

HDL[®] KNX / EIB



LCD Panel

MODEL: M/DLP04.1

Guangzhou Hedong Electronic Co.,Ltd(HDL)

HDL KNX / EIB-BUS

(Intelligent Installation Systems)

Product Manual

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1- Product introduction

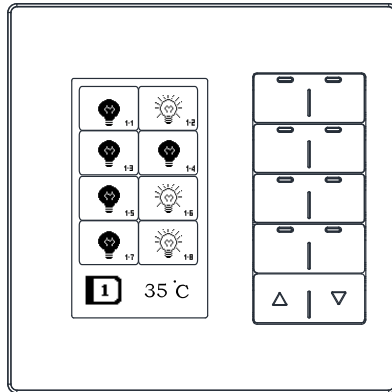
HDL KNX / EIB series DLP Panel controller are developed by HDL. Using KNX/EIB BUS communication with other KNX devices. Database need to be downloaded to the DLP Panel controller by using the ETS2 V1.3(*.vd2)/ETS 3.0(*.vd3)/ETS4. The document describes how to use the product. Our products use standard according to EMC, electrical safety, environmental conditions. This product has the accept function of infrared remote control. So, through infrared remote control can be reach the aim of control directly.

The panels are can be use as:

- * **Switch**
- * **Dimmer**
- * **Shutter**
- *
- * **Other Controlled equipments**

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1.1 Product Function



M/DLP04.1

For M/DLP04.1 require. The following functions can be set individually for each control channel:

- 1.-Switch control
- 2.-Dimming control
- 3.-Shutter control
- 4.-Flexible control
- 5.-Scene control
- 6.-Sequence control
- 7.-Percentage control
- 8.-Combination control
- 9.-String control
- 10.-HVAC control
- 11.-Floor Heating control
- 12.-Air conditioning control
- 13.-Button Lock
- 14.-Button Trigger
- 15.-Backlight Setup
- 16.-Night mode Setup
- 17.-Infrared remote control
- 18-Temperature display
- 19-Time display
- 20-Remote trigger control

2- Hardware

The technical properties of HDL KNX/EIB Panel controller as the following sections.

2.1 Technical data

Panel type and buttons

* Type of Device	M/DLP04.1
* Number of button	10

Power supply

* Operating voltage (supply by the bus)	21...30 V DC,
* Current consumption EIB / KNX (operate)	< 20 mA

Connections

* EIB / KNX	Bus Connection Terminal 0.8 mm Ø, single core
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Operating and display

* Push first and last button	Programming mode
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Temperature range

* Operation	- 5 °C ~ + 45 °C
* Storage	- 25 °C ~ + 55 °C
* Transport	- 25 °C ~ + 70 °C

Environment conditions

* humidity	max. 95 % Non-condensing
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Appearance design

* Dimensions (H x W x D)	86 x 86 x 41
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Weight (unit kg)	0.26
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Installation	Standard GI Box 86x86
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Mounting position	The wall
--------------------------	----------

Material and Colour	Glass and plastic, Black or White
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Standard and Safety	Certificated
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* LVD Standard	EN60669-2-1 , EN60669-1
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* EMC Standard	EN50090-2-2
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CE mark

* In accordance with the EMC guideline and low voltage guideline	
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Pollutant

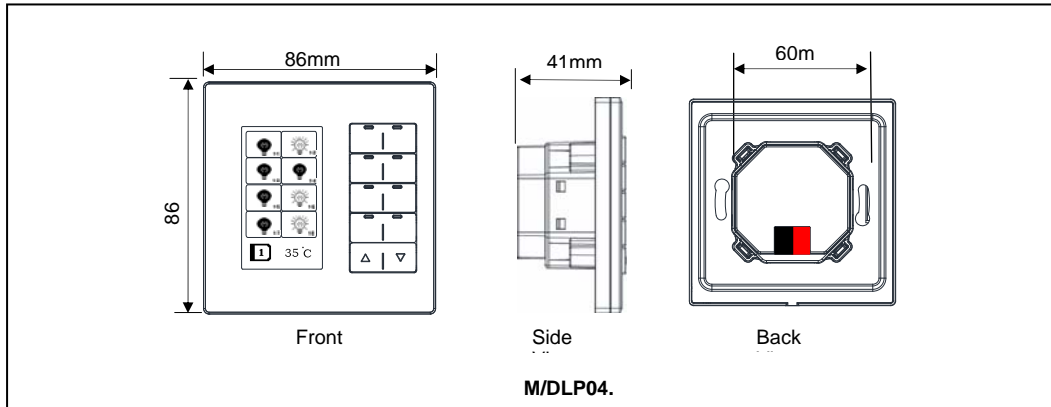
Comply with RoHS

Application table

Max. number of communication objects	230
Max. number of group addresses	254
Max. number of associations	254

Note: The programming requires the EIB Software Tools ETS2 V1.3 or ETS3.0 or ETS4.

2.2 Dimension drawings



2.3 Wiring diagram

Programming: 1 button + 10 button

Lock or Unlock: 2 button + 9 button

Basic information setting: 9 button +10 button

Programming: Keep pressing 1 and 10 buttons together for 2 seconds, the LED Indicators will flashing.

Lock or Unlock: keep pressing 2 and 9 buttons together for 2s, will lock the panel or unlock the panel.

Basic information setting: keep pressing 9 and 10 buttons together for 2s, Will enter the main menu page.

In this page can set LCD and LED brightness, Conversion from degrees Celsius to Fahrenheit, or form Fahrenheit to degrees Celsius ,etc

N=A,B,C,D: Order from top to bottom

2.4 Maintenance and Cautions

- *Please read this user manual carefully before any operation.
- *Don't close to the interfering devices.
- *The site should be ventilated with good cooling environment.
- *Pay attention to damp proof, quakeproof and dustproof.
- *Avoid rain, other liquids or caustic gas.
- *Please contact professional maintenance staff or HDL service center for repair or fix.
- *Remove the dust regularly and do not wipe the unit with the volatile liquids like alcohol, gasoline, etc.
- *If damaged by damp or liquid, turn off it immediately.
- *Regularly check the circuitry and other related circuit or cables and replace the disqualified circuitry on time.
- *For security, each circuit to connect an MCB or fuse
- *Installation location should be well-ventilated, pay attention to moisture, shock, dust proof.

3- Software

HDL KNX/EIB DLP Panel type is M/DLP04.1. The Interface and the functions Apply parameters please overview the following description of the paragraph.

3.1 Function parameter “General 1”

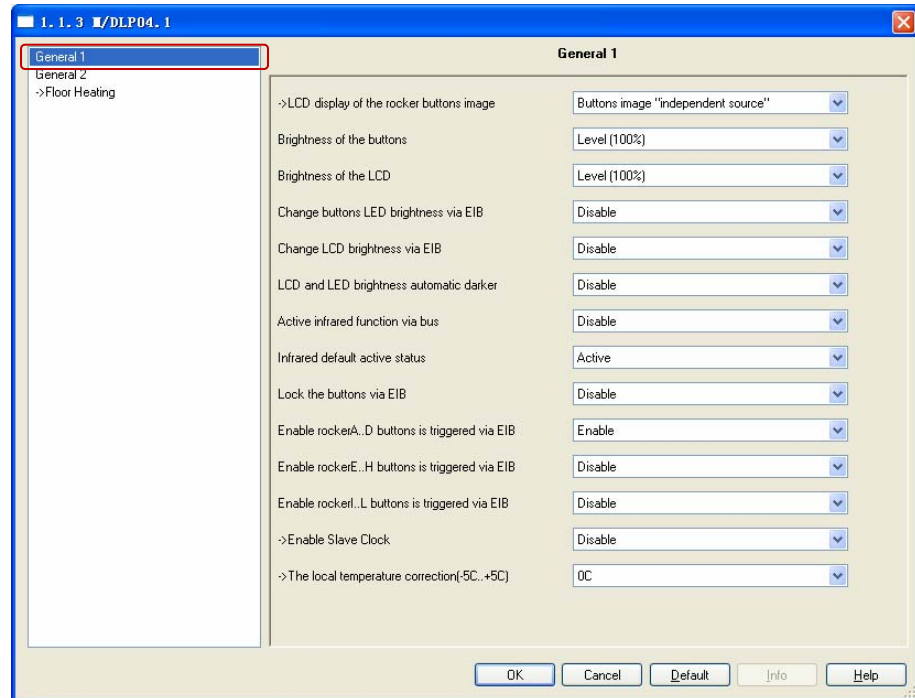


Fig1: “General 1” parameter windows

The window can set the DLP’s base parameters.

---LCD display of the rocker buttons image

DLP can display the image of the button. You can download the image with the special software “**HDL KNX Assistant Software**”.

Options: Buttons image “same source”

Buttons image “independent source”

Same source: it’s means that all button’s images are the same image source.

Independent source: you can download different images for every button.

---Brightness of the buttons

Set the LED’s brightness of the button.

The LED level setting range is 00% ... Level100%

Options: Level 00%...Level100%

---Brightness of the LCD

Set the LED level of the backlight.
LCD's brightness is 00% ... Level100%
Options: Level 00%...Level100%

---Change buttons LED brightness via bus

If choose the Enable, other devices on the bus can send telegram to change the LED brightness of the buttons.
If choose the Disable, the LED brightness of the buttons can't changed by other KNX/EIB devices.

Options: Disable
Enable

---Change LCD brightness via EIB

If choose the Enable, other devices on the bus can send telegram to change LCD's brightness.
If choose the Disable, the LCD's brightness can't changed by other KNX/EIB devices.

Options: Disable
Enable

---LCD and LED brightness automatic darker

It's energy- saving mode.if enable, LCD and LED brightness will automatic darker after a set delay.

Options: Disable
Enable

---Active infrared function via bus

Enable for active infrared function via bus.

Options: Disable
Enable

Disable: you can't active infrared function via bus.
Enable: you can active infrared function via bus.

---Infrared default active status

Options: Inactive
active

Inactive: infrared default status is inactive.

active: infrared default status is active.

---Lock the buttons via EIB

Options: Disable
Enable

Disable: Can't lock the buttons via EIB.

Enable: Can lock the buttons via EIB.

---Enable rocker A..D buttons is triggered via EIB

The DLP panel there are 5 pages. The first include A,B,C,D buttons.

Options: Disable
Enable

Disable: Can't trigger these buttons via EIB,

Enable: Can trigger these buttons via EIB.

---Enable rocker E..H buttons is triggered via EIB

---Enable rocker I..L buttons is triggered via EIB

E..L buttons are the second and third pages. The setting is same as A..D buttons.

---Enable Slave Clock

Options: Disable
Enable

Inside DLP panel has a slave clock, if enable and the time can displayed on DLP.

---The local temperature correction (-5C...+5C)

Options: -5C...+5C

DLP panel embedded with a temperature sensor, sometimes has deviation, you can correction it by set the parameter.

3.2 Function parameter “General 2”

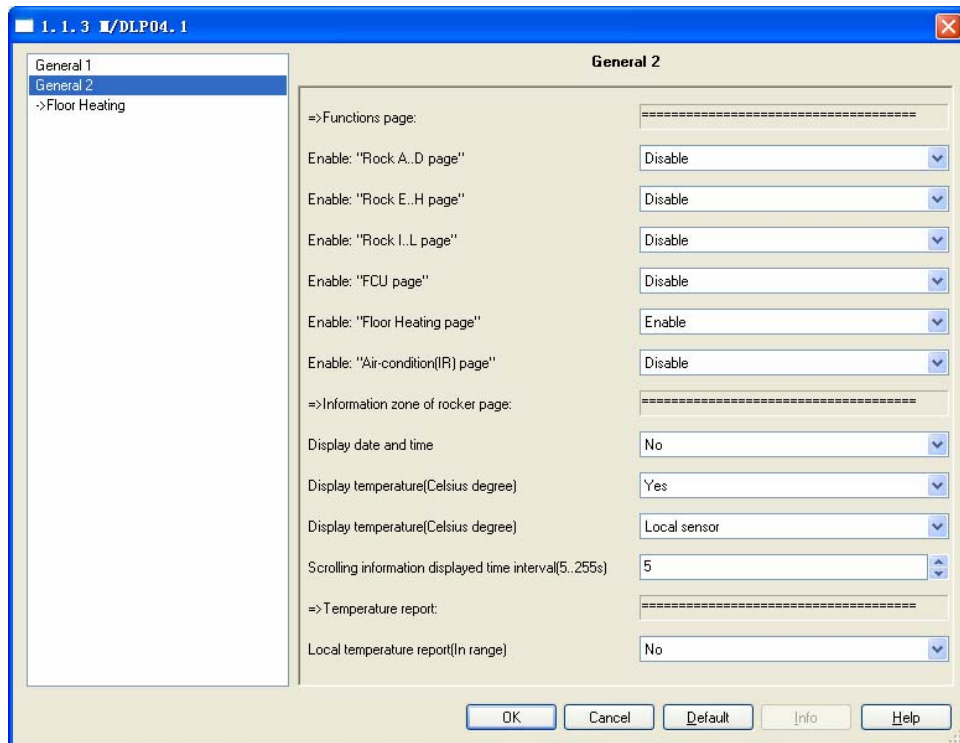


Fig2: “General 2” parameter windows

This page is setting functions about DLP panel.

