

USER MANUAL

SMARTSINGLE NG PLUS



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The Contained in This Manual are Subject To Change without Notice at Any Time.
It is Smart I's goal to supply accurate and reliable documentation. If you discover a
discrepancy in this document or Need Help, please e-mail your comments to
support@smartisystems.com.

Warning & Caution

- Ø Please handle the equipment with care. Physical Damage to the system is not covered under warranty.
- Ø Do not power on the system without reading this manual. Ensure proper power supply with Earthing.
- Ø Note down the serial number and model no. of the device for future reference and quote in all support and service requests.
- Ø To connect or interface the Card reader to the 'NG Smartsingle PLUS' unit please refer to the Hardware Installation Guide or Manual and carefully follow the instructions. A trained technician must make the connections.
Any negligence on your part may damage the Card reader interface on the NG Smartsingle PLUS terminal.
- Ø Mounting the unit in strong sunlight may affect user visibility of the LCD. Ensure that the LCD and LED's are clearly visible in all lighting conditions.
- Ø Do not use this unit near water.
- Ø Never insert objects of any kind into the unit or through the cabinet slots as they may touch voltage points and/or short circuit parts possibly resulting in fire or electric shock. Never spill liquid of any kind on the unit.
- Ø When connecting up the NG Smartsingle PLUS Access Controller ensure that the mains power supply is safely isolated. Power up the controller only when installation is complete.

Fire Safety and accountability Notice



When connecting card or weigand readers to any emergency entry, exit door, barrier or elevator must provide an alternative exit in accordance with all fire and life safety codes pertinent to the installation. These fire and safety codes vary from city to city and you must get approval from local fire officials whenever using an electronic product to control a door or other barrier.

Important Instructions

- **Care should be taken identifying the wires. Improper wiring may render permanent damage to the device or personal injury.**
- **Refer the color code on the Reader to connect the external weigand reader on the controller.**
- **Check the earthing at the site before installing the controllers. Normally the earthing should be between 1V to 2V only. Earthing on the higher side may damage the controller or its various other components.**

Get started with NG Smartsingle Plus

Included items:

Product	Image	Qty	Use
NG Smartsingle PLUS		1	Attendance System
Power Supply		1	Supplying power for the Unit
Software CD	http://www.smartisystems.com/Software.html	1	For Device Configuration/Management & For Data Downloading
Installation Guide & Test Report		1	For referring functions keys for programming the device by keypad & Other Installation Details

Power Supply Specification:

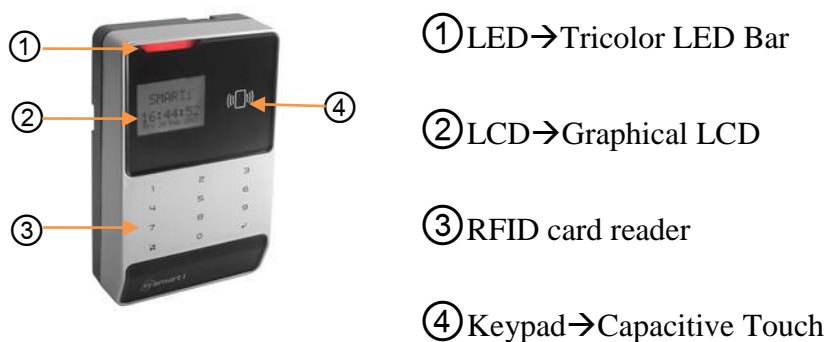
In case you do not have the required power supply included in the package and intend to buy your own power supply use these specifications. Below given specifications should be strictly adhered to.

Device	Application	Power Supply	Input	Output
NG Smartsingle PLUS	Attendance & Access (Lock Voltage)	Universal AC Adapter Isolated i/o	110 to 230 VAC	12 V DC/ 2A (Min)

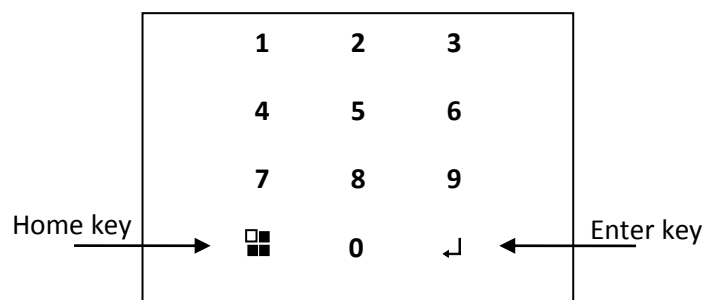
Introduction

The new **NG SMARTSINGLE PLUS** blends loads of innovative features to streamline installation and administration for small, medium or, large business enterprises for standalone door access control deployment. **NG SMARTSINGLE PLUS** brings the high speed, accuracy, flexibility and user friendly interactivity. It provides intuitive and aesthetic GUI on graphical LCD with easy-to-use touch sense keypad.

