*i*PASS IP10/20

ASK[EM] Format
Proximity Card Reader
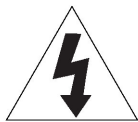
IDTECK

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Safety Information

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CAUTION

**RISK OF ELECTRIC SHOCK.
DO NOT OPEN**

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.

3. Do not connect multiple controllers to a single adapter. Exceeding the capacity may cause abnormal heat generation or fire.

4. Securely plug the power cord into the power receptacle. Insecure connection may cause fire.

5. When installing the controller, fasten it securely and firmly. The fall of controller may cause personal injury.

6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or containers filled with water on top of the controller. Doing so may cause personal injury due to fire, electric shock, or falling objects.

7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or electric shock.

8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued use in such a condition may cause fire or electric shock.

9. If this product fails to operate normally, contact the nearest service center. Never disassemble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)

10. When cleaning, do not spray water directly onto parts of the product. Doing so may cause fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a location subject to excessive vibration or magnetic interference.

2. Do not install in a location subject to high temperature (over 50°C), low temperature (below -30°C), or high humidity. Doing so may cause fire or electric shock.

3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.

4. Remove the power plug from the outlet when there is a lighting storm. Neglecting to do so may cause fire or damage to the product.

5. Keep out of direct sunlight and heat radiation sources. It may cause fire.

6. Install it in a place with good ventilation.

7. Avoid aiming the controller directly towards extremely bright objects such as sun.

8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

9. The Mains plug is used as a disconnect device and shall stay readily operable at any time.

1 IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's ins tructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two bla des and a third grounding prong. The wide blade or the third prong is provided for you r safety. If the provided plug does not fit into your outlet, consult an electrician for repla cement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenie nce receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sol d with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparat us combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparat us has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been expo sed to rain or moisture, does not operate normally, or has been dropped.

General

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The **iPASS IP10/20** is an elegant looking proximity reader. It can be easily mounted to metal door frame (mullion) or any flat wall surface. The **iPASS IP10/20** is a credible product with e poxy potting that enables you to install it outside.

Features   3

- 125KHz Proximity Card Reader
- ASK [EM] Format
- Read Range: Up to 4inch (10cm)
- User Format Available
- Output Format: 26bit Wiegand (Default), RS232 (Optional, Simultaneous output of 26bit Wiegand and RS232)
- Easy to Install on Metal Door Frame or Mullion (IP10) and Wall Mount (IP20) Suitable
- External LED Control and External Buzzer Control
- Solid Epoxy Potted
- Waterproof (IP65 / IP66)
- Reverse Polarity Protection

Identifying Supplied Parts

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Please unpack and check the contents of the box.

Reader Module
(1ea)

iPASS IP10 / IP20 Bezel
(1ea)

User's Manual
(1copy)

3.5*25 Screw
(2ea)

3.5*40 Screw
(2ea)

6.0*30 Anchor bolt
(2ea)

Specification

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Model	IP10	IP20
Read Range	IPK50: Up to 2 inches (5cm)IPC170 / IPC180: Up to 4 inches (10cm)	
Reading Time (Card)	30ms	
Power / Current	DC 12V / Max.150mA	
Input Port	2 ports (External LED Control, External Buzzer Control)	
Output Format	26bit Wiegand (Default), RS232 (Optional)	
LED Indicator	2 Color LED (Red and Green)	
Beeper	Piezo Buzzer	
Operating Temperature	-35 to +65C (-31 to +149F)	
Operating Humidity	10% to 90% relative humidity non-condensing	
Color / Material	Dark Pearl Gray / Polycarbonate	
Dimension (W x H x T)	46mm x 122mm x 23mm (1.82" x 4.81" x 0.87")	76mm x 124mm x 23.5mm (3" x 4.89" x 0.87")
Weight	160g (0.35lbs)	185g (0.41lbs)
Warranty	Life time	
Index of Protection	IP65 / IP66	
Certification	FCC, CE, RoHS	

Check Points and Tip

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- Recommended cable type and permissible length of cable

Description	Cable Specification	Maximum Distance
Reader (Power and Data) Reader -> ACU	Belden #9512, 22 AWG 4 conductor, shielded	**150m**
	Belden #9514, 22 AWG 8 conductor, shielded	

> notes * Need thicker wire if you connect the reader with high current consumption.