---Enable: Rock A..D page

Options: Disable
Enable

If you select “enable”, the “Rock A..D” page is appear, then you can set the function of A..D buttons. *As follows:*

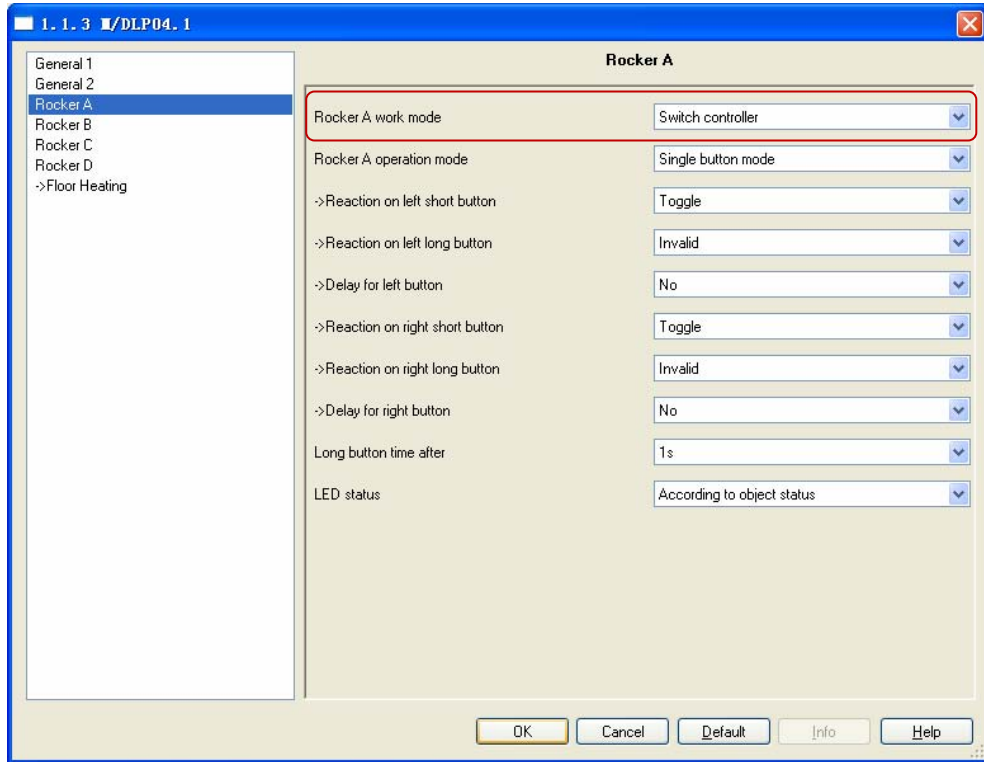


Fig3: “Rocker A” parameter windows

---Rocker A work mode

The function of the Rocker “N” work mode can be selected with the following parameter.

- Options:** Switch controller
Dimming controller
Shutter controller
Flexible controller
Scene controller
Sequence controller
Percentage controller
Threshold controller
String(14bytes)controller
Combination controller

3.2.1 Rocker's Mode “Switch controller”

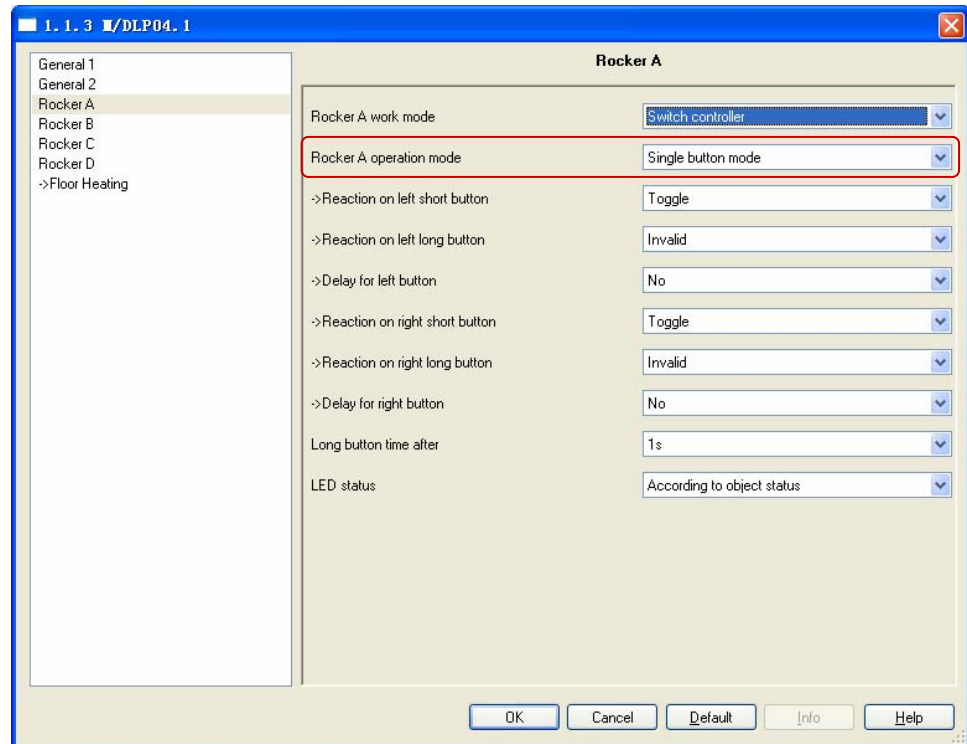


Fig4: “Switch controller” parameter windows

---Rocker A operation mode

Set the rocker A's operation mode.

Options: Single button mode

Double buttons mode

Single button mode: rocker A divided into left button and right button, The left button and the right button are independent

- ***If you select single button mode, Rock A's setting as follows.***

-->Reaction on left short button

This parameter determines the work mode of the rocker A's left short button.

Options: Invalid

Toggle

ON

OFF

Toggle: Left short button is toggle

ON: Left short button is on.

OFF: Left short button is off.

-->Reaction on left long button

This parameter determines the work mode of the rocker A's left long button.

Options: Invalid
Toggle
ON
OFF

Toggle: Left long button is toggle

ON: Left long button is on.

OFF: Left long button is off.

-->Delay for left button

Options: NO
YES

NO: there is not delay for operation left button.

YES: If you select yes, will appears some parameter as follows,

->Delay for left button	Yes
--Delay for switch ON of left short button(0..255s)	0
--Delay for switch OFF of left short button(0..255s)	0
--Delay for switch ON of left long button(0..255s)	0
--Delay for switch OFF of left long button(0..255s)	0

Set the delay time for button delay operation. The delay time range is 0-255S.

>Reaction on right short button

-->Reaction on right long button

-->Delay for right button

Right button's setting as same as left button.

-->Long button time after

Set long button time, the default time is 1s.

Options: 0.2S...60S

- ***If you select double buttons mode, Rock A's setting as follows.***

Double buttons mode: rocker A must set the same control targets, but you can set the different states for the buttons.

-->Reaction on short button

This parameter determines the work mode of the rocker A's short button.

Options: Invalid

Left=toggle, Right=toggle

Left=ON, Right=OFF

Left=OFF, Right=ON

Left=ON, Right=ON

Left=OFF, Right=OFF

Left=toggle, Right=toggle: Left and right are all toggle.

Left=ON, Right=OFF: left button is on, right button is off.

Left=OFF, Right=ON: left button is off, right button is on.

Left=ON, Right=ON: left and right buttons are all on.

Left=OFF, Right=OFF: left and right buttons are all off.

-->Reaction on long button

This parameter determines the work mode of the rocker A's long button.

Options: Invalid

Left=toggle, Right=toggle

Left=ON, Right=OFF

Left=OFF, Right=ON

Left=ON, Right=ON

Left=OFF, Right=OFF

Left=toggle, Right=toggle: Left and right buttons are all toggles.

Left=ON, Right=OFF: left button is on, right button is off.

Left=OFF, Right=ON: left button is off, right button is on.

Left=ON, Right=ON: left and right buttons are all on.

Left=OFF, Right=OFF: left and right buttons are all off.

-->Delay for left button**Options:** NO

YES

NO: there is not delay for operation left button.

YES: If you select yes, will appears some parameter as follows,

-->Long button time after

Set long button time,the default time is 1s.

Options: 0.2S...60S**---LED status**

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.**Always ON:** LED's status always ON.**Always OFF:** LED's status always OFF.**According to object status:** LED's status is same to the object's status.

3.2.2 Rocker's mode "Dimming controller"

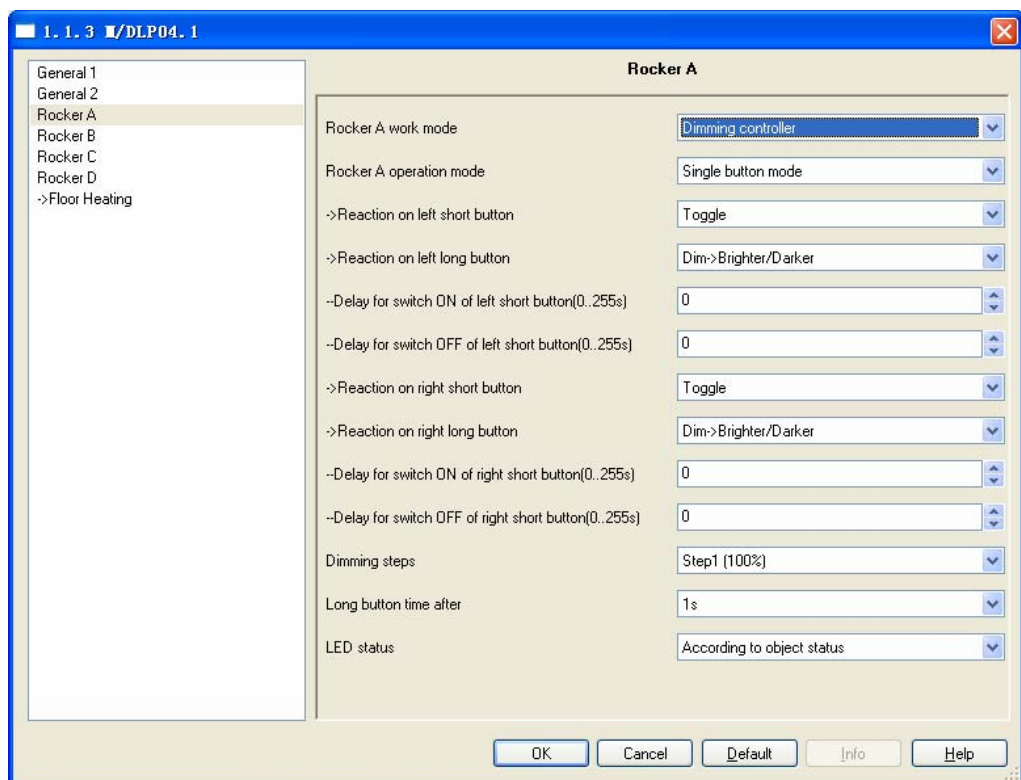


Fig.5: "Switch controller" parameter windows

---Rocker A operation mode

Set the rocker A's operation mode.

Options: Single button mode

Double buttons mode

Single button mode: rocker A divided into left button and right button, and can be set different control targets.

- **If you select single button mode, Rock A's setting as follows.**

-->Reaction on left short button

This parameter determines the work mode of the rocker A's left short button.

Options: Invalid

Toggle
ON
OFF

Toggle: Left short button is toggle

ON: Left short button is on.

OFF: Left short button is off.

-->Reaction on left long button

This parameter determines the work mode of the rocker A's left long button.

Options: Invalid

Dim->Brighter

Dim-> Darker

Dim->Brighter/Darker

Dim->Brighter: Long press left button to increase light brightness.

Dim-> Darker: Long press left button to decrease light brightness.

Dim->Brighter/Darker: Long press left button to increase light brightness, then long press left button again to decrease light brightness.

-->Delay for switch ON of left short button(0..255s)

Set the delay time for switch ON after press left short button. The delay time range is 0-255S.

Options: 0..255

-->Delay for switch OFF of left short button(0..255s)

Set the delay time for switch OFF after press left short button. The delay time range is 0-255S.

Options: 0..255

>Reaction on right short button

-->Reaction on right long button

-->Delay for switch ON of right short button(0..255s)

-->Delay for switch OFF of right short button(0..255s)

Right button's setting as same as left button.

-->Long button time after

Set long button time,the default time is 1s.

Options: 0.2S...60S

- ***If you select double buttons mode, Rocker A's setting as follows.***

Double buttons mode: rocker A must set the same control targets, but you can set the different states of the button.

-->Reaction on short button

This parameter determines the work mode of the rocker A's short button.

Options: Left=toggle, Right=toggle:

Left=ON, Right=OFF:

Left=OFF, Right=ON:

Left=ON, Right=ON:

Left=OFF, Right=OFF

Left=toggle, Right=toggle: Left and right buttons are all toggles.

Left=ON, Right=OFF: left button is on, right button is off.

Left=OFF, Right=ON: left button is off, right button is on.

Left=ON, Right=ON: left and right buttons are all on.

Left=OFF, Right=OFF: left and right buttons are all off.

-->Reaction on long button

This parameter determines the work mode of the rocker A's long button.