Description of keys & other parts



Operational keys:

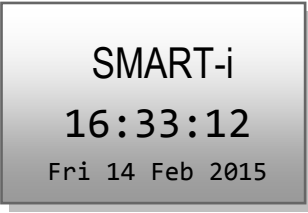

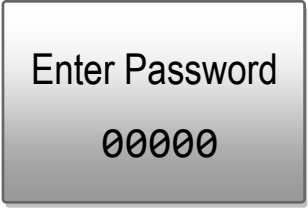
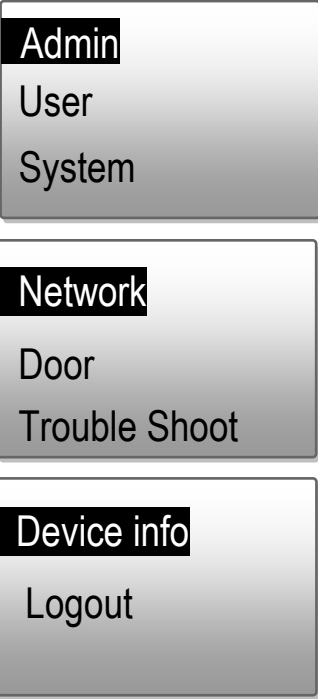


Keys	Description
Numeric keys(0-9)	To access keypad functions & to enter UID for verification
Keys 2 & 8	Scroll keys to select menu after admin login.
Keys 4 & 6	Scroll keys to select options
Home screen key	To go to the home screen
Enter key	Entering into menu parameter and set the values for parameter

Technical Specification

Particulars	Description
CPU	32 Bit RISC Arm
Memory	Upto Flash 8 MB
Events/Transactions	2,50,000
No. of Users	75000
Operation Modes	Card Only(On Weigand Card Only), UID only
Communications Port	TCP/IP, weigand, RS485
Baud Rate	9600bps (Default)
Controller ID	Max 9999
LCD	Graphical LCD
Keypad	Capacitive Touch Keypad
LED	Tricolor LED Bar
Language	English
Power Supply	12 V DC/ 2A (Min)
Enclosure	ABS Plastic
Color / Weight	Silver & Black
Dimension (H X W X D) in mm	167 x 105 x 45
Mounting	Wall Mounting

Display & keypad Interface:

Home screen	
	<p>After power on the unit, the unit shows the below home screen.</p>
Login Screen	
	<p>Press home key from keypad, you get Login screen. Enter admin ID i.e 11111 (default) &press 'enter' key from keypad.</p>
	<p>Then enter password i.e. 12345 (default)</p>
Menu Screen	
	<p>If admin ID & password is right then you get menu screen.</p>

Admin

Set Time

Set Date

Add Admin ID

Delete Admin ID

Change Password

This mode is used to set time and date, add/del/change admin users and to change its password.

Select Admin by moving cursor using keys 2 & 8. Then press enter key.

Set Time

Set Time

HH:MM:SS

HH:MM

Set Time

HH:MM:SS

10:10:10

In this menu user can change the time format & time according to user's requirement using the keypad. After selecting time format press enter then set time, press enter to set it.

Set Date

Set Date

DD:MM:YY

28/02/15

User can edit the date according to his requirement using keypad. After editing the date press enter to set it successfully.

Note:

- a. Maximum 16 admin ID can be added including Default admin ID.
- b. Auto logoff after 60 sec (default admin ID is 11111 and password is 12345).
- c. We can add maximum 1 to 65535 no for admin ID & password.

Add Admin ID

Add Admin ID
 Enter ID
 0000000000

In this mode, enter the Admin id and password and press enter to go back to the submenu
 User can create Admin ID by entering ID and password. With the added admin ID user can log in, but depending upon the authentication level set, user can access selected features..

Delete Admin ID

Delete Admin ID
 Enter ID
 0000000000

In this mode, user can Enter the admin ID and password and press enter to delete the created admin ID.

Change Password

Change Password
 Enter ID
 0000000000

In this mode enter the admin ID or shows card, press enter key then system ask for old password, enter old password & press enter after then system ask new password , enter new password and then press enter to set the change password successfully.

User

Add User
Del User
Search User

Bulk Add Card
Change Pin
Add User Data

Facility Code
Set DUA User

This mode is used to access all different parameters related to the user such as add user, delete user, search user, bulk add card, change pin, add user data, and facility code.

Add User

Add User
Enter UID
0000000000

In this menu enter the UID or show the card and press enter to add card or UID.

Delete User

Del User
Enter UID
0000000000

In this menu, enter the UID no. or show card and press enter to delete that user.

Search User

Search User
Enter UID
00000

UID:0000012345
Card Pin: 02345

In this menu enter the UID or shows card and press enter to displays card pin.

Change Pin

Change Pin
Enter UID
00000

Change Pin
Enter Pin
OldPin : 00000

Enter the UID or show card then it will ask for old pin and then for new Pin and press enter to set the new added pin for particular UID successfully.

