AY-K6255

CSN SELECT

ROSSLARE SECURITY PRODUCTS

MIFARE Classic CSN Smart Card Reader (Rev. A)
Installation and User Manual

1. Introduction

The AY-K6255 is a contactless smart card reader for use in access control system solutions. This reader reads the Card Serial Number (CSN) of MIFARE Classic® EV1 (ISO14443A) credentials.

The standard readers output the Wiegand CSN data in 26-bit format. Other Wiegand formats are available upon request.

The reader is approved by the Institute for Science and Halacha for use on the Sabbath.

Figure 1: AY-K6255

2. Technical Specifications

2.1 Electrical Characteristics

Power Supply Type	Regulated
Operating Voltage Range	8 to 16 VDC
Current @ 12 V	Standby: 55 mA, max: 80 mA
Read Range*	5 cm (2.0 in.)
LED/Buzzer Controls**	Dry Contact, N.O.
Tamper Output**	Open collector, active low, max. sink current 16 mA
Maximum Cable Distance to Controller	Wiegand: 150 m (500 ft) with 18-AWG cable
	OSDP (RS-485): 1,200 m (4,000 ft) with 2x2 18-AWG twisted shielded cable

* Measured using a Rosslare MIFARE Classic EV1 (ISO card). Read range with other credential technologies may vary. Range also depends on electrical environment and proximity to metal.

** Control lines are factory programmable and can be custom configured upon request.

2.2 Environmental Characteristics

Operating Temp. Range	-35°C to 66°C (-31°F to 150°F)
Operating Humidity Range	0 to 95% (non-condensing)
Outdoor Usage	Weather-resistant, UV-resistant, meets IP65, epoxy-potted, suitable for indoor and outdoor use

2.3 Physical Characteristics

Dimensions (H x W x D)	80.5 x 40.5 x 14.7 mm (3.2 x 1.6 x 0.6 in.)
Weight	73 g (2.6 oz)

3. Installation

3.1 Installation Kit

The installation kit consists of the following items to be used during the installation procedure:

- 1 backplate
- 1 self-adhesive mounting label template
- 1 metal clip
- 2 pan head mounting screws and screw anchors
- 1 Torx key tool and one Torx security screw

3.2 Mounting

Before mounting, you should determine the best location for the reader.

To mount the reader:

1. Peel off the back of the self-adhesive mounting label template and place it at the required mounting location.
2. Using the template as a guide, drill two holes (hole size and position is indicated on the mounting template) for mounting the reader onto the surface.
3. Insert a screw anchor into each hole.
4. Drill a 10-mm (7/16") hole for the cable. If mounting on metal, place a grommet or electrical tape around the edge of the hole.
5. Wire the reader to the host as described in Section 3.3. A linear type power supply is recommended.
6. Remove the security screw from the bottom of the unit.
7. Remove the reader's snap-off front cover.

8. Align the two holes of the backplate and of the reader with those drilled in the wall and firmly attach the reader to the wall with two screws (Figure 2).

Figure 2: Mounting Screws
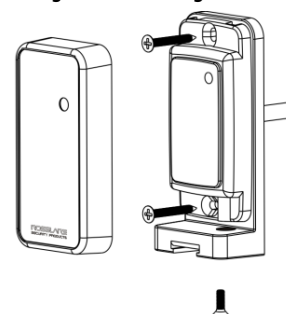
9. Relocate the front cover onto the reader.
10. Return the security screw to the bottom of the unit.
11. Insert the metal clip into the slot at the base of the backplate (Figure 3).

Figure 3: Metal Clip
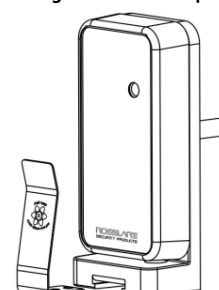
3.3   Wiring

The AY-K6255 is supplied with a 10-conductor 56-cm (22-in.) pigtail with exposed wires coated with solder.

To connect the reader to the controller:

1. Select the appropriate connections according to Table 1.

2. Prepare the controller cable by cutting its jacket back 3 cm (1¼") and strip the insulation from the wires about 1.2 cm (½").

3. Splice the reader's pigtail wires to the corresponding controller wires and cover each joint with insulating tape.

4. If the tamper output is being utilized, connect the purple wire to the correct input on the controller.

5. Trim and cover all unused conductors.

Note	• The individual wires from the reader are color coded according the Wiegand standard. • When using a separate power supply for the reader, this supply and that of the controller must have a common ground. • The reader's cable shield wire should be preferably attached to an earth ground, or a signal ground connection at the panel, or the power supply end of the cable.

Table 1: Wiring

Wire Color	Function
Red	Power
Black	Ground
Green	Data 0 / Data
White	Data 1 / Clock
Orange	Green LED control
Brown	Red LED control
Purple	Tamper output
Yellow	Sabbath (Buzzer)
Blue	RS-485 – A*
Gray	RS-485 – B*

* RS-485 is used for firmware update.

4. Sabbath Mode

To activate the Sabbath mode, the yellow wire must be connected to ground.

When in this mode, the reader behaves as follows:

▪ The reader is off for 4 seconds.

▪ While the reader is off, the user can present a card.

▪ The reader wakes up for 200 ms.

To de-activate the Sabbath mode, the yellow wire must be disconnected.

Declaration of Conformity

AY-K6255SH: FCC ID = GCD-AYX6255

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
    - This device may not cause harmful interference.
    - This device must accept any interference received, including interference that may cause undesired operation.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

Limited Warranty

The full ROSSLARE Limited Warranty Statement is available in the Quick Links section on the ROSSLARE website at www.rosslaresecurity.com. Rosslare considers any use of this product as agreement to the Warranty Terms even if you do not review them.

Contact Information

United States and Canada
Rosslare Security Products, Inc.
Southlake, TX, USA
Toll Free: +1-866-632-1101
Local: +1-817-305-0006
Fax: +1-817-305-0069
support.na@rosslaresecurity.com

Europe
Rosslare Israel Ltd.
Rosh HaAyin, Israel
Tel: +972-3-938-6838
Fax: +972-3-938-6830
support.eu@rosslaresecurity.com

Latin America
Rosslare Latin America
Buenos Aires, Argentina
Tel: +54-11-4001-3104
support.la@rosslaresecurity.com

China
Rosslare Electronics (Shenzhen) Ltd.
Shenzhen, China
Tel: +86-755-8610-6842
Fax: +86-755-8610-6101
support.cn@rosslaresecurity.com

Asia Pacific, Middle East, Africa
Rosslare Enterprises Ltd.
Kowloon Bay, Hong Kong
Tel: +852-2795-5630
Fax: +852-2795-1508
support.apac@rosslaresecurity.com

India
Rosslare Electronics India Pvt Ltd.
Tel/Fax: +91-20-40147830
Mobile: +91-9975768824
sales.in@rosslaresecurity.com

0706-0960638+00