

Allegion helps keep people safe where they live, work and visit. With more than 25 brands sold globally we specialize in security around the doorway and beyond: everything from residential and commercial locks, door closers and exit devices, steel doors and frames, to access control and workforce productivity solutions. Access to the proper tools and resources, as well as expert consultants, can streamline the specification process.

Allegion offers specification writing services, AIA-approved training, code consulting and other services, as well as our proprietary Overtur cloud-based collaboration site, to help architects specify the right door hardware solution for every type of project.

Allegion's portfolio includes strategic brands LCN, Schlage and Von Duprin; and other brands including Dexter by Schlage, Falcon, Glynn-Johnson, ISONAS, Ives, Kryptonite, Locknetics, Steelcraft, and Zero*.*

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SECTION 28 15 11 – INTEGRATED CREDENTIAL READERS

1. PART 1 GENERAL
   1. summary
      1. Section includes mobile enabled card readers capable of functioning with CSN cards, proximity cards, smart cards and mobile devices using NFC and Bluetooth communications.
   2. RELATED DOCUMENTS
      1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
      2. Divisions 26, 27, and 28 basic materials and methods sections apply to work specified in this section.
   3. Related Sections
      1. Division 08 Openings
         1. 08 06 71 Door Hardware Schedule
         2. 08 10 00 Doors and Frames
         3. 08 31 13.53 Security Access Doors and Frames
         4. 08 42 00 Entrances
         5. 08 74 00 Non-Integrated Access Control Hardware
      2. Division 28 Electronic Safety and Security
         1. 28 05 11 Cyber Security Requirements for Electronic Safety and Security
         2. 28 05 31 Communications Equipment for Electronic Safety and Security
         3. 28 06 10 Schedules for Access Control
         4. 28 13 00 Access Control Software and Database Management
         5. 28 14 00 Access Control System Hardware
   4. REFERENCES
      1. Abbreviations and Acronyms
         1. ASK – Amplitude Shift Keying
         2. CSN – Card Serial Number
         3. BLE – Bluetooth Low Energy
         4. FSK – Frequency Shift Keying
         5. NFC – Near Field Communications
      2. Definitions
         1. IP based Reader-Controller - An intelligent network-connected reader controller unit with inputs, outputs and data storage capability.
         2. Credential - RFID based token assigned to an entity and used to identify that entity.
         3. Mobile Credential – Token using Bluetooth® Low Energy on any Android or Apple device
         4. CSN Card – A contactless smart card containing read-only RFID.
         5. Identifier - A credential card, keypad personal identification number or code, or other unique identification entered as data into the entry-control database for the purpose of identifying an individual. Where this term is presented with an initial capital letter, this definition applies.
         6. RFID - An automatic identification method, relying on storing and remotely retrieving data using devices called RFID tags or transponders.
      3. Reference Standards
         1. ISO 14443 - Cards and security devices for personal identification — Contactless proximity objects
         2. ISO 15693 - Identification cards — Contactless integrated circuit cards — Vicinity cards
         3. Underwriters' Laboratories
         4. UL 294 V7 & cUL
         5. FCC
         6. IC
         7. RED Directive
         8. CE Mark
         9. IP65
         10. REACH
         11. Bluetooth SIG
         12. Directive 2002/95/EC Restriction of Hazardous Substances (RoHS)
   5. SUBMITTALS
      1. Product Data
         1. Manufacturer’s printed or electronic data sheets
         2. Manufacturer’s installation and operation manuals
         3. Where applicable, SIA OSDP Verified documentation.
   6. QUALITY ASSURANCE
      1. Manufacturer shall be ISO 9001 certified with a minimum of three years’ experience in manufacturing low voltage power supply equipment.
      2. Manufacturer’s products shall be manufactured in the United States of America.
   7. DELIVERY, STORAGE, AND HANDLING
      1. IP-based Reader-Controllers:
         1. Store in temperature and humidity-controlled environment in original manufacturer's sealed containers. Maintain ambient temperature between -40 and 120 deg F (-40 and 50 deg C).
         2. Open each container; verify contents against packing list, and file copy of packing list, complete with container identification for inclusion in operation and maintenance data.
         3. Mark packing list with designations that have been assigned to materials and equipment.
   8. COORDINATION
      1. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
   9. warranty
      1. Security Integrator shall provide a limited one year hardware warranty for the product to be free of defects in material and workmanship.
      2. Manufacturer shall provide a warranty for the system to be free of defects in material and workmanship for 12 months from date of installation, not to exceed 24 months from the date of shipment from factory.
      3. Manufacturer shall make available an extended warranty and maintenance support option.
2. PART 2 PRODUCTS
   1. EQUIPMENT
      1. Authorized Manufacturer(s): Schlage
      2. Models:
         1. Hardware:
            1. IP Reader Controller
      3. Acceptable Manufacturers: No Substitution.
   2. DESCRIPTION
      1. The mobile enabled multi-technology IP reader controllers shall connect to existing IT networks via a single PoE cable, make local access control decisions at the door, provide real-time connectivity to the access control system while reading CSN cards, proximity cards, smart cards, and NFC/BLE credentials from a mobile device.
   3. HARDWARE COMPONENTS
      1. Multi-technology IP Reader-Controller:
         1. Manufacturer:
            1. Schlage
            2. RC11 mullion mount
            3. *Delete RC models not being utilized for this project.*
            4. Schlage RC15 single gang mount
            5. Schlage RCK15 single gang mount with keypad
         2. Read Technologies: The readers shall support the following technologies:
            1. 125 kHz contactless proximity cards

