



333 Bayview Avenue, Amityville, New York 11701
For Sales and Repairs, (800) 645-9445
For Technical Service, (800) 645-9440 or visit us at
Tech.NapcoSecurity.com
(Note: Technical Service is for security professionals only)
Publicly traded on NASDAQ Symbol: NSSC

© NAPCO 2026

Getting Started Guide

R-MI 13.56MHz MIFARE Smart Card Reader

WI2822.bLF 4/26

NAPCO's 13.56MHz **R-MI MIFARE Smart Card Reader** is for use with NAPCO's MIFARE EV1 / EV2 / EV3 smart cards. The **R-MI MIFARE Smart Card Reader** provides secure, contactless smart card technology with fast data transmission and advanced encryption. 13.56MHz MIFARE smart cards offer stronger protection against unauthorized access compared with traditional 125kHz proximity cards. Stock Mifare cards and fobs can be purchased using Part Num: Mi42-25 for a 25 pack of ISO cards and use Part Num: Mik42-10 for a 10 pack of fobs. *To order custom NAPCO MIFARE smart cards for your installation, contact Sales customer service at (800) 645-9445.*

Carefully follow this **R-MI** Getting Started Guide to ensure all wiring connections are made accurately.

Features

- Indoor / Outdoor use
- Single / Dual Line LED Control.
- Standard Wiegand D0-D1 Data Output
- Field Firmware Upgradable using the **PR-PROG Reader/Programmer**
- Auto Configuration of Single Line LED or Dual Line LED Control*
- Low Current Consumption
- Up to 500ft. Reader to Panel Wire Length

Normal Operation

- Connected to an access control panel: Presenting a supported smart card will result in reader beeping, the blue LED turns off and the green LED turns on. Indicates the smart card has been validated and door is ready to open
- If NOT connected to an access control panel: Presenting a supported smart card will result in the reader beeping and the blue light bar flashing. The green light bar will *not* turn on

Cable Requirements

Use minimum 24AWG multi-conductor stranded wire with an overall foil shield (e.g., Belden 9535 or similar 5-conductor 24AWG gauge wire) comprising the physical layer of the Wiegand interface (power, ground, Data 0, Data 1, and/or beeper and LED). Alternatively use Belden 9539 or similar 9-conductor 24AWG wire.

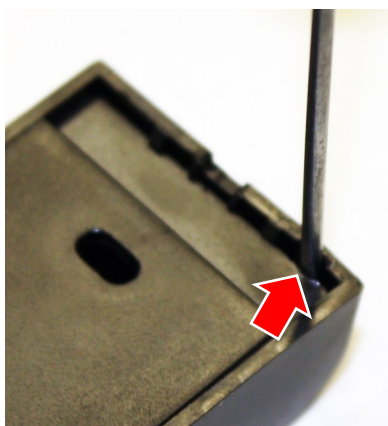
Mounting

Suitable for indoor or outdoor installations.

To detach cover

BEFORE installation:

As shown in the accompanying image, insert a



Reader Wiring

Wiegand	
Conductor	Function
Red	DC (7.5-16 VDC)
Black	DC Negative
Green	Data 0
White	Data 1
Brown	Green/Blue LED Control Input ^a
Orange	Green LED Dual Line Control ^b
Yellow	Ignore Smart Card Serial Number
Blue	Sounder
Drain	Shield Ground

WIRING NOTES:

^a **Single Line LED:** This is the standard operating mode (Orange conductor not used). The LED is Blue when the reader is idle and flashes when a card is presented. The LED turns Green when the Brown Conductor is pulled low by the access control panel.

^b **Dual Line LED:** This mode uses both the Brown and Orange conductors. The Brown conductor controls the Blue LED and the Orange conductor controls the Green LED, as determined by the access control panel.

Unused conductors should be trimmed, isolated and taped back to prevent unintended current flows.

small flathead screwdriver into the bottom gap between the cover and base and pry the cover away from the alignment tabs.

To detach cover AFTER mounting: Insert a medium-sized flathead screwdriver into the bottom hole and twist.

Use the supplied mounting screws or security screws appropriate for the installation and/or mounting surface. Supplied are two #6-32 screws for single gang box mounting (cover plate also supplied); also supplied are two #6 sheet metal screws and drywall anchors. Stainless steel screws recommended for outdoor installations.

Data Output

Wiegand D0-D1 26-bit to 37-bit.

Signals

Note that the Brown, Orange, Yellow, and Blue signal lines are active low.

Yellow Wire Input

To ignore the smart card serial number, connect the yellow wire to the black **DC Negative** wire. To detect the smart card serial number, simply isolate the yellow wire.

Shield Connection

The shield and the reader ground wire should be tied together at the access panel and connected to an earth ground at one point. Follow all earth-grounding requirements as detailed by the access control panel manufacturer.

*By default, the unit powers up in **Single Line LED** mode; but when the orange conductor sees activity (i.e., pulled active low to ground by the control panel or by another means) and the unit simultaneously acknowledges the presence of any compatible smart card, the unit will change to **Dual Line LED** mode. Refer to **Reader Wiring**, above.

Power

Power the reader by an access control panel or an independent external power supply.

When the unit is first powered, both LEDs will turn on; to ensure voltage stability, a 5-second delay is included in this power-up sequence whereby the sounder and green LED will activate several times. When the 5-second delay ends, the blue LED will light and remain lit.

Note: The access panel controls LED functionality, such as switching the light bar to green (see **Reader Wiring**).

Voltage / Current

Voltage:

- Rated 7.5VDC to 16VDC

Current:

- 55mA (idle/standby)
- 210mA (peak) while active @ 12VDC

The use of 22AWG (or heavier) wire for longer cable runs is recommended.

Specifications

Supports NAPCO MIFARE 13.56MHz EV1/EV2/EV3 Smart Cards

Operating Temperature

-40°F to +150.8°F (-40°C to +66°C)

Operating Humidity

0% to 90% Relative Humidity

IP Rating

IP67-rated for outdoor use

Typical Card Read Range

Up to 1.5 inches (3.8cm)

Connections

All wiring should be performed within all appropriate local electrical codes.

Agency Listings

ETL Listed: Conforms to UL Standard: UL 294



Access Control Levels

- **Destructive Attack:** Level I
- **Line Security:** Level I
- **Endurance:** Level IV
- **Standby Power:** Level I

Troubleshooting

If the reader does not function correctly when a smart card is presented, see the table below for possible causes.

Symptom	Possible Cause
Short smart card read range or blue light bar will not light	Typical card read range is up to 1.5 inches (3.8cm). Verify a minimum of 7.5V at the reader. If voltage is too low, the cable may be too thin.
Short smart card read range or no read range	Noise on the power supply (temporarily power unit with a 9V battery to determine if performance improves). Improper panel and shield grounding or the use of unshielded wire.
No response from reader when smart card is presented	Verify correct card type. Unit may be defective.

If performance is still not improved after taking corrective action, remove power by disconnecting the reader from the access control panel and power the reader with a separate power supply or a 9VDC battery, then re-test smart card functionality. If performance is not improved, the unit may be defective; contact NAPCO Technical Support at 1-800-645-9440.

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different

from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radiation Exposure Statement

The device has been found to be compliant to the requirements set forth in CFR 47 Sections 2.1091 for an uncontrolled environment. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.