AY-R12

Outdoor RGB Illuminated Reader

Installation Manual

ROSSLARE
SECURITY PRODUCTS

Table of Contents

List of Figures

List of Tables

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 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.
- The text, images and graphics contained in the manual are for the purpose of illustration and reference only.
- All data contained herein is subject to change without prior notice.
- In no event shall manufacturer be liable for any special, direct, indirect, incidental, consequential, exemplary or punitive damages (including, without limitation, any and all damages from business interruption, loss of profits or revenue, cost of capital or loss of use of any property or capital or injury).
- 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-R12 Proximity Reader is an RFID proximity card reader and is installed when using access control systems.

This is a unique product that has a variety of options to control the reader's illumination according to various settings.

An example of this are the settings that enable users to set the reader to project green light when everything is normal and red in case of emergency; this is done by adjusting the inputs accordingly.

This product is compatible with any controller that supports the Wiegand 26-Bit protocol (AC-215/225/425/525 panels; AC-015, AC-020, and AC-115 controllers; and AxTraxNG software), as well with any third-party controllers that support the same Wiegand input.

The panel links are used to set various conditions between events and outputs to get the required illumination from the reader.

1.1 Features

- Stylish and practical application to add color to any environment enabling a high quality high-tech atmosphere
- Seven different colors to create a unique ambience
- Sixteen pre-programmed color schemes that are enabled using wired inputs
- Optical back and cover tamper sends a signal to the control panel when removed from wall or housing opening
- Built-in 125 kHz Reader for RFID cards with a read range of up to 8 cm (3.15 in.)
- Complies with RoHS, WEEE, CE standards for international distribution

2. Technical Specifications

Electrical Characteristics	
Power Supply Type	Linear type (recommended)
Operating Voltage Range	12–16 VDC
Maximum Input Current	Standby: 100 mA Read: 150 mA
Tamper Output	Open collector, active low, max. sink current 16 mA
Read Range* (max)	8 cm (3.2 in.)
Maximum Cable Distance to Controller	150 m (500 ft)
RE Modulation	ASK @ 125 kHz
Regulatory Approvals	CE
Environmental Characteristics	
Operating Temp. Range	-31°C to 63°C (-25°F to 145°F)
Operating Humidity Range	0 to 95% (non-condensing)
Physical Characteristics	
Height x Width x Depth	120 x 89 x 21 mm (4.7 x 3.5 x 0.8 in.)
Weight	202 g (7.1 oz)

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

3. Mounting Instructions

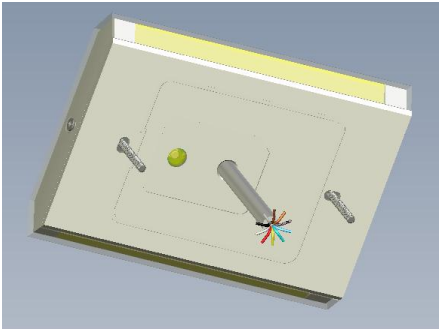
> Note: Installation of an RFID reader adjacent to metallic surfaces might alter the reader's specifications. To diminish this interference, use a plastic spacer when mounting the reader.

When mounting the reader, you must remove the snap-off cover to access the screw holes.

To mount the reader:

1. Determine an appropriate mounting position for the reader.
2. Screw off the back of the unit and place it at the desired mounting position.
3. Using the template as a guide, drill two holes (hole size is indicated on mounting template) for mounting the reader to the surface (Figure 1).

Figure 1: Mounting Template



4. Drill a 10-mm ($^{7}/_{16}$") hole for the cable.
5. Route the interface cable from the reader to the controller.

> Note: The proximity reader is also mountable using strong epoxy glue. After application, firmly hold the reader in place until the glue dries

4. Wiring Instructions

The AY-R12 is supplied with a 10-wire 45-cm (18") pigtail, comprising a 6-conductor cable.

To connect the reader to the controller:

1. Prepare the reader cable by cutting its jacket back 4.5 cm (1¼") and strip the wires 1.3 cm (½").
2. Prepare the controller cable by cutting its jacket back 3.2 cm (1¼") and stripping the wires 1.3 cm (½").
3. Splice the reader's pigtail wires to the corresponding controller wires and cover each connection.

Table 1: Wiring Colors

Color	Wiring
Black	Ground
Red	Vin
Green	Data 0
White	Data 1
Brown	G.LED
Purple	Tamper
Yellow	SET 0
Blue	SET 1
Gray	SET 2
Orange	SET 3

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

4. 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 preferably be attached to an earth ground, or a signal ground connection at the panel, or power supply end of he cable. This configuration is best fro shielding the Reader cable from external interference

5. Operating Instructions

Table 2 shows the settings for Set 0 through Set 3, which determine the color of the unit's lighting.

Table 2: Operations Table

Operation	Set 0	Set 1	Set 2	Set 3
Green	0	0	0	0
Green with dimming	0	0	0	1
Red	0	0	1	0
Red with dimming	0	0	1	1
Blue	0	1	0	0
Blue with dimming	0	1	0	1
Purple	0	1	1	0
Purple with dimming	0	1	1	1
Yellow	1	0	0	0
Yellow with dimming	1	0	0	1
Light Blue	1	0	1	0
Light Blue with dimming	1	0	1	1
White	1	1	0	0
White with dimming	1	1	0	1
No Illumination	1	1	1	0
7 colors circularly with dimmer	1	1	1	1

1 – Not connected; 0 – Connected to the ground

6. Testing the Reader

Once the reader has been wired to a power supply and the controller, it should be tested.

To test the reader:

1. Power up the reader. The beeper activates 3 times after which the LED lights up green (according to Set 0, Set 1, Set 2, and Set 3 setup). This indicates that the reader is working properly.

   The default is that the reader switches colors circularly. The color can be set according to the input wires.
2. Present the appropriate type of proximity card to the reader. The LED turns green (if set to default) and a short beep is emitted, indicating that the card was read properly by to proximity reader.

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.

AY-R12

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