HDL M/S48.1 KNX 48 路干接点模块

使用说明书

英文版

图号：**HDL**

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日期：_____年_____月_____日

广州河东科技有限公司

HDL M/S48.1
KNX 48CH Dry Contact Module
User Manual

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Release Date：2023/06/24

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Modification Record

This record accumulates instructions for each document update. The latest version of the document contains updates from all previous document versions。

Num	Version	Modification Content	Date
1	V1.0.0	First official release	2021/05/28

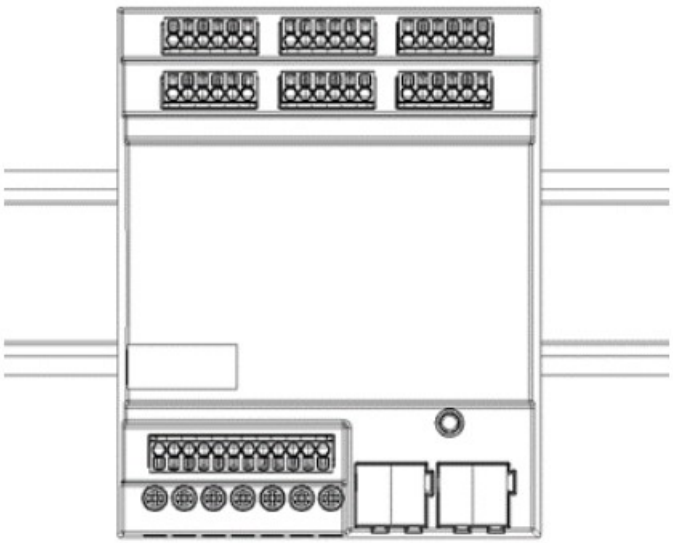
1 Overview

1.1 General Information

1.1.1 Description

KNX 48CH Dry Contact Module is a KNX standard protocol module with 48 dry contact channels, which enables control of lights, curtains, scenes, etc.

1.1.2 Device Installation



- Distribution board installation

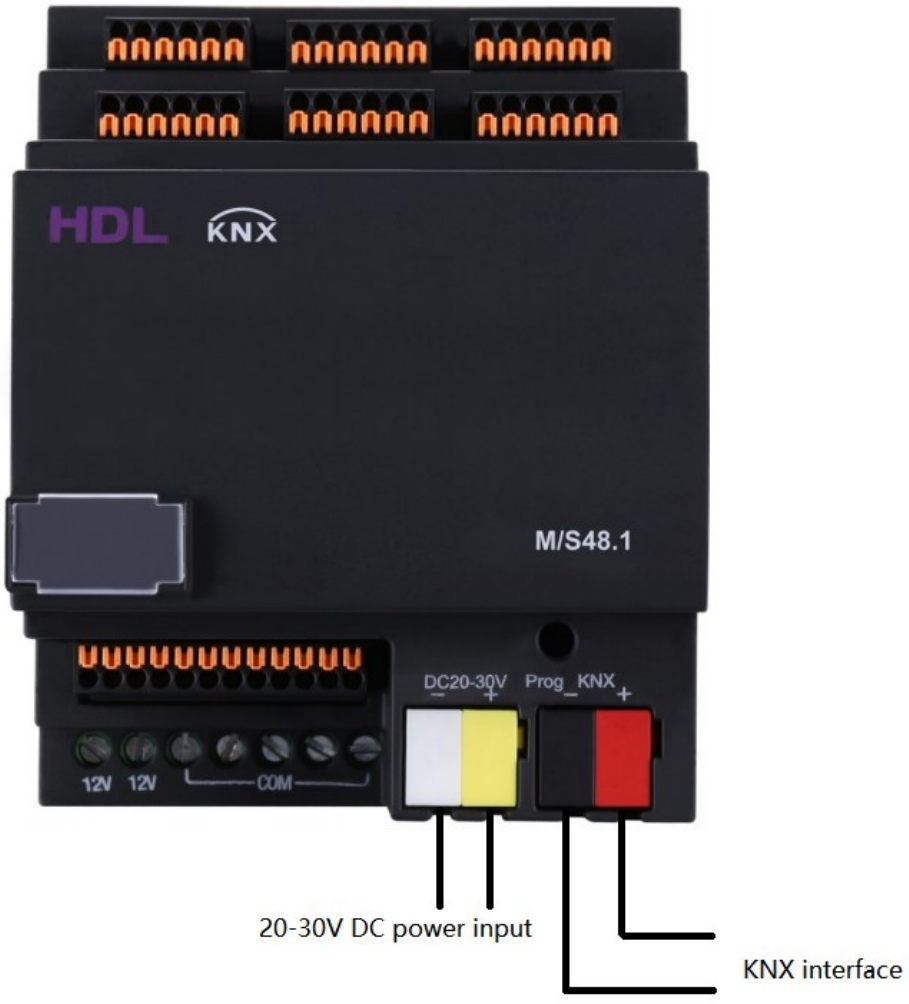
1.2 Functionalities

- 48 dry contact channels, which enable to switch dry contact input and output.
- Can be used to detect dry contacts, and can control switches, scenes, curtains, etc. when as input channel
- Output pulse signal to drive an LED status indicator when as output channel.

- Supported dry contact types: mechanical switch and electronic switch.
- Control types: switch control, curtain control, scene control, percentage control, logic control.
- Supports up to 10 scenes, and up to 10 output targets can be set for each scene.
- Logical relationships include: AND, OR, NAND, NOR, XOR.

1.3 Connections

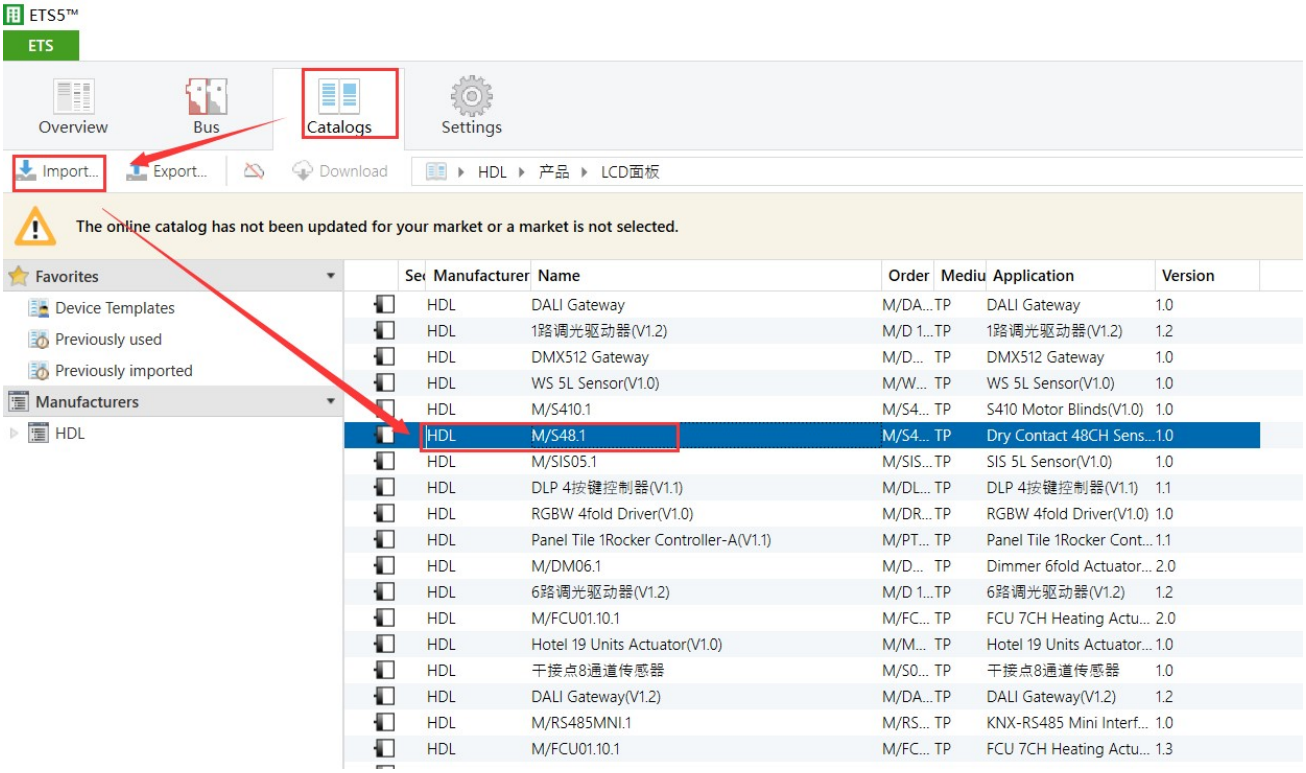
Device connection: KNX 48CH Dry Contact Module connect with the system by the KNX interface and the 20-30V DC power input.



