Star 100W
iPASS IP100W

IDTECK

Table of Contents

1. Important Safety Instructions

When using your Star 100W / iPASS IP100W, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons.

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. If necessary, use mild soap.
4. Do not use this product near water, such as bath-tub, wash bowl, kitchen sink, laundry tub, in a wet basement, or swimming pool.
5. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your installation site, consult your dealer or local power company.
6. Never push objects of any kind into this product or through the cabinet slots as they may touch voltage points or short out parts that could result in fire or electric shock. Never spill liquid of any kind on the product.
7. To reduce the risk of electric shock, do not disassemble this product by yourself, but take it to qualified service whenever service or repair is required. Opening or removing the covers may expose you to dangerous voltages or other risks. Also, incorrect reassembly can cause electric shock when the unit is subsequently used.
8. Unplug this product from the Direct Current (DC) power source and refer to qualified service personnel under these conditions:
   a. When the power supply cord or plug is damaged or frayed.
   b. If liquid has been spilled on the product.
   c. If the product does not operate normally after following the operating instructions in this manual. Adjust only those controls that are covered by the operating instructions in this manual. Improper adjustment of other controls that are not covered by this manual may damage the unit and will often require extensive work by a qualified technician to restore normal operation.
   d. If the product exhibits a distinct change in performance.

2. General

The Star 100W / iPASS IP100W is an intelligent PIN & Proximity Single Door Controller that combines the convenience of wireless entry with the security of an alarm system. Also, the Star 100W / iPASS IP100W system will give you field-proven reliability and a cost-effective solution anywhere access controls and high security are required. Each standard unit can store up to 512 users. The task of assigning cards and managing a user's database is so simple, user-friendly, and can be accomplished in many ways; it could be as simple as presenting each card to the unit or as descriptive as a user's database with an easy-to-use Graphical User Interface.

The Star 100W / iPASS IP100W can interface and operate with these accessories: Exit Request button, Door-Contact sensor, PIR sensor, Fire sensor and other sensors via 5 independent input ports. Also, output ports which include 2 Relays and 2 TTL outputs can be used to control the operation of other accessories such as Electric/Magnetic Door Lock, Alarm, Chime Bell, and Auto-Dialer. Moreover, the status or behaviors of these input and output accessories are configurable to provide the system administrator with complete customized control of the system. Besides the above configurable I/O interfaced behaviors, many of the Star 100W / iPASS IP100W internal behaviors are programmable as well. The internal operating parameters include the number of incorrect access attempts before an alarm is triggered, tampering protection from mounting removal, and timers. Furthermore, every event or transaction can be captured and time-stamped by the Star 100W / iPASS IP100W application software via the provided RS-232 wires.

3. Features

- 125KHz Standalone Proximity / PIN Single Door Access Controller
- 100W: PSK modulation / IP100W: ASK [EM] Format
- Basic Time & Attendance Function
- 512 Users
- 1 External Reader Port for Exit: 26bit Wiegand
- Standalone / Network Communication via RS232
- All I/Os and Operation Time Programmable by Keypad
- 5 Independent Inputs and 4 Outputs Including 2 Form-C Relay Outputs
- Keypad Lock by Try-out Error Alarm Function
- Duress Mode Function
- Toggle Mode for Door Opening / Closing
- Lock Control by Door Contact Switch
- Safe (Default) / Secure Mode Available
- Dual Tamper Switches
- Chime Bell Output
- Mode Selection: RF Only / PIN (4~6 digits) Only / RF+ P/W (4 digits) / RF or PIN
- Options: 4ch Voice Auto-dialer
- Compatible Software: STAR 100R PRO
- Weather-proofed

* Comparison Table

100W	125KHz PSK modulation
IP100W	125KHz ASK[EM] Format

4. Specification

Model		100W	IP100W
CPU		Dual 8bit Microprocessor	
Memory	Program Memory	20KByte ROM	
	Data Memory	2KByte EEPROM	
User		512 Users	
Read Range	Passive Type	IDK50 / IMC125: Up to 2 inches (5 cm) IDC80 / IDC170: Up to 4 inches (10 cm)	IPK50: Up to 2 inches (5 cm) IPC170 / IPC180: Up to 4 inches (10 cm)
	Active Type	IDA150 / IDA200 Compatible	N/A
Reading Time (Card)		30ms	
Power / Current		DC 12V / Max.200mA	
External Reader Port		1 Port (26bit Wiegand)	
Communication		RS232	
Input Port		5 Ports (Exit Button, Door Contact, Aux #1, Aux #2, Aux #3)	
Output Port		2 Ports (Form-C Relay Output (COM, NO, NC) / DC12~18V, Rating Max.2A)	
		1 Port (Chime Bell Output / DC5V, Rating Max. 500mA)	
		1 Port (TTL Output / DC5V, Rating Max.20mA)	

Keypad	12-Button Numeric Membrane Keypad
LED Indicator	3 Array LED Indicators (Red, Green and Yellow)
Beeper	Piezo Buzzer
Operating Temperature	-35° to +65°C (-31° to +149°F)
Operating Humidity	10% to 90% relative humidity non-condensing
Color / Material	Dark Pearl Gray / Polycarbonate
Dimension (W x H x T)	87mm x 100mm x 31mm (3.4” x 3.94” x 1.22”)
Weight	210g (0.46lbs)
Certification	UL, FCC, CE, MIC

5. Front Panel Description

Main Unit of Star 100W / iPASS 100W

6. Identifying Supplied Parts

Please unpack and check the contents of the package.

Main Unit
(1ea)

Wall Mount
(1ea)

O-Ring
(5ea)

User’s Manual
(1copy)

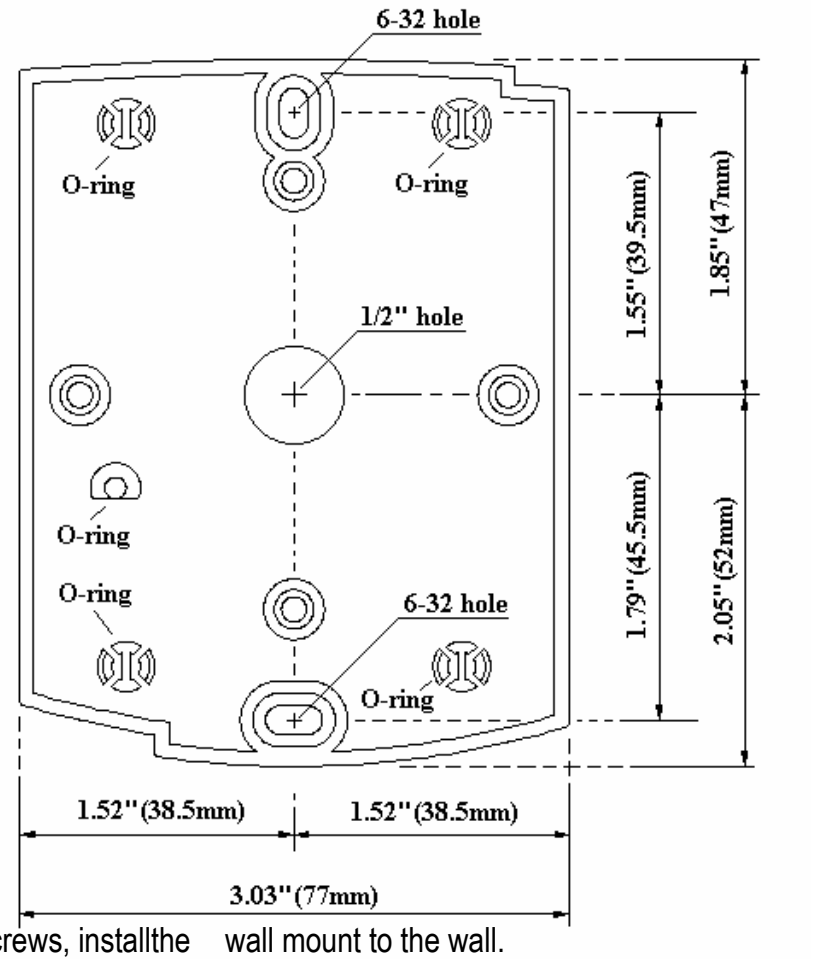
3.5*40 Screw
(4ea)

3.5*12 Screw
(4ea)

Anchor Bolt
(4ea)

7. Installation

7-1. Tear off Page 31 and use the provided template to drill two 6-32 holes and one 1/2" hole on the proper location of the wall to mount the Wall Mount bracket as shown below. (If the gang box is already installed on the wall then skip this step.)



7-2. Using 2 screws, installthe wall mount to the wall.

※CAUTIONS

Before mounting the STAR 100W unit to the Wall Mount bracket, operational testing of the unit should be completed, as the locking pins will lock the unit to the Wall Mount. Removing the unit from the Wall Mount bracket after they have been installed together may cause damages to the bracket and render its effectiveness.