Add User Data

Add User Data
Enter UID
00000

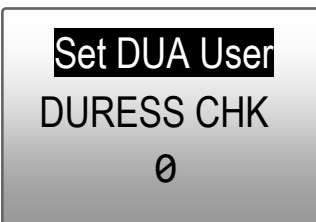
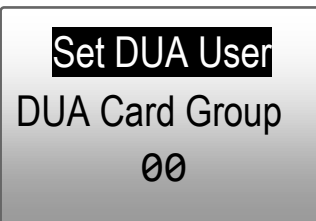
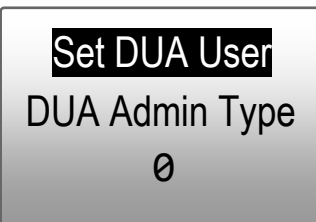
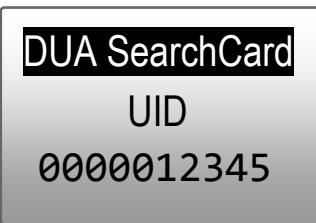
In this menu, Enter the UID or show card for which you want to add the data and press enter.
And select the following card types according to user:
UID/Card Only
Card Only
Key/Card + Pin
Card + Pin
And press enter to set it successfully.

Facility Code



By using the keys 4 and 6 user can enable and disable the facility code. After enabling the facility code it will ask for the location, set the location & press enter then show card to get facility code from that card and after getting facility code press enter.
You can set 8 different facility codes.

Set DUA user



To set dual authentication as per user enter in this menu. Enter UID or shows card & press enter key. Then enter master type & then select group. If you want duress check for particular user then enter 1 to enable duress for that card.

Please refer annexure B.

System

Set Slave ID

Set Controller No
Controller Type

Weigand Out

Display
DualAuth EN/DI

Allow Keypad

This mode is used to select the different parameters of the unit like set slave ID, controller no, controller type, weigand bits etc. by using the 2-8 keys we can select the require option.

Set Slave ID

Set Slave ID

Enter Slave No:
000

Select an option and press enter to go in slave id menu, in this menu enter the desired slave ID and press enter to update it. Default slave ID is We can set max 128 slave IDs to device.

Set Controller ID

Set Controller No

Controller No:
00000

We can set unique controller no. using this menu. After entering the controller no. press enter to update it. We can set max 10000 controller nos. to device.

Controller Type

Controller type
 Wei Access
 Wei Access 2RD
 Wei Att.
 Wei Att. 2RD

Controller type
 Wei Att. No Chk
 Wei Att. No Chk 2RD
 Wei Att. SCNo Chk
 Wei Att. SCNo Chk 2RD

Controller type
 Denv List

In this menu user can set total 12 different controller type. Depending upon the controller type unit will give access to the user, default controller type is Wei Access. After selecting the controller type On/Off the system.

For controller mode set Wei access or wei Attendance mode.

For reader mode set wei attendance no check or deny mode.

Weigand Out Reader

Set Weigand Out
 Weigand Bits

Use this menu when device set as a reader with another controller.

Set Weigand Out

Set Weigand Out
 4: EN 6:DI

To enable weigand reader mode press 4 to disable & press 6.

Weigand bits

Weigand bits
 Weigand 26
 Weigand 32
 Weigand 34
 Weigand 26 or card

Weigand 32 Or Card
 Weigand 34 or Card
 26 or Transparent
32 or Transparent

In this menu, user can select the six different type of weigand formats. Select it and press enter to set it. Default is 32 or transparent

Display

Display Contrast
 Card Digit

From this menu you can set display contrast as required & also set card digit format to display.

Display Contrast

Display Contrast
 Value: 50

In this menu you can set display contrast as per your requirement .

Card Digit

Card Digit
 5 Digit
 8 Digit
10 Digit

In this menu, user can set the three types of card digit display. We can set it as 5-digit,8-digit,10-digit depending upon the user requirement. User can select it using 2 & 8 keys and press enter to set it successfully.

Dual Auth EN/DI

DualAuth EN/DI

4: EN

6:DI

To enable dual user authentication.
Press 4 to enable & press 6 to disable this functionality.

Allow Keypad

Allow Keypad

4: EN

6:DI

To access numeric keys for UID verification.
Press 4 to enable & press 6 to disable this functionality.

Network

Network Setting

EnDis TCP Push
Server Auth

In this mode set the network setting for PC communication using Ethernet.

Network Setting

Network Setting

IP Address:
192.168.000.200

In this menu user can edit the various parameters such as, unit IP address, subnet mask, default gateway, server IP addressetc.

User have to set various parameters such as,

IP Address

Subnet mask

Gateway

Server IP Address

Local port No

Push Server1 IP

Push Server1 Port

Push Server2 IP

Push Server2 Port

UDP IP Address

UDP Port No

DNS Server IP

HB Server IP

HB Port No

HB Time in Min

UDP Server Port

Enter the proper value and press enter to set other parameters After setting all parameters need to restart the device.

Refer annexure A.

TCP PUSH EN/DI

EnDis TCP Push

4:EN

6:DI

To enable TCP push functionality. For TCP push works need to set server IP address & port no by Network setting menu.

Server Authentication

EN/DI ServerCHK

4:EN

6:DI

AuthSvr1 IPAddr

IP Address:

192.168.000.3

AuthSvr1 PortNo

Port no.

3001

AuthSvr1 IPAddr

IP Address:

192.168.000.3

AuthSvr1 PortNo

Port No.