Options: Left=Dim(toggle), Right=DIM(toggle)

Left=Brighter, Right=Darker

Left=Darker, Right=Bright

Left=Bright, Right=Bright

Left=Darker, Right=Darker

Left=Dim(toggle), Right=DIM(toggle): long press left and right are all toggles.

Left=Brighter, Right=Darker: long press left button to increase light brightness, long press right button to decrease light brightness.

Left=Darker, Right=Bright: long press left button to decrease light brightness, long press right button to increase light brightness.

Left=Bright, Right=Bright: long press left and right buttons are all to increase light brightness.

Left=Darker, Right=Darker: long press left and right buttons are all to decrease light brightness.

-->Delay for switch ON of short button(0..255s)

Set the delay time for switch ON after press left short button. The delay time range is 0-255s.

Options: 0..255s

-->Long button time after

Set long button time,the default time is 1s.

Options: 0.2S...60S

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.

Always ON: LED's status always ON.

Always OFF: LED's status always OFF.

According to object status: LED's status is same to the object's status.

3.2.3 Rocker's mode "Shutter controller"

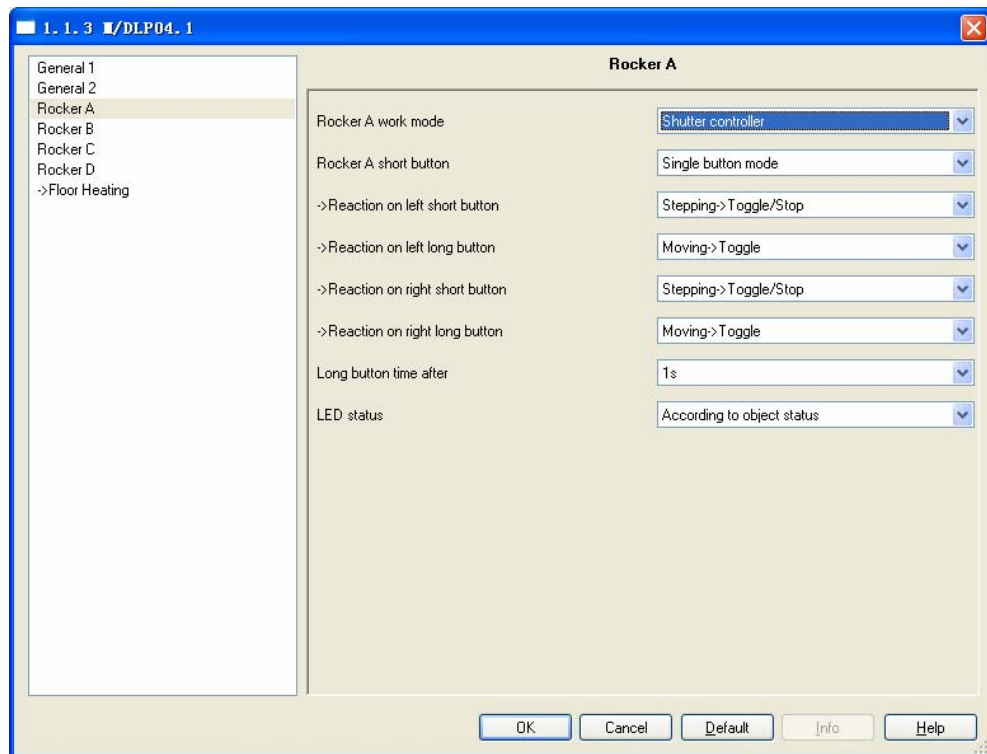


Fig6: "Shutter controller" parameter windows

---Rocker A short button

Set the rocker A's operation mode.

Options: Single button mode

Double buttons mode

Single button mode: rocker A divided into left button and right button, and can set different control targets.

- ***If you select single button mode, Rock A's setting as follows.***

-->Reaction on left short button

This parameter determines the work mode of the rocker A's left short button.

Options: Invalid

Stepping->Increase/Stop

Stepping-> Decrease/Stop

Stepping-> Toggle/Stop

Moving-> UP

Moving-> Down

Moving-> Toggle

Invalid: Short press left button is invalid.

Stepping->Increase/Stop: Short press left button to increase/stop.

Stepping-> Decrease/Stop: Short press left button to Decrease/Stop.

Stepping-> Toggle/Stop: Short press left button to toggle/stop.

Moving-> UP: Short press left button to up.

Moving-> Down: Short press left button to down.

Moving-> Toggle: Short press left button to toggle.

-->Reaction on left long button

This parameter determines the work mode of the rocker A's left long button.

Options: Invalid

Stepping->Increase/Stop

Stepping-> Decrease/Stop

Stepping-> Toggle/Stop

Moving-> UP

Moving-> Down

Moving-> Toggle

Press: Moving-> UP, Release: Call short button

Press: Moving-> Down, Release: Call short button

Press: Moving-> Toggle, Release: Call short button

Invalid: Long press left button is invalid.

Stepping->Increase/Stop: Long press left button to Increase/Stop.

Stepping-> Decrease/Stop: Long press left button to Decrease/Stop.

Stepping-> Toggle/Stop: Long press left button to Toggle/Stop.

Moving-> UP: Long press left button to up.

Moving-> Down: Long press left button to down.

Moving-> Toggle: Long press left button to toggle.

Press: Moving-> UP, Release: Call short button: Long press left button to move up, Release to call short button.

Press: Moving-> Down, Release: Call short button: Long press left button to move down, Release to call short button.

Press: Moving-> Toggle, Release: Call short button: Long press left button to move toggle, Release to call short button.

Right button's setting as same as left button.

-->**Long button time after**

Set long button time, the default time is 1s.

Options: 0.2S...60S

- ***If you select double buttons mode, Rocker A's setting as follows.***

Double buttons mode: rocker A must set the same control targets, but you can set the different states of the button.

-->**Reaction on short button**

This parameter determines the work mode of the rocker A's short button.

Options: Invalid

Left=Decrease/Stop, Right=Increase/Stop

Left=Increase/Stop, Right=Decrease/Stop

Invalid: button invalid

Left=Decrease/Stop, Right=Increase/Stop: Left short button to Decrease/Stop, Right short button to Increase/Stop

Left=Increase/Stop, Right=Decrease/Stop: Left short button to Increase/Stop, Right short button to Decrease/Stop.

-->**Reaction on long button**

This parameter determines the work mode of the rocker A's long button.

Options: Invalid

Left=UP, Right=DOWN

Left=DOWN, Right=UP

Left=UP/DOWN, Right=UP/DOWN

Invalid: Long press is invalid.**Left=UP, Right=DOWN:** Left long button to UP, Right long button to down.**Left=DOWN, Right=UP:** Left long button to down, Right long button to up**Left=UP/DOWN, Right=UP/DOWN:** Left long button or Right long button UP/DOWN**-->Long button time after**

Set long button time, the default time is 1s.

Options: 0.2S...60S**---LED status**

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.**Always ON:** LED's status always ON.**Always OFF:** LED's status always OFF.**According to object status:** LED's status is same to the object's status.

3.2.4 Rocker’s mode “Flexible controller”

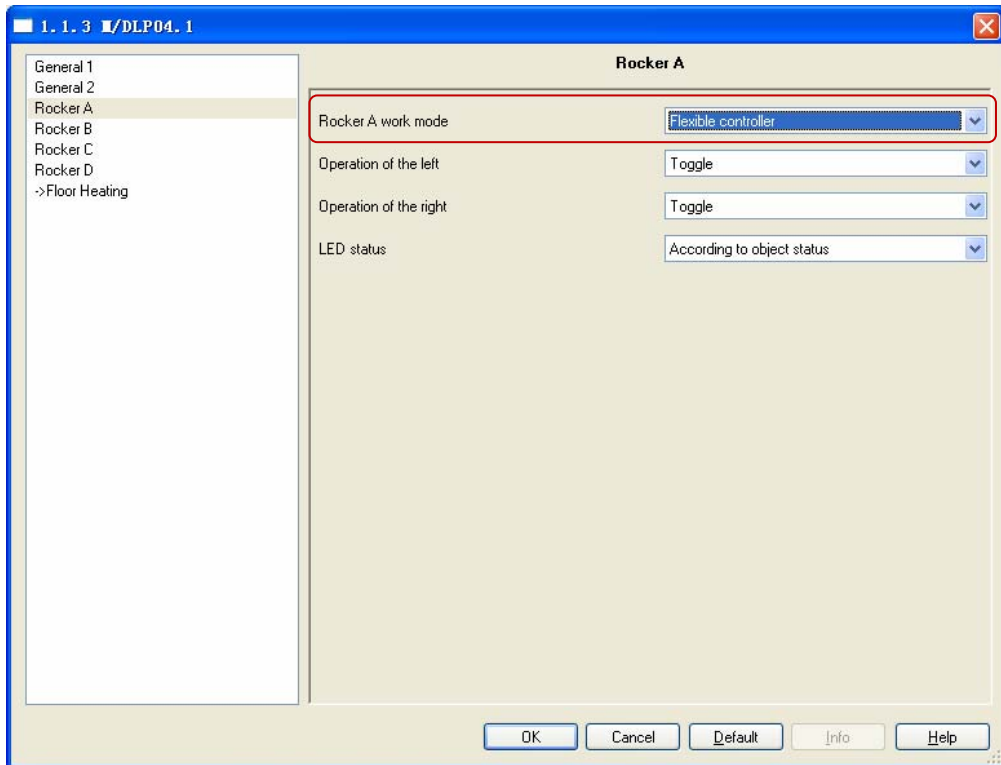


Fig7: Flexible controller window

---Operation of the left

Options: Invalid

Toggle

Press="ON"

Release="ON"

Press="ON", Release="ON"

Press="OFF"

Release="OFF"

Press=" OFF", Release=" OFF"

Press=" ON", Release=" OFF"

Press=" OFF", Release=" ON"

Toggle: the left button is toggle.

Press="ON" : Press left button is ON.

Press="ON", Release="ON": Press and release left button are all on.

Press="OFF" :Press left button is OFF.

Release="OFF": release left button is off.

Press=" OFF", Release=" OFF": Press and release left button are all off.

Press=" ON", Release=" OFF": Press left button is on, release is off.

Press=" OFF", Release=" ON": Press and release left button are all off.

---Operation of the right

The right button's setting is same as left button.

3.2.5 Rocker's mode "Scene controller"

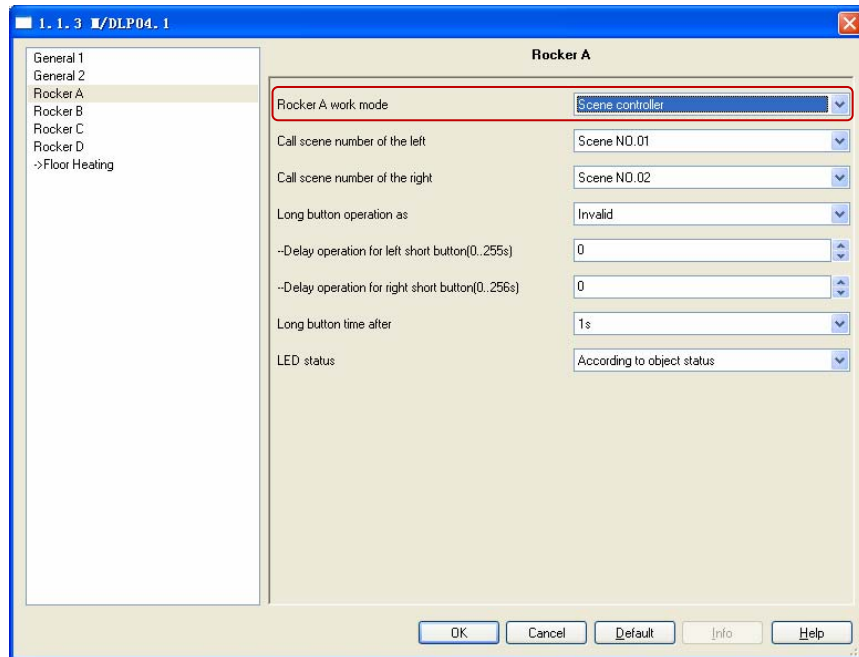


Fig8: Scene controller window

---Call scene number of the left

Call the scene number of left button.

Options: Scene NO.01—Scene NO.64

---Call scene number of the right

Call the scene number of right button.

Options: Scene NO.01-Scene NO.64

---Long time button operation as

Set the button's functions when long button press.

Options: Invalid

Scene dimming

Scene saving

Dimming and Saving

◇ **---Scene dimming**

Options: Left=Brighter, Right=Darker

Left= Darker, Right= Brighter

Left=Brighter, Right=Darker: left button: press to increase light brightness.
right button: press to decrease light brightness

Left= Darker, Right= Brighter: left button: press to decrease light brightness.
right button: press to increase light brightness

✧ **---Scene saving**

Long button to saving the scene, and the scene number is 1..64

✧ **---Dimming and Saving**

Dimming and saving together. Long press button for dimming UP/DOWN, Long release button for stop dimming and scene save.

---Delay operation for left short button (0-255S)

Set the delay time of left short button after press. The delay time range is 0-255S.

Options: 0-255S

---Delay operation for right short button (0-255S)

Set the delay time of right short button after press. The delay time range is 0-255S.

