

# RADIO KEY® RK-XRM/XRS

## Proximity Reader with RS-485 Interface

### For Host-Validated Systems

### with DYNASCAN® TECHNOLOGY



**RK-XRS**

Radio Key® RK-XRM and RK-XRS are proximity card readers that tap the potential of RS-485 communications. Up to 100 units can be connected via RS-485 to a PC for a host-validated system. When a proximity card is placed close to the reader, that card's ID number is sent in ASCII format to the host. The card ID can be up to 64 bits, allowing for a virtually unlimited number of cards.

RK-XRM and RK-XRS are designed to work with custom software applications developed by original equipment manufacturers and systems integrators. Access control, fuel management, data retrieval and many other RFID applications are possible. An evaluation kit, complete with demonstration software, is available to those who would like to explore the product's capabilities. For software developers who wish to write an application, an API license is also available.

The RK-XRM and RK-XRS have two user-configured general purpose inputs and a bi-color LED (Red and Green). A solid-state relay is also provided. If so programmed, this relay can either open or close a circuit upon receiving a command from the host PC. The relay is rated at 1 Amp and 60 VAC/VDC. Card IDs, input signals, relay commands and LED operation for all readers are communicated over a common pair of wires.

Installation of the readers is very easy. Two screws mount the RK-XRM to a mullion, masonry wall, post or almost any surface. The RK-XRS can also be mounted to a single-gang electrical box. The readers are fully potted for extreme weather-resistance. Patented Dynascan®\* technology tunes the reader to the environment for maximum performance at all times.

\*U.S. PATENT # 6317027

**Secura Key**  
A Division of SOUNDCRAFT Inc.

- **RS-485 MULTI-DROP COMMUNICATIONS**
- **ON-BOARD SOLID-STATE RELAY**
- **VERY INEXPENSIVE**
- **UP TO 6" READ DISTANCE**
- **PATENTED DYNASCAN®\* TECHNOLOGY**
- **UP TO 100 READERS PER 2-WIRE BUS**
- **MULLION AND SWITCHPLATE HOUSINGS**



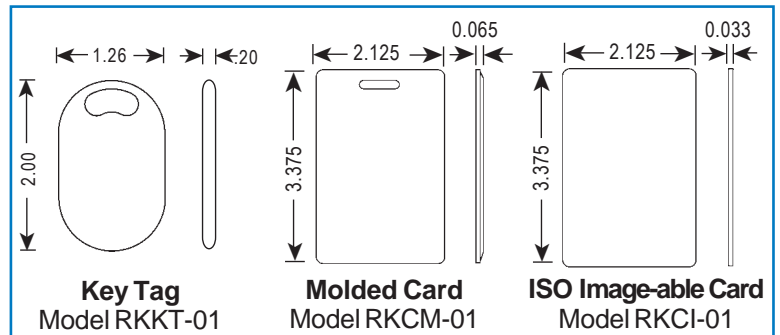
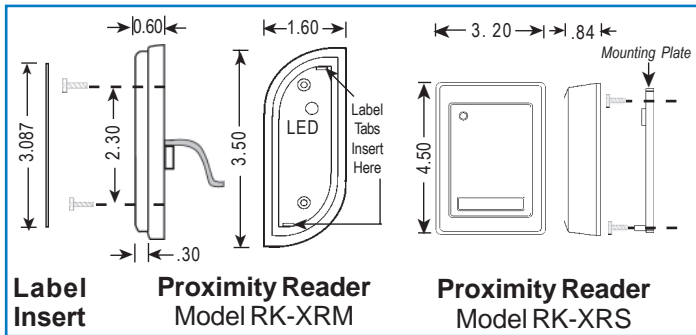
**RK-XRM**

Specifications subject to change without notice

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# RADIO KEY® XRM / XRS - SPECIFICATIONS

All dimensions in drawings are indicated in inches.



## PHYSICAL

	RK-XRM	RK-XRS	Key Tag	Molded Card	ISO Image-able Card
Depth	0.60" (1.52 cm)	0.84" (2.13 cm)	0.20" (0.50 cm)	0.065" (0.17 cm)	0.033" (0.08 cm)
Width	1.60" (4.06 cm)	3.20" (8.12 cm)	1.26" (3.20 cm)	2.125" (5.40 cm)	2.125" (5.40 cm)
Height	3.50" (8.89 cm)	4.50" (11.43 cm)	2.00" (5.00 cm)	3.375" (8.57 cm)	3.375" (8.57 cm)
Weight	2.88 oz. (81.65 gm)	6.67 oz. (189.15 gm)	0.25 oz. (7.20 gm)	0.39 oz. (11.16 gm)	0.20 oz. (5.67 gm)
Material	ABS	Lexan®	ABS	PVC	
Color	Gray	Beige	White	White	

## POWER REQUIREMENTS

5-14 VDC, 120 mA Maximum

## OUTPUTS

SPST Solid State Relay, 1A max. @60 VAC or DC  
Normally open or normally closed (configured by host)

## INPUTS

Two general purpose inputs (configured by host)

## DATA INPUT/OUTPUT

RS-485, ASCII format

## ENVIRONMENT

**Proximity Reader and Card/Key Tag**  
Ambient Temperature -40° to +70°C (-40° to +158°F)  
Humidity 0 to 95% non-condensing

READER CONNECTION	
WIRE COLOR	DESCRIPTION
BROWN	GROUND
BROWN-WHITE	VCC
ORANGE	DATA-B
ORANGE-WHITE	DATA-A
GREEN	INPUT 2
GREEN-WHITE	INPUT 1
BLUE	RELAY
BLUE-WHITE	RELAY

\* Connect to GROUND to activate.

## OPERATIONAL

Reading Distance	Molded Card: Up to 6" (15.24 cm); Key Tag & ISO Card: Up to 5" (12.70 cm)
User Capacity	Up to 64 bits, (over 4 billion)
Card/Key Tag Operation	Passive
Transmit Frequency	125 kHz
Host Settings	Non-Volatile
Relay Timer	1 to 4,080 seconds, managed by host.
LED Control	Bi-Color (Red/Green) managed by host.
Maximum Wire Distance	RS-485 up to 4,000 feet.

## OPTIONAL ACCESSORIES

RK-XR DEMO KIT	Two readers, one RS-232 to RS-485 converter, power supply, Demo software and sample cards, for product evaluation.
SK-API-XR	Software Developer's Kit, including communications DLL, sample application and documentation. One year of updates are included.
NET-CONV-P	Optical RS-232 to RS-485 converter. Can be used to connect an RS-485 bus to the serial COM port on a PC.

This product complies with UL 294 Standards, with Part 15, Class B FCC Rules and meets R&TTE Requirements (European Standards).

## WARRANTY (U.S. and Canadian)

"This product is warranted against defects in materials and workmanship for a period of 2 years from the date of purchase. Secura Key shall, at its option, either replace or repair this product, if returned to us freight prepaid within the warranty period. This warranty does not include freight, taxes, duties, or installation expenses. THE WARRANTY SET FORTH ABOVE IS EXCLUSIVE AND NO OTHER WARRANTY, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED. SECURA KEY SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. The remedies provided herein are the buyers' sole and exclusive remedies. In no event shall Secura Key be liable for direct, indirect, special, incidental or consequential damages (including loss of profits), whether based on contract, tort or any other legal theory." Contact Secura Key for Export Warranty Policy.

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