



SAMPLE SPECIFICATIONS FOR ARCHITECTS AND SPECIFYING ENGINEERS

HIGH FREQUENCY (HF) CONTACTLESS CARD SMART READERS

The following document contains sample specifications for Secura Key Contactless Card and Reader products used in SK-NET Systems with NOVA.16 Control Panels They are written using industry standard formatting and language.

These specifications are for use by architects, consultants, and specifying engineers who are preparing bid specifications for access control, building management and security systems.

The electronic version of these specifications may be copied into the appropriate sections of a complete bid specification by using the “cut and paste” method.

The specifications are written to highlight unique and powerful features of Secura Key Contactless cards and Smart Readers.

Section headings mention specific models only for clarity – these may be deleted after insertion into the complete specification.

Models covered include the **ET-SR-X-M** and the **ET-SR-X-D-W** as well as Secura Key Contactless Smart Cards and Key Tags.

Please see the Secura Key website www.securakey.com if you require technical specifications or additional information on these products.

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1.1 ACCESS CONTROL EQUIPMENT

- A. **ACCESS CONTROL READERS:** Provide Secura Key Contactless Smart Readers, or equivalent, as shown on the drawings. Smart Readers shall communicate with the Access Control Panel using RS-485 bi-directional communications, and shall monitor and control all devices at the door or gate location eliminating ‘home-run’ cabling extending from each door location to the control panel. Smart Readers require only RS-485 data and 12VDC power from the control panel. Card readers shall be available in the following configurations:
1. (ET-SR-X-M) – Contactless Smart Reader, Door Frame or Mullion Mounting Applications:
 - a. Provide mini-mullion style Contactless Smart Readers for doorframe or mullion mounting, and where shown on plans.
 - b. The reader shall be of potted, ABS material, sealed for weather resistance.
 - c. The reader shall be UL/C 294 listed, and shall have the following regulatory approvals: FCC, CE.
 - d. Transmit Frequency: 13.56 MHz
 - e. The reader shall have an approximate read range of up to 4” when used with the compatible ISO CR-80 type access card.
 - f. The reader shall require that a card, once read, must be removed from the RF field for one second before it will be read again, to prevent multiple reads from a single card presentation and anti-passback errors.
 - g. The reader shall be capable of reading and decrypting DES-Encrypted access control data from any Secura Key Contactless Smart card or equivalent, and transmitting that data to the control panel via RS-485, using Secura Key SR protocol.
 - h. The reader shall transmit card data, and input circuit voltages and status data to the control panel, and shall receive and execute commands from the control panel to activate outputs and operate red and green LEDs and the internal Beeper.
 - i. The reader shall have four separate input points for connecting switch contacts from devices such as Request-to-Exit pushbuttons, Exit PIRs, magnetic reed switches for door monitoring, status outputs from Magnetic Locks and and “crash bars” and other monitoring devices which provide a switch closure.
 - j. The reader shall have a solid-state latch output for connection to magnetic locks, electric strikes, electrified locksets, and gate controllers, as well as two open collector Auxiliary Outputs which can be connected through interposing relays to devices which can be operated by a contact closure, such as strobes, horns, sounders, camera inputs, lighting controllers or HVAC systems, in response to various types of access control transactions, card badgings within a pre-defined range, valid periods of specified time zones, or status changes of the input points described above.
 - k. The reader shall have a bi-color (red/green) LED, activated by host command from the control panel.

