



Long Range UHF RFID Reader And Writer

PK-UHF201U / PK-UHF201E

Ver.18.1

■ Introduction

- PK-UHF201 is one of high-performance UHF frequency reader, combining proprietary signal processing algorithms and efficient, with a high recognition rate processing performance and fast read and write, can be widely used in logistics, parking systems, access control systems, security systems and production process control, and other radio frequency identification (RFID) systems.

■ Features

- Protocol comply with UHF EPC Gen2(ISO18000-6C), ISO 18000-6B standard.
- Working frequency 902~928MHz(PK-UHF201U) / 865~868MHz(PK-UHF201E)
- Support adjustable frequency range (FHSS) or fixed specific working frequency.
- Power output 0-30dBm (adjustable)
- Built-in 12dBi polarized antenna as choice : Reading range 25M.
- Support operation Modes as Answer, Active, Trigger mode.
- Low power design, Input Power: DC +9V.
- Support RS-232, RS-485, Wiegand 26/34 Interface.
- Maximum transmission distance for Wiegand: 150M(24 AWG wire)

■ Specifications

Dimension	: 445(L) x 445(W) x 55(H)mm
Net Weight	: 2600g
Gross Weight	: 5200g
Protocol	: ISO18000-6B, EPC Class 1 Gen2(ISO18000-6C)
Protection Grade	: IP54
Work Frequency	: Standard ISM 902-928MHz(PK-UHF201U) 865~868MHz(PK-UHF201E)
Frequency Hopping	: FHSS
Power Output	: 0-30dBm(adjustable)
Antenna	: Built-in 12dBi linearized polarized antenna
Interface	: RS232, RS485, Wiegand 26/34 (TCP/IP, Wifi can be customized)
Operating Mode	: Answer, Active, Trigger
Read Range	: 3~25M
Write Range	: 0~6M
Reading Clue	: Buzzer
Input Power	: 100-240V, DC+9V (Please use our switching power)
Power Consumption	: 1W
Operation Temp	: -25°C~+60°C
Storage Temp	: -25°C~+80°C
Humidity	: 80%
Regulatory	: Compliant with CE, FCC
Additional services	: Provide Demonstration software and SDK for further development

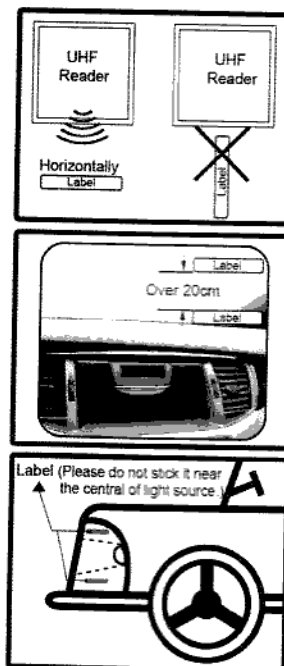
■ Wire Configuration

Color	Function
Red	+9VDC
Pink	TxD
Light blue	Data 0
Purple	485R+
Gray	Trigger
Black	GND
White	RxD
Blue	Data 1
Orange	485R-
Brown	GND

■ User manual for UHF Label/Card

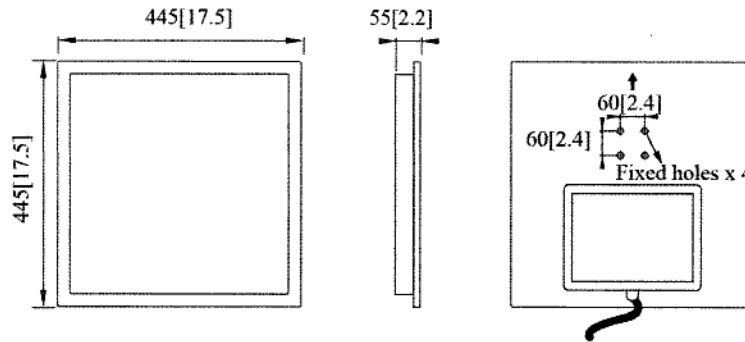
- Keep away from metals- Please don't stick the UHF label on or near the metal objects.
- The UHF label/card is directional which has to face the front side of reader and be stuck horizontally (Please don't stick the label vertically.)
- Please stick the label on flat and clear place.
- Car:
 - If the film of front windshield contains no metal, please stick the label on right bottom corner of windshield. (Suggestion: Stick the label opposite to the front of UHF reader)
 - If the film of front windshield contains metal, please stick the label on the cover of right head light. (Please stick the label near the top or bottom edge of cover. Please do not stick it near the central of light source.)
 - The Label can also be stuck on the right side of grille if that place is not made of metal.
 - If the windshield has stuck a UHF label, please use ID number of that label. One UHF label for one car will be suggested.
 - If two UHF labels need to be stuck on the same windshield, please separate them over 20cm. (as far as possible)
- Motorcycle:
 - The Label can be stuck on the non-metal place of front side of motorcycle.
 - If the front side of motorcycle is metal frame, please stick the label on the cover of head light. (Please stick the label near the top or bottom edge of cover. Please do not stick it near the central of light source.)
- Bicycle:

