UR220-PAS1 13.56MHz RFID Reader

RS485 OUTPUT with Remote I/O

■ INTRODUCTION

The UR220 brings the concept of " Your Reader" which is a stylish, reliable proximity RFID reader with piano finish housing which really shows seamless integration to an intelligent building. For those high end projects, UR220 fulfils its requirement in both excellent performance and flexible appearance, such as changeable housing with customized logo, LED colors or even the buzzer sound which are all configurable to meet wide range of applications in Access control area or Home automation area. With waterproof design, it also serves as a great outdoor reader in all environment.

UR220-PAS1

■ FEATURES

- Mifare Card 13.56MHz Read only
- Outputs according to RS485 characteristics.
- Weather resistant
- Available installed on metal surface
- Reading distance: up to 2~5 cm
- New stylish housing to match modern construction for customer design
- 2ch Digital output can direct to drive Door Lock and Alarm .
- 2ch Digital input for Door Sensor and Door Open Switch with optical coupler to improve noise immunity

■ SPECIFICATIONS

OPERATING

Transmit Frequency	13.56MHz standard
Transponder	ISO1443A Card Read only
Reading distance	2~5 cm with Mifare1K/4K card.
Interface	RS485

ELECTRICAL

| Power Input	7.5 to 12 VDC. Linear supply recommended.
Current Requirements	85 mA @12VDC
Digital Output	Strike Max. Voltage : DC 50 VDC Strike Max. Current : 4.0A (Drain 2.0A Current-Continuous) Strike Time : 3 - 254 seconds (Toggle Mode) Strike Mode : Toggle/Latch (Open Drain)
Digital Input	Optical Coupler isolation Input Voltage : DC 7.5~12 VDC

MECHANICAL

Dimensions	Length : 100 mm / Width : 32 mm / Height : 16.5 mm for UR110 Series Length : 87 mm / Width : 32 mm / Height : 16.5 mm for UR115 Series
Weight	50 gm (Without Cable)
Cable Length	3 M +/- 1cm

ENVIRONMENTAL

Temperature	Operating : 0 ℃ to 55 ℃ Storage : -10 ℃ to 65 ℃
Humidity	Operating : 10 % to 90 % noncondensing Storage : Up to 100% noncondensing

■ TERMINAL / INDICATOR DESCRIPTIONS
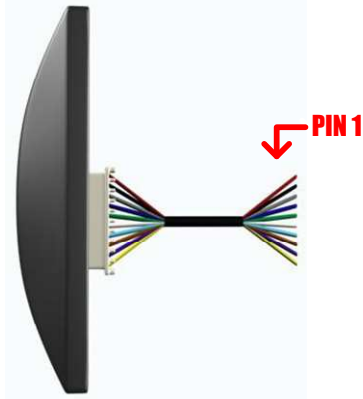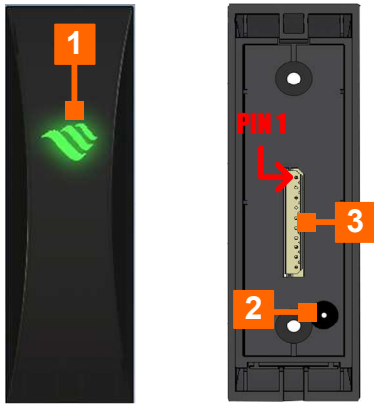
1 LED Indicator

Green	Red	Description
On	Off	Standby
Blink	Off	Read OK
Off	On	ISP Mode
Other		Software Control

2 Sound Indicator

Buzzer	Description
Bi-	Read OK
Other	Software Control

3 9 Pin Terminal

Pin	Color	Signal	In/Out	Description
1	Red	VCC	P	Power 7.5-12 Volts
2	Black	GND	P	Power Ground
3	Gray	D/O 1	O	Digital output 1 (open drain)
4	mazarine	D/O 2	O	Digital output 2 (open drain)
5	Green	485+	I/O	RS485+
6	White	485-	I/O	RS485-
7	Blue	GND	P	Power Ground
8	Brown	D/I 1	I	Digital input 1 (active high)
9	Purple	D/I 2	I	Digital input 2 (active high)
10	Yellow	SEL	I/O	Connector to Grand Enter ISP Mode