3001

To enable Server authentication functionality. For this functionality need to set server IP address & port no by Network setting menu.
This functionality is used where user authentication done by server.

Door

Door Open Time
Reader In/Out
Fire-Tamper EnDs

This mode is used to set the door open time, reader in/out setting, FIRE-TAMPER EnDs

Door Open Time

Door Open Time
Enter Time:
005

In this menu user can set the door time from 1 to 98secs as on his requirement.
Enter the door open time and press enter to set it. Default door open time is 5sec.

Reader IN/OUT

Reader In/Out
Reader Normal
Reader In
Reader Out
Rdr InOut Toggle

In this menu user can set different reader type. Default reader type is Reader normal.

- i. Reader normal
- ii. Reader IN – It shows IN entry on display
- iii. Reader OUT – It shows OUT entry on display
- iv. Reader IN/OUT Toggle – IN OUT entry can toggle using 0 key.

FIRE-TAMPER EnDs

FIRE-TAMPER
DISABLE ALL
ENABLE FIRE
ENABLE TAMPER
EN FIRE-TAMPER

In this menu user can enable disable fire and tamper by selecting the particular option by keys 2 & 8 and press enter to set it successfully.

Troubleshoot

Initialize System

Weigand Display
Network test

In this mode, we can initialise the system, test the network and weigand display. We can initialise the particular parameter like transaction, system info, facility code, time zone error etc.

Initialize system

Del Transaction

Del All Users
Set All Default

Delete SysInfo

Del Timezone
Del Holiday

Del FacilityCode

Del Door info
Del Admin IDs

Rest System

Del Cards Only
Delete All Data

In this menu user can initialize the system according to different parameters.

Use 2 & 8 key to select particular menu.

After selection press enter. It shows yes & no option. Press 4 to YES & 6 to NO.

Weigand Display

Weigand Display

Reader No: 01
Card No: 00000

In this menu, card information is displayed after showing card on reader such as,
Card No , Reader No
Weigand Bits
Parity chk
Weigand Raw data
Extra data

Network test

LAN Test
Internet Test

In this menu, we can test the LAN test and Internet test. If N/W settings are proper then you get TEST OK message for each.

Device Info

Disp. ALL Para
Disp. Useful Para

In this mode, we can see the all the information related to the product specification and features.

Display All parameter

Select the option and press enter to go in display all parameter. In this menu, user can see all the parameters related to the product setting like terminal ID, IP address, net mask, gateway, server IP but user cannot edit it.

Display Useful Parameter

In this menu user can see the product related information like, model no., used card buffer, firmware version..... etc. by pressing enter key.

Logout mode

Logout
Enter to Log Out

In this mode we can log out from the log in admin ID by pressing the Enter key.
Press enter key.

Annexure: A

Network setting

Sr. No.	Network Setting Parameters	Description
1.	IP Address	Set IP address to device for TCP/IP communication
2.	Subnet Mask	As per your network.
3.	Gateway	As per your network.
4.	Local TCP Port	For device indentification and communication
5.	Local UDP Port	For device indentification and communication.
6.	Server IP	Set Server IP Address, it is used when MAC security feature is Enable.
7.	PUSH Server1 IP	Set Server1 IP Address where we want to push transaction data using TCP.
8.	PUSH Server1 Port	Set Server1 Port Address where we want to push transactiondata using TCP.
9.	PUSH Server2 IP	Set Server2 IP Address where we want to push transaction data using TCP.
10.	PUSH Server2 Port	Set Server2 Port Address where we want to push transactiondata using TCP.
11.	UDP PushServer IP	Set Server IP Address where we want to push transaction data using UDP.
12.	UDP PushServer Port	Set Server Port Address where we want to push transactiondata using UDP.
13.	HB Server IP	Set Server IP Address where we want to push Heart Beat data. Device sendsall important information to this server.
14.	HB Server Port	Set Server Port Address where we want to push Heart Beat data.
15.	HB Time	Set Heart Beat Time,this is time delay after which controller send Device Information to HB Server IP.

Annexure B:

Procedure for configuring users for Dual Authentication

- 1) Firstly You have to Login→Press Home key →press “ 11111”→Press Enter → Password “12345”→Press Enter.
- 2) Add Users from User menu.
Go in User menu→Enter in Add user →Show card or Enter UID→ press enter
- 3) Repeat Step no.2 for Number of Users to add in Unit.
- 4) Now to configure dual user go in User menu & select ‘DUA Search Card’.
Show card or enter UID.

DUA SearchCard
 UID
 0000012345

Press Enter

DUA SearchCard
 DUA Master Type
 1

Now enter 1 for Master & 0 for normal user. Press Enter.

