Keri Systems NXT-RM3 Reader Interface Module Installation Guide

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Keri Systems NXT-RM3 Reader Interface Module

INSTALLATION GUIDE

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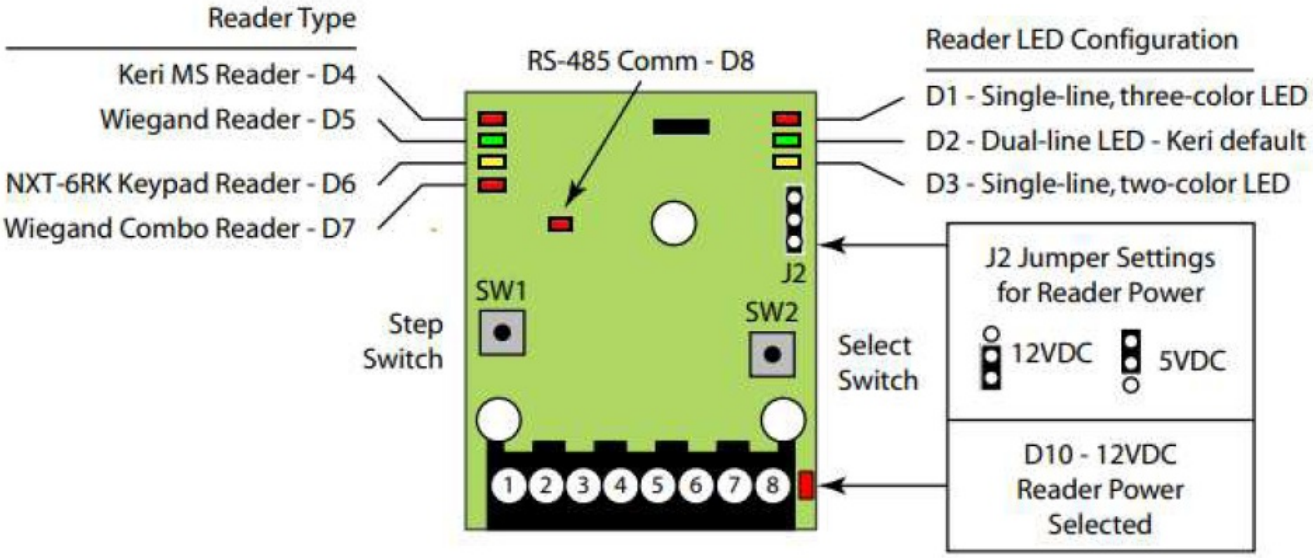
1. 1 Reader Interface Module (RIM} Diagram