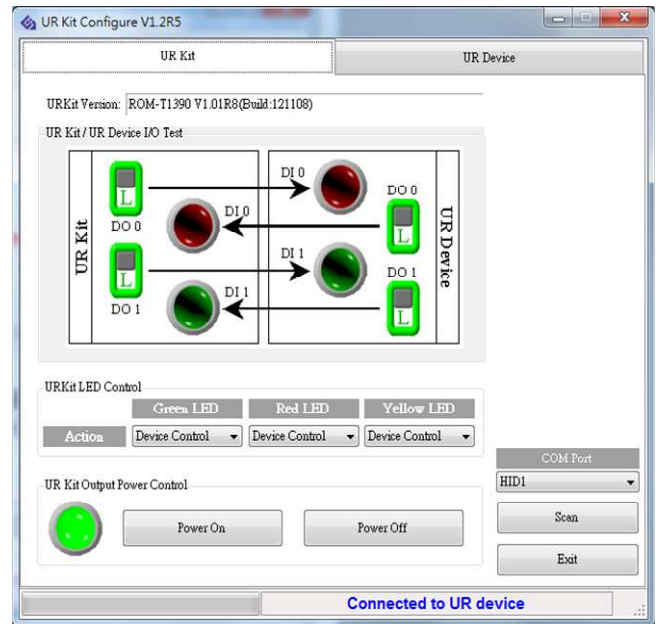# ■ CONNECTION

RS485 Wiring Diagram
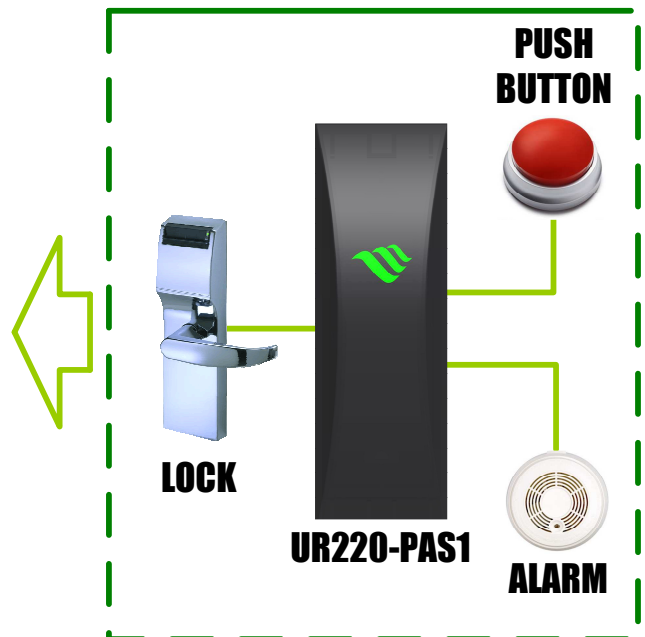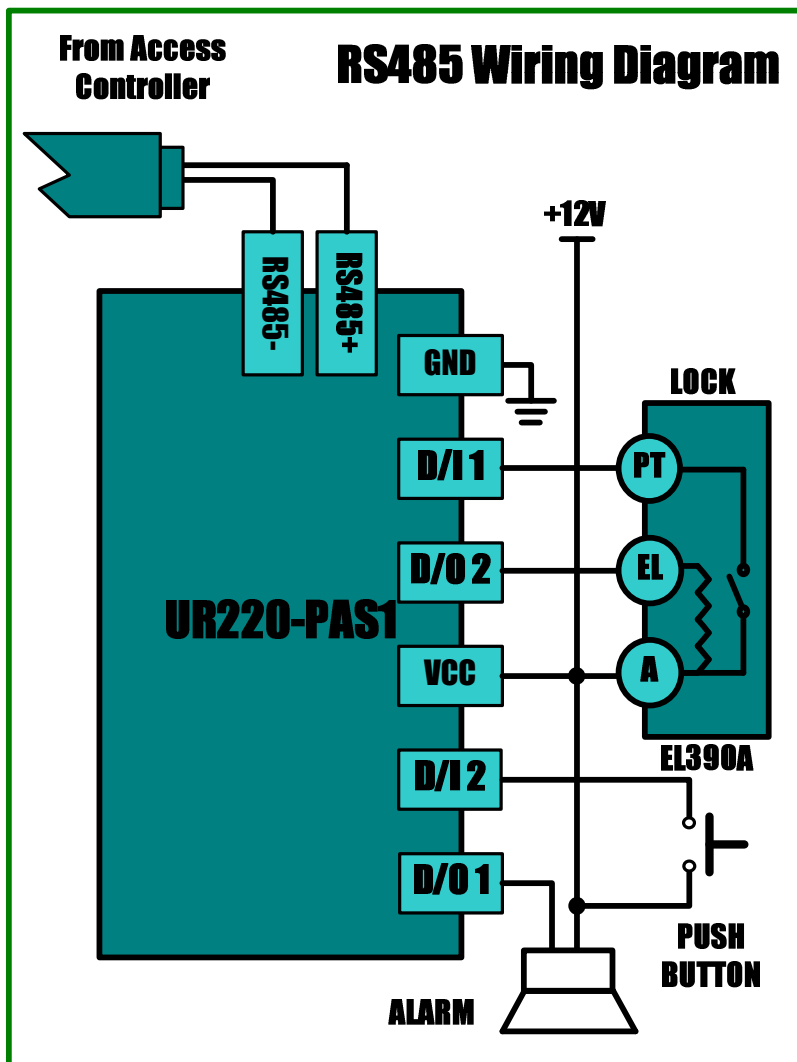
■ Utility Tool