Options: 0-255S

---Long button time after

Set long button time, the default time is 1s.

Options: 0.2-60S

---LED of the operation mode

Set LED's mode.

Options: Show via object status

Always on

Always off

Show via object status: the LED's status shows the object's status.

Always on: the LED is always on.

Always off: the LED is always off.

3.2.6 Rocker's mode “Sequence controller”

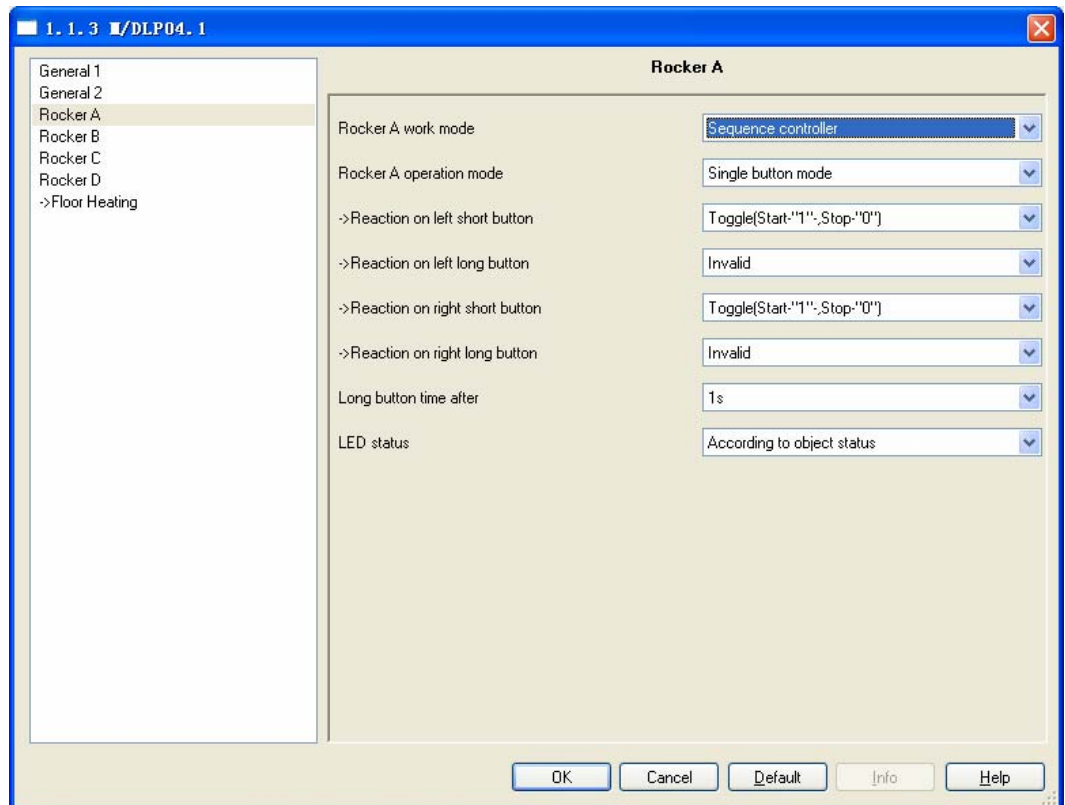


Fig9: Sequence controller window

---Rocker A operation mode

Options: single button mode
Double buttons mode

Single button mode: rocker A divided into left button and right button, can set different targets.

- **If you select single button mode, Rock A's setting as follows.**

-->Reaction on left short button

This parameter determines the work mode of the rocker A's left short button.

Options: Invalid

Toggle (Start with “1”, Stop with “0”):

Start with “1”

Stop with “0”

Invalid: rocker A's left short button is invalid.

Toggle (Start with “1”, Stop with “0”): rocker A's left short button is a toggle, telegram value “1” is start, telegram value “0” is stop .

Start with “1” : telegram value “1” is start.

Stop with “0”: telegram value “0” is stop

-->Reaction on left long button

This parameter determines the work mode of the rocker A's left short button. The left long button is same to the left short button.

Options: Invalid

Toggle (Start-"1",Stop-"0")

Start with "1"

Stop with"0"

The left long button is same to the left short button.

The right button's setting is same as left button.

---Long button time after

Options: 0.2s.....60s

Set the time of long button. If pressing the button longer the time is long button. The default time is 1s.

- ***If you select double buttons mode, Rock A's setting as follows.***

Double buttons mode: rocker A must set the same targets, but you can set the different states of the targets.

-->Reaction on short button

This parameter determines the work mode of the rocker A's short button.

Options: Invalid

Left= start with 1, Right=stop with 0

Left=stop with 0, Right=start with 1

Left=start with 1, Right=start with 1

Left=stop with 0, Right=stop with 0

Invalid: rocker A is invalid.

Left=toggle, Right=toggle: Left and right are all toggle.

Left= start with 1, Right=stop with 0: Left button telegram value is "1",Right button telegram value is "0".

Left=stop with 0, Right=start with 1: Left button telegram value is "0",Right button telegram value is "1".

Left=start with 1, Right=start with 1: Left button telegram value is "1",Right button telegram value is "1".

Left=stop with 0, Right=stop with 0: Left button telegram value is "0",Right button telegram value is "0".

-->Long button time after

Set long button time, the default time is 1s.

Options: 0.2S...60S

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.

Always ON: LED's status always ON.

Always OFF: LED's status always OFF.

According to object status: LED's status is same to the object's status.

3.2.7 Button mode “Percentage controller”

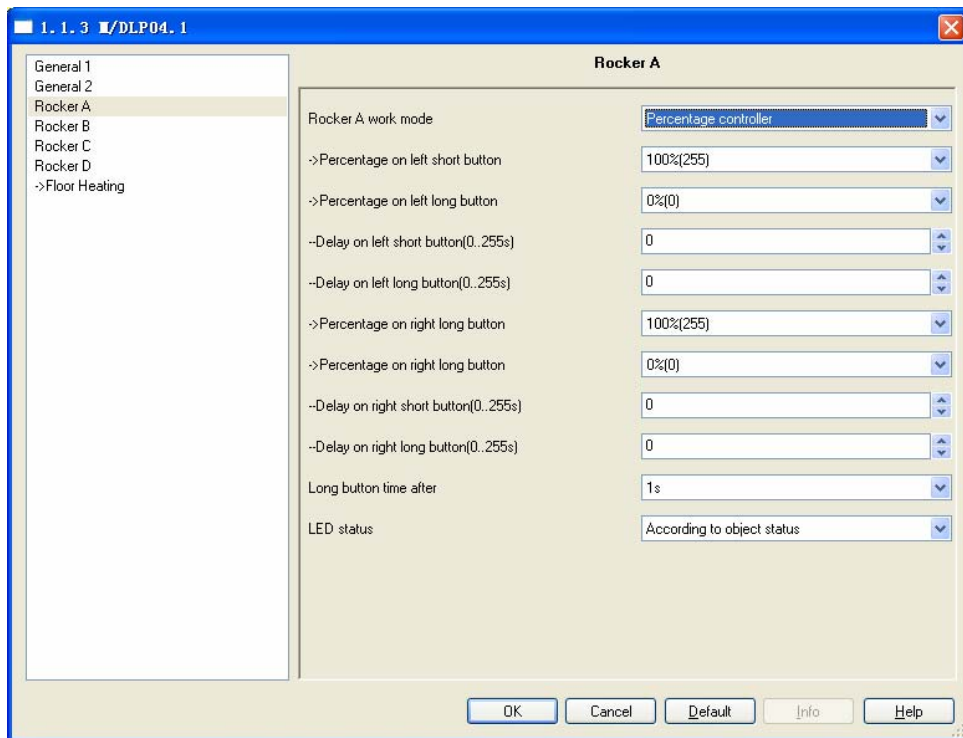


Fig10: Percentage controller window

---Percentage on left short button

Set the light level of left short button.

Options: 0%(0)—100%(255)

---Percentage on left long button

Set the light level of left long button

Options: 0%(0)—100%(255)

---Delay on left short button (0-255S)

Set the delay time of left short button after press. The delay time range is 0-255S.

Options: 0-255S

---Delay operation for right short button (0-255S)

Set the delay time of right short button after press. The delay time range is 0-255S.

Options: 0-255S

The right button's setting is same as left button.

-->Long button time after

Set long button time, the default time is 1s.

Options: 0.2S...60S

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.

Always ON: LED's status always ON.

Always OFF: LED's status always OFF.

According to object status: LED's status is same to the object's status.

3.2.8 Button mode “Threshold controller”

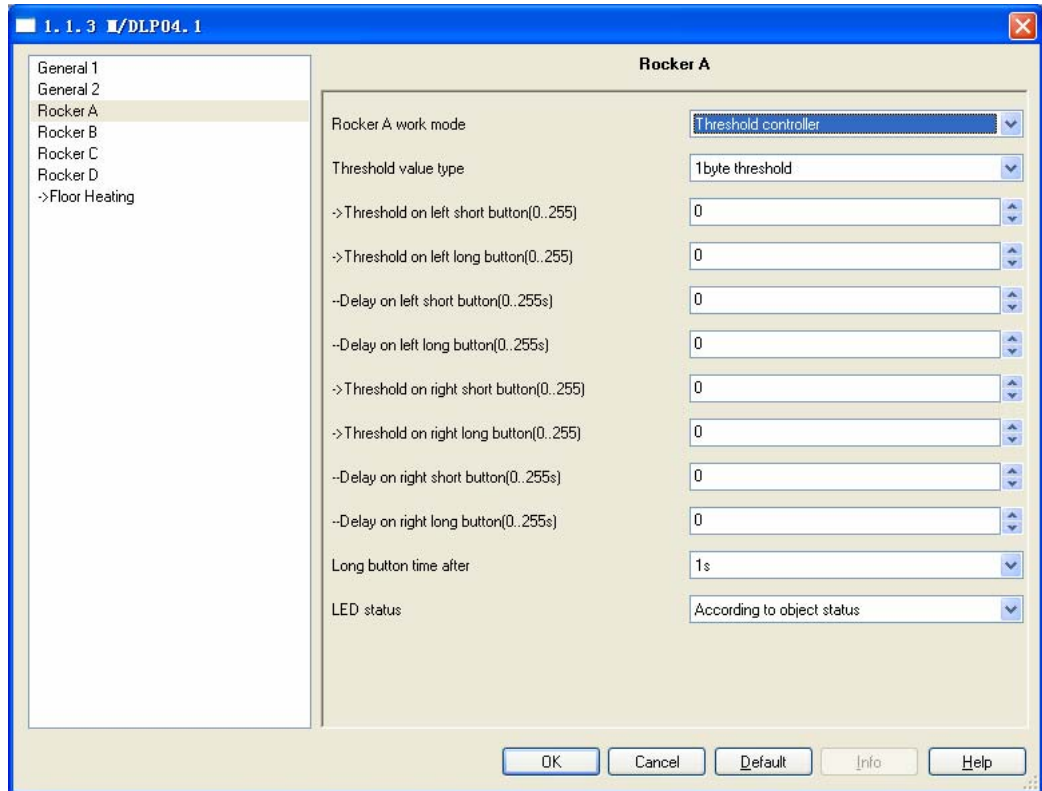


Fig11: Threshold controller window

---Threshold value type

Option: 1 byte threshold
2 bytes threshold

---Threshold on left short button (0...255)

Set the light level of left short button.

Options: 0—255

When select “2 bytes threshold” that the option’s range is 0—65535.

--- Threshold on left long button

Set the light level of left long button

Options: 0—255

When select “2 bytes threshold” that the option’s range is 0—65535.

---Delay on left short button (0-255S)

Set the delay time of left short button after press. The delay time range is 0-255S.

Options: 0-255S

---Delay operation for right short button (0-255S)

Set the delay time of right short button after press. The delay time range is 0-255S.

Options: 0-255S

The right button's setting is same as left button.

-->Long button time after

Set long button time,the default time is 1s.

Options: 0.2S...60S

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.

Always ON: LED's status always ON.

Always OFF: LED's status always OFF.

According to object status: LED's status is same to the object's status.