2 Import Data

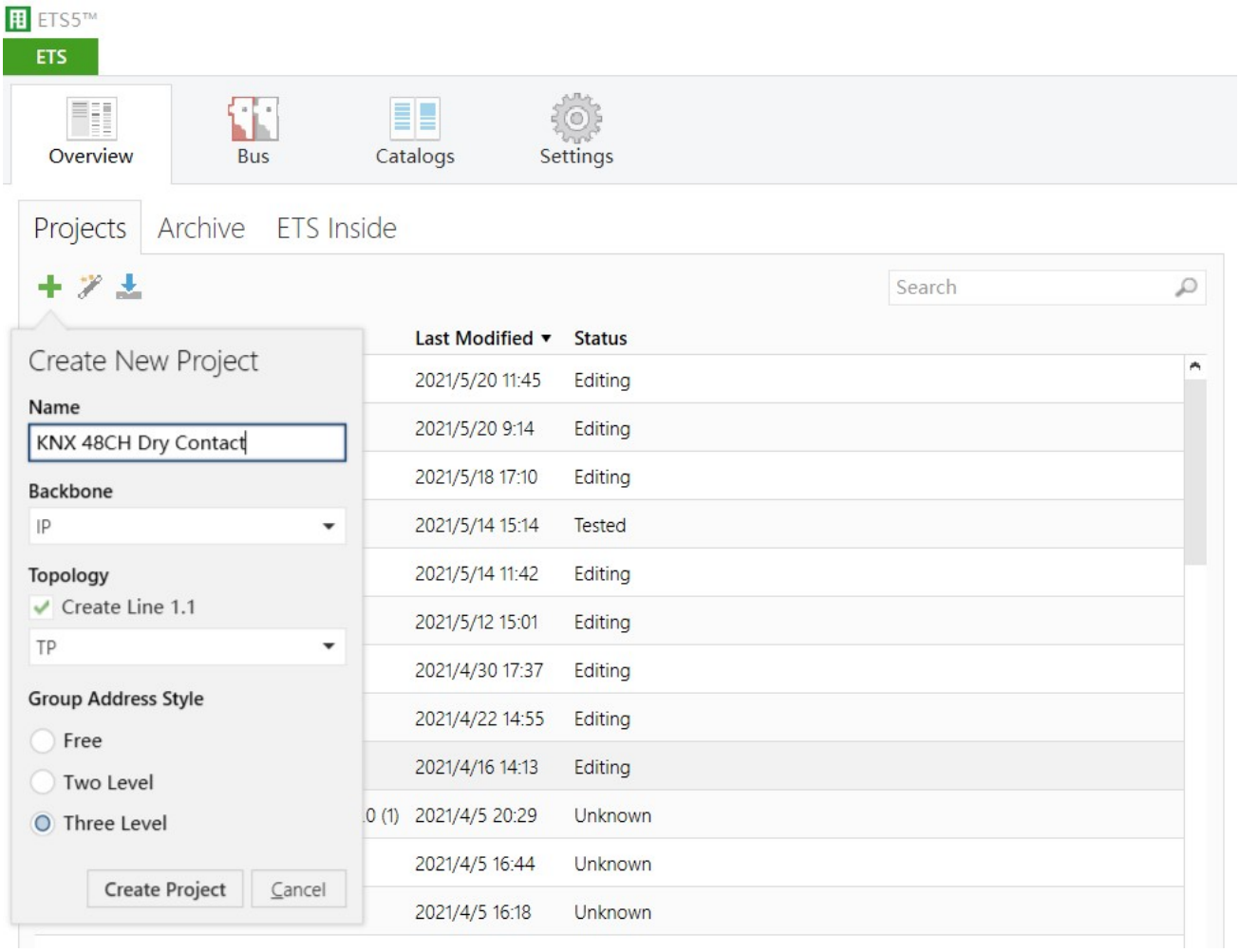
2.1 Import Database to ETS (.knxprod)

Import Catalogs: click “Catalogs” → “Import…” in the main page of ETS5 software andselect local database files with the suffix of .knxprod.



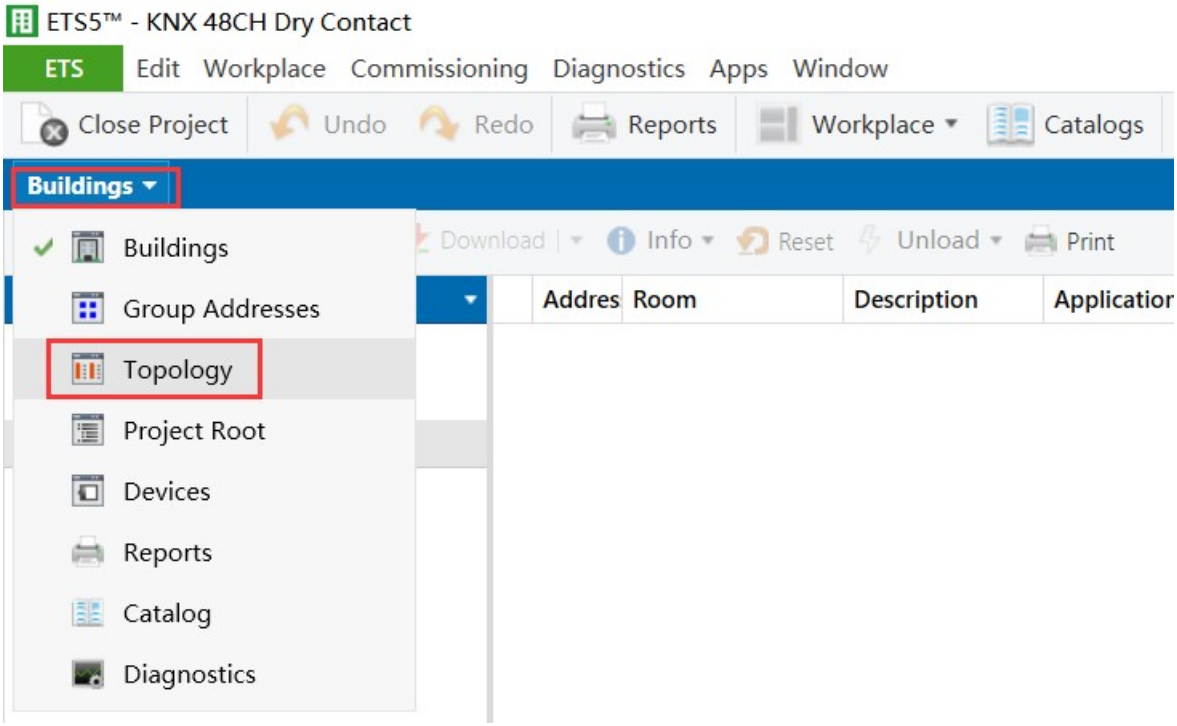
2.1.1 Import Projects (.knxproj)

Open ETS5 and click “Import project” button of “Your Project” tab of“Overview” page and import obtained KNX project files with the suffix of .knxproj. After importing projects, added/created projects will be listed below. Double click to edit.