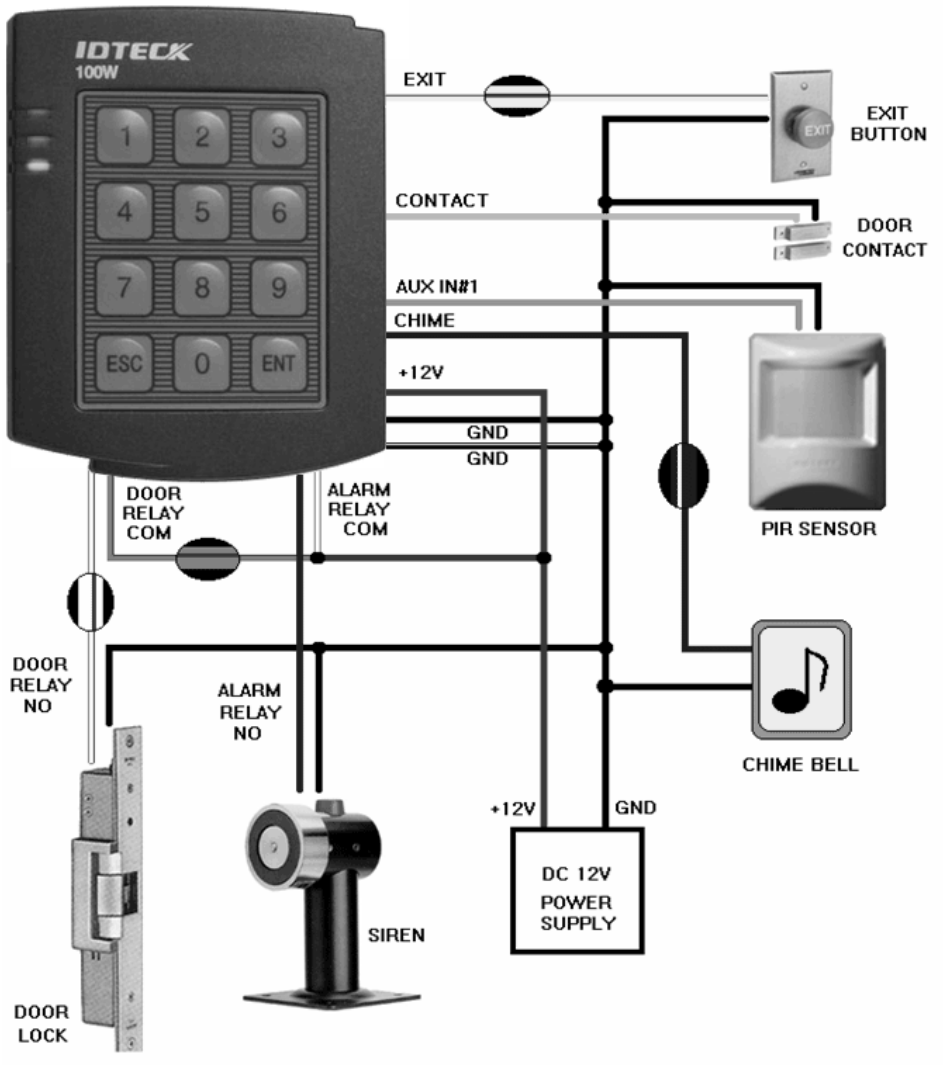
7-3. Insert 5 O-rings to the wall mount as indicated, then route the cable of the main unit through the center hole and push the main unit to wall mount to lock the main unit and make sure that the main unit is locked with the wall mount.

8. Wiring Color Table

SIGNAL	COLOR
Main Power (+12V)	Red
Power Ground (GND)	Black
Door Relay Out (COM)	Gray with Red stripe
Door Relay Out (NC)	Blue with White stripe
Door Relay Out (NO)	White with Red stripe
Alarm Relay Out (COM)	White
Alarm Relay Out (NC)	Purple with White stripe
Alarm Relay Out (NO)	Purple

TTL Out	Orange with White stripe
Chime Bell Out	Brown with White stripe
Wiegand Data 0 In	Pink
Wiegand Data 1 In	Cyan
Exit Button In	Yellow with Red stripe
Door Contact In	Green
Aux In 1	Orange
Aux In 2	Green with White stripe
Aux In 3	Brown
RS232 (TX)	Gray
RS232 (RX)	Blue
RS232 (GND)	Yellow
* Please cut out the tail connector before installation.	

9. System Wiring for Typical Application



9-1. Power Connection
- Connect (+) wire of DC +12V power to Red wire and Red/White banded wire.
- Connect Power GND (-) wire of DC +12V to Black wire and Black/White banded wire.

9-2. Door Lock Connection

9-2-1 Connection of POWER FAIL SAFE: Door Lock
- Connect Door RELAY (NC), Blue/White banded wire to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a larger-capacity one.)
- Connect (+) wire of Door Lock to Door RELAY (COM), Grey/Red banded wire.
- Connect (-) wire of Door Lock to Power GND (-) wire.

9-2-2 Connection of POWER FAIL SECURE: Door Lock
- Connect Door RELAY (COM), Grey/Red banded wire to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a larger-capacity one.)
- Connect (+) wire of Door Lock to Door RELAY (NO), White/Red banded wire.
- Connect (-) wire of Door Lock to Power GND (-) wire.

9-3. Alarm Device Connection
- Connect Alarm RELAY (COM), White wire to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a larger-capacity one.)
- Connect (+) wire of Alarm Device to Alarm RELAY (NO), Purple wire.
- Connect (-) wire of Alarm Device to Power GND (-) wire.

9-4. Exit Button Connection
- Connect one of the wires of Exit Button to Exit Button Input, Yellow/Red banded wire.
- Connect the other wire of Exit Button to Power GND (-) wire.

(If a normally closed Exit button is used, see section 12-67 to change the detection scheme from the default)

9-5. Door Contact Sensor Connection
- Connect Door Contact sensor (COM) wire to Door Contact Input, Green wire.
- Connect Door Contact sensor (NO) wire to Power GND (-) wire.

(If a normally closed Door Contact sensor is used, see section 12-69 to change the detection scheme from the default.)

9-6. Auxiliary Input Device Connection (Applied to AUX Input #1, #2, #3)
- Connect one wire of the Auxiliary Input Device to the AUX Input wire (Input #1 Orange, Input #2 Green/White banded, Input #3 Brown wire).
- Connect the other wire of Auxiliary Input Device to Power GND (-) wire.

(If a normally closed input device is used, see section 12-61,63 & 65 to change the detection schemes from the default.)

9-7. Auto-Dialer Connection (Separate purchase required)

The Auto-dialer function of this unit has not been evaluated by UL.
- Connect the input wire of Auto-Dialer to TTL output, Orange/White banded wire.
- Connect (+) wire of Auto-Dialer to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a larger-capacity one.)
- Connect (-) wire of Auto-Dialer to Power GND (-) wire.
- Connect Telephone Line plug (RJ-14) to Auto-Dialer.

(If an active High Auto-Dialer is used, see section 12-71 to change the TTL output level from the default.)

9-8. Wiegand Input Connection from another Compatible Wiegand Reader (Separate Purchase)

- Connect (+) wire of Reader to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a sufficient one.)
- Connect (-) wire of Reader to Power GND (-) wire.
- Connect Wiegand output DATA0 wire of the additional Reader to DATA0, Pink wire.
- Connect Wiegand output DATA1 wire of the additional Reader to DATA1, Cyan wire.

9-9. RS-232 Communication Port Connection

A 9-pin connector (COM Port, female) is required for RS-232 communication between the 100W and a PC.

- Connect RS-232-TX, Grey wire of Main Unit to pin number 2 of 9-pin connector.
- Connect RS-232-RX, Blue wire of Main Unit to pin number 3 of 9-pin connector.
- Connect RS-232-GND, Yellow wire of Main Unit to pin number 5 of 9-pin connector.
- Plug in 9-pin connector to COM1 or COM2 Port of the PC.
- Install and run STAR 100R PRO Application Software.

9-10. Chime Bell Connection (Separate purchase required)

- Connect (+) wire of Chime Bell unit to Bell Output, Brown/White wire of Main Unit.
- Connect (-) wire of Chime Bell unit to Power GND (-) wire.

10. Initial Setup

The Flash memory of each shipped STAR 100W contains a minimum set of default values, but it does not have any other preprogrammed values or user's data in it, therefore, Initial Setup is required upon the first time the unit is powered-up in order to operate the unit properly.

10-1. Registration of RF Cards for RF CARD ONLY MODE

(1) Apply 12VDC to the unit. All 3 LEDs will be flashing with a powered-up melody (do mi sol me do, do mi sol do~).

(2) Press [0][1][ENT] on the keypad. (RF CARD ONLY MODE)

(3) Present RF Cards in the following order to register a Configuration Card and User Access Cards.

Configuration Card

User Access Cards

Configuration Card again to end the task

※ NOTE: The user may choose to register the 8-digit card numbers via the keypad instead of presenting the cards to the unit; In this case, the user must know the 8-digit representation of each card.

(4) The first card presented becomes the Configuration Card and the following RF Cards are registered as User Access Cards. Once all User Access Cards have been registered, present the Configuration Card again to complete the registration process. (Please keep the Configuration Card in a secure location for future changes.)

(5) Now, the Main Unit enters the normal operation mode with factory default settings.

