iRox Pro readers incorporate HID iCLASS SE technology which can read a wide variety of 13.56 MHz high frequency credentials including HID Seos®, iCLASS®, iCLASS SE®, MIFARE®, DESFire®, FeliCA and CEPAS. iRox Pro offers support for all HID Mobile Access® solutions including employee badge and Student ID in Apple wallet. iRox Pro provides field selectable Wiegand or OSDP Secure Channel output.

Document Organization: In keeping with the indexing standard provided by the Construction Specifications Institute (CSI) it is recommended the specification text (found on the next page of this document) be inserted in section 28.13.19

Additional Resources: Data sheet and installation instructions available on the **iRox Pro Product Page**

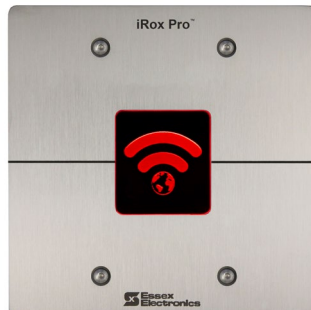

| IRXO-1B | IRXO-2B | IRXO-3B | Side View | Back View |

| IRXO-1S | IRXO-2S | IRXO-3S |

PLEASE NOTE! This specification provides readers that support 13.56Mhz Smart Cards only. 125Khz credentials are NOT supported. To include 125kHz prox technologies please refer to the iRox Pro Plus Specification.

28.13.19.   ACCESS CONTROL CARD READER

PART 1 GENERAL

1.01 Summary

    A.   Bid specification for read only 13.56 MHz RFID smart card readers.

    B.   Related Sections

        1.   28 13 33.16   Access Control Interfaces to Access Control Hardware
        2.   08 74 13   Card Key Access Control Hardware
        3.   26 05 19   Low-Voltage Electrical Power Conductors and Cables

1.02   Manufacturer Requirements

    A.   The RFID card readers must be made in America. Products manufactured and/or assembled outside of the United States of America will not be accepted.

    B.   The manufacturer must have a minimum of 10 years history in electronics manufacturing.

1.03   Submittals

    A.   Manufacturer data sheets and manuals for each model to be supplied.

    B.   All substitutions and/or alternate products must be pre-approved prior to bidding. Substitutions made at the time of bidding will not be considered.

1.04   Warranty

    A.   An 18 month warranty against manufacturer defects shall be included.

<div align="center">END OF SECTION</div>

PART 2 PRODUCTS

2.01   Manufacturer

    Essex Electronics
    1130 Mark Avenue
    Carpinteria, CA 93013
    (805) 684-7601
    essex@keyless.com

2.02   Models

A. IRXO–1B   iRox Pro™ Narrow iCLASS SE® Wall Reader with Black Faceplate

B. IRXO–1S   iRox Pro™ Narrow iCLASS SE® Wall Reader with Stainless Faceplate

C. IRXO–2B   iRox Pro™ U.S. Single Gang iCLASS SE® Wall Reader with Black Faceplate

D. IRXO–2S   iRox Pro™ U.S. Single Gang iCLASS SE® Wall Reader with Stainless Faceplate

E. IRXO–3B   iRox Pro™ U.S. Double Gang iCLASS SE® Wall Reader with Black Faceplate

F. IRXO–3S   iRox Pro™ U.S. Double Gang iCLASS SE® Wall Reader with Stainless Faceplate

2.03   FEATURES

Read Only Contactless smart card readers must meet or exceed the following:

A.   Technology: Guaranteed compatibility to read (placeholder) 13.56 MHz contactless access credentials programmed with (placeholder) bit format.

B.   User Feedback: The reader shall provide audio and visual feedback to inform the user of a successful card read or denied access.

C.   Physical Mounting:

1.   All electronics must fit in standard single gang electrical box.

2.   The faceplate for the reader shall be made of stainless steel and protrude no more than .125" from the mounting surface.

D.   Environmental: Rated for outdoor use, IP 66 rating, a temperature range of -31°F to +149°F (-35°C to +65°C) with 100% humidity. Readers with lesser ratings will not be accepted.

E.   Power Requirements: The voltage shall be 12VDC, with a current draw not exceeding 300mA peak and shall not exceed 90mA in standby mode.

F.   Reader to Panel Communications:

1.   Wiegand or Clock & Data: 5-conductor, shielded #22 AWG (or larger) cable.

2.   Bidirectional communication in compliance with V2 of the SIA OSDP (Open Supervised Device Protocol) standard. 4-conductor, shielded #24 AWG (or larger) cable.

END OF SECTION

PART 3 EXECUTION

3.01 INSTALLERS

A.   Contractor personnel shall comply with all applicable state and local licensing requirements.

3.02 PREPARATION

A.   The Contractor shall verify wire runs and wire sizes for location and code compliance for use with the installed equipment.

3.03 **INSTALLATION**

A.   The Contractor shall follow all Manufacturer-published guidance on proper installation and configuration of the readers.

B.   The Contractor shall test the system in conditions simulating the final installation.

END OF SECTION