

*Long range Multi Reader*

*AY-Z12*

*Installation Guide*



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**ROSSLARE**  
SECURITY PRODUCTS



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### 1. Introduction

The AY-Z12 Long-range Reader is an RFID proximity card reader, utilized with access control systems.



**Figure 1 The AY-Z12 Long-Range Reader**

This Manual contains the following information:

- Installation
- Wiring Instructions
- Operation Instructions

The AY-Z12, while easy to install and set up, **must be installed professionally.**

**This product has only one available channel.**

Pursuant to FCC §15.21 [ 54 FR 17714 , Apr. 25, 1989, as amended at 68 FR 68545 , Dec. 9, 2003], changes or modifications made to equipment, which are not expressly approved by Rosslare Enterprises, Ltd., may void the user's authority to operate the equipment.

## 2. Technical Specifications

### Electrical Characteristics

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Power Supply Type	Linear type - recommended
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Operating Voltage Range	10 - 16VDC
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Absolute Maximum (non-operating)	18VDC
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Input Current	Standby: 280mA Read: 330mA
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Tamper Output	Open collector, active low, max. sink current 30mA
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Maximum Cable Distance to Controller	500 ft (150 meters)
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Card Read Distance	Weigand 26 output format with a 23.6" (60 cm) maximum read range*
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### Environmental Characteristics

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Operating Temp. Range	-22°F to 145° F (-30°C to 63°C)
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Operating Humidity	0 – 95% (non-condensing) Suitable for outdoor use (IP54)
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### Dimensions

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Height x Width x Depth	11.81" x 11.81" x 1.0" 300mm x 300mm x 25.4 mm
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Weight	2.35 Lbs. (1066g)
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\* Measured using Rosslare Proximity Card AT-R14 or equivalent. Range also depends on electrical environment and proximity to metal.

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## 3. Installation

### 3.1 The Installation Kit

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

- One Installation Template
- Four pan head screws & wall plugs
- One L shaped security screw tool
- Three Security screws

### 3.2 Installing the AY-Z12 Long Range Reader:



## Installation

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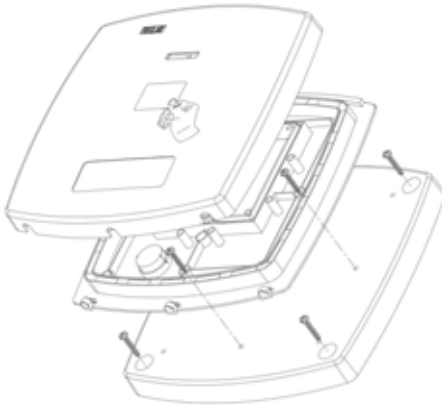
### Figure 2: Removing the Top Cover

Figure 2 shows the front view of the AY-Z12 Long-Range Reader.

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

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

Installing the unit on metal surfaces will reduce the read range considerably, to decrease the affect of the metal surface use Rosslare's MP-Z02 Spacer (sold separately) as described in the image below for a max range of 43cm (17 inch).



**Figure 3: Installing the unit with the MP-Z02 spacer**



### 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 the holes (the size of which are indicated in the template) to install the Reader or spacer onto the surface.
4. Drill a 7/16" (10mm) 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 and use the MP-Z02 spacer.
5. Route the interface cable from the Reader to the Controller. A linear type power supply is recommended.

### 4. Wiring Instructions

The AY-Z12 Reader is supplied with an 18" pigtail, comprising a 6-conductor cable.

#### To connect the Reader to the Controller:

1. Prepare the Reader cable by cutting its jacket back 1¼" and strip the insulation from the wires, ½".
2. Prepare the Controller cable by cutting its jacket back 1¼" and strip the insulation from the wires, 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.

Reader	Color	Weigand Output
10-16 VDC	Red	DC+Input
Shield / Ground	Black	Ground
Data 1	White	Data 1
Data 0	Green	Data 0
LEDCTL	Brown	LED Control
Tamper	Purple	Tamper

4. Trim and cover all unused conductors.



#### Note:

- 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 LED flashes green on power up (it may flash orange), and the Beeper sounds twice, at which point it begins an auto-calibration procedure, this can take up to two seconds, when the calibration is complete a third beep will sound, thus indicating that the Reader is working properly. The LED returns to its idle state (red).
2. Present the appropriate type of proximity card to the Reader. The LED will flash green briefly and a short beep is emitted, thus indicating that the card was read properly.

The Reader transmits the card's data to the Controller; the Controller checks the data, if the card transmission is valid, the LED can change briefly to green. Refer to the Controller's description of LED operation for Controllers with Reader LED control. The LED then returns to its idle state (red)

The range is measured using a Rosslare Proximity Card (P/N AT-11/12) or equivalent. The range also depends on electrical environment and/or proximity to metal.