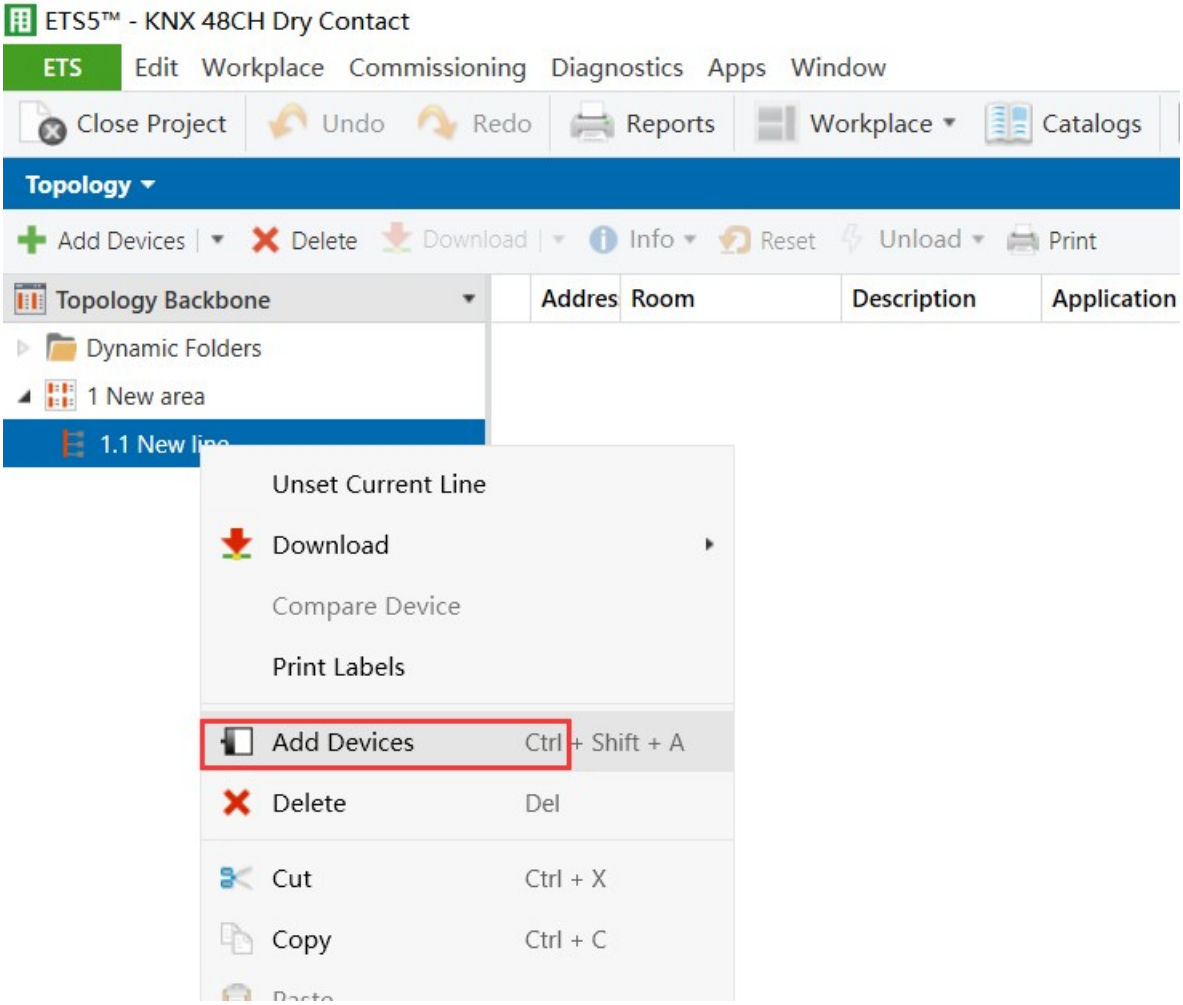


2.1.2 Add Devices to Projects

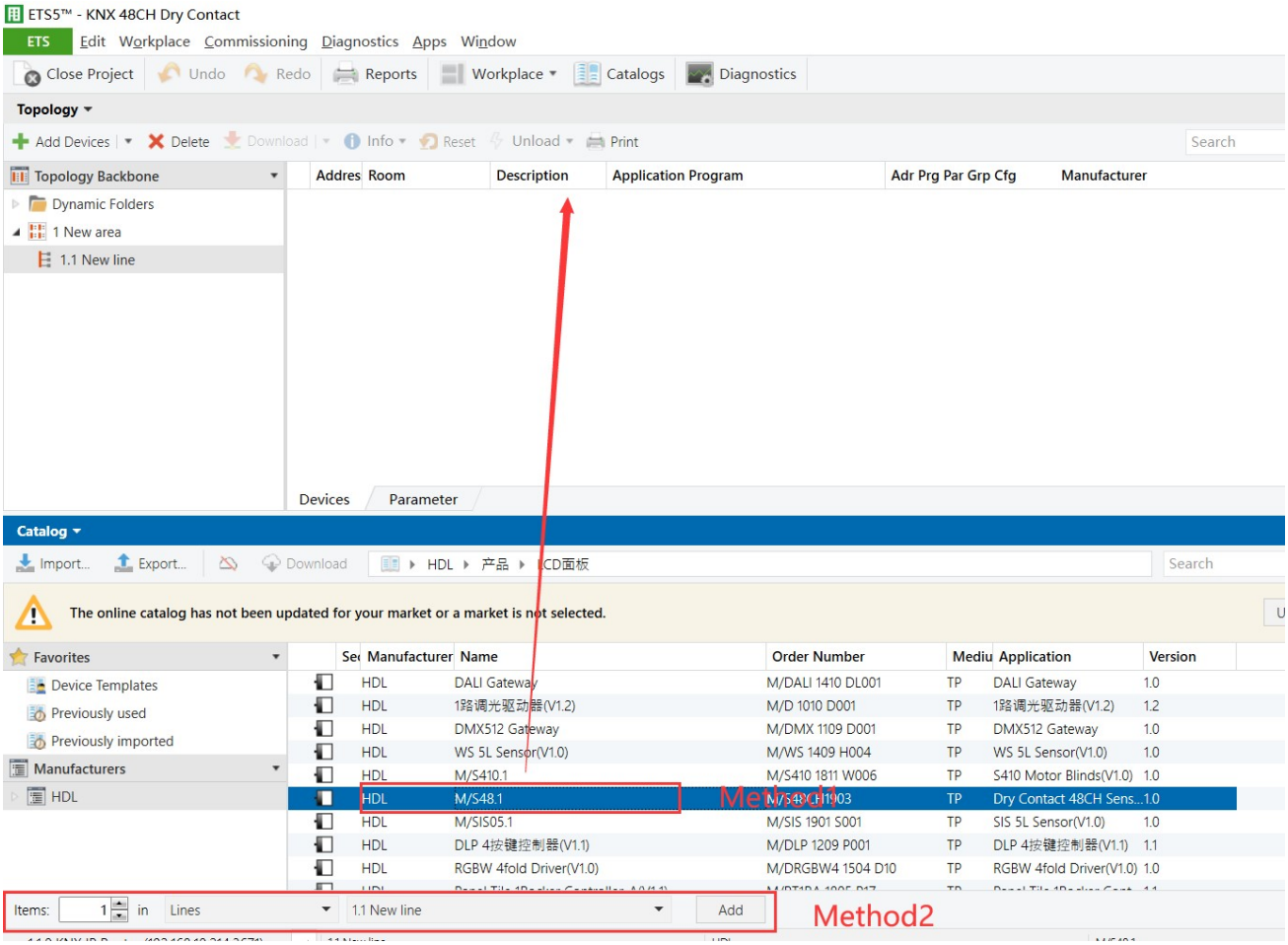
① After creating a project, the project page will show up by default. Click “Buildings” and select “Topology”.



② click the arrow beside “Add Areas” and select “Devices”, and the catalog page will show up below.