Not suggested. If it is necessary to stick UHF Label, please install a non-metal clamp on front side of handle bar or head light.
- Please put UHF card into card holder and place it near the windshield (face the front side of reader) to get the best reading range. Please don't put card in the pocket of clothes.

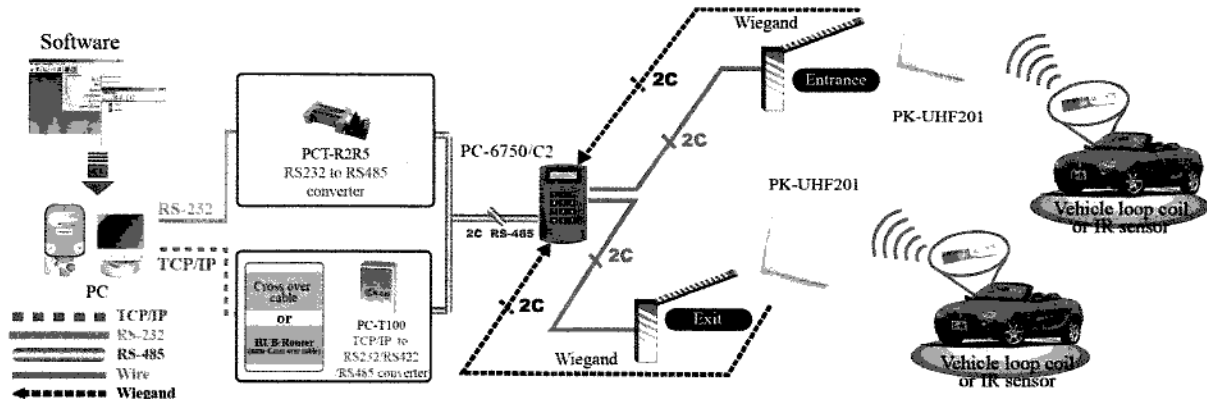


■ Dimensions

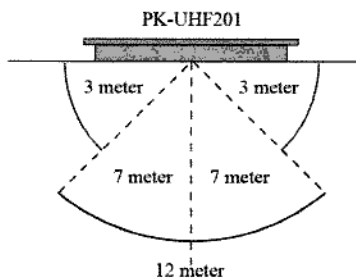
Unit: mm[inch]



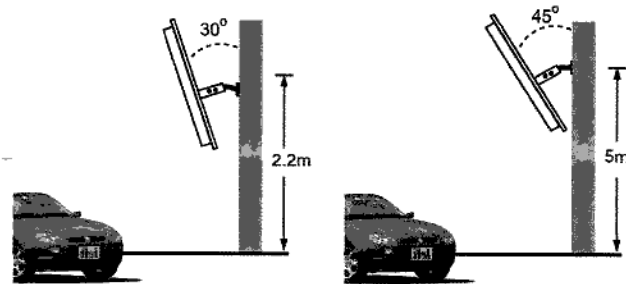
■ Configurations



■ Reading range and angle (Depending on tag)



■ Installation angle suggestion

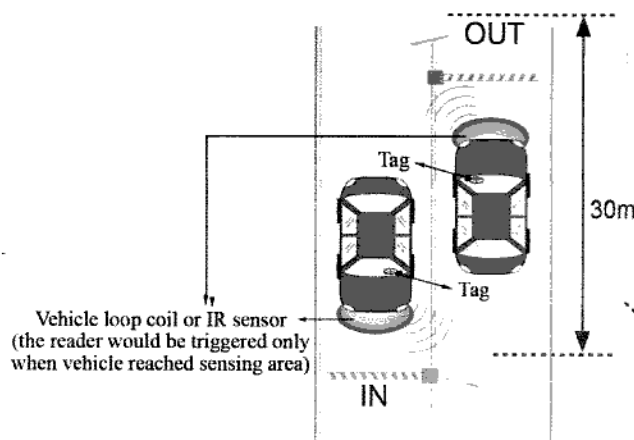


■ Installation of parking controls

Install two PK-UHF201 at left side of vehicle lane

Suggest proper installation:

