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This handbook has been designed as a guide to the installation and operation of SZ_IO_62 module.

1. Introduction

Home automation is "The Internet of Things". It simply means the way all devices are networked together to provide users with a control over their smart home equipment. This Module is an affordable device that provides users with smart control. It is a standalone switch that can connect to a wide range of appliances. It can turn on up to 8 devices at once by pushing one button. Same functionality is provided by RS-232 port from any compatible device. Can be integrated with other automation systems.

2. Product description

2.1. Features

- Supports remotely (RS-232) turning on or off added devices.
- Supports single, double click or toggle input.
- Supports turning on or off up to 8 separately connected devices.
- Easy configuration over RS-232.
- Easy to install, easy to operate and can be activated immediately.

2.2. Functions

- It allows users to assign all added devices to one or different inputs.
- Module allows users to use one device to trigger ON/OFF one or more devices. So you can connect two devices to separated channels and program them to one input.

2.3. Parameters

- Package Included: 1pc SZ_IO_62 Module
- Size: 6.5 x 7.1 x 2.5 mm (HxWxD)
- Work Voltage: DC 5-12v correct
- Work Current: 25 mA (standby)
- Load Voltage: 5V
- Load Current: 25mA/Channel(MAX)
- Output Type: Discrete
- Control Mode: Physical switch (button), RS-232
- Communication: RS-232, band rate 9600 need action

2.4. Work modes

- Click - one click to turn on or off configured outputs
- Double click - double click to turn on or off configured outputs
- Toggle - if input is shorted, opened to ground then turn on or off configured outputs
- RS-232 commands:
 - **inX_s** - same as click mode
 - **inX_d** - same as double click mode
 - **inX_on** - same as input is shorted to ground
 - **inX_off** - same as input is open state

3. Product operation mode

3.1. Connecting

To connect controller, you need:

- USB cable(mini or micro USB) depends on your Arduino Nano board
- Laptop/PC
- Software (Termite, putty or similar RS232 terminal)
- Drivers (CH340,FTDI FT232RL, CP2102, PL2032HX) depends on your Arduino Nano board

Connection settings:

- Port = Depends of your installed port in PC (Com1, Com3, ... , ComX)
- Baud = 9600
- DataBits = 8
- StopBits = 1
- Parity = 0
- Handshake = 0

3.2. Configuration

Commands:

conf - list all configured inputs

IXSY 12345678 - Input programming is simple. Just type IXSY 12345678 where X is input number and Y is mode of usage (1 - Single click, 2 Double clicks, 3 - Toggle On/Off), numbers are output number to assign to input. Example: I1S0 00045000 - assigned 4 and 5 output to input 1 mode Single click. *Can't assign same outputs to different inputs.

If all is alright you will see reply "OK"

save - saves the config and reboots controller

3.3. Using

To use hardware buttons/switches just connect button/switch to input and load to output. Program input working mode and assign outputs. After all done, just push button/switch.

Serial commands use RS-232 terminal:

IX_on - turn on input X (where X is input number), if all ok you will see reply `sInX_on`.

IX_off - turn off input X (where X is input number), if all ok you will see reply `sInX_off`.

IX_s - turn on/off single click input X (where X is input number), if all ok you will see reply `sInX_s`.

IX_d - turn on/off double click input X (where X is input number), if all ok you will see reply `sInX_d`.

3.4. Resetting to default

Reset from terminal:

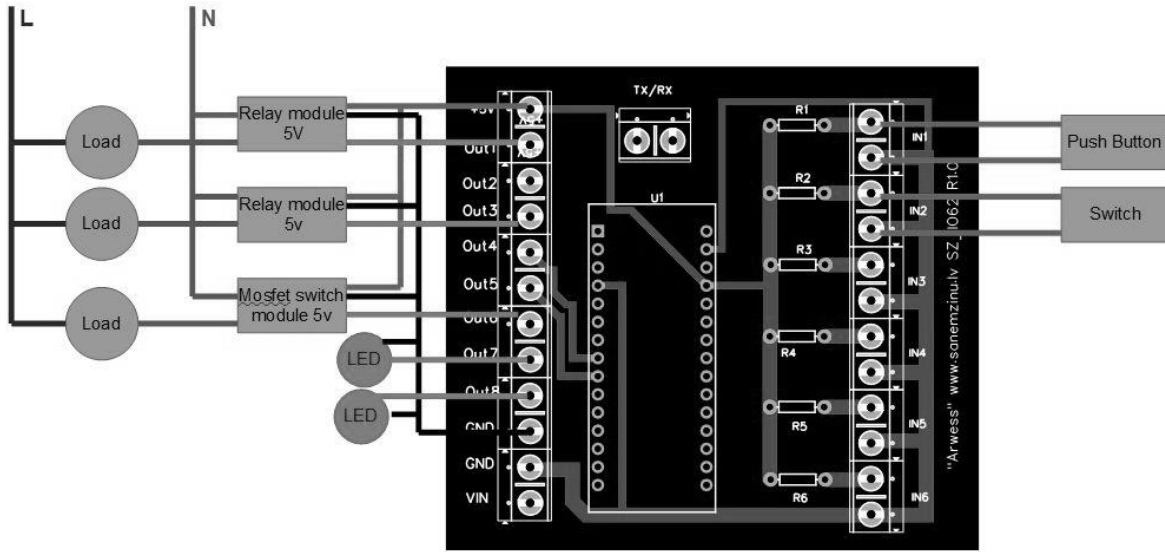
D0S1 1 - will reset to default configuration.

save - saves the config and reboots controller

Hardware resetting:

1. Turn off controller.
2. Short Input 1 to GND & Input 3 to GND.
3. Turn on controller.
4. Wait 2 seconds then release Input 1 & input 3.
5. Short Input 2 to GND.
6. Wait 10 seconds while controller restarts and default config will be loaded.

3.5. Wiring scheme diagram



4. Update history

Date	Firmware	Hardware	Description
06.07.2020	3.03	Rev.1	Last working version