- Reader connection

    If you install the reader in a long distance between the ACU and the reader, you have to remind that there will be a voltage drop between both ends of GND wire. For example, if you connect a reader with 100mA current consumption at 100m distance (assume to using DC resistance of cable of 100Ω/100m) and the reader power is supplied from the ACU, the voltage drop of the GND wire will be 1V. In this case, the Wiegand data signal cannot be measured lower than 1V.
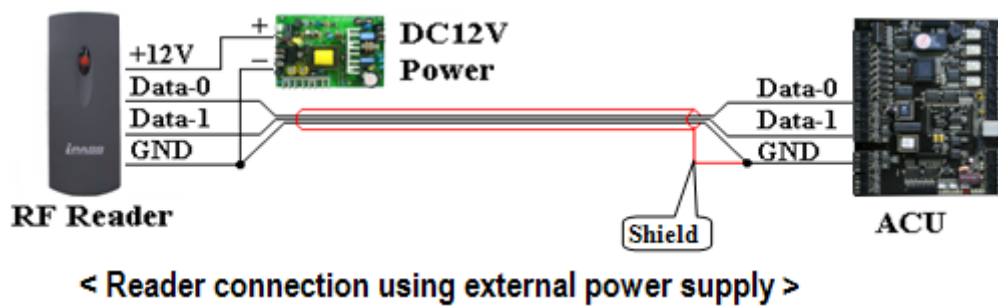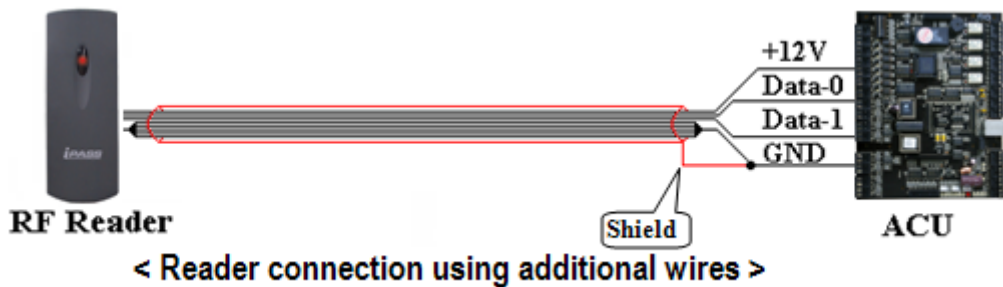
    The most of ACU is capturing the signal by the voltage level of data input and 1V is the critical point whether the ACU read the data logic "1" or logic "0" therefore the reader output cannot be read correctly from the ACU.

    You have to think about how you reduce the voltage drop between both ends of GND wire. There will be two methods to reduce the voltage drop and ACU can read data correctly.

    ○ Reduce the DC resistance of GND wire; Using thick cable or add more wires to GND wire in parallel. If you connect 4 wires in parallel for GND, the DC resistance of GND

wire will be reduced to 1/4 of single wire.

○ Use separate power for the reader; Disconnect +12V wire from the ACU and connect external power supply to the reader nearby then there will be no current flow through the GND wire and no voltage drop between both ends of GND wire.

RF Reader +12V / Data-0 / Data-1 / GND **ACU** Shield

< Reader connection using additional wires >

RF Reader +12V / Data-0 / Data-1 / GND — DC12V Power — Data-0 / Data-1 / GND **ACU** Shield

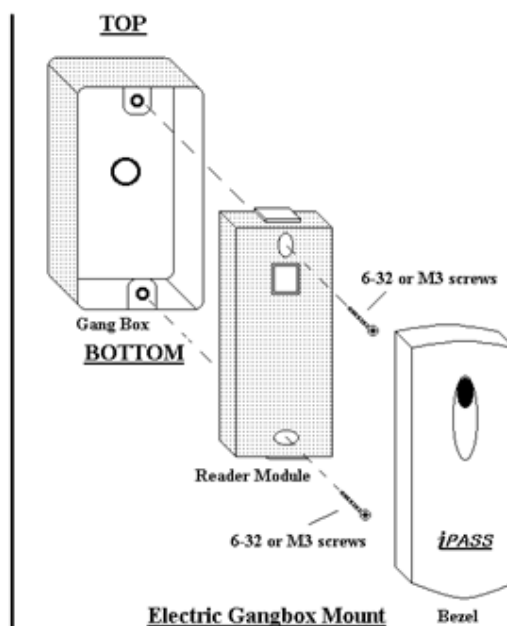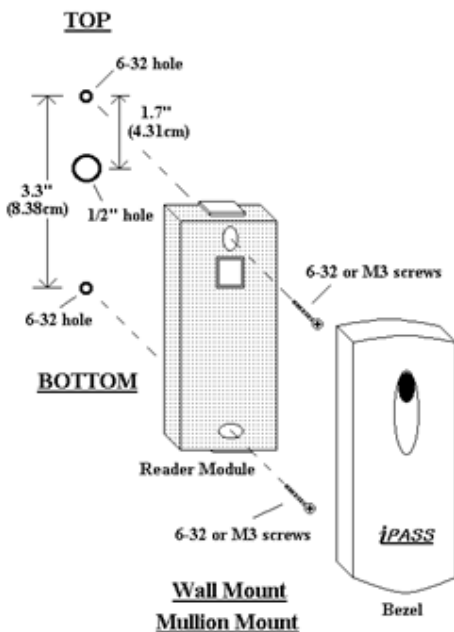< Reader connection using external power supply >

Installation

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1. Mullion/Wall Mount

   Drill two 6-32 or M3 holes 3.3"(8.38cm) apart in vertical and drill one 1/2" hole for the reader

   cable 1.7"(4.31cm) apart from the top hole.