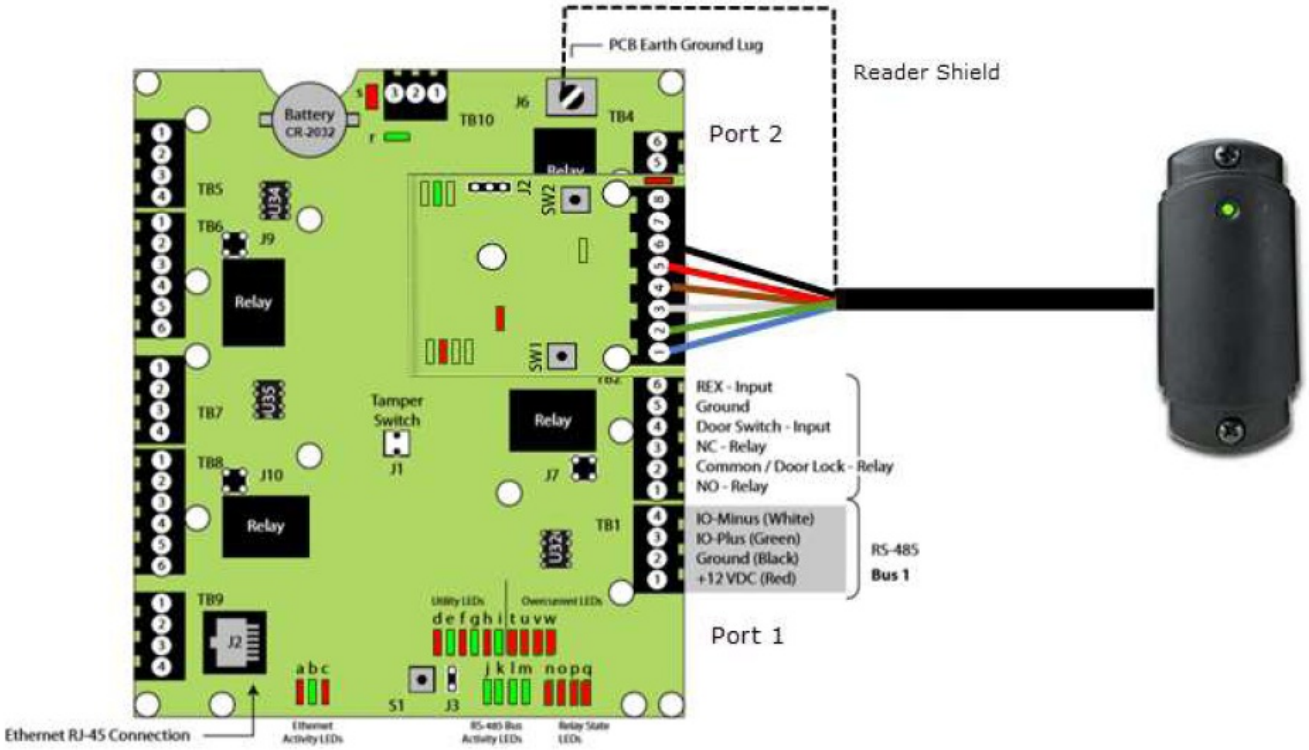


P/N:02501-002 Rev.K

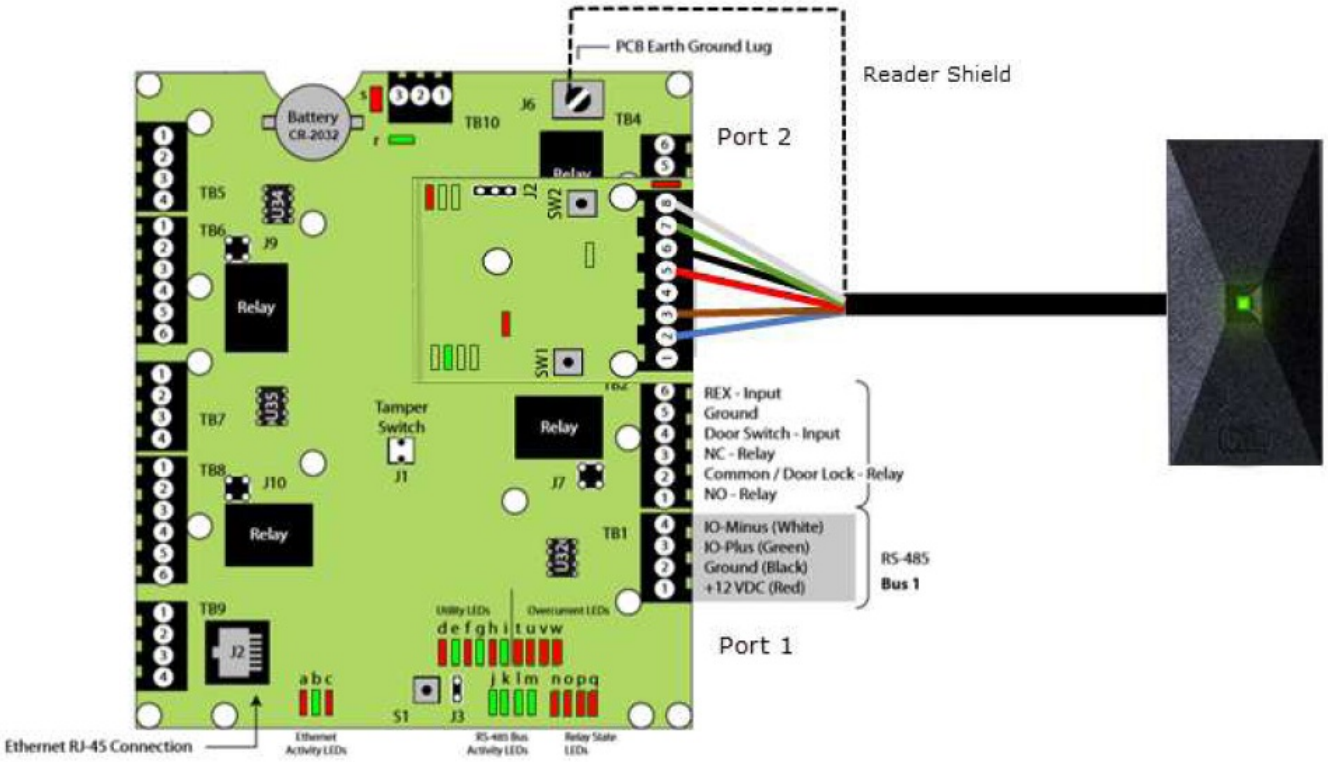
	Keri MS Reader		Wiegand Reader			
			Single-Line LED		Dual-Line LED	
Pin #	Connection	Wire Color	Connection	* Farpointe Wire Color	Connection	* Farpointe Wire Color
1	Antenna	Blue	n/a	n/a	n/a	n/a
2	Beeper	Green	Beeper	Blue	Beeper	Blue
3	Red LED	White	LED	Brown	Red LED	Brown
4	Green LED	Brown	n/a	n/a	Green LED	Orange
5	+ 12 VDC	Red	+ 12 VDC	Red	+ 12 VDC	Red
6	Ground	Black	Ground	Black	Ground	Black
7	n/a	n/a	Data0	Green	Data0	Green
8	n/a	n/a	Data1	White	Data1	White

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These llmlts are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, If not installed and used in accordance with the instruction manual, may cause hannful interference to radio communications.