Compatibility: prox FSK & ASK such as Schlage® Proximity, HID® Proximity, GE/CASI® Proximity, AWID® Proximity, LenelProx®

* + - * 1. 13.56 MHz contactless smart cards

Schlage smart cards using MIFARE Classic®, Schlage smart cards using MIFARE Plus®, Schlage smart cards using MIFARE® DESFire®

Mobile Credential Model

* + - * 1. CSN

DESFire® CSN, HID iCLASS® CSN, Inside Contactless PicoTag® CSN, ST Microelectronics® CSN, Texas Instruments Tag-It®, CSN, Phillips I-Code® CSN

* + - * 1. 2.4 GHz Bluetooth Low Energy Schlage mobile credential
        2. 13.56MHz NFC mobile credential
      1. Keypad
         1. The readers shall be available with the additional functionality of an integral keypad.
      2. Intelligence capacity
         1. 64,000 credentials
         2. 5000 stored access events
         3. 32 schedules per credential
         4. 32 holidays
      3. Input/output
         1. Inputs

Three configurable (Default usage - door sense, request for exit/auxiliary)

* + - * 1. Outputs

One solid state relay controlling the electric lock rated at 12 VDC @ 600 mA.

* + - 1. Communications Interface
         1. Network Communications
         2. 10/100 Mbps
         3. Half or full duplex
         4. Ethernet
         5. Websockets
         6. Standard CAT5E, CAT6, or better cable
         7. Network host or client modes
         8. DHCP addressing
      2. Audible communications
         1. IP reader controller shall provide the ability to enable and disable audible indication.
      3. Security
         1. TLS version 1.2 encryption
         2. Tamper detection via accelerometer
         3. Encrypted lock control with optional module
      4. Electrical
         1. System Interfaces

2 TTL lines

Clock & Data

* + - * 1. Power Voltage Range

12 VDC

PoE (IEEE802.3af, Class 0)

PoE+ (IEEE802.3at)

* + - * 1. Operating Current – 210-225mA peak
        2. Auxiliary Power Output – 12 VDC @ 600mA
        3. Connection

26 AWG, CAT 5E 8” length

* + - 1. User
         1. LED Indicators (3) - reader status, network connection
         2. Programming - Microcode flash upgradeable
         3. Dual-mode reset button - Power-cycle reader and Reset-to-Factory defaults
      2. Physical and Environmental
         1. Operating Temperature - -40º to +66º C
         2. Humidity - 0 - 100%
         3. Weather Resistance – Conformal Coated components for weather resistance
         4. Certifications

UL-294 V7 Compliant

FCC 47 CFR Part 15

IC Certification

cUL Listed

RED Directive

CE Mark

IP65

REACH

Bluetooth SIG

RoHS 3

* + - 1. Enclosure

Durable U/V stabilized, flame-retardant ABS

Form Factor: Wall mount and mullion mount

Dimensions:

Mullion (5.94” x 1.77” x 1”)

Wall mount (5.13” x 3.25” x 1”)

* + - 1. Accessories
         1. Provide pigtail cable to connect the reader controller to the locking device and other accessories around the door.
         2. Provide Advanced Security Module at all reader controllers.
  1. COMMISIONING
     1. The Manufacturer shall have a mobile app available to commission and configure readers.

1. PART 3 EXECUTION
   1. INSTALLATION
      1. Install all equipment in accordance with the manufacturer’s installation manuals, wiring diagrams and recommendations.
      2. Contractor personnel shall comply with all application state of local licensing requirements.
   2. CABLING
      1. Wiring Method: Install LAN cables using techniques, practices, and methods that are consistent with Category 5e or Category 6 rating of components and that ensure Category 5e or Category 6 performance of completed and linked signal paths, end to end.
      2. Install cables without damaging conductors, shield, or jacket.
      3. Boxes and enclosures containing security system components or cabling, and which are easily accessible to employees or to the public, shall be provided with a lock. Junction boxes and small device enclosures below ceiling level and easily accessible to employees or the public shall be covered with a suitable cover plate and secured with tamperproof screws.
   3. FIELD QUALITY CONTROL
      1. Contractor shall inspect, test, and adjust components and equipment installation.
         1. Results shall be reported in writing.
      2. Contractor shall remove and replace malfunctioning devices and circuits and retest as specified above.

END OF SECTION