- l. The reader shall have a piezoelectric audio sounder capable of providing audible indication that a card has been read, as well as other indications under host control.
 - m. The reader shall have a 3-year warranty against defects in materials and workmanship.
 - n. Color shall be black.
 - o. Secura Key e*Tag ET8-SR-X-M, or equivalent, compatible with selected card media.
2. (ET-SR-X-D-W) – Contactless Smart Reader, Wall Mounting (Single-Gang Leviton Decora® style Indoor/Protected area Mounting Applications):
- a. Provide “single-gang” Leviton Decora® style Contactless Smart Readers for wall mounting, and where shown on plans.
 - b. The reader shall be of ABS material, designed for interior applications only.
 - c. The reader shall be UL/C 294 listed, and shall have the following regulatory approvals: FCC, CE.
 - d. Transmit Frequency: 13.56 MHz
 - e. The reader shall have an approximate read range of up to 6” when used with the compatible ISO CR-80 type access card.
 - f. The reader shall require that a card, once read, must be removed from the RF field for one second before it will be read again, to prevent multiple reads from a single card presentation and anti-passback errors.
 - g. The reader shall be capable of reading and decrypting DES-Encrypted access control data from any Secura Key Contactless Smart card or equivalent, and transmitting that data to the control panel via RS-485, using Secura Key SR protocol.
 - h. The reader shall transmit card data, and input circuit voltages and status data to the control panel, and shall receive and execute commands from the control panel to activate outputs and operate red and green LEDs and the internal Beeper.
 - i. The reader shall have four separate input points for connecting switch contacts from devices such as Request-to-Exit pushbuttons, Exit PIRs, magnetic reed switches for door monitoring, status outputs from Magnetic Locks and and “crash bars” and other monitoring devices which provide a switch closure.
 - j. The reader shall have a solid-state latch output for connection to magnetic locks, electric strikes, electrified locksets, and gate controllers, as well as two open collector Auxiliary Outputs which can be connected through interposing relays to devices which can be operated by a contact closure, such as strobes, horns, sounders, camera inputs, lighting controllers or HVAC systems, in response to various types of access control transactions, card badgings within a pre-defined range, valid periods of specified time zones, or status changes of the input points described above.
 - k. The reader shall have a bi-color (red/green) LED, activated by host command from the control panel.

- l. The reader shall have a piezoelectric audio sounder capable of providing audible indication that a card has been read, as well as other indications under host control.
- m. The reader shall have a 3-year warranty against defects in materials and workmanship.
- n. Color shall be white (ET8-SR-X-D-W) or Ivory (ET8-SR-X-D-I)
- o. Secura Key Radio Key ET8-SR-X-D-W/I, or equivalent, compatible with selected card media.

B. ACCESS CARDS (CREDENTIALS)

Provide (specify quantities) Secura Key Contactless Smart Card Credentials (or equivalent) in the following form factors:

- 1. (ETCI-04) Access Card
 - a. Access cards shall be used with access readers to gain entry to access controlled portals (e.g.; doors, gates, turnstiles) and to hold information specific to the user.
 - b. The card shall be available in single technology or multiple technology configurations using 13.56 MHz contactless smart card technologies. Single technology cards shall meet the following criteria:
 - 1) The card shall meet ISO 7810 specifications for length, width, thickness, flatness, card construction and durability, and shall be in a form suitable for direct two-sided dye-sublimation or thermal transfer printing on the specified badge printer.
 - 2) Presentation to the access control reader at any angle within a minimum of one (1) inch shall result in an accurate reading of the card.
 - 3) The card shall be warranted against defects in materials and workmanship for three years, or with an added magnetic stripe the card shall have a fifteen (15) month warranty.
 - 4) Provide (specify quantity), access cards, compatible with the specified card readers. Cards shall be pre-encoded with 26-bit or 32-bit Wiegand card data, at the factory. Card data will be DES Encrypted using a diversified encryption key. The card shall be laser engraved with the card ID and Facility Code.
 - 5) The card shall not carry any identification showing the location of the property unless otherwise specified herein.
 - 6) The card shall be capable of accepting a slot punch, allowing it to be hung from a strap clip in either a vertical or horizontal orientation.
 - c. Multiple technology cards shall support a 13.56 MHz contactless smart card chip and antenna plus an added Magnetic Stripe.
 - d. Provide (specify quantity) (badge protectors with clips or other accessories), of a type acceptable to the Architect.

2. (ETST-03/ETKT-03) Access Key Tag
 - a. Access Key Tags shall be used with access readers using 13.56 MHz contactless smart card technology to gain entry to access controlled portals (e.g.; doors, gates, turnstiles) and to hold information specific to the user.
 - b. The Key Tag shall be constructed of durable laminated PVC plastic, with a hole punched into one end (optionally reinforced by a brass eyelet), and shall be suitable for placement on a key ring.
 - c. Presentation to the access control reader at any angle within one (1) inch shall result in an accurate reading of the key tag.
 - d. Provide (specify quantity), key tags, compatible with the specified card readers. Cards shall be pre-encoded with (select one) 26-bit or 32-bit Wiegand card data, at the factory. Card data will be DES Encrypted using a diversified encryption key. The card shall be laser engraved with the card ID and Facility Code, and
 - e. The key tag shall not carry any identification showing the location of the property unless otherwise specified herein.
 - f. The key tag shall be warranted against defects in materials and workmanship for three years.
 - g. Key tag shall be rectangular in shape with a rounded end (ETKT-03) or trapezoidal-shaped (ETKT-03)

End of Section