

AY-V12B

Multi-Reader

Installation Manual



ROSSLARE
SECURITY PRODUCTS

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Notice and Disclaimer

This manual's sole purpose is to assist installers and/or users in the safe and efficient installation and usage of the system and/or product, and/or software described herein.

BEFORE ATTEMPTING TO INSTALL AND/OR USE THE SYSTEM, THE INSTALLER AND THE USER MUST READ THIS MANUAL AND BECOME FAMILIAR WITH ALL SAFETY REQUIREMENTS AND OPERATING PROCEDURES.

- The system must not be used for purposes other than those for which it was designed.
- The use of the software associated with the system and/or product, if applicable, is subject to the terms of the license provided as part of the purchase documents.
- ROSSLARE exclusive warranty and liability is limited to the warranty and liability statement provided in an appendix at the end of this document.
- This manual describes the maximum configuration of the system with the maximum number of functions, including future options. Therefore, not all functions described in this manual may be available in the specific system and/or product configuration you purchased.
- Incorrect operation or installation, or failure of the user to effectively maintain the system, relieves the manufacturer (and seller) from all or any responsibility for consequent noncompliance, damage, or injury.
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- All graphics in this manual are for reference only, some deviation between the image(s) and the actual product may occur.
- All wiring diagrams are intended for reference only, the photograph or graphic of the PCB(s) are intended for clearer illustration and understanding of the product and may differ from the actual PCB(s).

1. Introduction

The AY-V12B Multi-Reader is an RFID proximity card reader, utilized with access control systems. The reader is compatible with standard and passive EM-type cards and tags, and features an output format of standard Wiegand 26-Bit.

The reader also contains two LED indicators that show the unit's status upon power up and the status for card reading attempts.

This manual contains the following information:

- Installation instructions
- Wiring instructions
- Operation instructions

2. Technical Specifications

Electrical Characteristics

Power Supply Type	Linear type (recommended)
Operating Voltage Range	5 to 16 VDC
Absolute Maximum (non-operating)	18 VDC
Input Current	Standby: 120 mA Read: 140 mA
Tamper Output	Open collector, active low, max. sink current 30 mA
Maximum Cable Distance to Controller	150 m (500 ft)
Card Output Format	Wiegand 26-Bit
Max. Proximity Card Read Range*	22 cm (9 in.)

Environmental Characteristics

Operating Temp. Range	-32°C to 63°C (-25°F to 145°F)
Operating Humidity Range	0 to 95% (non-condensing) Suitable for outdoor use (IP54)

Physical Characteristics

Dimensions (H x W x D)	125 x 125 x 21 mm (4.9 x 4.9 x 0.8 in.)
Weight	285 g (10.1 oz)

* Measured using a Rosslare proximity card or equivalent. Range also depends on electrical environment and proximity to metal.

3. Installation



Installation of an RFID reader adjacent to metallic surfaces might alter the reader's specifications. To diminish this interference, use a plastic spacer when mounting the reader.

3.1 Installation Kit

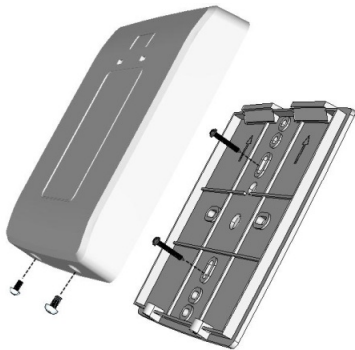
The installation kit comprises of the following items that are to be used during the installation procedure:

- One installation template
- Two pan head screws and wall plugs
- One L-shaped security screw tool
- Two security screws

3.2 Installing the AY-V12B

When installing the reader, you must remove the snap-off cover to access the screw holes (Figure 1).

Figure 1: Removing the Top Cover



Installation

The reader must be mounted with the appropriate screws (not supplied), as described in the template provided.

To install the reader:

1. Determine an approximate location for the installation of the reader.
2. Peel off the back of the self-adhesive installation label template and locate it at the required location.
3. Using the template as a guide, drill two holes (the size of which are indicated in the template) to install the reader onto the surface.
4. Drill a 10-mm ($\frac{7}{16}$ ") hole for the cable. In the event that you are installing the reader on metal, place a grommet or electrical tape around the edge of the hole.
5. Route the interface cable from the reader to the controller. A linear type power supply is recommended.



The reader can also be mounted using strong epoxy glue. After application, the reader should be firmly held in place until the glue dries.

4. Wiring Instructions

The AY-V12B is supplied with a 46-cm (18") pigtail, comprising a 6-conductor cable.

To connect the reader to the controller:

1. Prepare the reader cable by cutting the cable jacket back 3.2 cm (1¼") and stripping the wire 1.3 cm (½").
2. Prepare the controller cable by cutting the cable jacket back 3.2 cm (1¼") and stripping the wire 1.3 cm (½").
3. Splice the reader's pigtail wires to the corresponding controller wires and cover each joint with insulating tape.

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

Table 1: Wiring Colors

Reader	Color	Function
5~16 VDC	Red	DC Input
Shield/Ground	Black	Ground
Data 1	White	Data 1
Data 0	Green	Data 0
LEDCTLO	Brown	LED Control
Tamper	Purple	Tamper

4. Trim and cover all unused conductors.



- The individual wires from the reader are color-coded according to 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 preferably be attached to an earth ground, or a signal ground connection at the panel, or power supply end of the cable. This configuration is best for shielding the Reader cable from external interference

5. Operation Instructions

The reader should be tested after wiring it to a power supply and the controller.

To test the reader:

1. Power up the reader. The red LED lights turn on. The beeper sounds once.
2. Present the appropriate type of proximity card to the reader. The LED momentarily flashes green and a short beep is emitted, thus indicating that the card was read properly by the reader.

The reader transmits the card's data to the controller. The controller checks the data and if it is valid, the LED changes momentarily to green. It then returns to its idle state (red).

A. 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.



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