

## SECTION 13730 – SECURITY ACCESS

### PROXIMITY ACCESS CONTROL READERS AND CREDENTIALS

#### GENERAL NOTES TO SPECIFIER:

THIS SPECIFICATION SECTION HAS BEEN PREPARED TO ASSIST DESIGN PROFESSIONALS IN THE PREPARATION OF PROJECT OR OFFICE MASTER SPECIFICATIONS. IT FOLLOWS GUIDELINES ESTABLISHED BY THE CONSTRUCTION SPECIFICATIONS INSTITUTE, AND THEREFORE MAY BE USED WITH MOST MASTER SPECIFICATION SYSTEMS WITH MINOR EDITING.

EDIT CAREFULLY TO SUIT PROJECT REQUIREMENTS. MODIFY AS NECESSARY AND DELETE ITEMS THAT ARE NOT APPLICABLE. VERIFY THAT REFERENCED SECTION NUMBERS AND TITLES ARE CORRECT. (NUMBERS AND TITLES REFERENCED ARE BASED ON *MASTERFORMAT*, 1995 EDITION).

THIS SECTION ASSUMES THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS INCLUDING SECTIONS 01330BSUBMITTAL PROCEDURES, 01620BPRODUCT OPTIONS, 01630BPRODUCT SUBSTITUTION PROCEDURES, 01660BPRODUCT STORAGE AND HANDLING REQUIREMENTS, 01770BCLOSEOUT PROCEDURES, AND 01780BCLOSEOUT SUBMITTALS. CLOSE COORDINATION WITH DIVISION 1 SECTIONS IS REQUIRED. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS, ADDITIONAL INFORMATION SHOULD BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

THIS IS AN OPEN PROPRIETARY SPECIFICATION ALLOWING USERS THE OPTION OF APPROVING OTHER MANUFACTURERS WHICH COMPLY WITH THE CRITERIA SPECIFIED HEREIN.

NOTES TO THE SPECIFIER ARE CONTAINED IN BOXES AND SHOULD BE DELETED FROM FINAL COPY.

OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITHIN BRACKETS, E.G.: [35] [40] [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.

ITEMS REQUIRING ADDITIONAL INFORMATION ARE UNDERLINED BLANK SPACES, E.G.: \_\_\_\_\_ .

OPTIONAL PARAGRAPHS ARE SEPARATED BY AOR= WITHIN A BOX, E.G.:

OR

**THIS SECTION SPECIFIES READERS AND CREDENTIALS ONLY. PROVISION OF OTHER COMPONENTS, AND CLOSE COORDINATION THEREWITH, ARE REQUIRED FOR A COMPLETE ACCESS CONTROL SYSTEM.**

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Proximity access control readers and proximity credentials (user cards and tags for access identification).
- B. Related Sections and Divisions:
  - 1. 08710 Door Hardware
  - 2. 08740 Electro-Mechanical Hardware: Electrical locking control system.
  - 3. Division 16 Electrical: Conductors and outlet boxes.

INCLUDE APPROPRIATE INFORMATION BELOW, INCLUDING A REFERENCE TO SECTION 01210BALLOWANCES, IF PROXIMITY READERS ARE INCLUDED IN ANY ALLOWANCE ITEMS, AND ADD 01210BALLOWANCES TO ARELATED SECTIONS= PARAGRAPH ABOVE. OTHERWISE DELETE FOLLOWING PARAGRAPH.

##### C. Allowances

INCLUDE APPROPRIATE LANGUAGE BELOW INCLUDING A REFERENCE TO SECTION 01230B ALTERNATES, IF PRODUCTS SPECIFIED IN THIS SECTION ARE SUBJECT TO ANY ALTERNATE BID ITEMS, AND ADD SECTION 01230B ALTERNATES TO A RELATED SECTION'S PARAGRAPH ABOVE. OTHERWISE DELETE FOLLOWING PARAGRAPH

D. Alternates:

## 1.2 DEFINITIONS

- A. Anti-passback Mode: Controller prevents successive use of credential through a specified access point.
- B. Normal Mode: Controller grants access provided credential holder has privileges for that time and that access point.
- C. Proximity Credential: A portable media (card or keytag) that carries data associated with the identity of an individual or property and is based on 125 kHz radio frequency identification technology (RFID).
- D. Proximity Reader: A device based on 125 kHz radio frequency identification technology that is capable of reading data from a proximity credential when the credential is presented within the device read range.
- E. Wiegand Protocol: Electrical and physical definition of the interface between a reader and control panel. Commonly used by the security/access control industry, the electrical characteristics are loosely based upon the fundamentals of the Wiegand Effect. The Wiegand Effect is the storage of magnetic energy by a highly processed ferromagnetic wire called the Wiegand Wire.
- F. Card-to-Reader Password: A security feature option that allows a 30-bit password between the reader and card. When activated, the card and reader password must match before ID data is allowed to pass from the reader to the control panel.