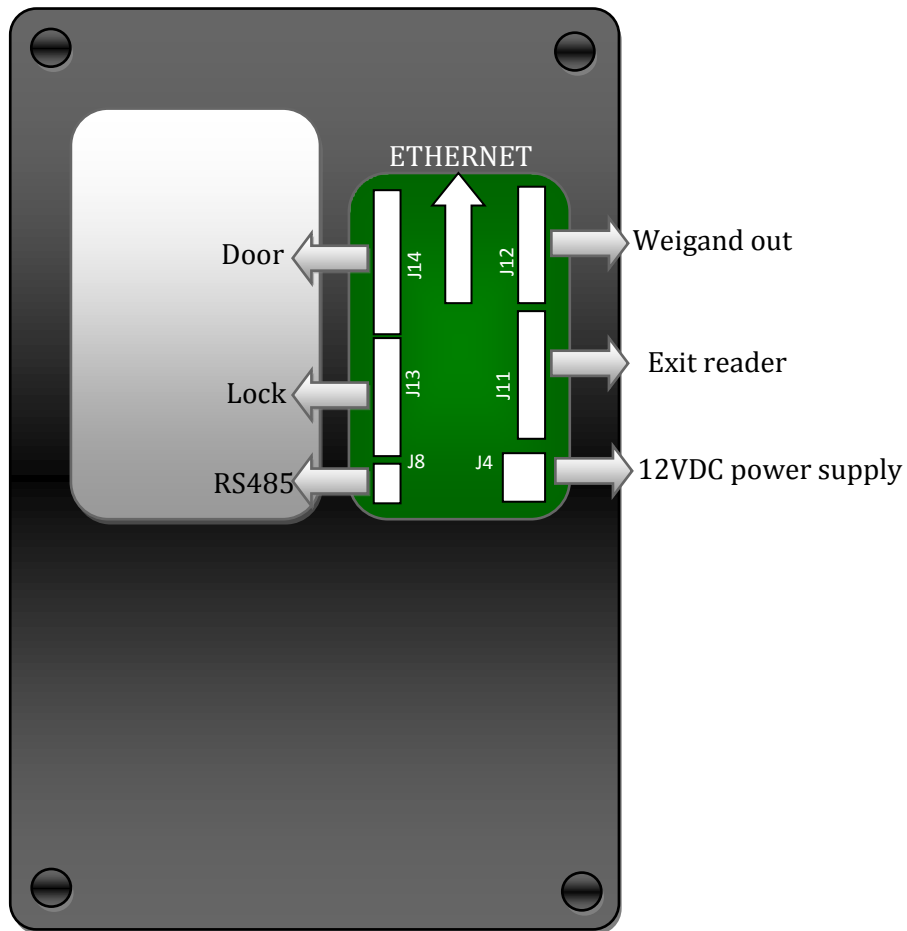
DUA SearchCard
 DUA Card Group
 01

Assign Group no. Press Enter.

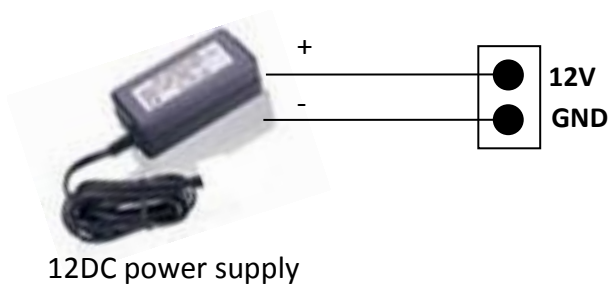
DUA SearchCard
 DURESS CHK
 0

Press “1”→ to enable Duress & Press “0”→ to Disable Duress
 Press enter (it will go for next card number)