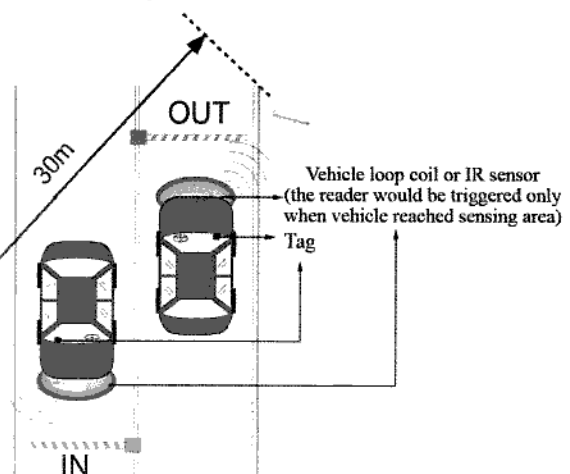
1. To separate over than 30m between entrance and exit reader to avoid the mutual electrical field interference.
2. Install reader at the left side of vehicle lane, and place the Tag at the left top windshield of car.



Install two PK-UHF201 at right side of vehicle lane

Suggest proper installation:

1. To separate over than 30m between entrance and exit reader to avoid the mutual electrical field interference.
2. Install reader at the right side of vehicle lane, and place the Tag at the right top windshield of car.



■ Q & A

Q1 : Why the reader outputs different card number everytime when reads the same tag? Even can't output anything?

A1 : Please refer to the wiring diagram and check the wiring between PK-UHF201 and controller, PC-6750/C2 as below.

- (1) The GND of both devices should be connected together (common grounded)
- (2) If the wiring of Data 0 & Data 1 is correct or contrary

Q2 : The reader is power on but can not read?

A2 : Please refer to the wiring diagram and ensure the gray wire connected with GND through loop detector or IR sensor.

If the system excludes such devices, please also connect the gray wire to GND.

Parking Management System applied by PK-UHF201 UHF long range reader with PC-6750V/C2 two doors access controller

PC-6750V/C2: F4=9803 To define the card display format

JP1 - Lift relay box driver or print output
interface section

J2-9 pins in RS-232 interface(Optional)

J2-9 pins in open-collector interface

J1-8 pins connector for communication and
alarm output

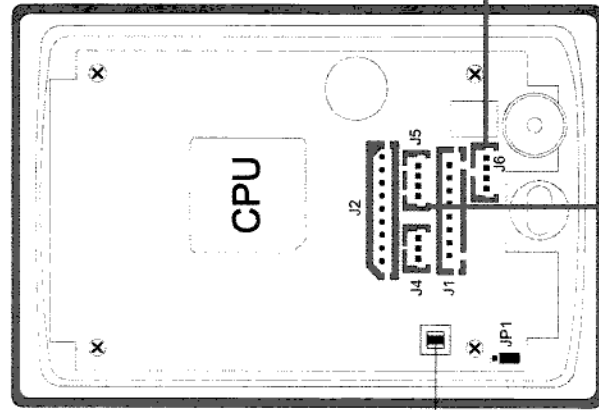
J2-9 pins connector for access port

J4-3 pins connector for tamper switch output

J5-Power out selection for external reader(Relay B)

J6-Power out selection for external reader(Relay A)

PC-6750V/C2



Entrance



PC-6750V/C2

J6 Wiegand input

1. DC 12V (Red)
2. DATA 1 (Yellow)
3. DATA 0 (Green)
4. GND (Black)

PK-UHF201

Power Supply +9V/DC

PK-UHF201

+DCV + input = A.Red

= B. Pink

= C. Light blue

= D. Purple

= E. Gray

= F. Black

= G. White

= H. Blue

= I. Orange

= J. Brown

+9VDC

TxD

485R+

Trigger

GND

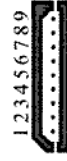
RxD

Data 1

485R-

GND

Note:
Please connect to make short-circuited
(E & F) if no need to connect with loop
vehicle detector or IR sensor devices.