## Limited Warranty

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### Appendix A: Limited Warranty

ROSSLARE ENTERPRISES LIMITED S (Rosslare) FIVE YEARS LIMITED WARRANTY is applicable worldwide. This warranty supersedes any other warranty. Rosslare's FIVE YEARS LIMITED WARRANTY is subject to the following conditions:

#### Warranty

Warranty of Rosslare's products extends to the original purchaser (Customer) of the Rosslare product and is not transferable.

#### Products Covered By This Warranty and Duration

ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARIES (ROSSLARE) warrants that the AY-Z12 RFID long-range proximity card Reader, to be free from defects in materials and assembly in the course of normal use and service. The warranty period commences with the date of shipment to the original purchaser and extends for a period of 5 years (60 Months).

#### Warranty Remedy Coverage

In the event of a breach of warranty, ROSSLARE will credit Customer with the price of the Product paid by Customer, provided that the warranty claim is delivered to ROSSLARE by the Customer during the warranty period in accordance with the terms of this warranty. Unless otherwise requested by ROSSLARE ENTERPRISES LTD. AND / OR SUBSIDIARIES representative, return of the failed product(s) is not immediately required. If ROSSLARE has not contacted the Customer within a sixty (60) day holding period following the delivery of the warranty claim, Customer will not be required to return the failed product(s). All returned Product(s), as may be requested at ROSSLARE ENTERPRISES LTD. AND /OR SUBSIDIARY'S sole discretion, shall become the property of ROSSLARE ENTERPRISES LTD. AND /OR SUBSIDIARIES.

To exercise the warranty, the user must contact Rosslare Enterprises Ltd. to obtain an RMA number after which, the product must be returned to the Manufacturer freight prepaid and insured

In the event ROSSLARE chooses to perform a product evaluation within the sixty (60) day holding period and no defect is found, a minimum US\$ 50.00 or equivalent charge will be applied to each Product for labor required in the evaluation.

Rosslare will repair or replace, at its discretion, any product that under normal conditions of use and service proves to be defective in material or workmanship. No charge will be applied for labor or parts with respect to defects covered by this warranty, provided that the work is done by Rosslare or a Rosslare authorized service center.

### **Exclusions and Limitations**

ROSSLARE shall not be responsible or liable for any damage or loss resulting from the operation or performance of any Product or any systems in which a Product is incorporated. This warranty shall not extend to any ancillary equipment not furnished by ROSSLARE, which is attached to or used in conjunction with a Product, nor to any Product that is used with any ancillary equipment, which is not furnished by ROSSLARE.

This warranty does not cover expenses incurred in the transportation, freight cost to the repair center, removal or reinstallation of the product, whether or not proven defective. Specifically excluded from this warranty are any failures resulting from Customer's improper testing, operation, installation, or damage resulting from use of the Product in other than its normal and customary manner, or any maintenance, modification, alteration, or adjustment or any type of abuse, neglect, accident, misuse, improper operation, normal wear, defects or damage due to lightning or other electrical discharge. This warranty does not cover repair or replacement where normal use has exhausted the life of a part or instrument, or any modification or abuse of, or tampering with, the Product if Product disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection and testing to verify any warranty claim.

ROSSLARE does not warrant the installation, maintenance, or service of the Product. Service life of the product is dependent upon the care it receives and the conditions under which it has to operate.

In no event shall Rosslare be liable for incidental or consequential damages.

### **Limited Warranty Terms**

THIS WARRANTY SETS FORTH THE FULL EXTENT OF ROSSLARE ENTERPRISES LTD. AND IT'S SUBSIDIARY'S WARRANTY

THE TERMS OF THIS WARRANTY MAY NOT BE VARIED BY ANY PERSON, WHETHER OR NOT PURPORTING TO REPRESENT OR ACT ON BEHALF OF ROSSLARE.

THIS LIMITED WARRANTY IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES. ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE SPECIFICALLY EXCLUDED.

IN NO EVENT SHALL ROSSLARE BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, OR FOR ANY OTHER INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF USE, LOSS OF TIME, COMMERCIAL LOSS, INCONVENIENCE, AND LOSS OF PROFITS, ARISING OUT OF THE INSTALLATION, USE, OR INABILITY TO USE SUCH PRODUCT, TO THE FULLEST EXTENT THAT ANY SUCH LOSS OR DAMAGE MAY BE DISCLAIMED BY LAW.

THIS WARRANTY SHALL BECOME NULL AND VOID IN THE EVENT OF A VIOLATION OF THE PROVISIONS OF THIS LIMITED WARRANTY.

### Appendix B: Technical Support

#### Asia Pacific, Middle East, Africa

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