③ Click “HDL” in “Manufactures” column and select devices to be added to the project on the right. Drag devices to the above area (Method 1) or click “Add” button to add devices after clicking the location needed to add projects below (Method 2).

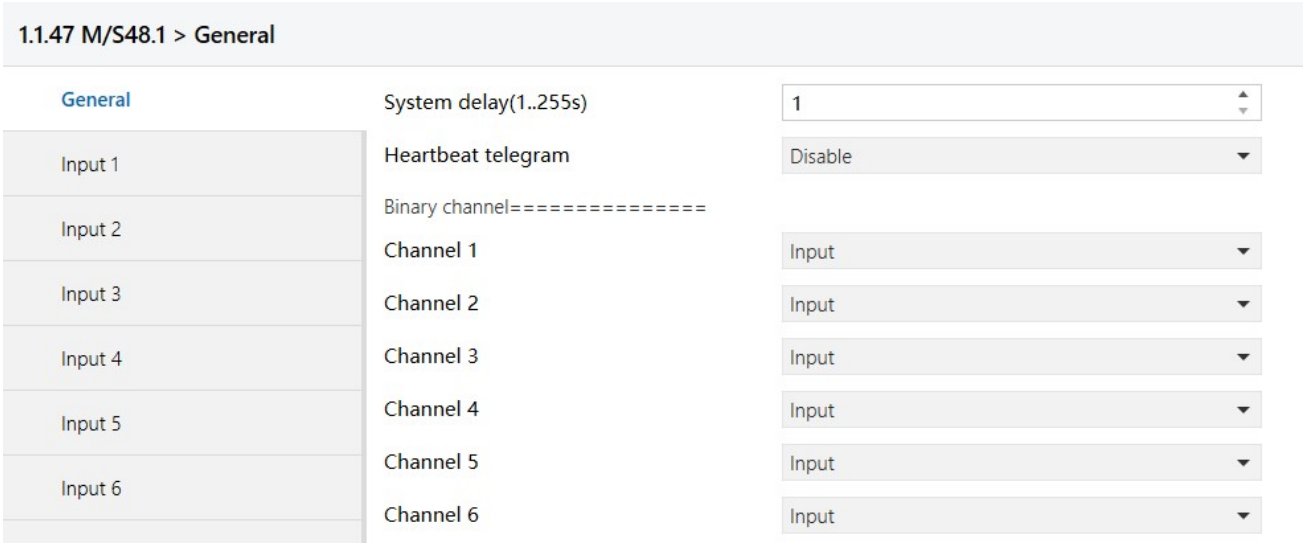


3 Software Configurations

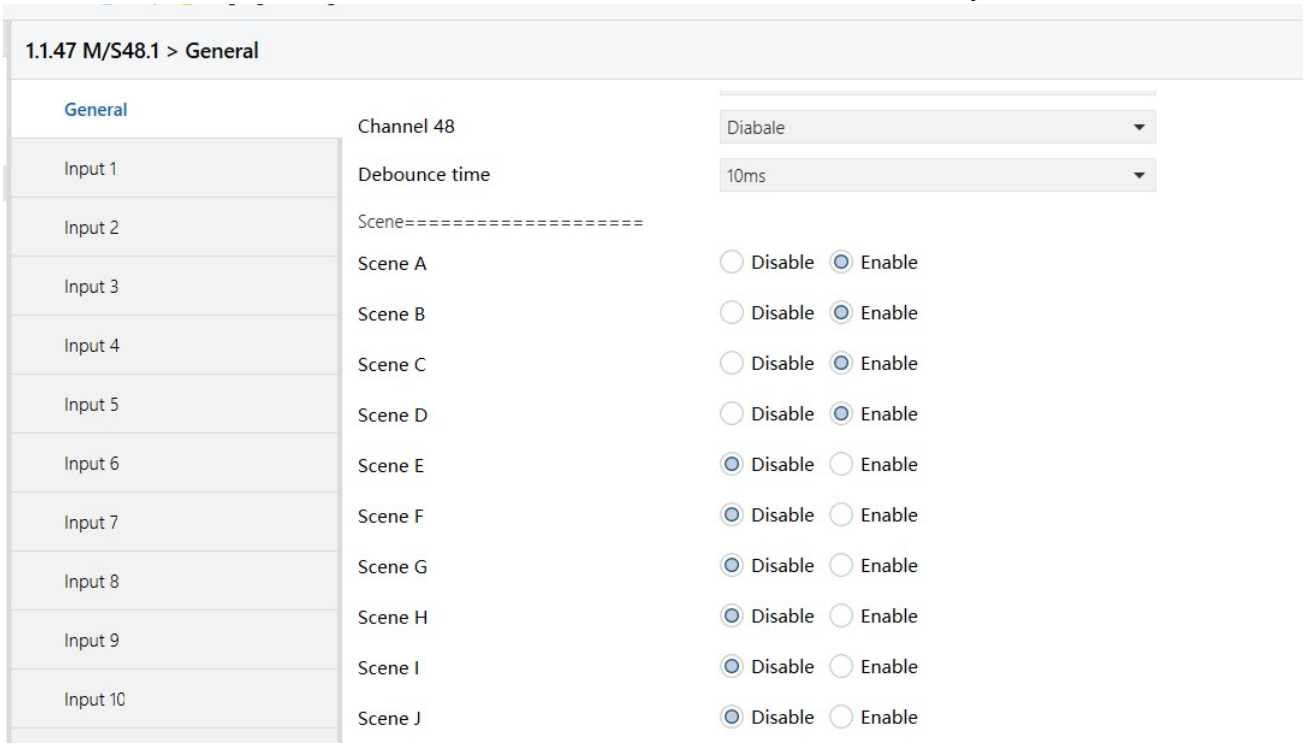
3.1 General

The setting instruction of this page like the follow　:

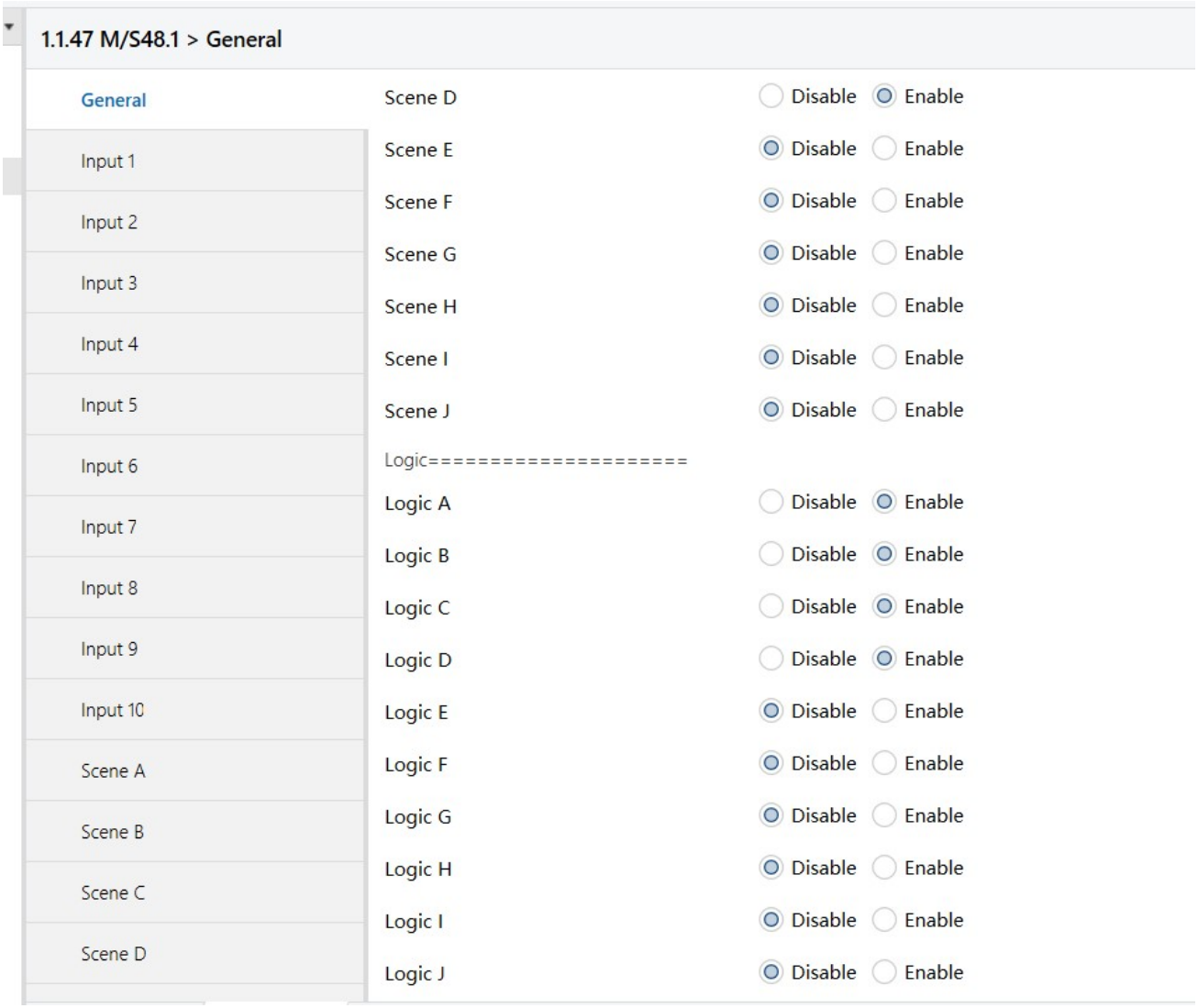
1. System delay: we can set the delay time from 1 to 255s.
2. Heartbeat telegram: it is work with the third party device, tell the third party devices the timer is online, we can select disable or send value cyclically.
3. Channel1: there are totally 48 channels, we can set “Disable”, “Input” and “Output” for the channel.