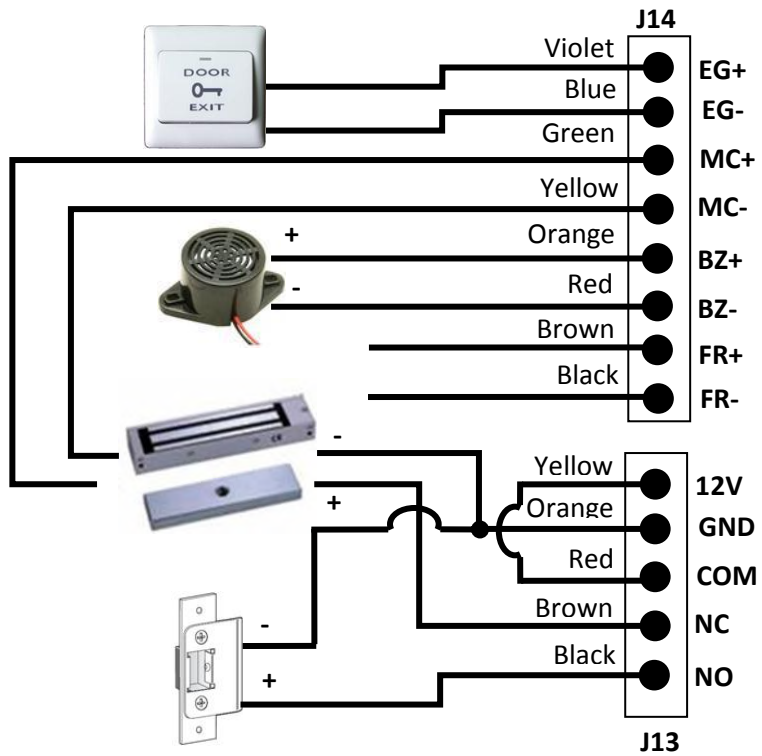
NG smartsingle plus connection details



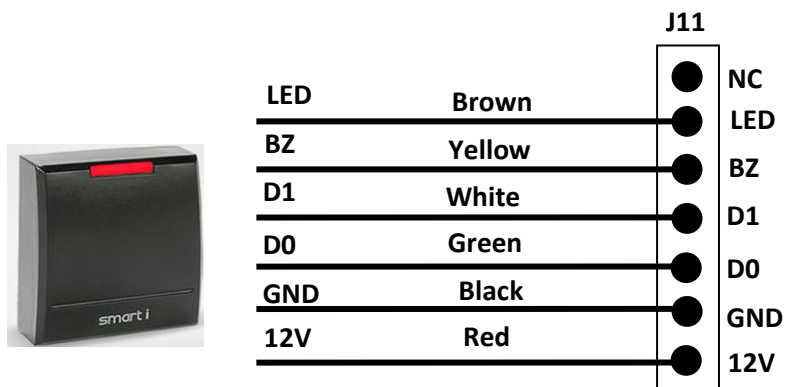
Power Supply connection:



Door connection:

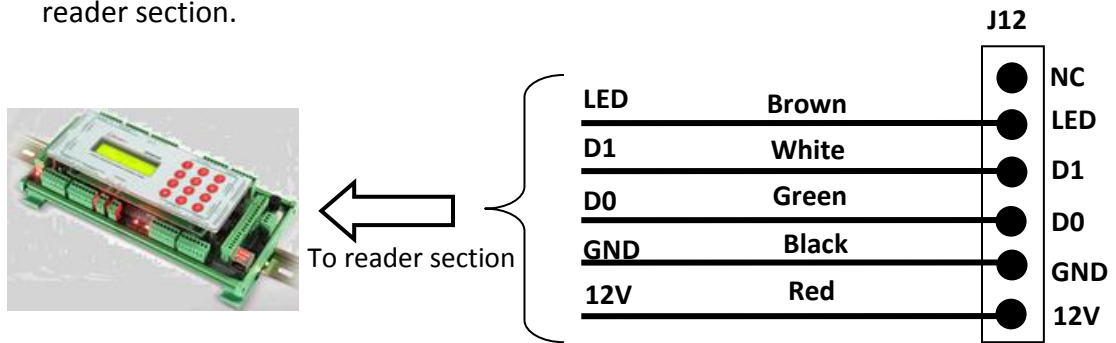


Exit reader connection:



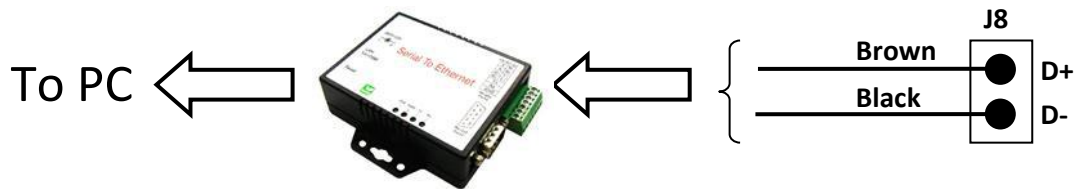
Weigand OUT connection:

In weigand out mode need to use this connection to connect with controller at it's reader section.

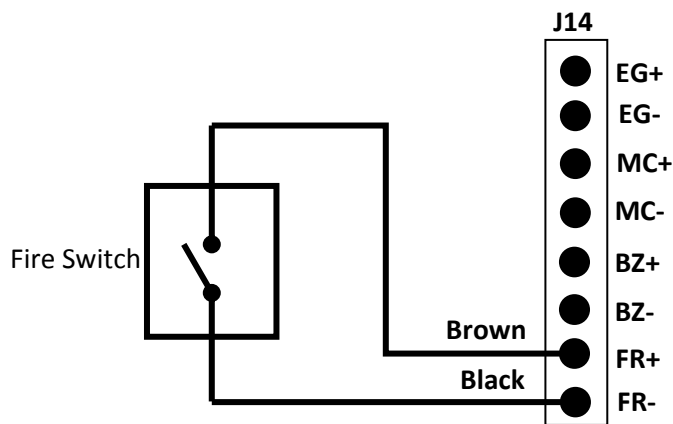


RS485 connection:

