

Rhombus100 Extended Range Reader

Instruction Manual

Contents

Section1 Introduction

Section2 Features

Section3 Specification

Section4 Interface

Section5 Trouble Shooting

1. Introduction

The Rhombus100 is a low cost and high performance proximity reader for reading ID code from uem4100 compatible read-only tags. The Rhombus100 reader features an extended reading range up to 1000mm. It is ideally suited to be applied in automatic parking system, personal identification, access control and production control systems etc.

2. Features

- ⌘ High sensitivity and reliable performance;
- ⌘ Built-in transceiver antenna for maximum performance;
- ⌘ Maximum effective distance up to 1000mm;
- ⌘ Less than 100ms decoding time;
- ⌘ Low power dissipation with single power supply;
- ⌘ Multiple output format optional;
- ⌘ Built-in buzzer;
- ⌘ Built-in external LED control;
- ⌘ Potted for environmental protection.

3. Specifications

Power Requirements	+12Volts linear regulated DC at 200mA typical, 250mA max.
Interface	Wiegand or other optional
Typical Maximum Read Range (In ideal conditions)	Range 1000mm with ISO card
Frequency	125KHz typical
Transponder	Read Only
Audio/visual Indication	Buzzer output with external LED control

Note: Rhombus’ products must work with linear regulated power supply, and other kinds of power supply are prohibited.

4. Interface

Color	Description
Red	+12VDC
Black	GND
Green	DATA0
White	DATA1
Brow	HOLD
Yellow	External LED control(Internal 2K pulled-up)

5. Trouble Shooting

When powered up, the Rhombus100 take a self-test to ensure the best reading performance with the buzzer beeping continually. When the self-test ends, the buzzer will give out a long beep and the Rhombus100 enter the normal working mode. If the buzzer continue beeping without stop for a long time, please turn off the power and check out the environment and power supply to ensure locating the Rhombus100 in a good working condition. In case of problems the following procedure should be followed:

Failure to finish self-test with the buzzer beeping continually or with a short reading distance

- 1) Turn off the power to the Rhombus100;
- 2) Check the power input connections making sure that they are not reversed;
- 3) Check the power supply complying with the specification;
- 4) If the supply has a current limit, set this to 350mA;
- 5) Make sure to install the Rhombus100 in a environment without large area conductors nearby or mounting on a conductive surface. In self-test state, do not apply any tags in Rhombus100’s functional area;
- 6) Try to change the installment of the Rhombus100 to another place to check if the trouble still exists;

Note: Rhombus’ products must work with linear regulated power supply, and other kinds of power supply are prohibited.