4. Scene A: we can enable and disable it. There are 10 scenes totally.



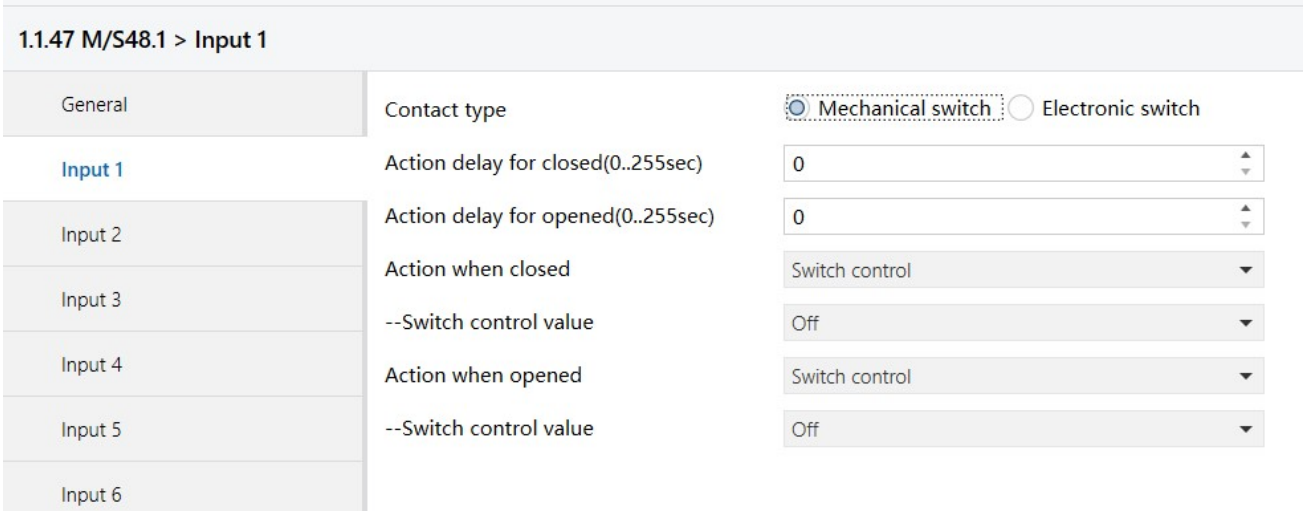
5. Logic A: we can enable and disable it. There are 10 scenes totally.



3.2 Input 1

From input 1 page, we can select mechanical switch and electronic switch

3.2.1 Mechanical switch



1. Contact type: we can select mechanical switch and electrical switch.
2. Action delay for closed(0…255sec): Set the delay time for closed, range from 0s to 255s.
3. Action delay for opened(0…255sec): Set the delay time for opened, range from 0s to 255s.
4. Action when closed: we can select below option

Switch control: the target can be lighting, curtain and AC, for the switch control value, we can select “Off”, “On” and “Off/On alternate”.

Curtain control: control the curtain motor and curtain module, for the curtain control value, we can select “Up”, “Down”, “Up/Down alternate”, “Step decrease/Stop”, “Step increase/Stop”, “Step alternate/Stop” and “Step”.

Scene control: we can trigger different scene by this function. For the scene number, we can set from Scene No.1 to Scene No.64.

Percentage control: we can trigger different scene by this function. The percentage control value can be from 0% to 100%.

1 bit data: control the start and stop of sequence. We can set value 0, 1, 0/1 alternate.

1 byte interge: control the percentage of lighting or curtain. The value is from 0-255.

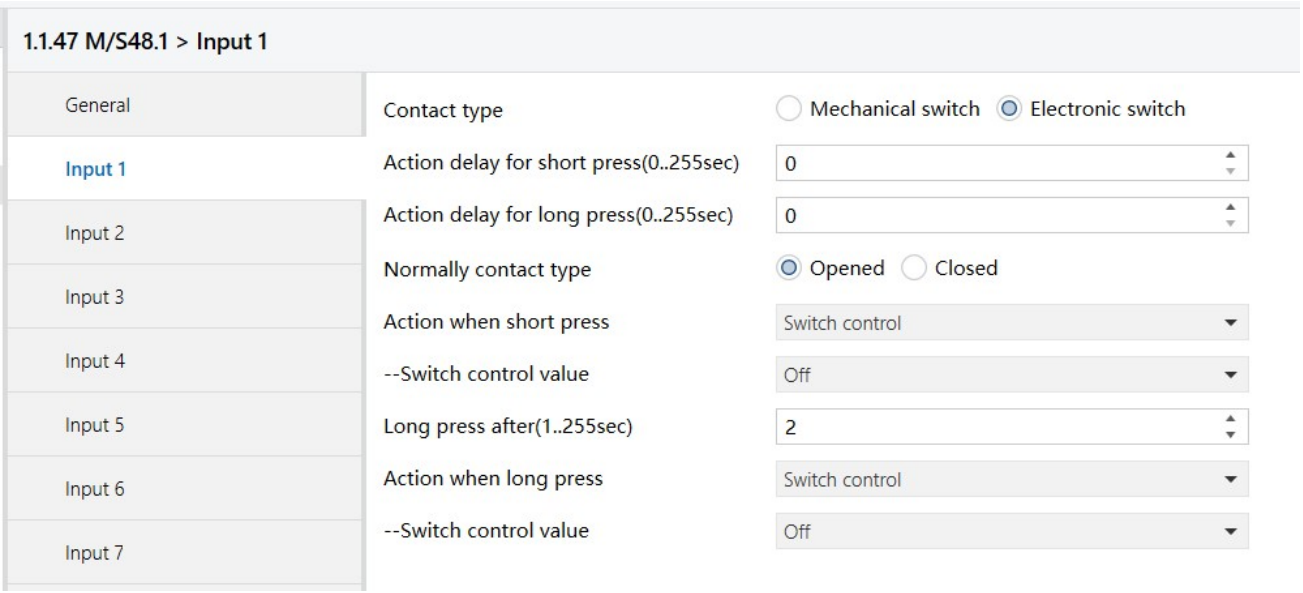
2 bytes interge: we can send the threshold value to bus by this control type. The value is from 0-65535.