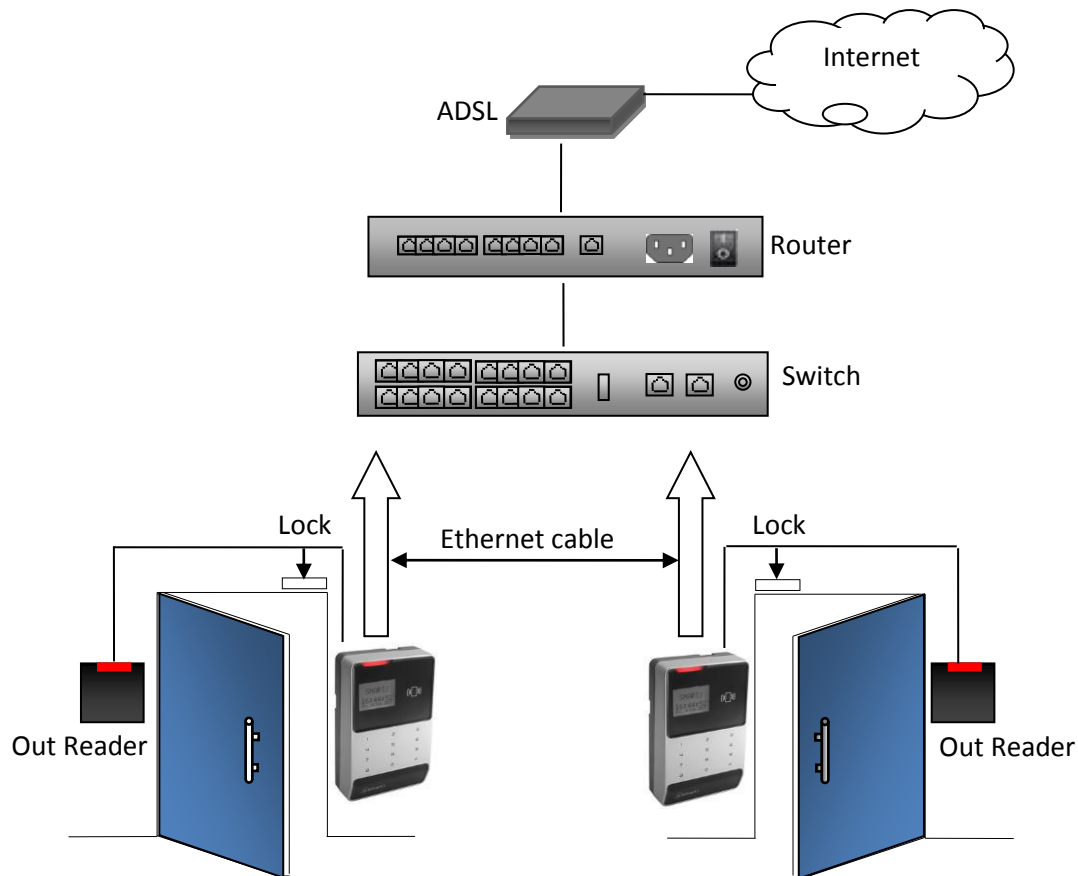
To RS485 converter for serial communication.



Fire Panel connection:



Device configuration



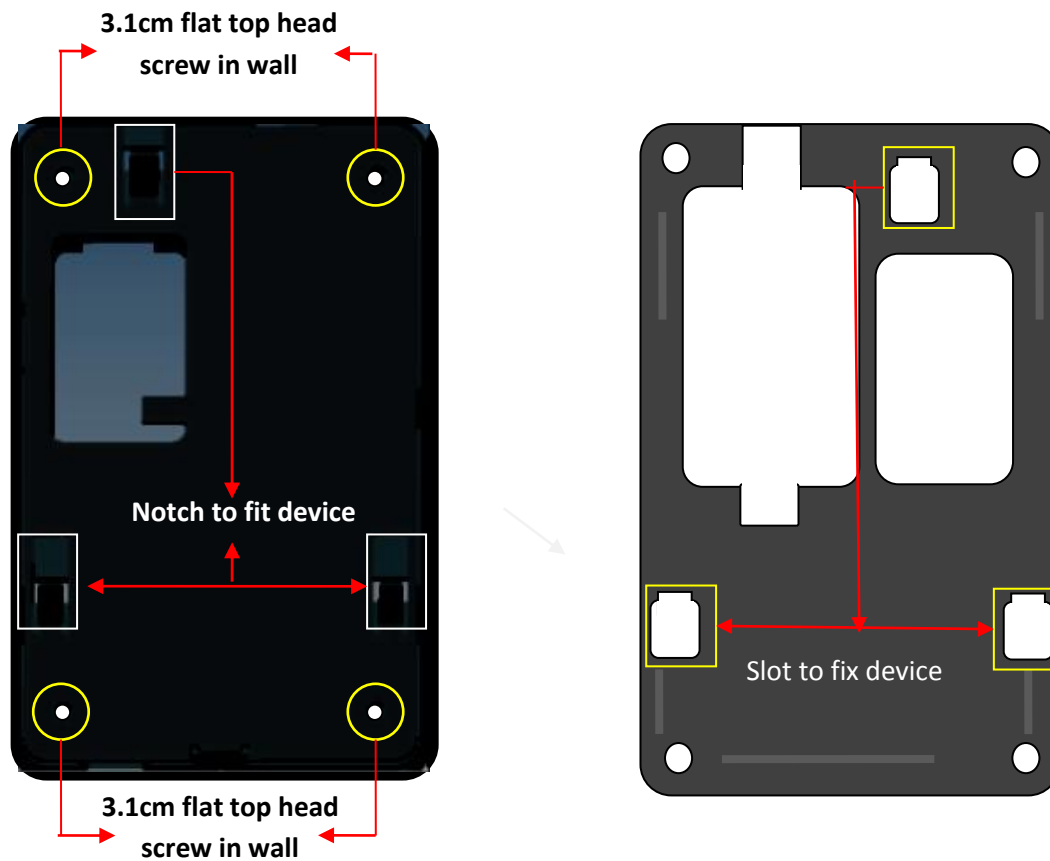
Recommended Cable specification

Type	Particular	Cable Spec	Distance
A	Reader (Weigand)	22AWG; 6 core; shielded Cable	Up to 25 meter
B	Egress switch, Magnetic contact	22 AWG;2 core; shielded Cable	Up to 10Ft.
C	Lock	16 AWG; 2 core; shielded Cable	Up to 10 Ft.
D	Unit to Power Supply	22AWG; 2 Core shielded Cable	Up to 10 Ft.
E	LAN Cable	24AWG; CAT5 / CAT6 (4 pair)	Up to 100 meter