## 1.3 SYSTEM DESCRIPTION

- A. Design Requirements: Proximity readers shall read user credentials without physical contact, process credential encoded data and output data to access system controller resulting in instructions to allow/deny access.
- B. Performance Requirements:
  - 1. Credential shall be readable when presented in any orientation or at any angle to reader surface.
  - 2. Reader data output time to controller: 110 milliseconds or less.
  - 3. Transmission of radio frequency signals into the reader shall not compromise the system.
  - 4. Presence of small metal objects, such as keys or coins, near the credential shall not alter the code nor prevent the code from being read.
  - 5. Different types of credentials may be used interchangeably and shall be compatible with all readers in the system.

## 1.4 SUBMITTALS

- A. Reference Section 01330 Submittal Procedures; submit following items:

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1. Product Data: Readers and Credentials.
  2. Quality Assurance/Control Submittals:
    - a. Manufacturer's Installation Instructions.
  3. Closeout Submittals:
    - b. Operation and Maintenance Manual.
    - c. Special Warranties.

#### 1.5 QUALITY ASSURANCE

- A. Qualifications:
1. Manufacturer Qualifications: Minimum 10 years experience in producing proximity access control readers and credentials.

#### 1.6 DELIVERY STORAGE AND HANDLING

- A. Reference Section 01660B Product Storage and Handling Requirements.
- B. Follow manufacturer's instructions.

#### 1.7 WARRANTY

- A. Special Warranty:
1. Readers: Lifetime.
  2. Credential Type 1: Lifetime.
  3. Credential Type 2: Lifetime.
  4. Credential Type 3: Lifetime.

### **PART 2 PRODUCTS**

#### 2.1 MANUFACTURER

- A. Manufacturer: Indala Corporation; 6850B Santa Teresa Blvd; San Jose, CA 95119; tel. (408) 361-4700; fax. (408) 361-4701

INSERT NAME, ADDRESS AND PHONE NUMBERS OF LOCAL DEALER/SYSTEMS INTEGRATOR BELOW.

1. Dealer/Systems Integrator:

- B. Substitutions: Reference Section 01630B Product Substitution Procedures.

#### 2.2 SYSTEM COMPONENTS

- A. Proximity Card Reader:
1. General:
    - a. Reader shall function in access control system's normal or anti-passback mode without changes to the reader.
    - b. Standard Output Data Configuration: Wiegand protocol.
    - c. Status Indicator: Independently controlled tri-color LED and independently controlled audio tone.
    - d. Input Voltage: 4-16 VDC.
    - e. Operating Temperature Range: -30 to 150 degrees F (-35 to 65 degrees C).
    - f. Required Certifications: UL 294, FCC Part 15, I-ETS 300 330 and CE marked

per directive 89/336/EEC.

g. Operating Requirements:

- 1) User Status: LED flash and audio tone capability to advise user that a credential has been read and data transmitted to the controller (QuickFlash).
- 2) Test Mode: Capability to demonstrate readers operational readiness of LED, audio tone and data lines (SelfTest).
- 3) Reader Supervision: Capability to advise controller at approximately one minute intervals that reader is functioning normally (WatchDog).

2. Type A Mullion:

- a. Model: FP#####A with FlexSecure technology
- b. Maximum Size (HxWxT): 4.5x1.70x0.85 inches (114x43x21.5 mm).
- c. Mounting: Metal door frames/mullions.
- d. Color: [White] [Beige] [Gray] [Black] [As selected by Architect from manufacturer=s standard color range; minimum 4 colors].
- e. Read Range: Up to 5 inches.

3. Type B Wallswitch:

- a. Model: FP#####A with FlexSecure technology
- b. Maximum Size (HxWxT): 4.5x3.0x0.85 inches (114x76x21.5 mm).
- c. Mounting: Metal or plastic single gang outlet box.
- d. Color: [White] [Beige] [Gray] [Black] [As selected by Architect from manufacturer=s standard color range; minimum 4 colors].
- e. Read Range: Up to 5 inches.

4. Type C Midrange:

- a. Model: FP#####A with FlexSecure technology
- b. Maximum Size (HxWxT): 5.1x6.1x1.1 inches (130x155x28 mm).
- c. Mounting: Metal or plastic single or double gang outlet box.
- d. Color: [White] [Beige] [Gray] [Black] [As selected by Architect from manufacturer=s standard color range; minimum 4 colors].
- e. Read Range: Up to 12 inches.