10-2. Registration of RF Cards with PINs for RF CARD + PIN MODE

(1) Apply 12VDC to the unit. All 3 LEDs will be flashing with a powered-up melody (do mi sol me do, do mi sol do~).

(2) Press 0 2 ENT on the keypad. (RF CARD + PIN MODE)

(3) Present RF Cards in the following order to register Configuration Card and User Access Cards + 4~6 digit Personal Identification Number (PIN) for each User Access Card.

Configuration Card

4~6 digit PIN ENT

User Access Cards + PINs

Configuration Card again
to end the task

(4) The first card presented becomes the Configuration Card and the following RF Cards + PINs are registered as User Access Cards with assigned PINs. Once all User Access Cards and PINs have been registered, present the Configuration Card again to complete the registration process.
(Please keep the Configuration Card in a secure location for future changes.)

(5) Now, the Main Unit enters the normal operation mode with default settings.

10-3. Registration of PIN ONLY MODE

(1) Apply 12VDC to the unit. All 3 LEDs will be flashing with a powered-up melody (do mi sol me do, do mi sol do~).

(2) Press 0 3 ENT from the keypad. (PIN ONLY MODE)

(3) Enter 4~6 digit PIN ENT to register Configuration PIN then 4~6 digit PIN ENT to register User Access PIN(s) one by one and then enter 4~6 digit PIN ENT (Configuration PIN) to complete the registration.

4~6 digit PIN ENT

Configuration PIN

4~6 digit PIN ENT

User Access PIN

.....

4~6 digit PIN ENT

Enter the Configuration PIN again
to complete the registration

(4) The first 4~6 digit PIN becomes the Configuration PIN and the subsequent 4~6 digit PINs are registered as User Access PINs. Once all User Access PINs have been registered, enter the Configuration PIN again to complete the registration. (Please store the Configuration PIN for future changes.)

(5) Now, the Main Unit enters the normal operation mode with default settings.

10-4. Registration of RF/PIN Combination MODE

(1) Apply 12V DC to the unit. All 3 LEDs will be flashing with a power-up melody.

(2) Press 0 5 ENT from the keypad. (RF/PIN Combination Mode)

(3) Present Configuration Card to register Configuration Card to the unit.

(4) Present RF Card(s) or enter 4~6 digit PIN number(s) to register user access card(s) or PIN(s).

(5) Present Configuration Card to complete the registration process.

Configuration Card

or
PIN

or
PIN

or
PIN

. . . . .

Configuration Card

10-5. Factory Default Setting Values

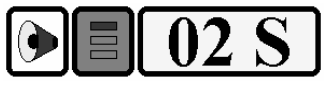
After the Initial Setup, the Main Unit uses the factory default setting values below to execute the normal operation mode. You may want to change these factory setting values or modify your User Access list; refer to section 12 for instructions on how to customize the operation of your unit.

(1) When User Access Card (or PIN) is granted

- Door RELAY activates for 3sec.
- Green LED lights on for 3sec.

(2) When User Access Card (or PIN) is not recognized

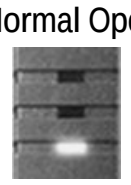
- Alarm RELAY activates for 2sec.
- Red LED lights on for 2sec.



(3) Duress Password = 00, Duress Alarm to TTL output port for 03 sec.
(4) QUICK ACCESS MODE = Disable
(5) Chime Bell output = Enable, Chime Bell activation time = 05 sec.
(6) Melody sound = Enable
(7) Keypad lock-out time when Try-Out error detected = 01 min.
(8) Detect all inputs from 'H' to 'L'
(9) Activate TTL output to 'L'
(10) Delay time to activate SECURE MODE = 00 min.
(11) Door Open time-out for Door Contact sensor = 00 sec.
(12) Number of times of Try-out = 05 times
(13) Input keypress time-out time = 20 sec.
(14) Tamper Alarm = Disable, Tamper Alarm output port = 02 (Alarm Relay)
(15) Toggle Mode: Disable
(16) Unlock followed by Door Contact: Disable

11. Operation

11-1. Normal Operation Mode (Safe Mode)



When the Main Unit operates in normal mode, the yellow LED is flashing every second.

11-2. Open the Door

Registered Card (or PIN)

When a registered Card (or PIN) is read, the Door will open for 3 seconds along with the"do-mi-sol-do" melody.

11-3. Exit (Open the Door)

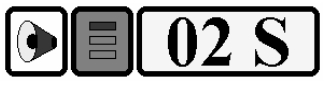
Exit Button

To request an exit from the inside, an Exit Button can be used to open the door for the same duration as in 11-2.

11-4. Action and Alarm Caused by Unregistered Card (or PIN)

Unregistered Card (or PIN)

When an unregistered Card (or PIN) is read, access is denied and the Alarm can be activated for 2 seconds along with "sol-do-sol-do" melody.



(If you do not want to activate the Alarm in case of unregistered access attempt, then you can change this setting as shown in section 12.)

11-5. Secure Mode

The last person to exit can change the operation of the unit from Normal Mode to Secure Mode by entering the Secure Code of [7][7][ENT] on the keypad.

[7][7][ENT] ⟶ Change to Secure Mode.

The Secure Mode will revert back to the normal mode when a registered card (or PIN) is presented / entered.

11-6. DURESS Alarm

In case of Duress, enter the 2 digit Duress Password [P][W][ENT] and the door will open as usual; however, the Duress Alarm (TTL Output) will activate an external Auto-Dialer to notify the appropriate personnel. See section 9.7 and 12.29 for more instructions on this feature.

11-7. Chime Bell Operation

The [ESC BELL] key can be used to activate an external Chime Bell for 5 seconds, the default value.

12. Setting Changes

Configuration Card/PIN is required to change the existing or default setting values or to manage user's access. First, present the Configuration Card (or enter the Configuration PIN) and enter the 2-digit command code.

RF Only Mode or RF + PIN Mode

Configuration Card

\+ [?][?][ENT]

Command Code

PIN Only Mode

or [4~6 digit PIN][ENT] + [?][?][ENT]

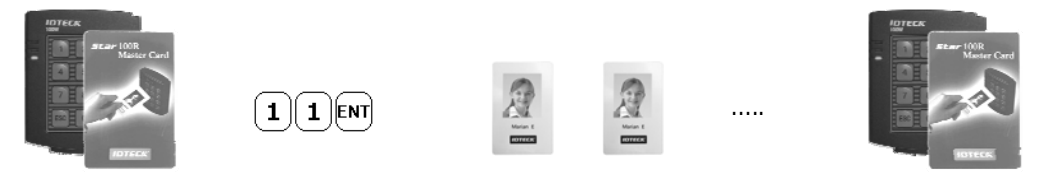
Configuration PIN Command Code

Summary Table of Commands

Command	Action/Change setting values
11	Add User Access Cards (RF CARD ONLY MODE)
12	Add User Access Cards and PIN (RF CARD + PIN MODE)
13	Add User Access PIN numbers (PIN ONLY MODE)
14	Delete User Access Cards (or PIN)
15	Add User Access Card/PIN (RF/PIN Combination Mode)
21	Change Door open time when User Access Card (or PIN) is granted
22	Change Alarm time when User Access Card (or PIN) is denied
23	Change Alarm time when Try-Out error detected
24	Change Alarm time when Door-Contact error detected
25	Change Alarm time when Aux Input #1 detected
26	Change Alarm time when Aux Input #2 detected
27	Change Alarm time when Aux Input #3 detected
28	Change Alarm time when magnet detected
29	Register 2 digits Duress Alarm password
30	Change Alarm time when Duress Alarm detected
31	Test Door open time set by command "21"
32	Test Alarm time set by command "22"
33	Test Alarm time set by command "23"
34	Test Alarm time set by command "24"
35	Test Alarm time set by command "25"
36	Test Alarm time set by command "26"
37	Test Alarm time set by command "27"
39	Change Chime Bell activating time
41	Open door unconditionally
42	Close door unconditionally
43	Enable QUICK ACCESS MODE
44	Disable QUICK ACCESS MODE
45	Enable Toggle Mode for Lock control
46	Disable Toggle Mode for Lock control
47	Enable Unlock followed by Door Contact
48	Disable Unlock followed by Door Contact
51	Disable Melody sound (turning off both the melody & keypress audio feedback)
52	Enable Melody sound
60	Change keypad lock-out time when Try-Out error detected
61	Set Aux Input #1 Detection from ‘L’ to ‘H’
62	Set Aux Input #1 Detection from ‘H’ to ‘L’
63	Set Aux Input #2 Detection from ‘L’ to ‘H’
64	Set Aux Input #2 Detection from ‘H’ to ‘L’
65	Set Aux Input #3 Detection from ‘L’ to ‘H’
66	Set Aux Input #3 Detection from ‘H’ to ‘L’
67	Set Exit Button Input Detection from ‘L’ to ‘H’
68	Set Exit Button Input Detection from ‘H’ to ‘L’
69	Set Door-Contact sensor Input Detection from ‘L’ to ‘H’
70	Set Door-Contact sensor Input Detection from ‘H’ to ‘L’
71	Activate TTL output to ‘H’
72	Activate TTL output to ‘L’
73	Enable Keypad Input To Enter ID Number
74	Disable Keypad Input To Enter ID Number