URkit is the Utility tool for UR series reader. With its software(URkit Configure), URkit may perform complete functionalities of UR series reader.

URKIT is an optional device for UR220's configuration,please contact sales for inquiry

■ OUTPUT FORMAT

Data Structure (Serial ASCII)

Baud Rate : 19200,N,8,1

STX(02 HEX)	DATA(8 HEX CHARACTERS)	CR	LF	CRLFETX(03 HEX)

The start character is factory defined as an 'STX' (02 HEX). This is followed by 8 Hex characters of data . The CR\LF characters serve to bring the received screen text back to the left hand side and on the line below after the data bytes have been sent. The 'ETX' (03 HEX) character denotes the end of the current transmission.

Peer to Peer mode

Multiple mode

Host to UR220-PAS1

STX	"D"	ADDR	CR

Host form UR220-PAS1

STX	"A"	","	"UR220"	","	ST	","	Checksum	CR

Baud Rate : 19200,N,8,1

This byte is to inform you the D/I is actived right now.

ST bit		Description
b7-b4	b3-b0	
3	b0	D/I 1 (1: High, 0: Open or Low)
	b1	D/I 2 (1: High, 0: Open or Low)
	b2	D/O 1 (1: On, 0: Off)
	b3	D/O 2 (1: On, 0: Off)

This byte is to inform you the D/I is actived previously.

ST bit		Description
b7-b4	b3-b0	
3	b0	D/I 1 (1: High, 0: Open or Low)
	b1	D/I 2 (1: High, 0: Open or Low)
	b2	none
	b3	none

STX : 0x02   ST : State   ADDR : Address   CR : 0x0D

[Ex.]
Host to UR220-PAS1

STX	"D"	00	CR

Host form UR220-PAS1

D/O 1 ON

STX	"A"	","	"UR220"	","	40	","	Checksum	CR

D/I 1 are data in

STX	"A"	","	"UR220"	","	10	","	Checksum	CR

D/I 2 are data in ,D/I1 have been Data In.

STX	"A"	","	"UR220"	","	21	","	Checksum	CR

Host to UR220-PAS1

STX	"D"	ADDR	CR

Host form UR220-PAS1

STX	"A"	","	"UR220"	","	ST	CR

Host to UR220-PAS1

STX	"J"	"n"	CR

Host form UR220-PAS1

STX	"A"	CR

Baud Rate : 19200,N,8,1

"n"	Description
5	Treble Single Beep
6	Treble Triple Beep
7	Mediant Single Beep
8	Mediant Triple Beep
9	Bass Single Beep
A	Bass Triple Beep
B	D/O 1 On
C	D/O 1 Off
D	D/O 2 On
E	D/O 2 Off
F	* D/O 1 Momentarily On
G	* D/O 2 Momentarily On

* Momentarily Time default 5 seconds.