2 byes float: send the string to bus. The value is from -99.0-999.0.

No action: there is no output if select this option.

5. Action when opened: the option is the same as action when closed.

3.2.2 Electronic switch



1. Contact type: we can select mechanical switch and electrical switch.
2. Action delay for short press(0..255sec): the delay time can be from 0 to 255s.
3. Action delay for long press(0..255sec): the delay time can be from 0 to 255s.
4. Normally contact type: we can select opened and closed.
5. Action when short press: we can select below option

Switch control: the target can be lighting, curtain and AC, for the switch control value, we can select “Off”, “On” and “Off/On alternate”.

Curtain control: control the curtain motor and curtain module, for the curtain control value, we can select “Up”, “Down”, “Up/Down alternate”, “Step decrease/Stop”, “Step increase/Stop”, “Step alternate/Stop” and “Step”.

Scene control: we can trigger different scene by this function. For the scene number, we can set from Scene No.1 to Scene No.64.

Sequence control: we can select stop, start and stop/start alternate.

1 bit data: control the 1 bit target. We can set value 0, 1, 0/1 alternate.

1 byte interge: control the percentage of lighting or curtain. The value is from 0-255.

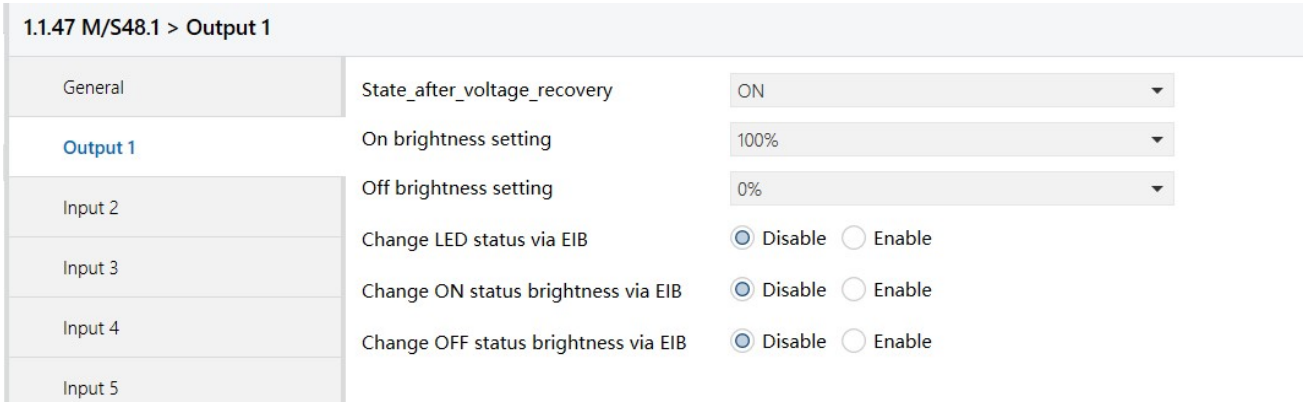
2 bytes interge: we can send the threshold value to bus by this control type. The value is from 0-65535.

2 byes float: send the string to bus. The value is from -99.0-999.0.

No action: there is no output if select this option.

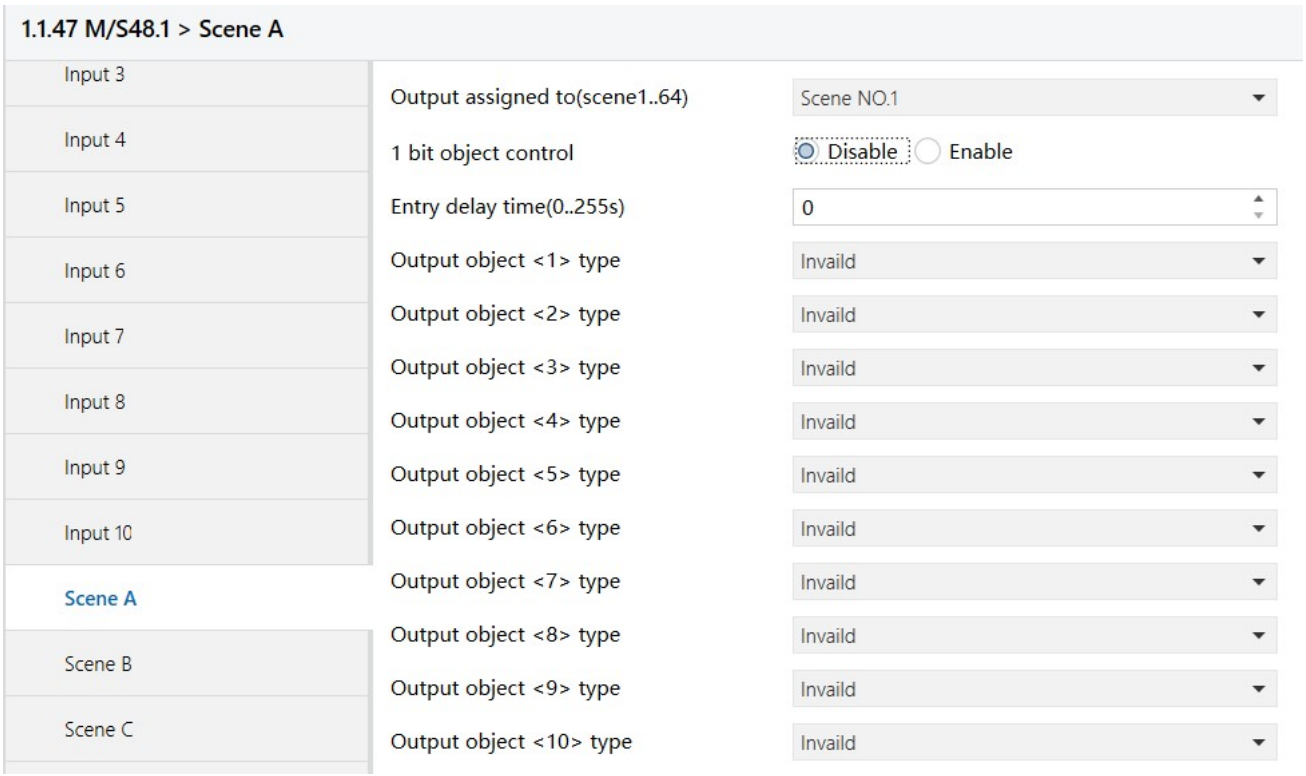
6. Action when long press: the option is the same as action when short press.

3.3 Output 1



1. State after voltage recovery: we can set “ON”, “OFF” and “Recovery”.
2. On brightness setting: we can from 0% to 100%.
3. Off brightness setting: we can from 0% to 100%.
4. Change LED status via EIB: we can “Disable” and “Enable”.
5. Change ON status brightness via EIB: we can select “Disable” and “Enable”.
6. Change OFF status brightness via EIB: we can select “Disable” and “Enable”.