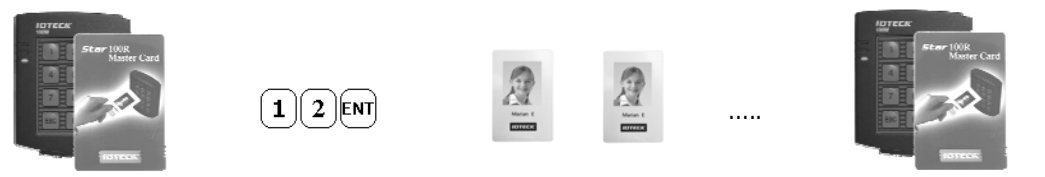
77	Enable Chime Bell Output
78	Disable Chime Bell Output
80	Set delay time to activate SECURE MODE
81	Set Door Open time-out for Door-Contact sensor
82	Set number of times of Try-Out
83	Set input key press time-out time
84	Set Tamper Alarm output port
88	Enable Tamper Alarm
89	Disable Tamper Alarm
99	Re-Initialize and erase all setup data

12-11. Add User Access Cards (RF CARD ONLY MODE)



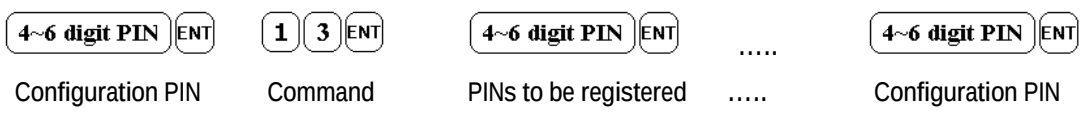
Configuration Card Command Cards to be registered ..... Configuration Card

12-12. Add User Access Cards (RF CARD + PIN MODE)



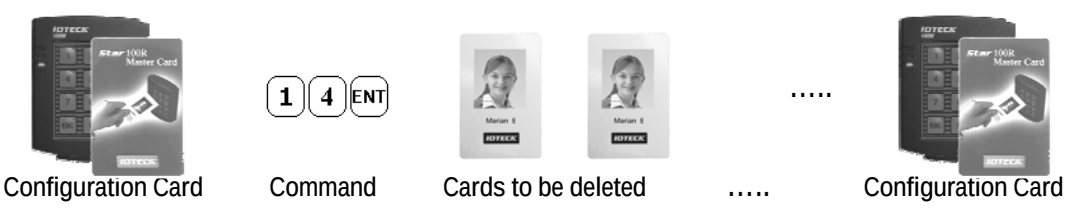
Configuration Card Command Cards to be registered ..... Configuration Card

12-13. Add User Access PIN (PIN ONLY MODE)



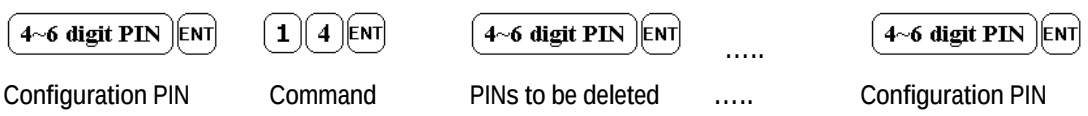
Configuration PIN Command PINs to be registered ..... Configuration PIN

12-14.1. Delete User Access Cards (RF CARD ONLY MODE & RF CARD + PIN MODE)



Configuration Card Command Cards to be deleted ..... Configuration Card

12-14.2. Delete User Access PIN (PIN ONLY MODE)



Configuration PIN Command PINs to be deleted ..... Configuration PIN

12-15. Add User Access Card/PIN (RF/PIN Combination Mode)


Configuration Card


Command


or
PIN


or
PIN

……
……..


Configuration Card

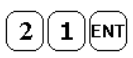
<TABLE 1> SETTINGS FOR COMMAND

Symbol	Setting Values	Examples/Remarks
Output Mode (OM)	(You must add value ① and ②) Setting value for activating time ① Activate Mode Value Activate only in Secure Mode : *00* Activate in Safe & Secure Mode : *50* Setting Value for activating Output Port ② Activate Output Port Value Activate only Door Relay : *01* Activate only Alarm Relay : *02* Activate only TTL Output : *04* Activate Door Relay & TTL : *05* Activate Alarm Relay & TTL : *06*	EX1)Activate Door Relay In Safe & Secure Mode ① Safe & Secure Mode *50* ② Door Relay *01* OM = *51* EX2)Activate Alarm Relay & TTL only in Secure mode ① Secure Mode *00* ② Alarm Relay & TTL *06* OM = *06*
tt	tt is the activating time value (seconds) from 01sec. to 99sec.	tt value 00sec. means no operation.
PW	PW is the 2 digit Password for Duress Alarm.	Do not use '77' for PW as it is used for Secure Mode
mm	mm is the activating time value (minutes) from 01min. to 99min.	mm value 00min. means no operation.

12-21. Change Door Open Time When User Access Card (or PIN) is Granted

(tt=00~99 sec., Default Door Open time = 03 sec.)


Configuration Card /Configuration PIN


Command

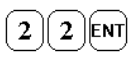

Door open time


TTL time

12-22. Change Alarm Time When User Access Card (or PIN) is Denied

(Refer to Table 1 for OM, tt=00~99 sec., Default Alarm time = 02 sec.)


Configuration Card /Configuration PIN


Command


Output Mode


Door time


Alarm Time


TTL time

12-23. Change Alarm Time When Try-Out Error is Detected

(Refer to Table 1 for OM, tt=00~99 sec., Default Alarm time = 10 sec.)

Configuration Card /Configuration PIN	Command	Output Mode	Door time	Alarm Time	TTL time
	2 3 ENT	O M ENT	t t ENT	t t ENT	t t ENT

12-24. Change Alarm Time When Door Contact Error is Detected

(Refer to Table 1 for OM, tt=00~99 sec.)
Door Open Time-out setting is required for activating, refer to 12.81.

Configuration Card /Configuration PIN	Command	Output Mode	Door time	Alarm Time	TTL time
	2 4 ENT	O M ENT	t t ENT	t t ENT	t t ENT

12-25. Change Alarm Time When AUX Input #1 Detected

12-26. Change Alarm Time When AUX Input #2 Detected

12-27. Change Alarm Time When AUX Input #3 Detected

(Refer to Table 1 for OM, tt=00~99 sec.)

Configuration Card /Configuration PIN	Command	Output Mode	Door time	Alarm Time	TTL time
	2 5 ENT 2 6 ENT 2 7 ENT	O M ENT	t t ENT	t t ENT	t t ENT

12-28. Change Alarm Time When Magnet Detected

(Refer to Table 1 for OM, tt=00~99 sec.)

Configuration Card /Configuration PIN	Command	Output Mode	Door time	Alarm Time	TTL time
	2 8 ENT	O M ENT	t t ENT	t t ENT	t t ENT

12-29. Register 2 Digit Duress Alarm Password

(PW=00~99, Default PW= 00, Do not use 7 7 ENT)

Configuration Card /Configuration PIN	Command	Password
	2 9 ENT	P W ENT

Note: The default Password is '00'.

12-30. Change Alarm Time When Duress Alarm Detected

(tt=00~99 sec., Default TTL time= 03 sec.)

3 0 ENT t t ENT

Configuration Card /Configuration PIN | Command | TTL time

12-31. Test Door Open Time Set By Command "21"
12-32. Test Alarm Time Set By Command "22"
12-33. Test Alarm Time Set By Command "23"
12-34. Test Alarm Time Set By Command "24"
12-35. Test Alarm Time Set By Command "25"
12-36. Test Alarm Time Set By Command "26"

12-37. Test Alarm Time Set By Command "27"

Outputs set by command will be tested.

3 1 ENT ~ 3 7 ENT

Configuration Card /Configuration PIN | Command

12-39. Change Chime Bell Activating Time

(tt=00~99 sec., Default Chime Bell time= 05 sec.)

3 0 ENT t t ENT

Configuration Card /Configuration PIN | Command | Chime Bell time

12-41. Open Door Unconditional

Configuration Card /Configuration PIN 4 1 ENT

12-42. Close Door Unconditional

Configuration Card /Configuration PIN 4 2 ENT

12-43. Enable QUICK ACCESS MODE

When QUICK ACCESS MODE is enabled, Door will open simply by pressing ENT key.

Configuration Card /Configuration PIN 4 3 ENT

12-44. Disable QUICK ACCESS MODE

Configuration Card /Configuration PIN 4 4 ENT (Default setting=Disable)

12-45. Enable Toggle Mode for Lock Control

Configuration Card /Configuration PIN

4 5 ENT

If you enable the Toggle Mode, the door will be toggled open/closed when a registered card or PIN is entered. You may use this function for Arm/Disarm for burglary alarm system.

12-46. Disable Toggle Mode for Lock Control

Configuration Card /Configuration PIN

4 6 ENT

12-47. Enable Lock followed by Door Contact

Configuration Card /Configuration PIN

4 7 ENT

If you enable "Lock followed by Door Contact", the door will only be locked followed by Door Contact so the door will remain unlocked until the door is completely closed.

