ROSSLARE
SECURITY PRODUCTS

Installation Instructions
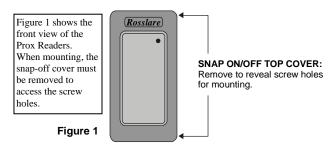**Model Series AY-H12/J12/K12/L12/M12**

The AY-X12 Series Prox Readers are RFID proximity card readers to be installed for use with access control systems.

These Installation Instructions contain the following information:
- Mounting Instructions
- Wiring Instructions
- Operation Instructions

MOUNTING INSTRUCTIONS

Figure 1 shows the front view of the Prox Readers. When mounting, the snap-off cover must be removed to access the screw holes.

SNAP ON/OFF TOP COVER: Remove to reveal screw holes for mounting.

Figure 1

Mount the Reader with the appropriate screws (not supplied) as indicated on the template.

To mount the Reader, perform the following:
1) Determine an appropriate mounting position for the Reader.
2) Peel off the back of the self-stick mounting label template included with the unit and place 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.
4) Drill a 7/16" (10mm) hole for the cable. If mounting 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.

NOTE: The Prox Reader can also be mounted using strong epoxy glue. After application, the Reader should be firmly held in place until the glue dries.
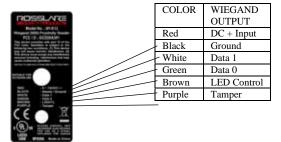
Card Readers are to be used with a Listed access control unit whose power supply is UL Listed Class 2 or equivalent.

WIRING INSTRUCTION

The Prox Reader is supplied with an 18-inch pigtail, having a 6-conductor cable. To connect the Reader to the Controller, perform the following steps:

1) Prepare the Reader cable by cutting the cable jacket back 11/4 inches and strip the wires 1/2 inch.
2) Prepare the Controller cable by cutting the cable jacket back 11/4 inches and strip the wires 1/2 inch.
3) Splice the Reader pigtail wires to the corresponding Controller wires and cover each connection (see Figure 2).
4) If the tamper output is being utilized, connect the purple wire to the correct input on the Controller.
5) Trim and cover all conductors that are not used.

Figure 2 below shows how you should wire the Reader to the Controller.

COLOR	WIEGAND OUTPUT
Red	DC + Input
Black	Ground
White	Data 1
Green	Data 0
Brown	LED Control
Purple	Tamper

Cable Notes:

1) The individual wires coming out of the reader are color coded according to the recommended Wiegand standard.
2) When using a separate power supply for the Reader, this supply and the Controller's power supply must have a common ground.
3) The cable shield wire on the Reader should be attached to an Earth ground (best) or 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.

OPERATION INSTRUCTION

The Reader should be tested after wiring it to a power supply and the Controller. Do this by performing the following steps:

1) Power up the Reader. The LED and Beeper will activate three times. This indicates that the Reader is working properly.
2) Present the appropriate type of proximity card to the Reader. The LED will momentarily flash green and a short beep will be emitted. This indicates that the card was read properly by the Prox Reader.
3) After the card data is processed by the Controller, the Controller can then turn the LED green. Refer to the Controller description of the LED operation if the Reader LED is controlled by the Controller.

Model Number	Output Format	Read Range (Max)*
AY-H12	Wiegand 26	12 cm
AY-J12	Wiegand 26	10 cm
AY-K12	Wiegand 26	8 cm
AY-L12	Wiegand 26	12 cm
AY-M12	Wiegand 26	10 cm

* Measured using Rosslare Proximity Card (P/N AT-R11, AT-T11) or equivalent. Range also depends on electrical environment and/or proximity to metal.

SPECIFICATIONS

Electrical Characteristics:		
Power Supply Type	Linear type recommended	
Operating Voltage Range	5-16 VDC	
Maximum Input Current	AY-K12 AY-J12	Standby: 35 mA Read: 50mA
	AY-H12 AY-L12 AY-M12	Standby: 35 mA Read: 100mA
Tamper Output	Open collector, active low, max sink current 16 mA	
Max Cable Distance to Controller	500 ft. (150 meters)	
RF Modulation	ASK	
Regulatory Approvals	USA: UL 294 & FCC Part 15B	
	Europe: CE Listed	
Operating Temp. Range	-25°F to 145°F (-31°C to 63°C)	
Operating Humidity	0 to 95% (non condensing)	
Dimensions (HxWxD):		
AY-H12	4.33x2.95x0.59 inch (109.91x74.91x15mm)	
AY-J12	4.72x1.65x0.55 inch (119.95x41.95x14mm)	
AY-K12	3.15x1.57x0.50 inch (79.91x39.91x12.8mm)	
AY-L12	5.7x1.69x0.79 inch (144.91x42.91x20mm)	
AY-M12	3.5x3.5x0.59 inch (88.91x88.91x15mm)	

0706-0960166+01