

## ideaReader 5100 125kHz LONG RANGE PROXIMITY READER

### Introduction:

The ideaReader 5100 is a low cost and high performance long range 125kHz proximity card reader for reading ID code from uem4100 compatible read-only tags.

The ideaReader 5100 is ideal for installations incorporating parking control, personal identification, access control and through-wall, hands-free, logistic etc. and long read range applications.

The ideaReader 5100 reader packages all the electronics in one rugged, weatherized epoxy resin enclosure designed to withstand harsh environments as well as provide a high degree of vandal resistance for reliable performance anywhere, attractive and easy-to-install indoor/outdoor



### Features:

- High sensitivity and reliable performance
- Built-in transceiver antenna for maximum performance
- Maximum effective distance up to 1000mm
- Less than 100ms decoding time
- Low power dissipation with single power supply
- Multiple output format optional
- Built-in buzzer
- Potted for environmental protection

### Specifications

- **Power Requirement**

**Operating Voltage** :+12 VDC (linear power supplies are recommended)

**Max Average Current 12V:** 300mA

- **Interface/output format** Wiegand 26,Wiegand 34,RS232,RS485 or other optional

- **Cards/Tags** compatible with EM4100

- **Typical Maximum Read Range**     Range up to 600mm even more longer in ideal conditions
- **Frequency**                             125kHz typical
- **Transponder**                          Read Only
- **Audio/visual Indication**     Buzzer output
- **Operating Temperature**     -20° to + 55°C
- **Color**                                         Grey
- **Dimension (Width x Heightx Depth)**     239mm x 239mm x 32mm
- **Weight**                                     about 1.5 Kg
- **Diagnostics**                             On reader power up, a internal self-test routine checks and verifies the set-up configuration, determines the internal or external control of the LED and beeper, and initializes the reader operation.
- **LED Control(default)**                             internal/single
- **LED type**                                         Red/Green
- **Beeper Control(default)**                             Beeper enabled

## Interface/Output format Structure

### Wire Color Instruction

Power(DC+12V)	----	RED
Power(GND)	----	BLACK
Data0	----	GREEN
Data1	----	WHITE
LED	----	YELLOW
BEEP	----	BLUE

## Operation:

Proximity cards are presented to the front of the ideaReader 5100. The beeper sounds when the proximity cards is read and the message is transmitter the Host computer or interface panes.

## **Trouble Shooting:**

When powered up, the ideaReader 5100 takes a self-test to ensure the best reading performance with the buzzer beeping continually. When the self-test ends, the buzzer will give out a bug beep and the ideaReader 5100 enters the normal working mode. If the buzzer continues beeping without stop for a long time, please turn off the power and check out environment and power supply to ensure locating the ideaReader 5100 in a good working condition. In case of problems the following procedure should be followed: Failure to finish self-test with the buzzer beeping continually or with a short reading distance

1. Turn off the power to the ideaReader 5100
2. Check the power input connections making sure that they are not reversed
3. Check the power supply complying with specification
4. If the supply has a current limit, set this to 350mA
5. Make sure to install the ideaReader 5100 in an environment without large area conductors nearby a mounting on a conductive surface. In self-test state, do not apply any tags in ideaReader 5100's functional area
6. Try to change the installment of the ideaReader 5100 to another place to check if the trouble still exists

## **Radio Frequency Interference**

Motors and electronic devices generate RF noise that may interfere with the reception of the signal from a transponder. The effect of RF noise is typically a reduction of read range. The ideaReader 5100 is susceptible to RF interference, as are all devices that receive RF signals. The read range is affected by the amount of interference (noise) in the area. Common sources of RF interference are power supplies, electrical and electronic equipment, some types of lighting, computers and monitors, motors and generators. Moving the reader to a location known to be free of interference and testing read range there will help to isolate RF interference as a factor in low read range situations.

The ideaReader 5100 should not be mounted within six feet of any monitors (VDTs or CRTs) because the scan frequencies of most monitors include frequencies that may interfere with signal received from the access control cards.

**Mounting:**

Mount on non-metallic surfaces for optimal read range performance.

**Diagnostics:**

On reader power-up, an internal self-test routine checks and verifies the setup configuration, determines the internal or external control of the beeper, and initializes the reader's operation.

**Indication:**

when a proximity card is presented to the reader, the beeper sounds.

**Indoor/outdoor design:**

The ideaReader 5100 sealed in a rugged, weatherized epoxy resin enclosure designed to withstand harsh environments as well as provide a high degree of vandal resistance for reliable performance anywhere.

**Power supply:**

The ideaReader 5100 reader can be operated at 12 VDC linear power. If the reader power overrun 15VDC is applied, can't be operated, or If AC power is applied, circuit damage can result, 12VDC linear power supplies are recommended.

Noise from devices such as switching power supplies, computer monitors, and arc welders can reduce the read range or make the unit inoperable. Keep these devices at least 10 ft away from the reader, With the ideaReader 5100 and power supply wired together, apply power to the reader.

**CAUTION:**

12VDC linear power supplies are recommended. Failure to provide an adequate current capacity power supply will result in reduced read range or circuit damage.

Read range will be reduced if located on metal surfaces or in the vicinity of metal objects or metal is installed nearby or the affect of switching power supplies, computer monitors, electrical and electronic equipment, motors and generators etc.

#### FCC warning 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 or more 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this 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.