Mounting of unit on the wall

Img1. Fit the wall mounting plate on the wall as shown and screw the plate on the wall using the drill machine and 3.1cm screws as shown below:

Img2. Fit device on back plate by fixing the slots given at the back cover of device.

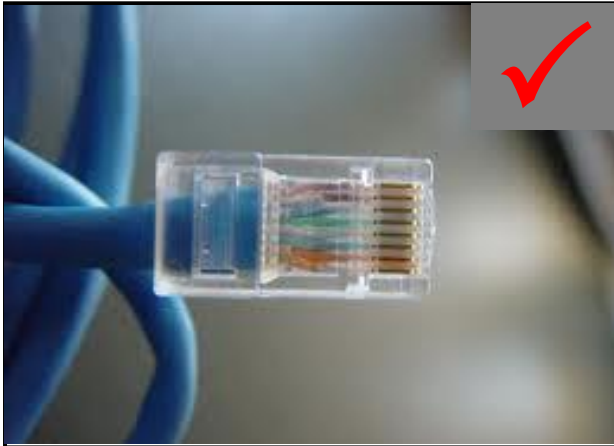


Connecting To Host Computer Using

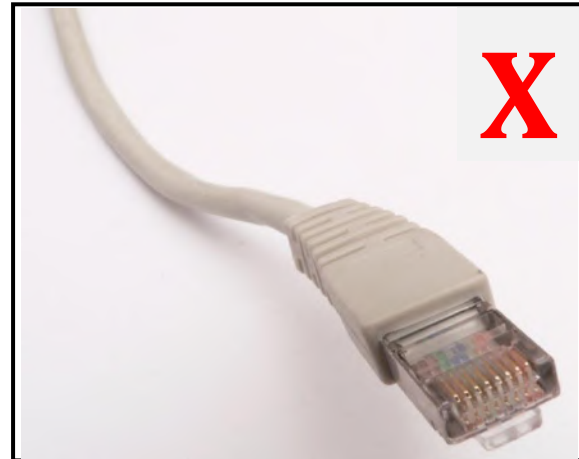
The NG smart-single PLUS Can be Connect to the computer by TCP/IP (Ethernet).

Note: Use proper manually crimp CAT5 cable, Refer bellow images,

Manually Cramped RJ-45



Readymade RJ-45



The NG Smartsingle PLUS series can be connected on the LOCAL AREA NETWORK (LAN) Or Wide Area Network (WAN) as under:

Connecting single controller directly to a PC Using TCP/IP (CAT5/6) Network Cable

Step 1

Use the crossover network cable, with one end connected to the NGSmartsingle PLUS TCP/IP port, and the other end to your PC network adapter.

Step 2

To check your PC's IP Address Settings, find out the IP address of the network. To do so, go to a PC in the network presently, press Start -> Run -> Type "command" and click on 'OK'.

Step 3

Type "ipconfig" and press 'Enter'.

Step 4

Note the IP Address displayed, following is an example.

```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\Documents and Settings\User-09>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix . : 
    IP Address . . . . . : 192.168.0.26
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.0.11

C:\Documents and Settings\User-09>
```


Trouble Shooting

No Communication from Controller to PC

- There are a few points that can be checked to fix it:
- Make sure the network cable is functional; sometimes a damaged cable may be the cause of all problems. To check if it is functional, make sure there are no loose ends and the jack is properly attached to the cable.
- Check that the IP Address Assignment matches the network settings of the corporate LAN or the PC being used.
- Make sure no IP has clashed and that there are no two identical IP addresses in the network.

LCD screen of the device completely blank

- Check whether the power supply is working or not
- The output voltage generated by the power supply is 12V DC. Check this voltage using multimeter if possible
- Check 12V-G power connector properly inserted into a socket.

Is it possible to connect two locks or two readers on single connector?

- NO, do not connect 2 locks or 2 readers together on a single connector. A single lock connector can safely drive 600mA current.
- If load current increases beyond 1A, that may cause hardware problems.

Continues Beep & Door Force Open

- Check for lock magnetic contact (MC+/ MC-), it should be short if not in used.(Refer connection Diagram)

Admin User: User/Password Fail

- If the System/Unit is initializing then password will not match. In this case RESET the System i.e. power off and then power on the system then enter Admin Id and password.

Is it possible to connect NG Smartsingle PLUS as weigand reader then what will be to step follow-up?

- Enable as weigand out mode by menu System → Weigand Out
- Change weigand bit in transparent mode by menu System → Weigand Bits
- All changes done by using key function.