3.2.9 Button mode “String(14 bytes) controller”

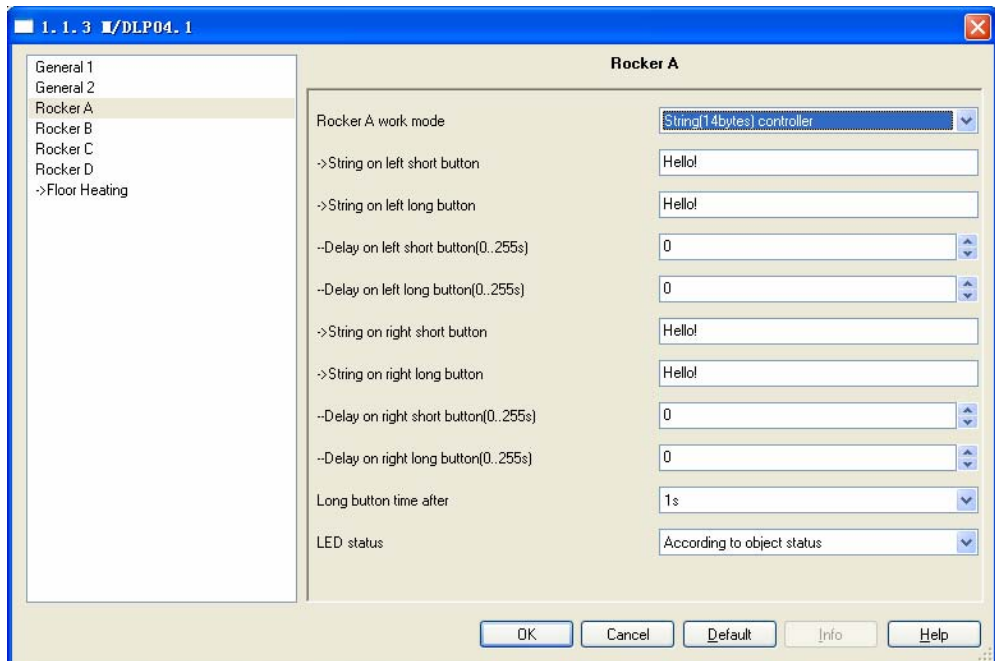


Fig12: 14 bytes value controller window

---String on left short button

Short press left button can send the value to the bus. The value type is string. Max. length is 14bytes

---String on left long button

Long press left button can send the value to the bus. The value type is string. Max length is 14bytes

---Delay on left short button (0-255S)

Set the delay time after press short button. The delay time range is 0-255S.
Options: 0-255S

---Delay on left long button (0-255S)

Set the delay time after press long button. The delay time range is 0-255S.
Options: 0-255S

The right button's setting is same as left button.

-->Long button time after

Press button more than the setting time, it is long button.
Options: **0.2S...60S**

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

According to object status

Flashing: when pressing the button LED will flashing.

Always ON: LED's status always ON.

Always OFF: LED's status always OFF.

According to object status: LED's status is same to the object's status.

3.2.10 Button mode “Combination controller”

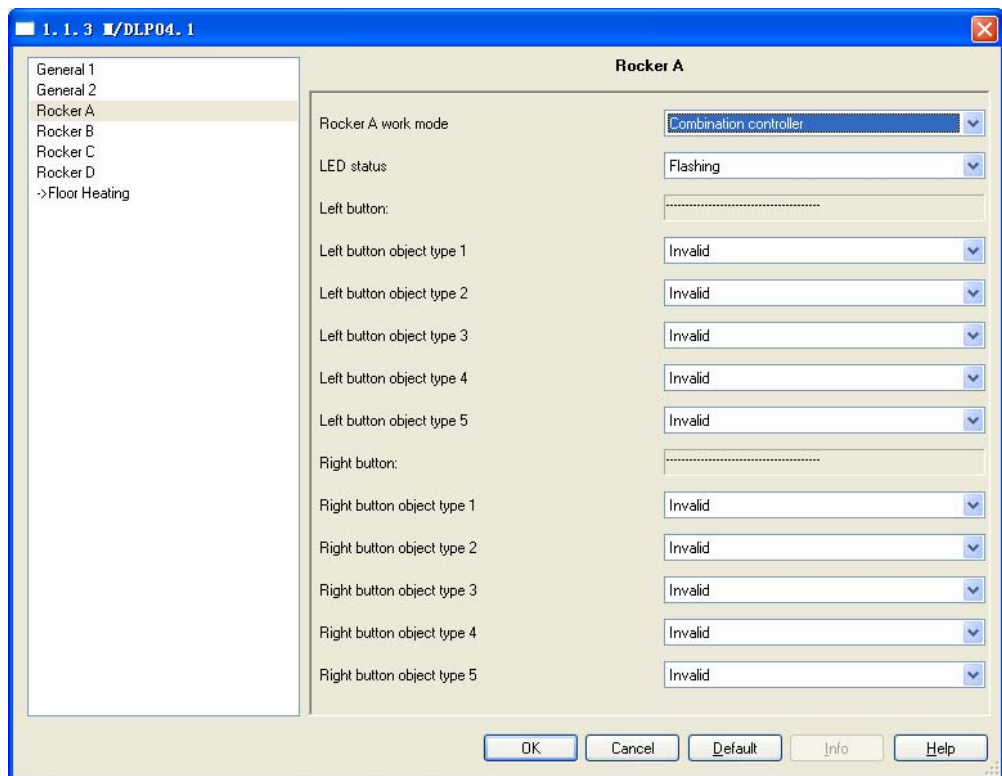


Fig13: “Combination controller” window

---LED status

Set the status of LED.

Options: Flashing

Always ON

Always OFF

Flashing: when pressing the button LED will flashing.

Always ON: LED’s status always ON.

Always OFF: LED’s status always OFF.

---Left button

✧ **Left button of object1...5:** Invalid

Switch controller

Shutter controller

Scene controller

Sequence controller

Percentage controller

Threshold controller

14byte value controller (string)

This mode is that left button can control several objects. if set some these items, and when press short button that can send several control telegram simultaneously. Maximum control object number of each button is 5

The right button's setting is same as left button.

3.3 Function parameter “FCU”

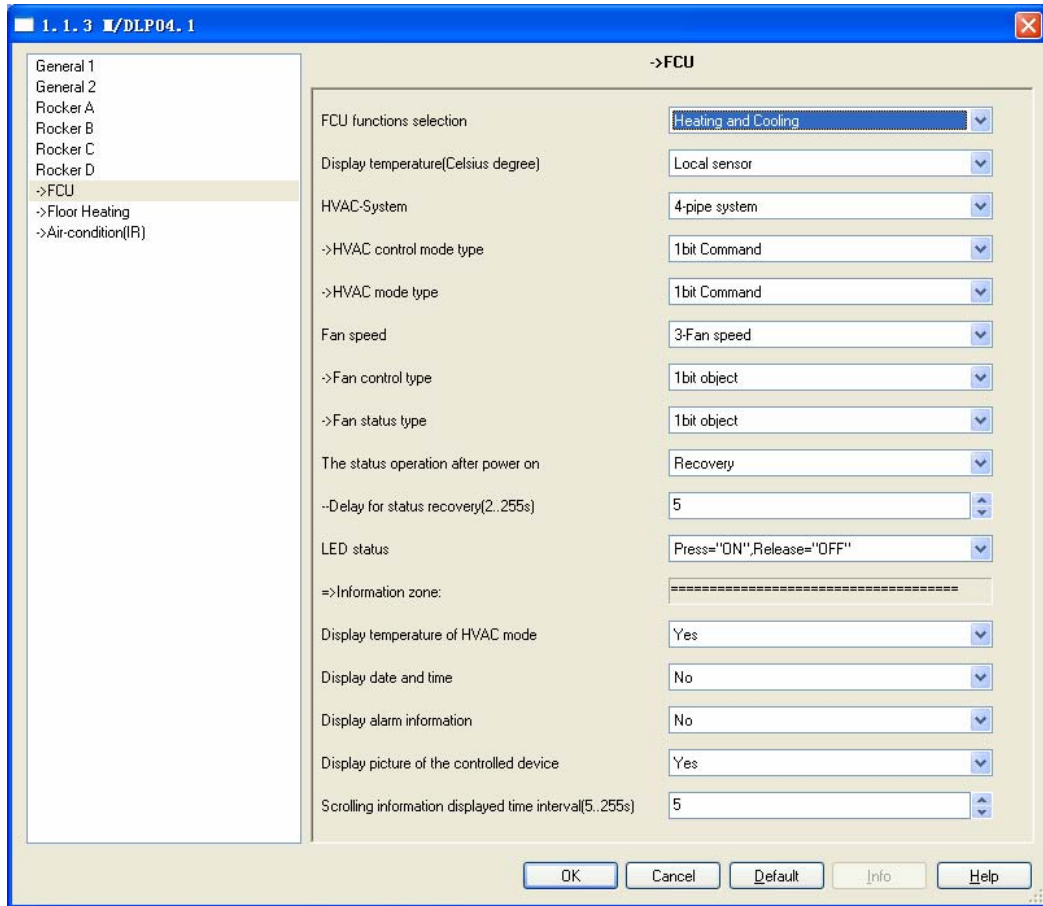


Fig14: FCU window

NOTE:This function is must coordinating with HDL's the Fan Coil Unit Controller (M/FCU.01.10.1).

---FCU functions selection

Set to FCU's work mode. there are 4 modes.

- Options:** Fan
 Heating
 Cooling
 Heating and Cooling

Fan: The FCU's work mode is fan.

Heating: the FCU's work mode is heating.

Cooling: the FCU's work mode is cooling.

Heating and cooling: the FCU's work mode is heating and cooling.

---Display temperature (Celsius degree)

Options: via EIB
Local sensor

Via EIB: The display actual temperature is depend on other devices via EIB.

Local sensor: The display actual temperature is depend on sensor itself.

---HVAC-System

Options: 2-pipe system
4-pipe system

2-pipe system: There is one single water circuit that is filled with cooling or heating medium according to the season.

4-pipe system: The system consists of two separate water circuits for heating and cooling

->HVAC control mode type

Options: 1 bit Command
1 byte mode

->HVAC mode type

Options: 1 bit Command
1 byte mode

---Fan speed

Set to FCU's fan speed.

Options: 1-fan speed
2-fan speed
3-fan speed

1-fan speed: If you select this one, HVAC has 1 fan speed only.

2-fan speed: If you select this one, HVAC has 2 fan speeds can be setting.

3-fan speed: If you select this one, HVAC has 3 fan speeds can be setting.

->Fan control type

Options: 1 bit object
1 byte object

->Fan status type

Options: 1 bit object
1 byte object

---Fan speed

Set to FCU's fan speed.

- Options: 1-fan speed
- 2-fan speed

3.4 Function parameter “Floor Heating”

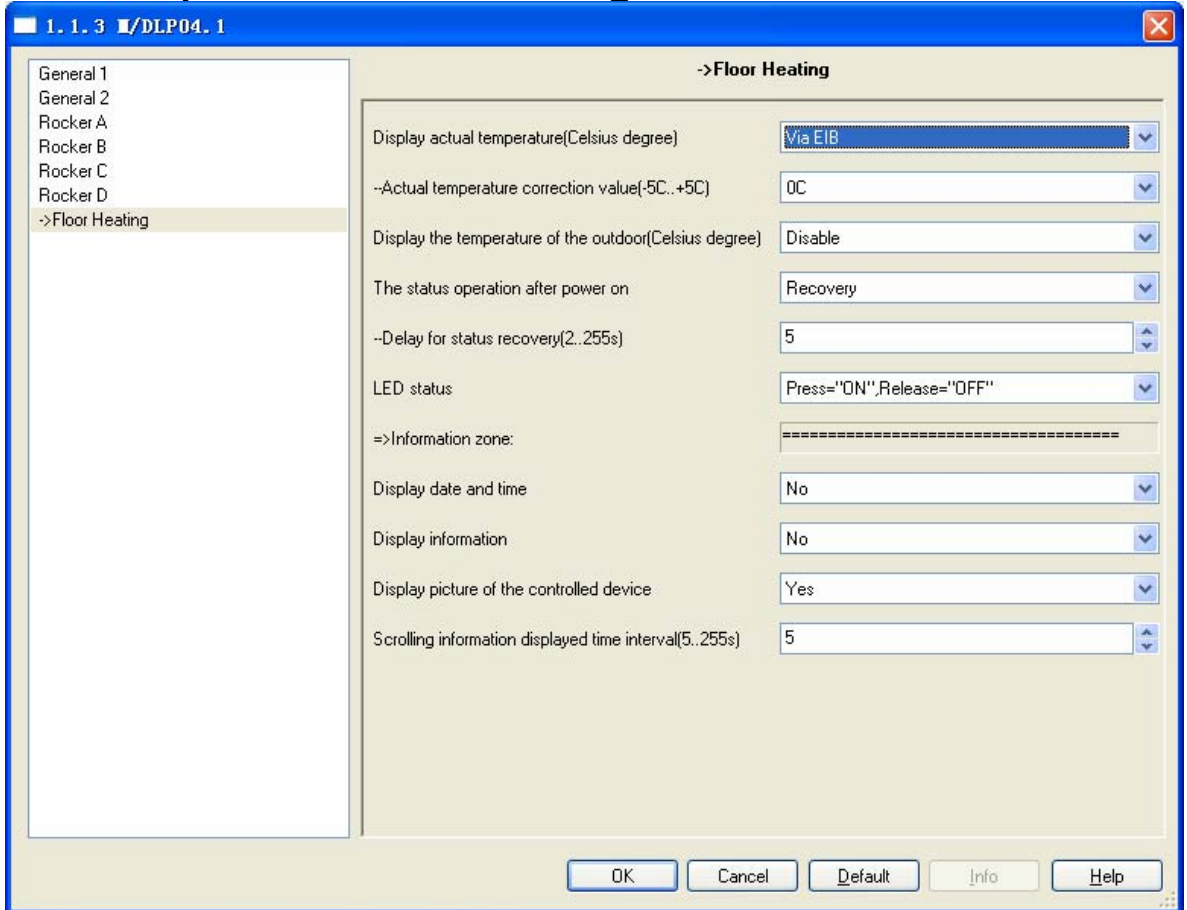


Fig15: Floor heating window

NOTE:This function is must coordinating with HDL's the Fan Coil Unit Controller (M/FCU.01.10.1).

---Display actual temperature (Celsius degree)

Setting display actual temperature source.