12-48. Disable Lock followed by Door Contact

Configuration Card / Configuration PIN

4 8 ENT

12-51. Disable Melody Sound

Configuration Card /Configuration PIN

5 1 ENT

12-52. Enable Melody Sound

Configuration Card /Configuration PIN

5 2 ENT (Default setting=Enable)

12-60. Change Keypad Lock-out Time When Try-Out Error Detected

(mm=00~99 min., Default Keypad Lock-out time= 01 min.)

6 0 ENT m m ENT

Configuration Card /Configuration PIN | Command | Keypad Lock-out time

12-61. Set AUX Input #1 Detection from 'L' to 'H'

AUX#1 input is detected on the rising edge of AUX#1 input

Configuration Card / Configuration PIN

6 1 ENT

12-62. Set AUX Input #1 Detection from 'H' to 'L'

AUX#1 input is detected on the falling edge of AUX#1 input (Default setting)

Configuration Card / Configuration PIN

6 2 ENT

12-63. Set AUX#2 Input Detection from 'L' to 'H'

AUX#2 input is detected on the rising edge of AUX#2 input

Configuration Card / Configuration PIN 6 3 ENT

12-64. Set AUX#2 Input Detection from 'H' to 'L'

AUX#2 input is detected on the falling edge of AUX#2 input (Default setting)

Configuration Card / Configuration PIN 6 4 ENT

12-65. Set AUX#3 Input Detection from 'L' to 'H'

AUX#3 input is detected on the rising edge of AUX#3 input

Configuration Card / Configuration PIN 6 5 ENT

12-66. Set AUX#3 Input Detection from 'H' to 'L'

AUX#3 input is detected on the falling edge of AUX#3 input (Default setting)

Configuration Card / Configuration PIN 6 6 ENT

12-67. Set Exit Button Input Detection from 'L' to 'H'

Exit Button input is detected on the rising edge of Exit Button input

Configuration Card / Configuration PIN 6 7 ENT

12-68. Set Exit Button Input Detection from 'H' to 'L'

Exit Button input is detected on the falling edge of Exit Button input (Default setting)

Configuration Card / Configuration PIN 6 8 ENT

12-69. Set Door Contact Sensor Input Detection from 'L' to 'H'

Door Contact input is detected on the rising edge of Door Contact input

Configuration Card / Configuration PIN 6 9 ENT

12-70. Set Door Contact Sensor Input Detection from 'H' to 'L'

Door Contact input is detected on the falling edge of Door Contact input (Default setting)

Configuration Card / Configuration PIN 7 0 ENT

12-71. Activate TTL Output to 'H'

TTL output changes the state from logic '0' to logic '1' when it activates.

Configuration Card / Configuration PIN 7 1 ENT

12-72. Activate TTL Output to 'L'

TTL output changes the state from logic '1' to logic '0' when it activates. (Default setting)

Configuration Card / Configuration PIN 7 2 ENT

12-73. Enable Keypad Input To Enter ID Number

Keypad input is enabled to enter the ID numbers through keypads.

Configuration Card / Configuration PIN 7 3 ENT

12-74. Disable Keypad Input To Enter ID Number

Keypad input is disabled to enter the ID numbers through keypads. (Default setting)

Configuration Card / Configuration PIN 7 4 ENT

12-77. Enable Chime Bell Output

Configuration Card /Configuration PIN [7][7][ENT] (Default setting=Enable)

12-78. Disable Chime Bell Output

Configuration Card / Configuration PIN [7][8][ENT]

12-80. Set Delay Time to Activate SECURE MODE

(mm=00~99 min., Default Delay time= 00 min.)

[8][0][ENT] [m][m][ENT]

Configuration Card /Configuration PIN | Command | Delay time

12-81. Set Door Open Time-out for Door Contact Sensor

(tt=00~99 sec., Default value = 00 sec. means no detect Door Contact Sensor, refer to 12.24 for Alarm time settings)

[8][1][ENT] [t][t][ENT]

Configuration Card /Configuration PIN | Command | Door Open time-out

12-82. Set Number of Times of Try-Out

(NN=00~99 times, Default Try-out numbers= 05 times)

[8][2][ENT] [N][N][ENT]

Configuration Card /Configuration PIN | Command | Try-out numbers

12-83. Set Input Keypress Time-out Time

(tt=10~99 sec., Default Keypress time-out= 20 sec., Minimum tt = 10 sec.)

[8][3][ENT] [t][t][ENT]

Configuration Card /Configuration PIN | Command | Keypress time-out time

12-84. Set Tamper Alarm Output Port

(Refer to Table 1 for OM, Default Output port= 02 Alarm Relay)

[8][4][ENT] [O][M][ENT]

Configuration Card /Configuration PIN | Command | Alarm Output Port

12-88. Enable Tamper Alarm

To comply with UL 294, the Standard for Access Control System Units, Tamper Alarm must be enabled.

Configuration Card /Configuration PIN [8][8][ENT]

12-89. Disable Tamper Alarm

Configuration Card /Configuration PIN [8][9][ENT] (Default setting)

12-99. Re-Initialize and Erase All Setup Data

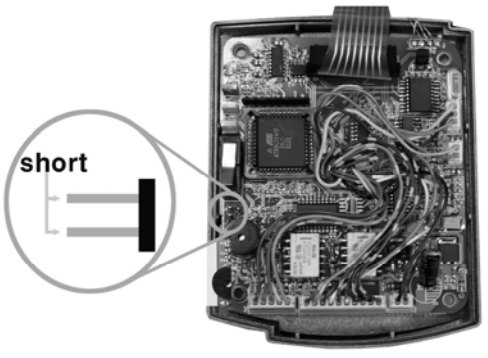
Use this command when you really want to erase all data and start the unit from the beginning.

Configuration Card /Configuration PIN [9][9][ENT]

13. Initialization

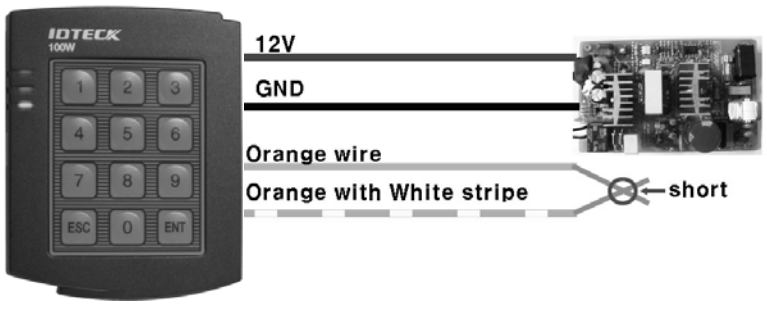
When you lost the Configuration Card or forgot the Configuration PIN number, you may need to re-initialize the unit for new setup. There is a hard-wired Initialize function on the unit.
※ WARNING: You may lose all setup data after Initialization.

13-1. Hardware Initialization (When the Configuration Card or PIN is lost)

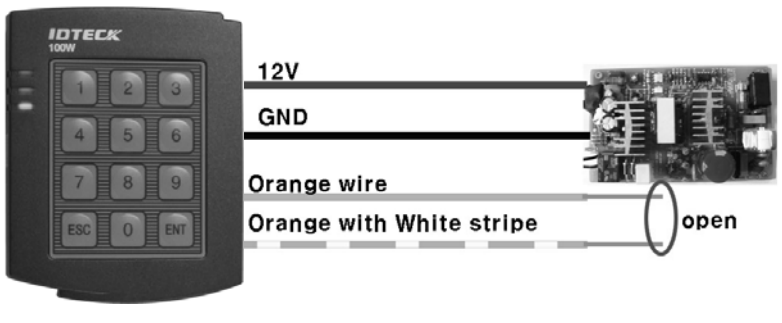


1) Open the top case by screwing the four bolts out from the back.
2) As shown in the left picture, short the two pins of the jumper while power is applied.
3) The 3-color LED blinking with beep sound indicates successful initialization

13-2. Wire Initialization (When the Configuration Card or PIN is lost)



1) Power off the Main Unit.
2) Connect Orange wire and Orange/White banded wire together and power on the Main Unit.
3) The 3-color LED blinking with beep sound indicates successful initialization.



4) Power off the Main Unit again.
5) Disconnect Orange wire and Orange/White banded wire as shown above (normal connection diagram) and power on the Main Unit.

14. FCC Registration Information

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 B 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.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the radio or television off and on, the user is encouraged to try to correct interference by one or more of the following measures.

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.

15. Troubleshooting

If a problem occurs during the use of this product, do not attempt to disassemble the product. Please check the following suggestions before reporting to the customer service center.

[Operation]

- Problem

  When power is applied for the first time, 3 LEDs of 100W blink and RF cards won't be recognized.

- Cause
  - ▶ Configuration Card (or Configuration PIN) is not registered yet. (Initialized status)
  - ▶ The unit is malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.
  - ▶ The internal circuit may be damaged or malfunctioning
- Solution
  - ▶ Make sure that initial setup is properly done and check the operation status.

