

ROSSLARE SECURITY PRODUCTS

AY-K20C

Multi Format Proximity Card Reader

INTRODUCTION & KEY FEATURES

The AY-K20C Series Prox Readers are RFID proximity card readers to be installed for use with access control systems. This instruction manual contains information regarding the features, mounting, wiring, operating instructions and warranty details for the AY-K20C series readers.



GENERAL FEATURES

- Selectable Wiegand 26-Bit, Wiegand 37-Bit, or Serial RS232
- Reads EM 4102 or Rosslare Format Cards
- Waterproof
- Green LED control line
- Red LED control line
- Buzzer control line
- Hold control line
- Optical tamper sensor
- Tamper output line
- UV Protected polycarbonate housing
- Mounting Template for quick installation

MOUNTING INSTRUCTIONS

Figure 1 shows the front view of the Prox Readers. When mounting, the cover screw, and the snap-off cover must be removed to access the mounting 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.
6. Route the interface cable from the Reader to the Controller.

Note: The prox reader can also be mounted using epoxy glue.

After application, the reader should be firmly held in place until the glue dries.

Note: Card Readers are to be used with control panels whose power supply is UL Listed Class 2 or equivalent.

WIRING INSTRUCTIONS

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 1 inches and strip the wires inch.
2. Prepare the Controller cable by cutting the cable jacket back 1 inches and strip the wires 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.

WIRE COLOR	WIEGAND 26-BIT OUTPUT MODE	WIEGAND 37-BIT OUTPUT MODE	SERIAL (RS232) OUTPUT MODE
Red	+DC	+DC	+DC
Black	Ground	Ground	Ground
Green	Data 0	Data	RS232
White	Data 1	Clock	-
Orange	Green LED	Green LED	Green LED
Brown	Red LED	Red LED	Red LED
Yellow	Buzzer	Buzzer	Buzzer
Blue	Hold	Hold	Hold
Purple	Tamper	Tamper	Tamper
Grey	Connected to GND	Open Input	Connect to +DC

OPERATION INSTRUCTIONS

TESTING THE READER AND CARD READING

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 one time. 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.

OUTPUT SELECTION

For Wiegand 26-bit operation the grey wire should be connected to the ground, for Wiegand 37-Bit operation the grey wire should be held not connected, for Serial RS232 operation the grey wire should be held to +DC (VIN).

LED CONTROL

If the LED control wires (orange and brown) are not used (open) the reader LED will remain red continuously and when successfully reading a card the reader will flash the LED green momentarily. The Bi-Color LED color can be controlled using the orange and brown wires. When the orange wire is held to ground the LED will be green; when the brown wire is held to ground the LED will be red; when both the brown and orange wires are held to ground the LED will be amber.

BUZZER CONTROL

If the buzzer control wire (yellow) is not used (open) the buzzer will beep only when a card is read successfully. The buzzer can also be controlled using the yellow wire. When the yellow wire is held to ground the buzzer will sound.

HOLD CONTROL

The reading of cards can be disabled using the hold wire (blue). If the blue wire is held to ground the reader will ignore all cards placed in its field. If the blue wire is open the reader will read cards normally.

TAMPER OUTPUT

This reader has an optical tamper sensor; when the sensor detects light the tamper output is held to ground; when the sensor does not detect light the tamper output is held high open collector.

READ RANGE

A read range of 8cm is measured using Rosslare proximity cads (P/N AT-11/14) 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	Standby: 65mA Read: 100mA
Tamper Output	Open collector, active low, max. sink current is 16mA
Maximum Cable Distance to Controller	150 meters (500ft.)
RF Modulation	ASK, 125KHz
Card Reading Distance	See Table 1
Cable length	3M
Operating Temperature Range	-31° C to 63° C (-25° F to 145° F)
Operating Humidity	0 to 95% (non condensing)
Dimensions	79.91 x 39.91 x 12.80

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Warranty

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Products Covered By This Warranty and Duration

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