J2-9P Blue (For power input and access functions)

1. Red Power "+"
2. Black Power "-"
3. Brown COM
4. Orange NO
5. Yellow NC
6. Green No Connection
7. Blue Exit push button
8. Purple Door Monitor
9. Gray Print / Lift Access

+12V DC input

GND

Relay A (COM)

Relay A (NO)

Relay A (NC)

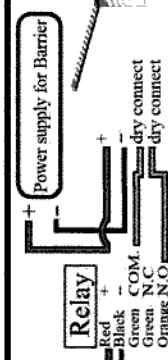
No Connection

Exit push button

Door Monitor

Print / Lift Access

Connect to loop vehicle detector



Power supply for Barrier

Relay

Power supply for relay

Entrance

Loop vehicle detector 1

Loop 1

Loop 1

Loop vehicle detector 1

1.Live

2.Neutral

3.Channel 1 loop

4.Channel 1 loop

5.Channel 2 loop

6.Channel 2 loop

7.Channel 2 N.O.

8.Channel 2 COM.

Note: This is an example wiring diagram for suggested vehicle loop detector model number PK-PD-232. For other model, please refer to their official wiring diagram.

Exit



PC-6750V/C2

J5 Wiegand input

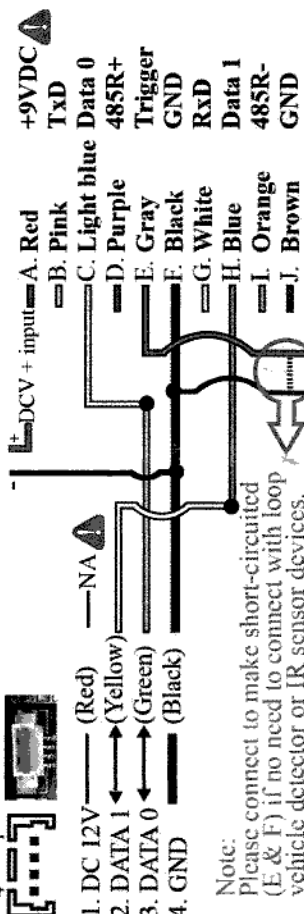


1. DC 12V (Red)
2. DATA 1 (Yellow)
3. DATA 0 (Green)
4. GND (Black)

PK-UHF201

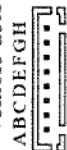
Power Supply
+9VDC

PK-UHF201



Note:

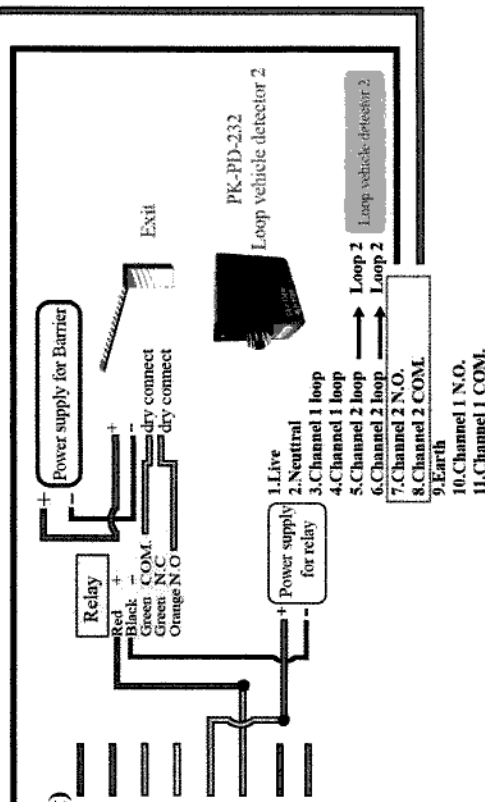
Please connect to make short-circuited (E & F) if no need to connect with loop vehicle detector or IR sensor devices.



J1-8P White (For on-line interface & exit output)

- | | | |
|-------------|---|------------------------------|
| A. (Brown) | ← | Receive Data(A) |
| B. (Red) | ← | Inverted Receive Data(B) |
| C. (Orange) | → | Transmit Data(TxD+) |
| D. (Yellow) | → | Inverted Transmit Data(TxD-) |
| E. (Green) | → | Relay B(COM) |
| F. (Blue) | → | Relay B(NO) |
| G. (Purple) | → | Data Terminal Ready |
| H. (Gray) | → | Singal Ground |

Connect to loop vehicle detector



Note: This is an example wiring diagram for suggested vehicle loop detector model number PK-PD-232. For other model, please refer to their official wiring diagram.

* We reserve the right to change the specification without prior notice or obligation!