    ☞ If you have just installed the 100W or initialized it, then, the 100R is in the initialized status. You need to select an operation mode and register a Configuration Card(or Configuration PIN) and User Access Cards. For more details, see 10. Initial Setup on Page 10.

    ☞ If a problem occurs while 100W is in the normal operation mode, It is caused by system malfunctions. Try turning the power of 100W off and on.

    ● If the problem still persists, initialize the product. See 13. Initialization for more information about how to initialize your 100W.

- Problem

  The 100W returns to the Normal Operation Mode while you are registering User Access Cards or changing settings in the Configuration Mode.

- Cause
  - ▶ Time-out Error
- Solution
  - ▶ If no key is pressed within 20 seconds in the Configuration Mode, 100W automatically goes back to the Normal Operation Mode.

[Registration or Deletion]

- Problem

  User Access Card or User Access PIN won't be registered any more.

- Cause
  - ▶ Improper use or settings
  - ▶ The maximum number of users that can be registered (512) is already reached
- Solution
  - ▶ Make sure that installation and operation are properly done.

    ☞ If you have just installed the 100W or initialized it,
    then, the 100R is in the initialized status, which means you need to choose an operation mode and register a Configuration Card(or Configuration PIN) and User Access Cards. For more details, see 10. Initial Setup on Page 10.

    ☞ If you'd like to add more User Access Cards or PINs, see Page 16.

● Problem

User Access Cards or User Access PINs won't be deleted.

● Cause

▶ Improper use or settings

▶ The unit is malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.

● Solution

▶ Make sure that installation and operation are properly done.

☞ The 100W is in the Normal Operation Mode.

- Have the Configuration Card?

1. Have the User Access Card(s) that needs to be deleted?
   a. Present the Configuration Card (or press the Configuration PIN + ENT).
   b. Press "14 + ENT" to delete User Access Cards.
   c. Present the User Access Card(s) that you wish to delete. Repeat this process if you have more than one card to delete.
   d. Present the Configuration Card (or press the Configuration PIN + ENT).
2. Lost the User Access Card(s) that needs to be deleted?
   a. Present the Configuration Card (or press the Configuration PIN + ENT).
   b. Press "73 + ENT" to enable "Keypad Input To Enter ID Number".
   c. Present the Configuration Card (or press the Configuration PIN + ENT).
   d. Press "4 + ENT" to delete the User Access Card(s).
   e. Press "PIN + ENT". Repeat this process if there're more than one card to delete.
   f. Present the Configuration Card (or press the Configuration PIN + ENT).

Note — See 12. Setting Changes for more information.

- Lost the Configuration Card?

1. If the Configuration Card is missing, you cannot perform registration / deletion / setting adjustment.
2. Initialize the product. See 13. Initialization for more information about how to initialize your 100W.

[System Initialization]

● Problem

The Configuration Card is lost and I can't register/delete User Access Cards/PINs or change settings.

● Cause

▶ Missing Configuration Card

● Solution

▶ Without the Configuration Card, you have no choice but to initialize your 100W if you wish to change settings. See 13. Initialization for more information about how to initialize your 100W.

[Communication]

● Problem

100W is connected to a PC but communication won't be established.

● Cause

▶ Improper communication settings

▶ Incorrect communication cable connection

▶ The unit is malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.

● Solution

▶ Make sure that communication settings and cable connection are correct.

☞ Check the communication settings of the 100W and a PC.

1. Make sure that the COM port number is correct in the communication settings of the application software
2. Baud rate is fixed at 9600bps. Make sure that communication settings of the application software are as follows; Parity bit=None, Data bit=8bits, Stop bit =1bit

☞ Make sure that the communication cables are correctly connected.

1. Check the cable connections between the 100W and the PC.
2. Beware of the maximum cable length. (RS232: Maximum of 15m)

Caution

The maximum transmission distance for each communication type is greatly affected by the communication environment. Eliminate any electrical noise around the communication cable or seperate it from other cables.

[Keypad]

● Problem

An RF card works properly but the 100W won't recognize the RF card number when it is entered on the keypad.

● Cause

▶ Improper system settings

▶ The unit may be malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.

● Solution

▶ Check if the buzzer beeps when a key is pressed.

☞ If the buzzer beeps:

1. Present the Configuration Card (or press the Configuration PIN + ENT).
2. Enter "73 + ENT" to enable "Keypad Input To Enter ID Number".
   See 12. Setting Changes for more details.

☞ If the buzzer does not beep:

1. If the buzzer beeps after a certain length of time passes, see the following.
   a. If unregistered IDs are entered 5 times (default) in a row, keys on the keypad do not function for 1 min.(default)
   b. The following is about how to configure the maximum number of trials allowed.
      - Present the Configuration Card (or press the Configuration PIN + ENT).
      - Press "82 + ENT" to set "Number of Times of Try-Out".
      - Press 2 digits for Try-Out times + ENT".
        e.g. 10 + ENT ➔ Allow 10 trials before a keypad freeze.
   c. See Page 23 for more information about how to set how many trials to allow before keypad freezes.

2. If the buzzer never beeps when a key is pressed, initialize the product. See 13. Initialization for more information about how to initialize your 100W

[External Device]

● Problem

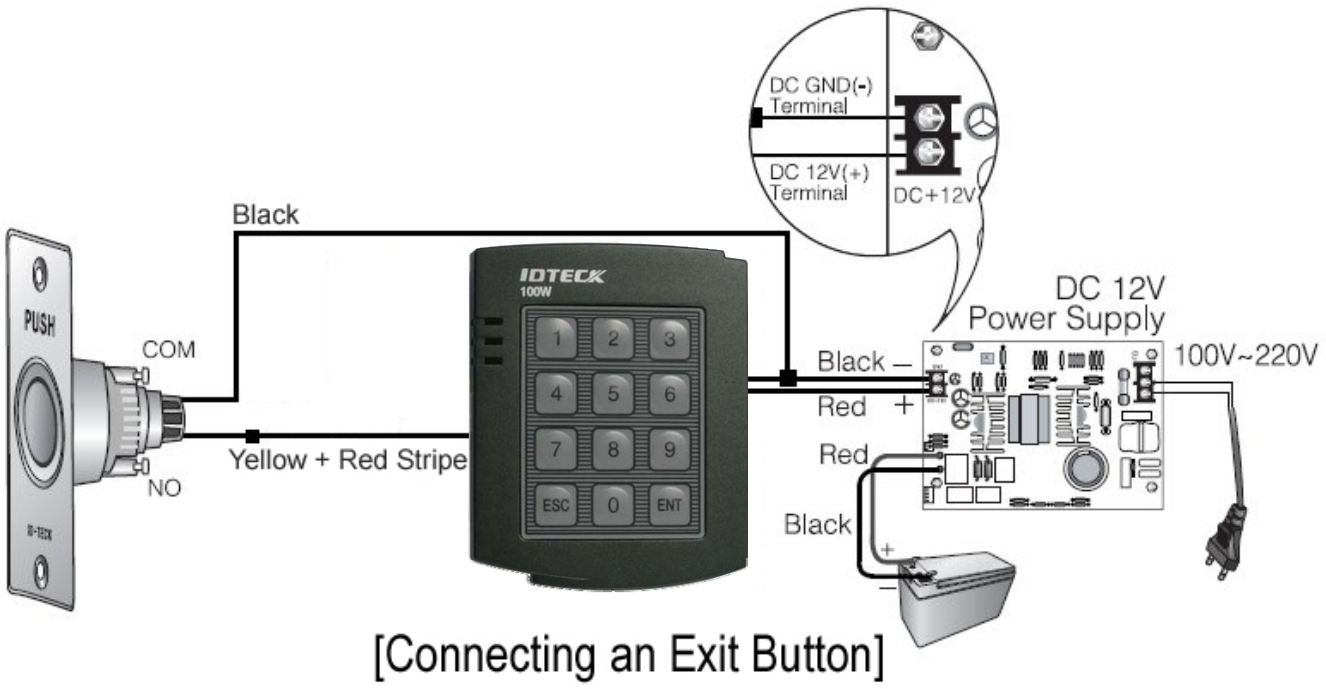
The exit button won't work.

● Cause

▶ Incorrect connection between the exit button and the 100W
▶ Malfunction of the exit button
▶ Internal circuit may be damaged or malfunctioning.

● Solution

☞ Check the connection between the exit button and the 100W.



[Connecting an Exit Button]

Caution Make sure to use an NO (Normally Open)-type exit button.

☞ Check the operation of the Exit Button.

1. Check the wiring between the Exit Button and the 100W to see if there is any short circuit or cutoff.)
2. Try connecting the two wires connected to the Exit Button..
   - If the 100W responds when the exit button is pressed, replace the exit button because it is faulty.
   - If the 100W does not respond, the 100W is malfunctioning. Initialize the product.

Caution Upon initialization, all data default value will be restored.

NOTE See "Installation" to connect the exit button.

● Problem

An RF card is successfully recognized by the exit reader, but the data transmission to the PC fails or incorrect data is transmitted.