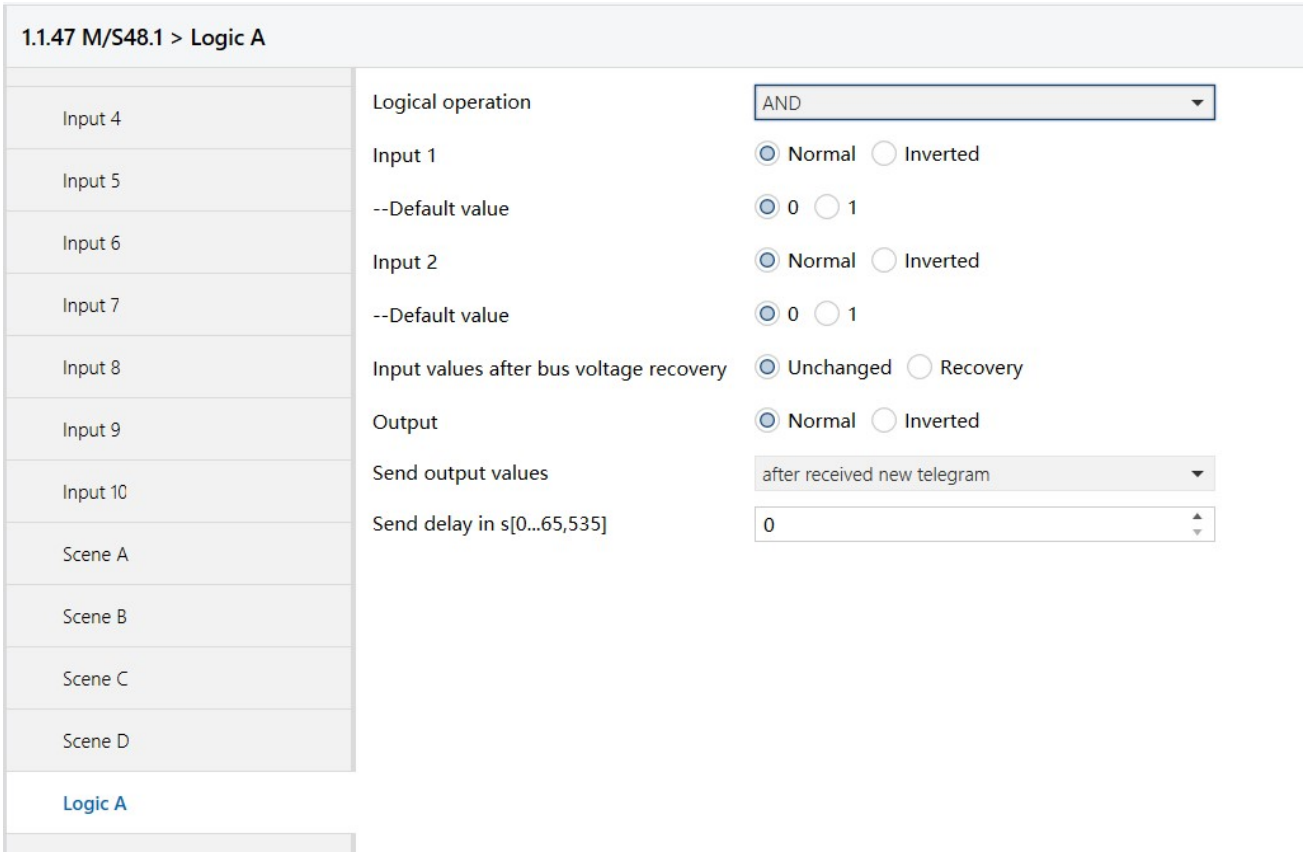
3.4 Scene A



1. Output assigned to (scene1..64)：we can set from Scene NO.1 to Scene NO.2.
2. 1 bit object control: we can enable and disable it.

3. Entry delay time(0..255s): we can set from 0-255s.
4. Output object <1> type: we can select “Invalid”, “1bit value”, “1byte value(0..100%)”, “1byte value(0..255)” , “2byte value(Float)”, 2byte value(0..65535) and 3 byte value(RGB).

3.5 Logic A



1. Logic operation：we can select “AND”, “OR”, “NAND”, “NOR”, “XOR”.
2. Input 1: we can select “Normal” and “Inverted”.
3. Default value: we can set “1” and “0” for default value.
4. Input values after bus voltage recovery: set the input status after bus voltage recovery, “Unchanged” and “Recovery” can be selected.
5. Input 2: the same as input 1.
6. Output: set the output value, “Normal” and “Inverted” can be set.
7. Send output values: we can set when to send the output values, there are 3 options: “after receive new telegram”, “after object value changed”, and “cyclically”.
8. Send delay in s[0…65535]: the time can be from 0 to 65535.

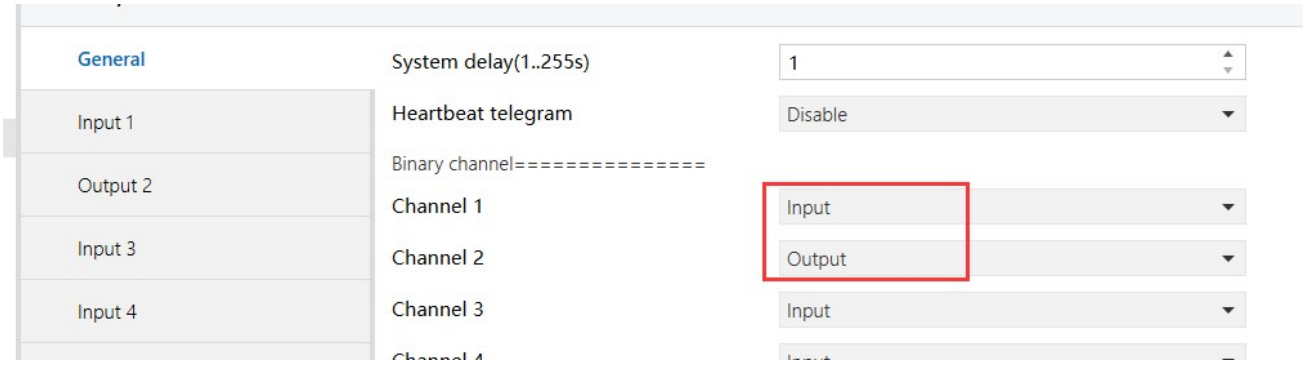
4 Application

The 48 channels dry contact module can work with input mode and output mode. In the below example, I will use channel 1 as input, and use channel 2 as output.

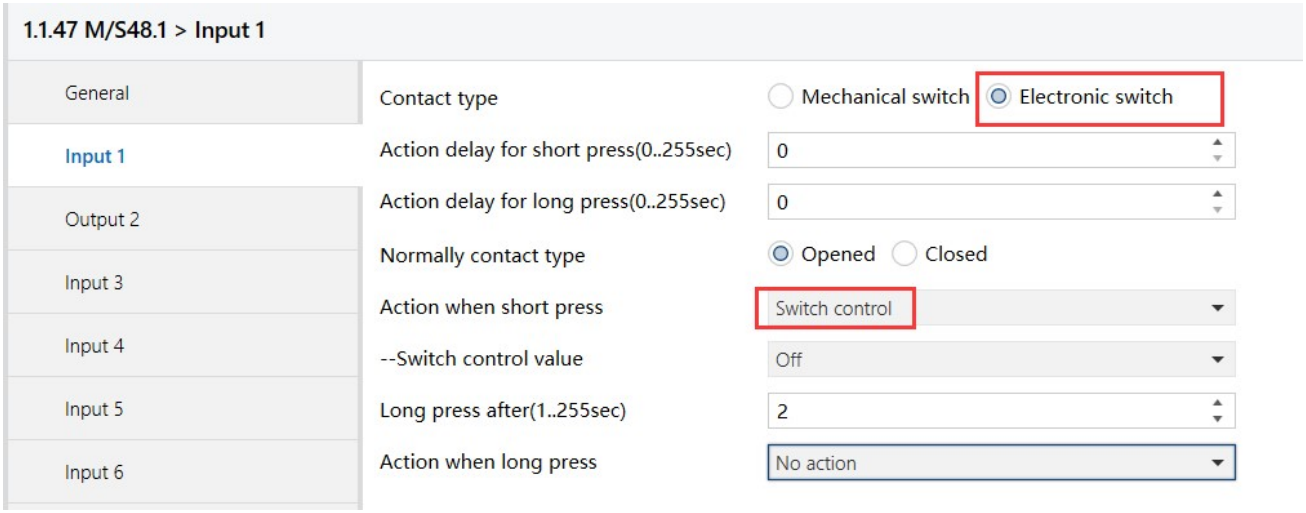
4.1 Switch Control by Day Routine

In this sample, channel 1 of dry contact connect with an electronic switch, and channel 2 of dry contact connect with a LED indicator, the electronic switch control the channel of relay module.