* This Value is changed by the URKit

[Ex.]
D/O 1 ON
Host

STX	"J"	"B"	CR

Device

STX	"A"	CR

Other Protocol refer the
document"Programming Guide"

■ Installation

For the installation, the inner reader requires two screws to be fixed on the proper location next to the entrance. The outer black housing will apply on top of the reader.
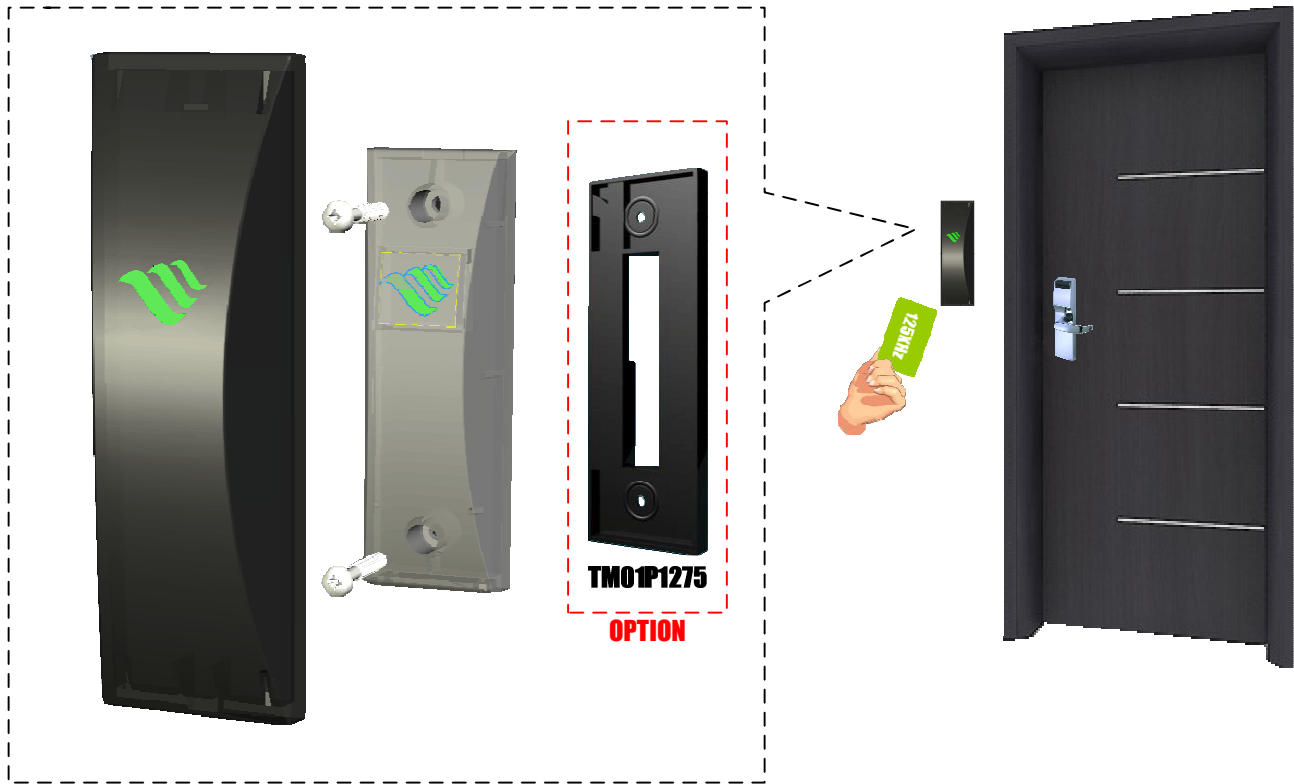
Please pay special attention to the below instruction which demonstrates the proper direction that outer housing needs to be applied to inner reader.

Above picture shows the inside of the outer housing.
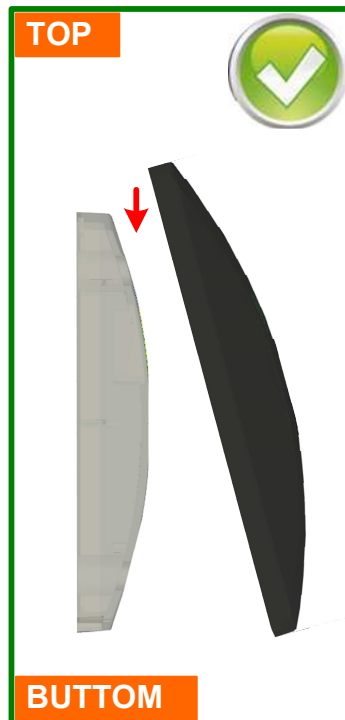
Above picture shows the correct direction (TOP) that outer housing needs to be applied.

CAUTION:

The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream.

To prevent possible harm to the environment or human health please separate this product from other waste streams to en-sure that it can be recycled in an environmentally sound manner.

For more details on available collection facilities please contact your local government office or the retailer where you purchased this product.

This information only applies to customers in the European Union.

For other countries, please contact your local government to investigate the possibility of recycling your product.