Options: Via EIB

Local sensor

Via EIB: The display actual temperature is received other devices via EIB.

Local sensor: The display actual temperature is received sensor of itself.

---Actual temperature correction value (Celsius degree)

It is used to emend temperature when difference happened to detected temperature and actual temperature.

Options: Disable
Enable

Disable: can't emend temperature

Enable: you can emend temperature when difference happened to detected temperature and actual temperature.

--Temperature correction value of the outdoor(-5C...+5C)

Options: -5C...+5C

The temperature range is -5C...+5C.

--Temperature monitoring time interval of the outdoor(s)

Options: 5...255

Set to the time of temperature monitoring.

---**The status operation after power on**

When power on and the bus voltage recovery, this function will be executed.

Options: Unchange
Recovery
Read status

Unchange: The position unchanged after bus voltage recovery.

Recovery: After bus voltage recovery, The position will be back to the state of the power-down previous.

--Delay for status read(2...255s)

Options: 5...255

---**LED status**

Set to the LED's status when operation buttons.

Options: flashing
Press="ON", Release="OFF"
Press="OFF", Release="ON"

Flashing: when operation the button LED will flashing.

Press="ON", Release="OFF": when pressing the button LED is ON, and when release the button LED is OFF.

Press="OFF", Release="ON": when pressing the button LED is OFF, and when release the button LED is ON.

=>**Information zone:**

---**Display date and time**

Whether display the date and time in information zone.

Options: NO

YES,

NO: don't display the date and time.

YES: display the date and time.

---Display information

Whether display the information in information zone.

Options: NO

YES,

---Display picture of the controlled device

Whether display the information in information zone.

---Scrolling information displayed time interval (5...255s)

The time range is 5...255s

3.5 Function parameter “Air-condition”

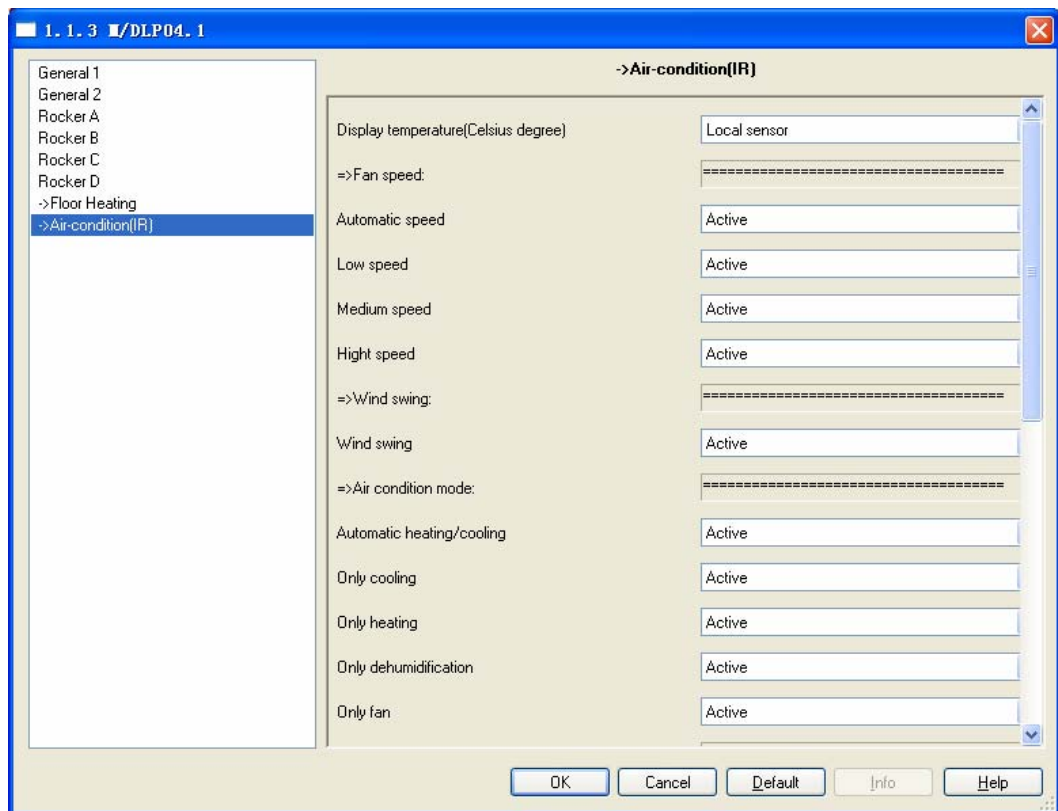


Fig16: Air-condition window

NOTE: This function is must coordinating with HDL's infrared signal transmitter (M/IRAC.1).

---Display actual temperature (Celsius degree)

Setting display actual temperature source.
DLP can display actual temperature.

=>Fan speed
Automatic speed
Low speed
Medium speed
Hight speed

=>Wind swing
Wind swing

=>Air condition mode
Automatic heating/cooling
Only heating
Only heating
Only dehumidification
Only fan

=>Air condition status
The status operation after power on
Delay for status recovery(2..255s)
LED status

=>Information zone
Display date and time
Display picture of the controlled device
Scrolling information displayed time interval (5..255s)

4- Communication objects description

In this section will introduce the communication objects, The objects will show by setting the function enable .

Note: In following sections the N=A,B,C,D

4.1 Objects “General”

Nu. . .	Name	Object Function	Description	Group Addresses	Le. . .	C	R	W	T	U	Data Type	Prio: ^
0	General	Change button LED brightness			1 Byte	C	-	W	T	U		Low
1	General	Change LCD brightness			1 Byte	C	-	W	T	U		Low
2	General	Infrared active/inactive			1 bit	C	-	W	T	U		Low
3	General	Lock buttons			1 bit	C	-	W	T	U		Low
4	General	Trigger left of Rock A			1 bit	C	-	W	T	U		Low
5	General	Trigger right of Rock A			1 bit	C	-	W	T	U		Low
6	General	Trigger left of Rock B			1 bit	C	-	W	T	U		Low
7	General	Trigger right of Rock B			1 bit	C	-	W	T	U		Low
8	General	Trigger left of Rock C			1 bit	C	-	W	T	U		Low
9	General	Trigger right of Rock C			1 bit	C	-	W	T	U		Low
10	General	Trigger left of Rock D			1 bit	C	-	W	T	U		Low
11	General	Trigger right of Rock D			1 bit	C	-	W	T	U		Low
12	General	Trigger left of Rock E			1 bit	C	-	W	T	U		Low
13	General	Trigger right of Rock E			1 bit	C	-	W	T	U		Low
14	General	Trigger left of Rock F			1 bit	C	-	W	T	U		Low
15	General	Trigger right of Rock F			1 bit	C	-	W	T	U		Low
16	General	Trigger left of Rock G			1 bit	C	-	W	T	U		Low
17	General	Trigger right of Rock G			1 bit	C	-	W	T	U		Low
18	General	Trigger left of Rock H			1 bit	C	-	W	T	U		Low
19	General	Trigger right of Rock H			1 bit	C	-	W	T	U		Low
20	General	Trigger left of Rock I			1 bit	C	-	W	T	U		Low
21	General	Trigger right of Rock I			1 bit	C	-	W	T	U		Low
22	General	Trigger left of Rock J			1 bit	C	-	W	T	U		Low
23	General	Trigger right of Rock J			1 bit	C	-	W	T	U		Low
24	General	Trigger right of Rock K			1 bit	C	-	W	T	U		Low
25	General	Trigger right of Rock K			1 bit	C	-	W	T	U		Low
26	General	Trigger left of Rock L			1 bit	C	-	W	T	U		Low
27	General	Trigger right of Rock L			1 bit	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
0	General	Change button LED	C W T U	DPT 5.001
1	General	Change LCD brightness		1byte
These communication objects used to change LED and LCD brightness function.				

NO.	Object name	Function	Flags	Data type
2	General	Infrared active/inactive	C W T U	DPT 1.003 1bit

This communication object used to enable or disable the infrared function. if receive the value “1”,and the infrared function is enabled, if receive the value “0”,and the infrared function is disabled

NO.	Object name	Function	Flags	Data type
3	General	Lock buttons	C W T U	DPT 1.003 1bit

This communication object used to lock the button. if receive the value “0”,and all buttons locked, if receive the value “1”,and all buttons is unlocked.

NO.	Object name	Function	Flags	Data type
4..27	General	Trigger left or right of rocker N	C W T U	DPT 1.008 1bit

These communication objects used to trigger the button. If receive the value “1”,and the single button triggered, if receive the value “0”,and the button not triggered.

It is only can get a short operation when using the remote trigger button objects, Long operate is impossible.

Nu...	Name	Object Function	Description	Group Addresses	Le...	C	R	W	T	U	Data Type	Prio...
28	Slave clock	Network datetime			8 Byte	C	-	W	T	U		Low
29	Slave clock	Network date			3 Byte	C	-	W	T	U		Low
30	Slave clock	Network time			3 Byte	C	-	W	T	U		Low

NO.	Object name	Function	Flags	Data type
28	Slave clock	Network datetime	C W T U	DPT 19.001 8 Byte
29	Slave clock	Network date	C W T U	DPT 11.001 3 Byte
30	Slave clock	Network time	C W T U	DPT 10.001 3 Byte

Input time & date information synchronisation of master clock in the KNX system

4.2 Objects “Switch controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A left short	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low
41	Rocker A left long	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low
42	Rocker A right short	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low
43	Rocker A right long	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left short	Switching(Toggle)	C W T U	DPT 1.001 1bit
41	Rocker A left long			
42	Rocker A right short			
43	Rocker A right short			

These communication objects used for switching other switch device. Send telegram value “1” for ON, send telegram value “0” for OFF.

Tips: Rocker A set up different work mode, will have different function, but the same object number. Other rockers are same to rocker A.

4.3 Objects “Dimming controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A left short	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low
41	Rocker A left long	Dimming			4 bit	C	-	W	T	U	3 bit co...	Low
42	Rocker A right short	Switching(Toggle)			1 bit	C	-	W	T	U	1 bit DP...	Low
43	Rocker A right long	Dimming			4 bit	C	-	W	T	U	3 bit co...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left short	Switching(Toggle)	C W T U	DPT 1.001 1bit
41	Rocker A left long	Dimming	C W T U	DPT 3.007 4bit
42	Rocker A right short	Switching(Toggle)	C W T U	DPT 1.001 1bit
43	Rocker A right long	Dimming	C W T U	DPT 3.007 4bit

These communication objects used for switch or dimming the device. Rock short button for switching,Rocker long button for dimming.

4.4 Objects “Shutter controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A left short	Adjust for shutter			1 bit	C	-	W	T	U		Low
41	Rocker A left long	Move for shutter			1 bit	C	-	W	T	U	1 bit DP...	Low
42	Rocker A right short	Adjust for shutter			1 bit	C	-	W	T	U		Low
43	Rocker A right long	Move for shutter			1 bit	C	-	W	T	U	1 bit DP...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left short	Adjust for shutter	C W T U	DPT 1.007 1bit
41	Rocker A left long	Move for shutter	C W T U	DPT 1.008 1bit
42	Rocker A right short	Adjust for shutter	C W T U	DPT 1.007 1bit
43	Rocker A right long	Move for shutter	C W T U	DPT 1.008 1bit

These communication objects used for Adjust and Move for the shutter. Send the telegram value “1” to adjust or move, or send telegram value “0” to stop adjust or stop moving.

4.5 Objects “Flexible controller”

Number	Name	Object Function	Descript...	Group Add...	Length	C	R	W	T	U
0	General	Send cycles			1 bit	C	R	-	T	-
37	Rocker A left	Flexible			1 bit	C	-	W	T	U
38	Rocker A right	Flexible			1 bit	C	-	W	T	U
87	Rocker B left	Flexible			1 bit	C	-	W	T	U
88	Rocker B right	Flexible			1 bit	C	-	W	T	U
137	Rocker C left	Flexible			1 bit	C	-	W	T	U
138	Rocker C right	Flexible			1 bit	C	-	W	T	U
187	Rocker D left	Flexible			1 bit	C	-	W	T	U
188	Rocker D right	Flexible			1 bit	C	-	W	T	U

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A left	Flexible			1 bit	C	-	W	T	U	1 bit DP...	Low
41	Rocker A right	Flexible			1 bit	C	-	W	T	U	1 bit DP...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left	Flexible	C W T U	DPT 1.001 1bit
41	Rocker A right	Flexible	C W T U	DPT 1.001 1bit

These communication objects used for flexible control some device.

4.6 Objects “Scene controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A short	Call scene			1 Byte	C	-	W	T	U		Low
41	Rocker A long	Scene dimming			4 bit	C	-	W	T	U	3 bit co...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A short	Call scene,	C W T U	DPT 18.001 1byte
41	Rocker A long	Scene dimming	C W T U	DPT 3.007 4bit

These communication objects used for Call and Scene dimming, Call scene NO. is 1 to 64 and the value is 0 to 63. The Scene dimming is 4bits value.