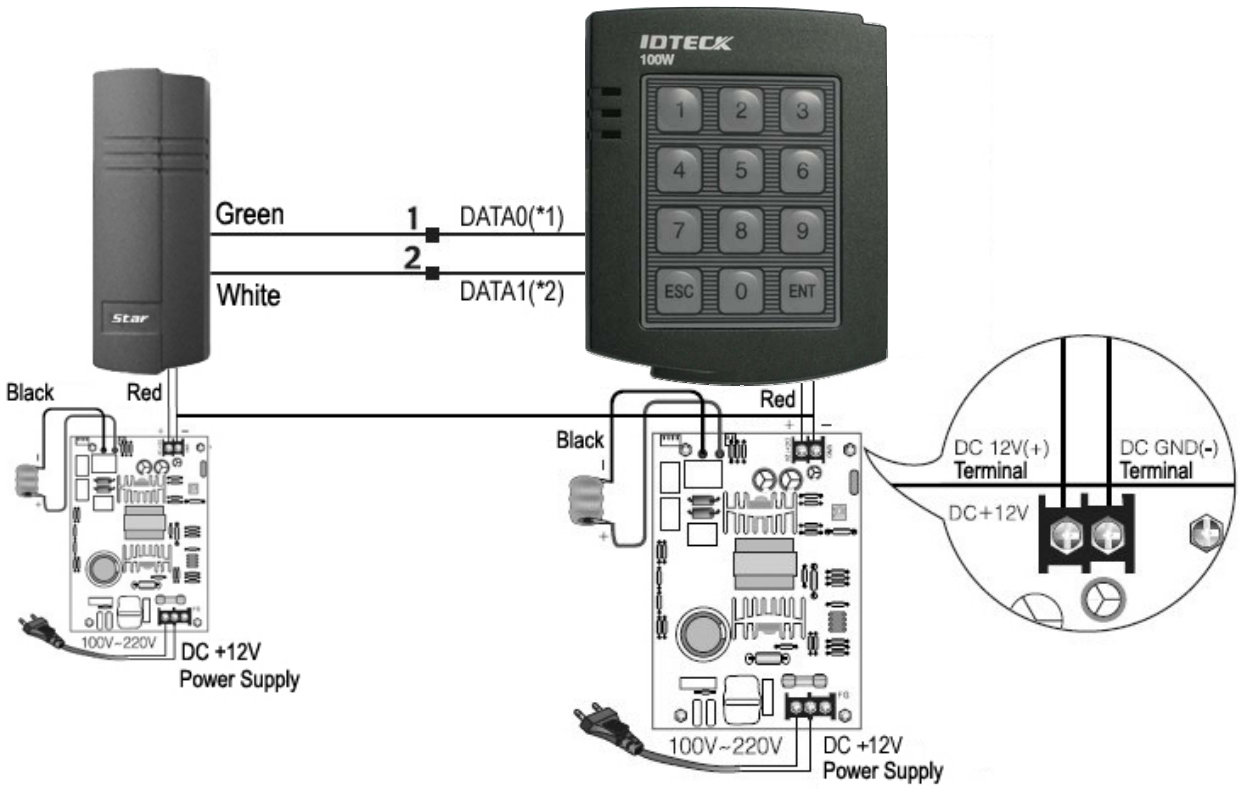
● Cause

▶ Incorrect connection between the exit reader and the 100W
▶ Communication error
▶ Malfunction of the exit button

▶ The unit is malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.

● Solution

☞ Check the connection between the exit reader and the 100W.



[Connecting a External Reader]

☞ Check the operation of the exit reader.

1. Check the wiring between the exit reader and the 100W to see if there is a short circuit or cutoff.

2. Check if any noise can be introduced into the communication wires between the exit reader and the 100W.

- Test the exit reader output by checking the Wiegand communication cable with a measuring instrument.

- With a measuring instrument, check if any noise is present in the communication cable. If a trace of noise is detected, enhance the GND signal by using the shield wire and a spare wire of the cable as GND.
- It is recommendable to stabilize communication signals by using a repeater.

● See 7. Installation.to find out more about wiring.

● Problem

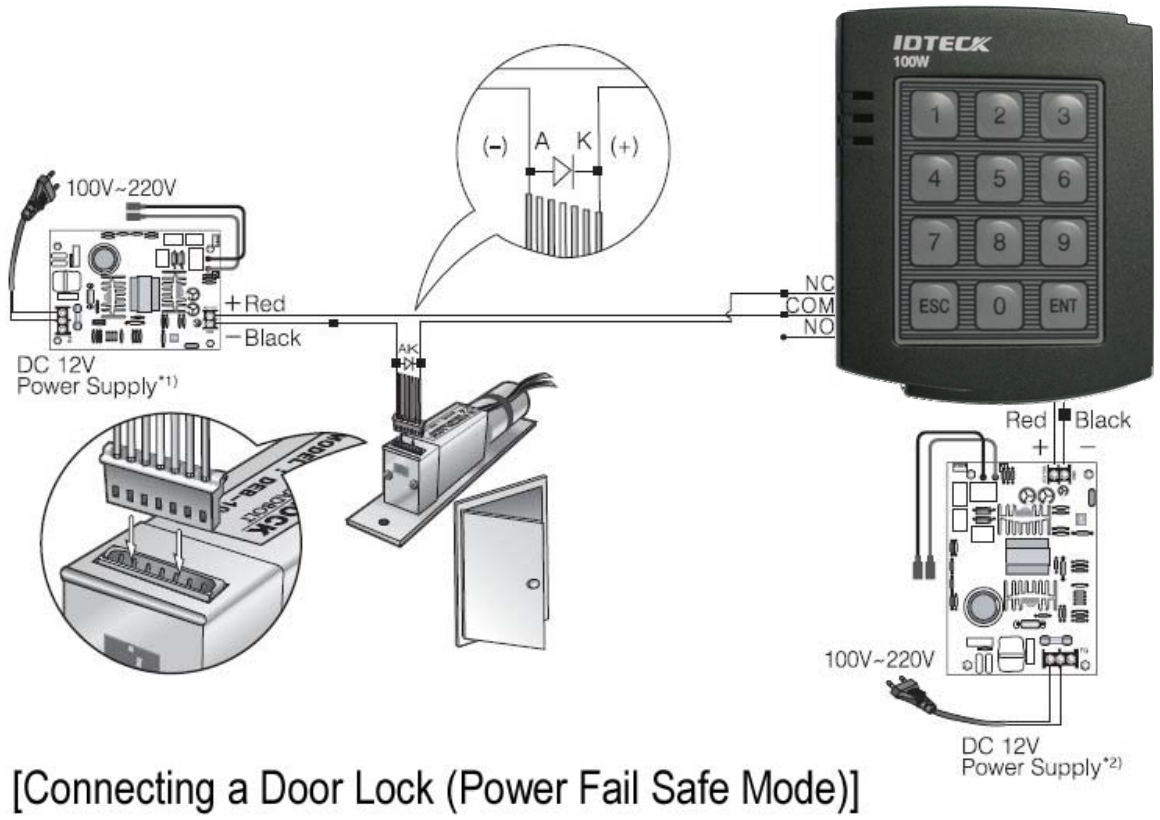
A door lock won't work.

● Cause

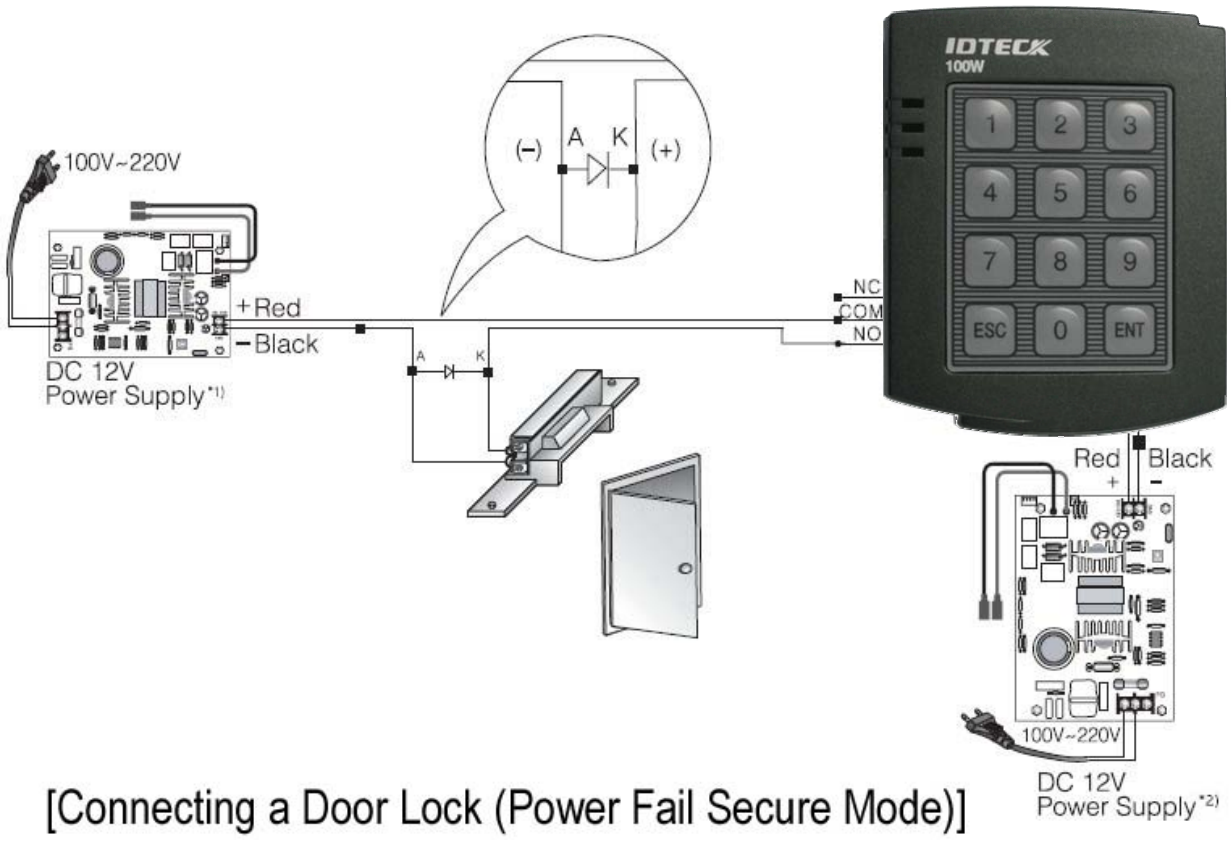
▶ An error in connection between the door lock and the 100W
▶ A door lock error
▶ The unit is malfunctioning or its data is damaged or lost due to external noise disturbance or a short circuit.