5. Type D Long Range:

- a. Model: ASR620+ with FlexSecure technology
- b. Maximum Size (HxWxT): 5.1x6.1x1.1 inches (130x155x28 mm).
- c. Mounting: As specified by manufacture.
- d. Color: Black.
- e. Read Range: Up to 28 inches.

6. Type E Heavy Duty PIN Pad and Proximity:

- a. Model: FP#####A with FlexSecure technology and Metallic Heavy Duty 12 button keypad for higher security applications combining proximity cards and PIN numbers.
- b. Maximum Size (HxWxT): 4.7x2.9x1.1 inches (119x74x28 mm).
- c. Mounting: Metal or plastic single gang outlet box.
- d. Color: [Beige] [Black] [As selected by Architect from manufacturers standard color range; minimum 2 colors].
- e. Read Range: Up to 2 inches.

B. Proximity Credentials:

1. General:

- a. Passive operation must be readable without use of battery.

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- b. Operating Temperature Range: -22 to 150 degrees F (-30 to 65 degrees C).
  - 2. Type 1:
    - a. FlexCard [FPCRD] LifeTime Proximity Card; credit card size plastic card with beveled edges.
    - b. Size: 3.38x2.12x0.065 inches (86x54x1.7 mm) maximum thickness.
    - c. Read Range: Up to 12 inches (305 mm) depending on reader.
    - d. ID Marking: [None] [Encoded, offset or random numbers].
    - e. Coding: [Wiegand] [\_\_\_\_\_].
    - f. Slot Punch: [Vertical].
    - g. Graphics: [None] [Custom color printing using Owner supplied artwork].
  - 3. Type 2:
    - a. FlexKey [FPKEY] Proximity Key Tag; molded plastic with slot to fit key ring, chain or ID lanyard.
    - b. Maximum size: 1.725x1.197x0.215 inches (43.8x30.4x5.46 mm).
    - c. Read Range: Up to 6 inches (152 mm) depending on reader.
    - d. ID Marking: [None] [Encoded, offset or random numbers].
    - e. Coding: [Wiegand] [\_\_\_\_\_].
  - 4. Type 3:
    - a. FlexISO-XT [FPIXT], Imageable Proximity Card; Credit card size plastic card conforming to ISO 7813. Front face suitable for edge to edge dye sublimation printing.
    - b. Size: 3.38x2.12x0.033 inches (86x54x0.84 mm) thick.
    - c. Read Range: Up to 12 inches (305 mm) depending on reader.
    - d. ID Marking: [None] [Encoded, offset or random numbers].
    - e. Coding: [Wiegand] [\_\_\_\_\_].
    - f. Slot Punch: [None] [Vertical] [Horizontal].
    - g. Finish:
      - 1) Front: [Glossy White]
      - 2) Back: [Glossy White]
    - h. Graphics: [None] [Front] [and] [back] [full custom color graphics using Owner supplied artwork].
    - i. [Magnetic Stripe: Embedded 3-track high coercivity.]

## 2.3 FABRICATION

- A. Reader:
  - 1. Electronics Module: Single piece weatherproof construction enclosed in epoxy potting.
  - 2. Bezel: Snap-on plastic cover (to conceal electronics module mounting screws) with locking screw or snap to restrict removal.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates upon which readers will be installed.
- B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
- C. Commencement of work by installer is acceptance of substrate.

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3.2 INSTALLATION

A. Follow manufacturers instructions.

3.3 FIELD QUALITY CONTROL

A. Site Tests: Test each reader for access granted and access denied decisions.

3.4 CLEANING

A. Clean components soiled by work as recommended by manufacturer.

B. Remove surplus materials and debris from site.

3.5 DEMONSTRATION

A. Demonstrate proper operating procedures to Owner=s Representative.

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| COMPLETE FOLLOWING SCHEDULES OR PROVIDE SIMILAR SCHEDULES ON DRAWINGS. EXPAND SCHEDULES AS REQUIRED. |
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3.6 READER SCHEDULE

| DOOR NO. | READER TYPE | READER COLOR | REMARKS |
|----------|-------------|--------------|---------|
|          |             |              |         |
|          |             |              |         |
|          |             |              |         |

3.7 CREDENTIAL SCHEDULE

| CREDENTIAL TYPE | NO. REQUIRED |
|-----------------|--------------|
| Type 1          |              |
| Type 2          |              |
| Type 3          |              |

END OF SECTION 1

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