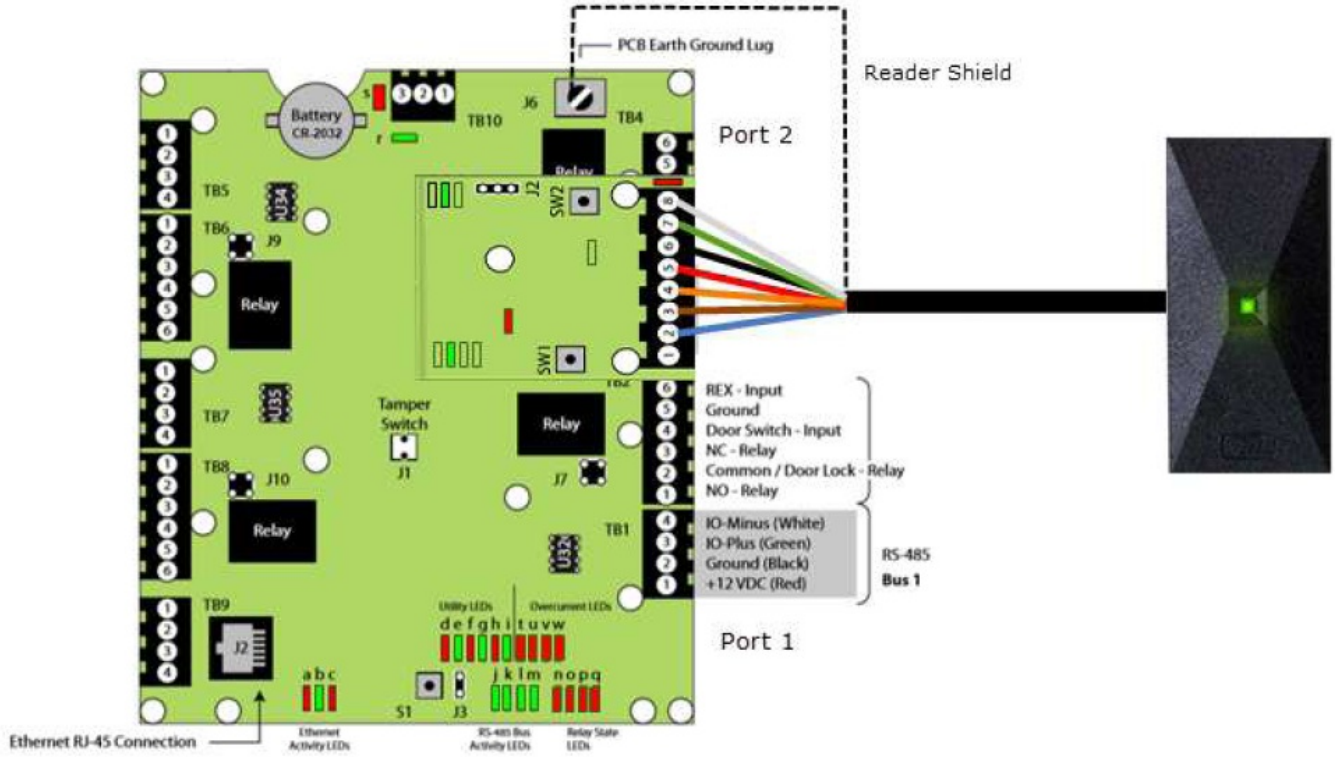
1.2 MS Reader Wiring Diagram



1.3 Wiegand Reader Wiring Diagram (Single Line LED)



1.4 Wiegand Reader Wiring Diagram (Dual Line LED)



2.0 Reader Grounding

As shown in the reader diagrams, the shield/drain wire of any reader/peripheral cables

MUST be terminated to one of the following points

- the green ground lug (J6) on the controller (illustrated),
- any corner screw attaching the controller to the enclosure,
- Pin 3 ofTB10,
- or the ground lug of the enclosure.

WARNING: Failure to properly earth ground the reader/peripheral drain wire may result in unreliable communication or operation of the attached peripheral.