   (Skip this step, if you have installed an electric gang box.)

2. Put reader cable into the center hole and install the reader module by using two 6-32 or M3 screws (Not included).

3. Put bezel on to the reader module. Then push bezel until you hear the locking sound.

4. To detach the bezel, hold both sides of the bezel, push the bezel to the bottom, and pull the bezel forward.
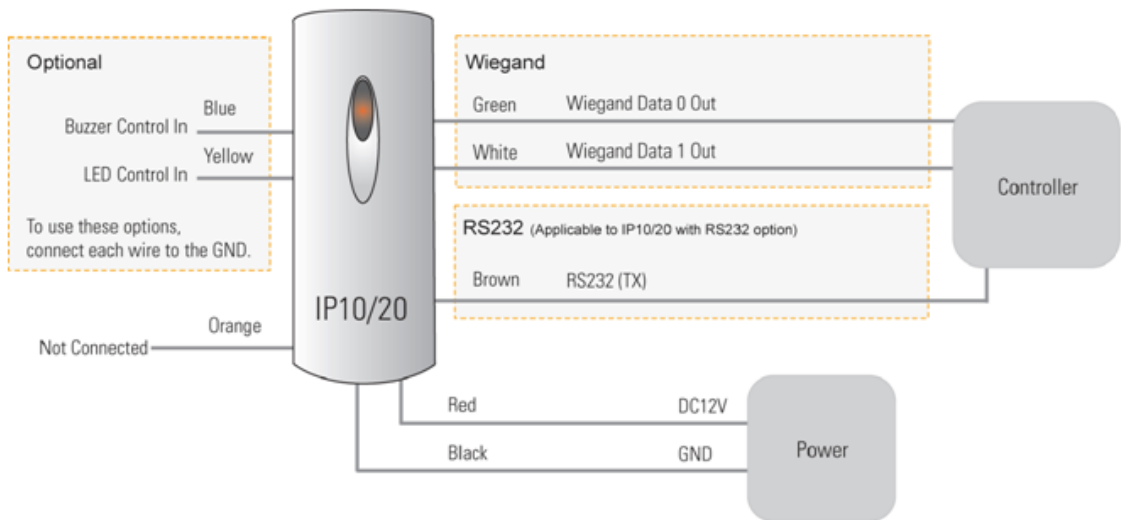
Wire Color Table of the Reader

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SIGNAL	COLOR
Main Power (+12V)	Red
Power Ground (GND)	Black
Not Connect	Orange
Wiegand Data 0 Out	Green
Wiegand Data 1 Out	White
Buzzer Control In	Blue
LED Control In	Yellow
RS232 (TX)	Brown

* Please cut out the tail connector before installation.

Wire Connection to Controller

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Operation

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1. Once the power is applied, three beeping sounds can be heard and the LED toggles the color to red-green-red indicating that the reader is in standby mode after a successful initialization and diagnostics

2. Present proximity card to the reader until you hear a beep sound. The LED is changing the color to Green simultaneously and sends the RF card data to the controller. Afterwards the LED changes the color to red again for the next reading.

3. LED Control:

    To change the LED colors, you may connect the LED Control Input (Yellow wire) to power ground. The green LED is indicating that the reader is in standby mode.

    Present proximity card. The LED changes the color to red simultaneously, then to green again for the next reading.

4. Buzzer Control:

    When the reader reads the proximity card, one beep sound generates in normal operation mode, but you can generate more beep sounds to distinguish whether the access is granted or denied.

    To generate more beeps, you may control the Buzzer Control Input (Blue wire) to power ground.

    Afterwards you can turn the beeper on, while holding the Buzzer Control Input to power ground.

FCC REGISTRATION INFORMATION 11

FCC Requirements Part 15

Caution: Any changes or modifications in construction of this device which are not expressly approved by the responsible for compliance could void the user's authority to operate the equipment.

NOTE: This device complies with **Part 15 of the FCC rules.**

Operation is subject to the following two conditions:

1. This device may not cause harmful interface, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a **Class A Digital Device**, pursuant to **Part 15 of the FCC rules**. These limits are designed to this equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on another circuit.
4. Consult the dealer or an experienced radio/TV technician for help.

RMA Request

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If you have any questions or problems regarding the RMA services, please contact us using the contact information below. Friendly representatives at IDTECK are always standing by to provide the best after sales services.

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⚠️ The specifications contained in this manual are subject to change without notice at any time.