4.7 Objects “Sequence controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A left short	Sequence			1 bit	C	-	W	T	U	1 bit DP...	Low
41	Rocker A left long	Sequence			1 bit	C	-	W	T	U	1 bit DP...	Low
42	Rocker A right short	Sequence			1 bit	C	-	W	T	U	1 bit DP...	Low
43	Rocker A right long	Sequence			1 bit	C	-	W	T	U	1 bit DP...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left short	Sequence	C W T U	DPT 1.010 1bit
41	Rocker A left long	Sequence	C W T U	DPT 1.010 1bit
42	Rocker A right short	Sequence	C W T U	DPT 1.010 1bit
43	Rocker A right long	Sequence	C W T U	DPT 1.010 1bit

These communication objects used for start and stop sequence. Send the telegram value “1” to start one sequence, and send the telegram value ‘0’ to stop on sequence.

4.8 Objects “Percentage controller”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A	Percentage			1 Byte	C	-	W	T	U	8 bit un...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A	Percentage	C W T U	DPT 5.001 1byte

This communication object used for control some device, eg: Absolute dimming the

brightness.

4.9 Objects “Threshold(1byte)”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A	Percentage			1 Byte	C	-	W	T	U	8 bit un...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A	Threshold(1bytes)	C W T U	DPT 5.004 1byte
40	Rocker A	Threshold(2byte)	C W T U	DPT 7.001 1byte

This communication object used for threshold control.

4.10 Objects “string (14 byte) value”

Number	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Prio
40	Rocker A	String(14bytes) value			14 Byte	C	-	W	T	U	Characte...	Low

NO.	Object name	Function	Flags	Data type
40	Rocker A	14 byte value	C W T U	DPT 16.000 14byte
.....				

This communication object used for control 14 bytes string value. According to the set and send corresponding string variables.

4.11 Objects “Combination controller”

Nu...	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Priority
40	Rocker A left	COMB OBJ1 switching			1 bit	C	-	-	T	-		Low
41	Rocker A left	COMB OBJ2 shutter			1 bit	C	-	-	T	-		Low
42	Rocker A left	COMB OBJ3 scene			1 Byte	C	-	-	T	-		Low
43	Rocker A left	COMB OBJ4 shutter			1 bit	C	-	-	T	-		Low
45	Rocker A right	COMB OBJ1 scene			1 Byte	C	-	-	T	-		Low
46	Rocker A right	COMB OBJ2 sequence			1 bit	C	-	-	T	-		Low
47	Rocker A right	COMB OBJ3 percentage			1 Byte	C	-	-	T	-		Low
48	Rocker A right	COMB OBJ4 threshold(0..255)			1 Byte	C	-	-	T	-		Low
49	Rocker A right	COMB OBJ5 String(14bytes)			14 Byte	C	-	-	T	-		Low

NO.	Object name	Function	Flags	Data type
40	Rocker A left	COMB OBJ1 switching	C T	DPT 1.001 1bit
41	Rocker A left	COMB OBJ2 shutter	C T	DPT 1.008 1bit
42	Rocker A left	COMB OBJ3	C T	DPT 18.001

		scene		1byte
43	Rocker A left	COMB OBJ4 sequence	C T	DPT 1.010 1bit
44	Rocker A left	COMB OBJ5 percentage	C T	DPT 5.001 1byte
45	Rocker A right	COMB OBJ1 switching	C T	DPT 1.001 1bit
46	Rocker A right	COMB OBJ2 shutter	C T	DPT 1.008 1bit
47	Rocker A right	COMB OBJ3 scene	C T	DPT 18.001 1byte
48	Rocker A right	COMB OBJ4 sequence	C T	DPT 1.010 1bit
49	Rocker A right	COMB OBJ5 percentage	C T	DPT 5.001 1byte

These communication objects used for control of multiple objects at the same time. So, Multiple objects can synchronization operation.

Other rockers are same to rocker A.

4.12 Objects “HVAC Fan”

Number	Name	Object Function	D.	G.	Length	C	R	W	T	U	Data Type	Prior
161	HVAC Actual temperature	Actual temp. error signal			1 bit	C	-	W	T	U		Low
162	HVAC Actual temperature	Frost/heat alarm error signal			1 bit	C	-	W	T	U		Low
163	HVAC Setpoint	Base setpoint temperature			2 Byte	C	-	W	T	U	2 byte float ...	Low
164	HVAC Setpoint	Instantaneous setpoint temp.			2 Byte	C	-	W	T	U	2 byte float ...	Low
166	HVAC control mode	Automatic heating/cooling mode			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
167	HVAC control mode	Activation of heating mode			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
168	HVAC control mode	Activation of cooling mode			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
169	HVAC control mode	Activation of fan only			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
171	HVAC mode	ON CMD for comfort mode			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
172	HVAC mode	ON CMD for standby mode			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
173	HVAC mode	ON CMD for night mode			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
174	HVAC mode	ON CMD for building protection			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
175	HVAC Fan	Fan speed automatic			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
177	HVAC Fan	Fan speed 1			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
178	HVAC Fan	Fan speed 2			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
179	HVAC Fan	Fan speed 3			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
180	HVAC Fan	Status fan speed 1			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
181	HVAC Fan	Status fan speed 2			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
182	HVAC Fan	Status fan speed 3			1 bit	C	-	W	T	U	1 bit DPT_Switch	Low
184	HVAC Fan	Status fan speed automatic			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
185	HVAC Valve Heating	Trigger valve purge			1 bit	C	-	W	T	-		Low
186	HVAC Valve Heating	Status valve purge			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low
187	HVAC Valve Cooling	Trigger valve purge			1 bit	C	-	W	T	-		Low
188	HVAC Valve Cooling	Status valve purge			1 bit	C	-	W	T	U	1 bit DPT_Enable	Low

NO.	Object name	Function	Flags	Data type
161	HVAC Actual temperature	Actual temp. error signal	C W T U	DPT 1.005 1bit
162	HVAC Actual temperature	Frost/heat alarm error signal		

An error signal can be received from KNX/EIB with these objects.
Telegram value: "0": No error, "1": Error

NO.	Object name	Function	Flags	Data type
163	HVAC Setpoint	Base setpoint temperature	C W T U	DPT 9.001 2 byte

The temperature value can be transmitted to KNX bus. HVAC or FCU on the KNX bus can receiving the temperature as base setpoint temperature.

164	HVAC Setpoint	Instantaneous setpoint temperature	C W T U	DPT 9.001 2 byte
-----	---------------	------------------------------------	---------	---------------------

This object can receive the Instantaneous temperature via KNX bus.

NO.	Object name	Function	Flags	Data type
166	HVAC control mode	Automatic heating/cooling mode	C W T U	DPT 1.003 1bit
167	HVAC control mode	Activation of heating mode		
168	HVAC control mode	Activation of cooling mode		
169	HVAC control mode	Activation of fan only		

These communication objects used for switching HVAC's control mode. Telegram value "1" is valid and telegram value '0' is invalid.

NO.	Object name	Function	Flags	Data type
171	HVAC mode	ON CMD for comfort mode	C W T U	DPT 1.001 1bit
172	HVAC mode	ON CMD for standby mode		
173	HVAC mode	ON CMD for night mode		
174	HVAC mode	ON CMD for building		

		protection		
These communication objects used for switching HVAC work mode. Telegram value “1” is valid and telegram value ‘0’ is invalid.				

NO.	Object name	Function	Flags	Data type
175	HVAC Fan	Fan speed automatic	C W T U	DPT 1.003 1bit
177	HVAC Fan	Fan speed 1	C W T U	DPT 1.001 1bit
178	HVAC Fan	Fan speed 2		
179	HVAC Fan	Fan speed 3		

These communication objects used for switching HVAC Fan speed. Telegram value “1” is valid and telegram value ‘0’ is invalid.

Nu...	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type
180	HVAC Fan	Status fan speed 1			1 bit	C	-	W	T	U	1 bit D...
181	HVAC Fan	Status fan speed 2			1 bit	C	-	W	T	U	1 bit D...
182	HVAC Fan	Status fan speed 3			1 bit	C	-	W	T	U	1 bit D...

NO.	Object name	Function	Flags	Data type
180	HVAC Fan	Status fan speed 1	C W T U	DPT 1.001 1bit
181	HVAC Fan	Status fan speed 2		
182	HVAC Fan	Status fan speed 3		

These communication objects used to receive HVAC Fan speed. Telegram value “1” is valid.

4.13 Objects “Floor heating”

Nu...	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Priority
192	Floor heating	Actual temp. error signal			1 bit	C	-	W	T	U		Low
194	Floor heating	Normal-mode setpoint Temp.			2 Byte	C	-	W	T	U	2 byte ...	Low
195	Floor heating	Day-mode setpoint Temp.			2 Byte	C	-	W	T	U	2 byte ...	Low
196	Floor heating	Night-mode setpoint Temp.			2 Byte	C	-	W	T	U	2 byte ...	Low
197	Floor heating	Away-mode setpoint Temp.			2 Byte	C	-	W	T	U	2 byte ...	Low
198	Floor heating	Preset 1 Temp. for timer ...			2 Byte	C	-	W	T	U	2 byte ...	Low
199	Floor heating	Time of day for preset 1			3 Byte	C	-	W	T	U	Time DP...	Low
200	Floor heating	Start/Stop heating for pr...			1 bit	C	-	W	T	U	1 bit D...	Low
201	Floor heating	Preset 2 Temp. for timer ...			2 Byte	C	-	W	T	U	2 byte ...	Low
202	Floor heating	Time of day for preset 2			3 Byte	C	-	W	T	U	Time DP...	Low
203	Floor heating	Start/Stop heating for pr...			1 bit	C	-	W	T	U	1 bit D...	Low
204	Floor heating	Preset 3 Temp. for timer ...			2 Byte	C	-	W	T	U	2 byte ...	Low
205	Floor heating	Time of day for preset 3			3 Byte	C	-	W	T	U	Time DP...	Low
206	Floor heating	Start/Stop heating for pr...			1 bit	C	-	W	T	U	1 bit D...	Low
207	Floor heating	Floor heating(1-ON,0-OFF)			1 bit	C	-	W	T	U	1 bit D...	Low
208	Floor heating	ON CMD for Normal-mode			1 bit	C	-	W	T	U	1 bit D...	Low
209	Floor heating	ON CMD for Day-mode			1 bit	C	-	W	T	U	1 bit D...	Low
210	Floor heating	ON CMD for Night-mode			1 bit	C	-	W	T	U	1 bit D...	Low
211	Floor heating	ON CMD for Away-mode			1 bit	C	-	W	T	U	1 bit D...	Low
212	Floor heating	ON CMD for Timer-mode			1 bit	C	-	W	T	U	1 bit D...	Low
213	Floor heating	Trigger valve purge			1 bit	C	-	W	T	-		Low
214	Floor heating	Status valve purge			1 bit	C	-	W	T	U	1 bit D...	Low

NO.	Object name	Function	Flags	Data type
192	Floor heating	Actual temp. error signal	C W T U	DPT 1.005 1bit
An error signal can be received from KNX/EIB with these objects. Telegram value: “0”: No error , “1”: Error				

NO.	Object name	Function	Flags	Data type
194	Floor heating	Normal-mode setpoint Temp.	C W T U	DPT 9.001 2Byte
195	Floor heating	Day –mode setpoint Temp.		
196	Floor heating	Night –mode setpoint Temp.		
197	Floor heating	Away –mode setpoint Temp.		
These modes setpoint temperature can be transmitted to KNX bus.				

198	Floor heating	Preset 1 Temp. for timer mode	C W T U	DPT 9.001 2 byte
The Time-mode preset 1 temperature can be transmitted to KNX bus.				
199	Floor heating	Time of day for preset 1	C W T U	DPT10.001 3 byte
The Time-mode preset 1 start time can be transmitted to KNX bus.				
200	Floor heating	Start/Stop heating for preset 1	C W T U	DPT 1.010 1 bit

The Time-mode floor heating start or stop in this preset 1 time can be transmitted to KNX bus.				
201	Floor heating	Preset 2 Temp. for timer mode	C W T U	DPT 1.010 1 bit
The Time-mode preset 2 temperature can be transmitted to KNX bus.				
202	Floor heating	Time of day for preset 2	C W T U	DPT 1.010 1 bit
The Time-mode preset 2 start time can be transmitted to knx bus.				
203	Floor heating	Start/Stop heating for preset 2	C W T U	DPT 1.010 1 bit
The Time-mode floor heating start or stop in this preset 2 time can be transmitted to KNX bus.				
204	Floor heating	Preset 3 Temp. for timer mode	C W T U	DPT 9.001 2 byte
The Time-mode preset 3 temperature can be transmitted to KNX bus.				
205	Floor heating	Time of day for preset 3	C W T U	DPT 10.001 3 byte
The Time-mode preset 3 start time can be transmitted to KNX bus.				
206	Floor heating	Start/Stop heating for preset 3	C W T U	DPT 1.010 1 bit
The Time-mode floor heating start or stop in this preset 3 time can be transmitted to KNX bus.				
207	Floor heating	Floor heating(1-ON,0-OFF)	C W T U	DPT 1.001 1 bit
This communication object used for control floor heating's ON and OFF. Send the telegram value "1" for ON ,0 for OFF.				

NO.	Object name	Function	Flags	Data type
208	Floor heating	On CMD for Normal-mode	C W T U	DPT 1.001 1bit
209	Floor heating	ON CMD for Day -mode		
210	Floor heating	ON CMD for Night -mode		
211	Floor heating	ON CMD for Away -mode		
212	Floor heating	ON CMD for Time -mode		
These communication objects used for control floor heating's mode. Send the telegram value "1" or"0" to switching floor heating's mode.Telegram value "1" is valid,Telegram value "0" is invalid.				