3.0 Specifications

3.1 Size

- When mounted on the NXT Controller
  – 2.50 inches high by 2.0 inches wide by 1.0 inch deep, not including wiring connectors
  – 6.4 cm by 5.0cm by 2.5cm

3.2 Power/Current Requirements

- 10 to 14 VDC@ 100 mA (maximum current draw at 12 VDC)

3.3 Operating Conditions

- 32°F to 150°F (0°C to 60°C) – 0% to 90% Relative Humidity, non-condensing

3.4 Cable Requirements

The total RIM to reader cable length must be less than 500 feet.

Note: On long cable runs, cable resistance causes a drop In voltage at the end of the cable run. Ensure the appropriate power and current for your device is available at the device at the end of the cable run.

Table 1: Cable Requirements

Connection	Total Run Length	# of Conductors	Shielded	Stranded	Twisted Pair	AWG[a]	Belden Equivalent
RIM to Keri-MS or Wiegand Single-line LED Reader	500 feet	6	Y	Y	N	22	9536
RIM to NXT-6RK or Wiegand Dual-line LED Reader	500 feet	7	Y	Y	N	22	9537

a. Heavier gauges than those listed are always acceptable.

4.0 RIM Configuration

The RIM allows either Kari MS or Wiegand readers/credentials to be recognized and read by NXT controllers. The default RIM configuration is for an MS-Series Reader using two line LED control (multi-color). Perform the following steps to configure the RIM for your application. Refer to the Drawing on page 1 for switch and LED locations, and the Table on page 3 for switch and LED definitions.

4.1 Enter Programming Mode

1. Hold down both SW1 and SW2 for about two seconds.
2. All seven LEDs on the RIM will flash three times.
3. Release both SW1 and SW2, and the unit is now in configuration mode.

4. Once in configuration mode, SW1 steps between options – SW2 selects the currently displayed option.

4.2 Select Your Reader Type

The Keri MS (D4), Wiegand (D5), Keri Keypad (D6), and Wiegand Keypad/Reader Combo (D7) types are currently supported.

1. Press SW1 to step through the supported reader types. Each press of SW1 will step to the next reader type.
2. When the desired reader type LED is illuminated, press SW2. The reader type is now set.
3. If you have selected Wiegand (D5), Keri Keypad (D6), or Wiegand Combo (D7) reader mode, the unit is now ready to configure the RIM's LED line control mode.
Skip to section 3.3 for configuration instructions.
4. If you have selected Keri MS (D4) reader mode, press SW2 twice. The RIM is now configured and the unit reboots to accept the new parameters. All seven LEDs will flash three times as the unit reboots with the new configuration parameters. When the LEDs stop flashing, the unit is operational.

Note: Do not remove power from the RIM during the reboot process. Loss of power during rebooting will invalidate any configuration changes you have made.

4.3 Select Your Wiegand Reader LED Line Configuration

Dual-line control is the default RIM setting for LED line configuration. This is the desired setting for the Keri Keypad reader. Perform the following steps to switch between single-line and dual-line LED control.
1. Press SW1 to step through the supported LED line configuration types. Each press of SW1 will step to the next LED line type.
2. When the desired LED line control mode LED is illuminated, press SW2. The LED line control mode is now set.

3. Press SW2 twice and the RIM is now configured and the unit reboots to accept the new parameters.
4. The RI M's LEDs will be off for about 10 seconds as the unit resets itself. All seven LEDs will flash as the unit is rebooting with the new configuration parameters. When the LEDs stop flashing, the unit is operational.

Note: Do not remove power from the RIM during the reboot process. Loss of power during rebooting will invalidate any configuration changes you have made.

4.4 Verifying RIM Configuration

The corresponding reader type and line control mode LEDs are illuminated during operation. To confirm your configuration settings, refer to the drawing at the beginning of the document for switch and LED locations, and the following table for switch and LED definitions.

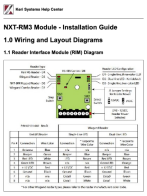
Table 2: Reader Interface Module LED Guide

LED	Reader Type
D4	Keri MS Series *Keri factory default setting*
D5	Wiegand
D6	Keri NXT-6RK Keypad
D7	Wiegand Reader/Keypad Combo
	LED Control
D1	single wire LED control – red, green, amber, off
D2	two wire LED control – red, green, amber, off *Keri factory default setting*
D3[a]	single wire LED control – red, green, off *standard setting for Wiegand Readers using a single wire to drive the LED (no amber)*
	Communication Active
D8	RS-485 Bus
	J2 Reader Power Setting
D10	lit when set for 12 VDC reader power

a. Table is valid for RI.M Finnware v03.01.06 and later. Please upgrade your firmware as necessary.

https://help.kefisys.com/portal/en/kb/articles/rm3-installation#10Wiring_and_Layout_Diagrams

Documents / Resources

	Keri Systems NXT-RM3 Reader Interface Module [pdf] Installation Guide NXT-RM3 Reader Interface Module, Reader Interface Module, Interface Module, Module

References

- User Manual