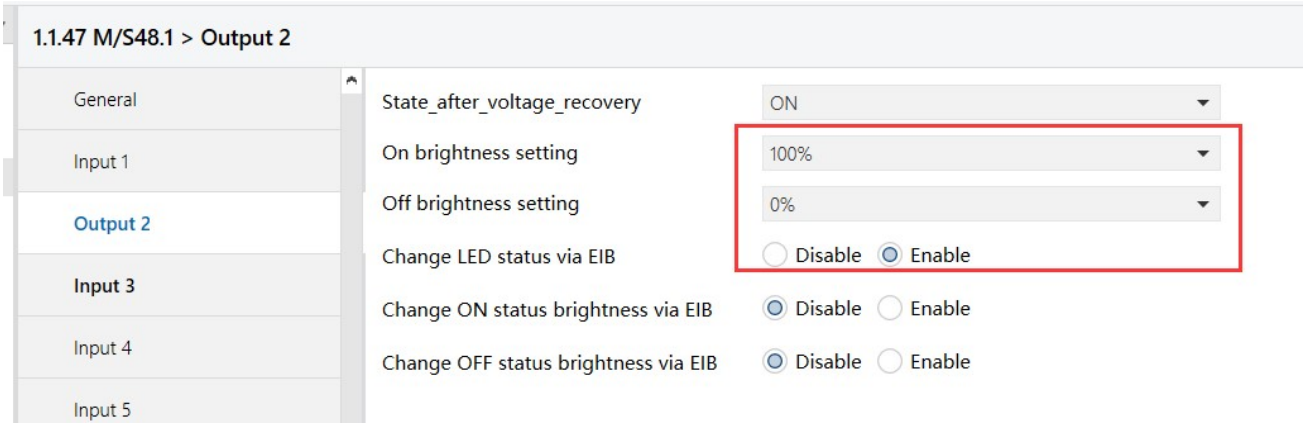
1-In the general page of dry contact module, set “input” for channel 1, and set “output for channel 2”.



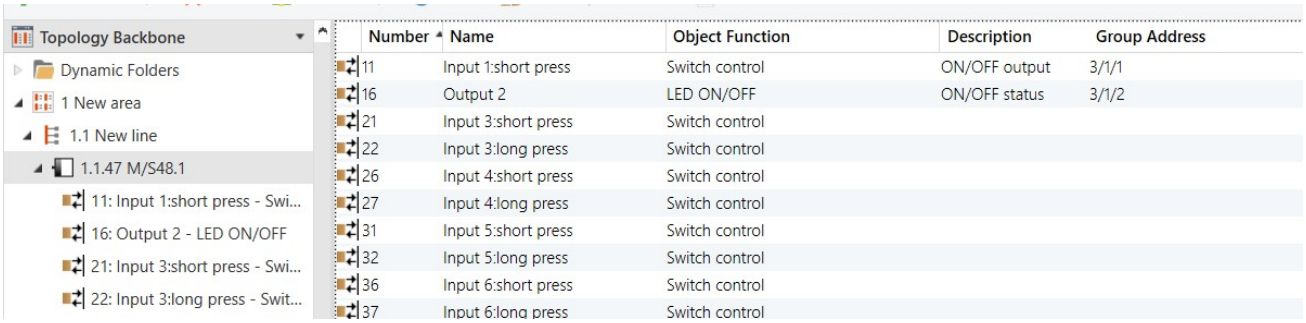
2-In the input 1 page of dry contact module, set electronic switch for contact type, select switch control when short press.



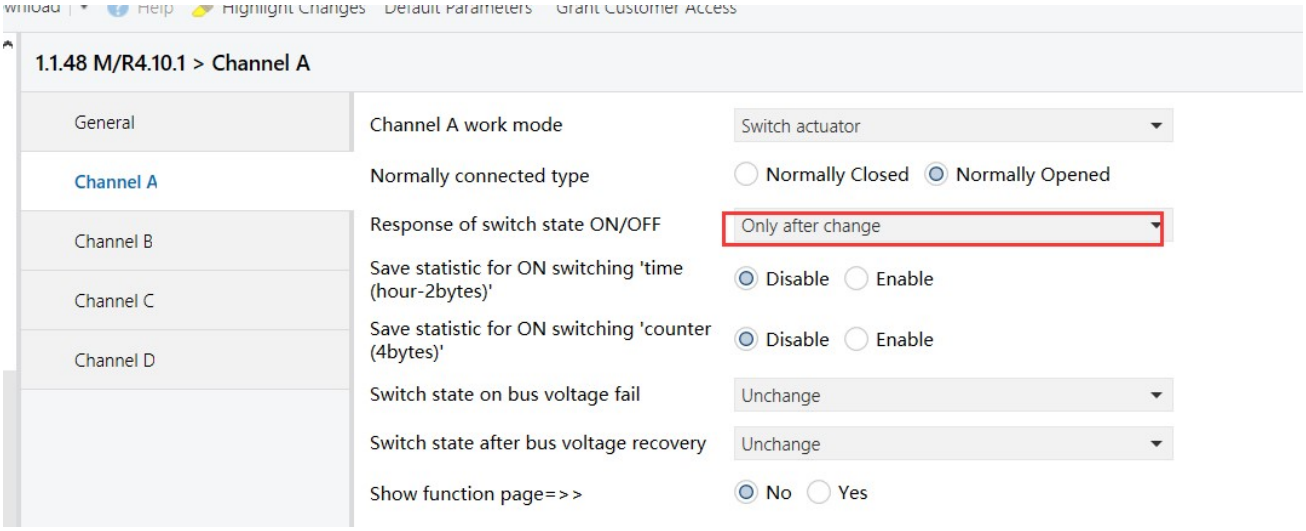
3-In the output 2 page of dry contact module, set the on/off brightness of output, enable "Change ON status brightness via EIB".



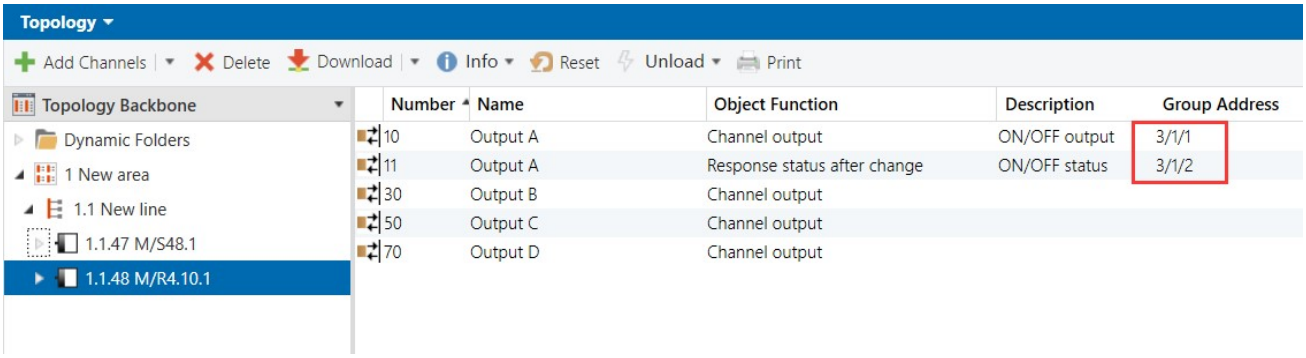
4- Link input 1 and output 2 with group address 3/1/1 and 3/1/2.



5-In the channel A page of relay module, set "Only after change" for response of switch state.



6-Link group address with the object 10 and 11 in the relay module. After that, download the application to dry contact and the relay, finish the configuration.


Topology
Add Channels
Delete
Download
Info
Reset
Unload
Print
Topology Backbone
Dynamic Folders
1 New area
1.1 New line
1.1.47 M/S48.1
1.1.48 M/R4.10.1
Number
Name
Object Function
Description
Group Address
10
Output A
Channel output
ON/OFF output
3/1/1
11
Output A
Response status after change
ON/OFF status
3/1/2
30
Output B
Channel output
50
Output C
Channel output
70
Output D
Channel output