● Solution

▶ Check the connection between the door lock and the 100W. The connection method differs depending on the door lock type and its operation type (Normally Open, Normally Close).



[Connecting a Door Lock (Power Fail Safe Mode)]



[Connecting a Door Lock (Power Fail Secure Mode)]

▶ Check the door lock operation and the connection between the door lock and the 100W.

1. Check the wiring between the door lock and the 100W to see if there is any short circuit or cutoff.
2. Check the operation of the door lock. Remove the door lock from the 100W and check the relay output from the 100W with a measuring instrument. If the relay output from the 100W is normal, replace the door lock.

16. Warranty Policy and Limitatin of Liability

IDTECK warrants this product against defects in material and workmanship for the period specified below from the date of purchase under normal customer use. This Warranty doesn't apply: 1) to any product which has been dismantled without authorization of IDTECK or/and has a damaged or detached QC label on its back side; 2) to any losses, defects, or damages caused by improper testing, operation, installation, maintenance, modification, alteration, or adjustment; 3) to any product with a damaged or faded serial number on it; or 4) to any losses, defects, or damages caused by lightning or other electrical discharge, natural disaster, misuse, accident or neglect.

This Limited Warranty is in lieu of all other warranties, obligations, or liabilities on the part of IDTECK, and IDTECK DISCLAIMS ANY AND ALL WARRANTY, WHETHER EXPRESS OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.IDTECK does not, and cannot, know who is present, what property is located, where this product will be used; it would be extremely difficult to determine the actual damages that may result from a failure of the product to perform as anticipated; and the low price of this product is based upon the nature of the product provided and the limited liability that IDTECK assumes. IDTECK IS NOT RESPONSIBLE FOR ANY PERSONAL INJURY, PROPERTY DAMAGE OR LOSS, DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR OTHER LOSS, AND IDTECK'S MAXIMUM LIABILITY SHALL NOT IN ANY CASE EXCEED THE PURCHASE PRICE OF THE PRODUCT.

To obtain repair or replacement under the terms of this warranty, visit IDTECK's Website (http://www.idteck.com) and place an online RMA request. After an RMA code is issued, return the product along with the authorization RMA code.

>> Warranty Period

	Product Category	Warranty Period
1	RF CARD (Active type)	1 year
2	RF READER / FINGERPRINT READER	3 years
3	STANDALONE CONTROLLER	
4	CONTROL PANEL	
5	FINGERPRINT CONTROLLER	
6	MOLDED RF READER (RF10, RF20, RF30, RF TINY, IP10, IP20, IP30, SR10E, SR10UE, SR10SE, SR10RWE, SR10BE)	Lifetime
7	RF CARD (Passive type) (IDC80, IDC170, IDK50, IMC125, LXK50, IPC80, IPC170, IPK50, ISC80, ISC80S, ISK50, IMC135, IHC80, IP100, IP200)	

RMA REQUEST FORM

IDTECK accepts only on-line RMA requests on our Website (www.idteck.com). Please provide us with basic information in the below form so that we can understand your problems better. Send us back this form with your products after an RMA code is issued on our Website. This form is not compulsory.

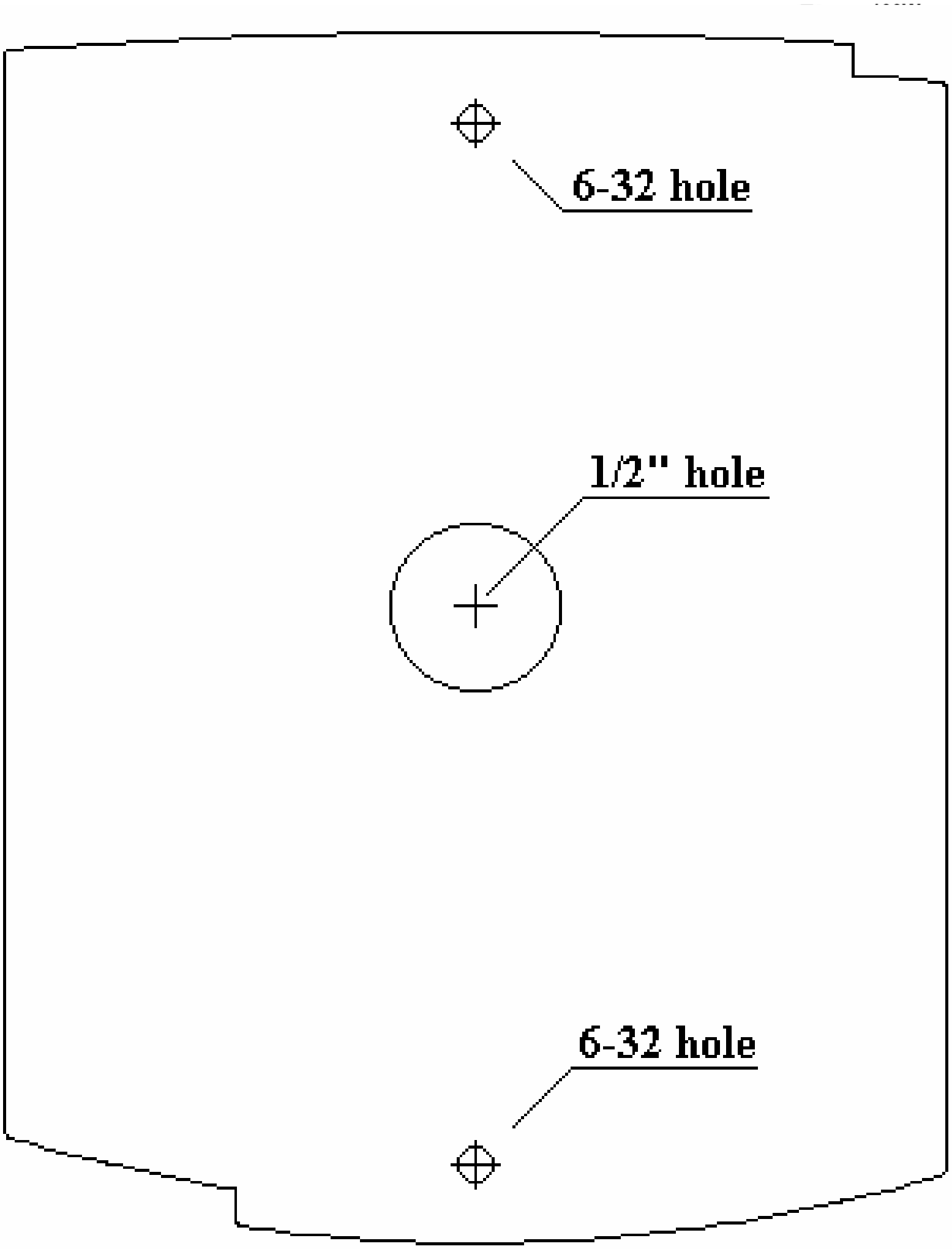
RMA Authorization Code :	
1. Company Name	
2. Model Name	
3. Serial No.	
4. Original Invoice No.	
5. Distributor	
6. Purchasing Date	
7. RMA Request Date	

Please check your problems.

□ Card Reading	□ Power	□ Keypad
□ Communication	□ Relay	□ LCD
□ LED & Buzzer	□ Registration	
□ Others :		

IDTECK RMA Center >>

3F, 10/10-1/10-2, Dodang-Dong, Weonmi-Gu, Bucheon-Si, Gyeonggi-Do 157-030, Korea
Telephone: 82.2.2659.0055 (HQ) / 82.32.671.5642 (RMA Center)
Fax: 82.2.2659.0086 (HQ) / 82.32.671.5641 (RMA Center)
Website: www.idteck.com
e-Training Center: www.idtecktraining.com


6-32 hole
1/2" hole
6-32 hole

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

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