NO.	Object name	Function	Flags	Data type
213	Floor heating	Trigger valve purge	C W T	DPT 1.017 1bit
214	Floor heating	Status valve purge	C W T U	DPT 1.003 1bit

These communication objects used for valve purge. Send the telegram value “1” to trigger valve purge,value “0” to stop valve purge.Also, State can be feedback to the KNX bus.

4.14 Objects “Air condition”

Nu...	Name	Object Function	Des...	G.	Length	C	R	W	T	U	Data Type	Priorit...
216	Air-condition	Switch ON/OFF			1 bit	C	-	W	T	U	1 bit D...	Low
218	Air-condition Temperature	Setpoint temperature			2 Byte	C	-	W	T	U	2 byte ...	Low
219	Air-condition Fan	ON CMD for automatic			1 bit	C	-	W	T	U	1 bit D...	Low
220	Air-condition Fan	ON CMD for low speed			1 bit	C	-	W	T	U	1 bit D...	Low
221	Air-condition Fan	ON CMD for medium speed			1 bit	C	-	W	T	U	1 bit D...	Low
222	Air-condition Fan	ON CMD for high speed			1 bit	C	-	W	T	U	1 bit D...	Low
223	Air-condition Wind	Wind swing('1'-swing,'0'-s...			1 bit	C	-	W	T	U	1 bit D...	Low
224	Air-condition Mode	ON CMD for automatic			1 bit	C	-	W	T	U	1 bit D...	Low
225	Air-condition Mode	ON CMD for cooling			1 bit	C	-	W	T	U	1 bit D...	Low
226	Air-condition Mode	ON CMD for heating			1 bit	C	-	W	T	U	1 bit D...	Low
227	Air-condition Mode	ON CMD for dehumidification			1 bit	C	-	W	T	U	1 bit D...	Low
228	Air-condition Mode	ON CMD for fan			1 bit	C	-	W	T	U	1 bit D...	Low

NO.	Object name	Function	Flags	Data type
216	Air condition	Switch ON/OFF	C W T U	DPT1.001 1bit
.....				

This communication object used for control air condition is ON or OFF.

NO.	Object name	Function	Flags	Data type
218	Air condition	Setpoint temperature	C W T U	DPT 9.001 2 Byte
.....				

This communication object used for setpoint temperature.

NO.	Object name	Function	Flags	Data type
219	Air condition Fan	ON CMD for automatic	C W T U	DPT 1.001 1bit
220	Air condition Fan	ON CMD for low speed		
221	Air condition Fan	ON CMD for medium speed		
222	Air condition Fan	ON CMD for high speed		

These communication objects used for switching air condition's speed. Telegram value "1" is valid.

NO.	Object name	Function	Flags	Data type
223	Air condition Wind	Wind swing("1"-swing,"0"-stop)	C W T U	DPT 1.010 1bit

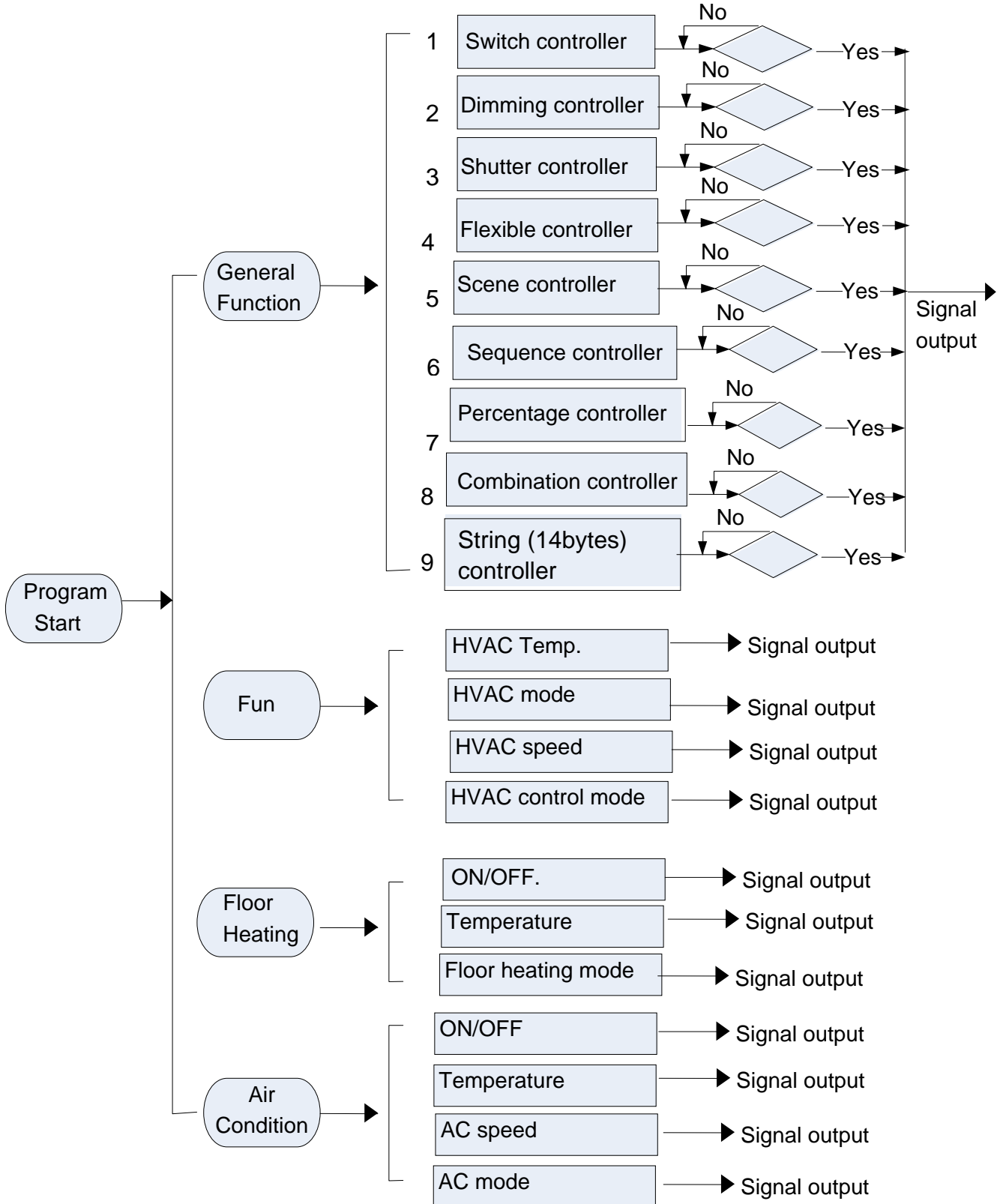
This communication object used for switching air condition wind.
Telegram value "1" start swing, and 0 is stop.
"1"-swing,
"0"-stop

NO.	Object name	Function	Flags	Data type
224	Air condition Mode	ON CMD for automatic	C W T U	DPT 1.001 1bit
225	Air condition Mode	ON CMD for cooling		
226	Air condition Mode	ON CMD for heating		
227	Air condition Mode	ON CMD for high dehumidification		
228	Air condition Mode	ON CMD for fan		

These communication objects used for switching air condition's mode. Telegram value "1" is valid.

5- Application

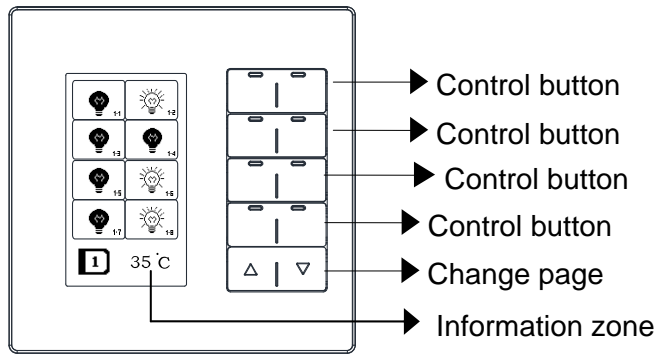
5.1 Program functions diagram



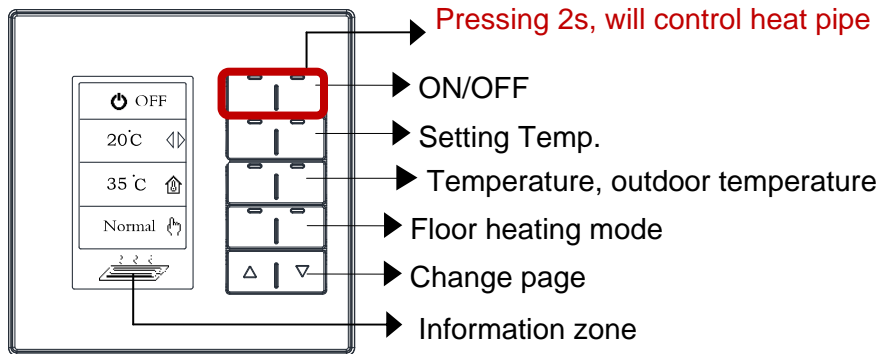
6-Panel operation

6.1 General control

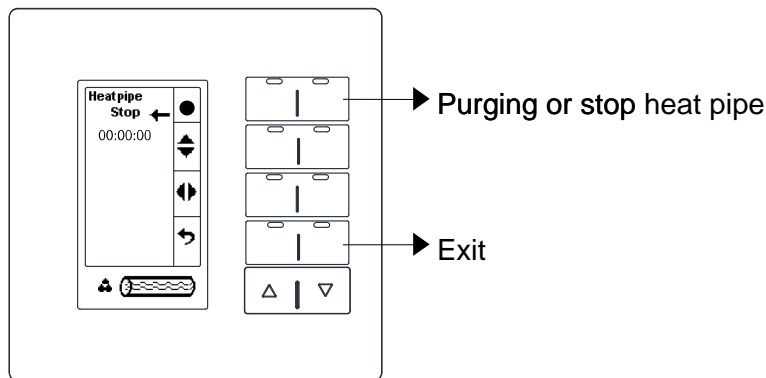
1 to 4 pages control.



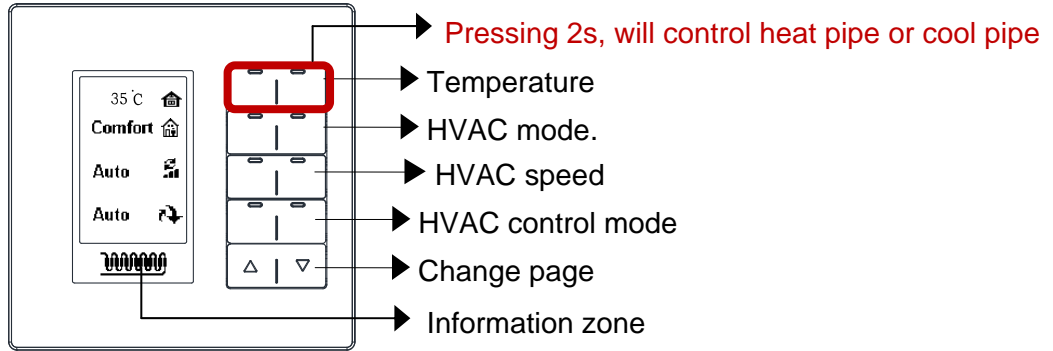
6.2 Floor heating control



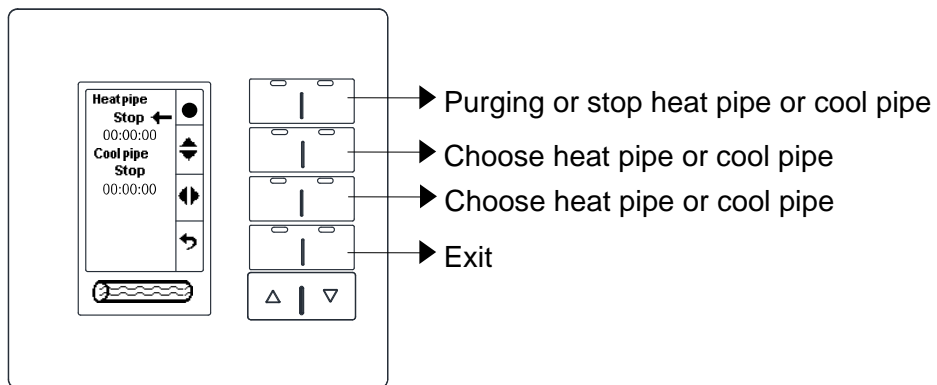
Heat pipe control:



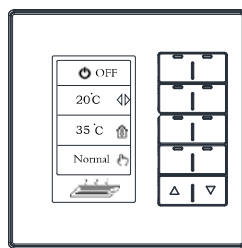
6.3HVAC control



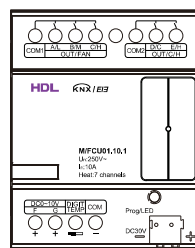
heat pipe or cool pipe control



NOTE:Floor heating control and HVAC control are must coordinating with HDL's the Fan Coil Unit Controller (M/FCU.01.10.1).



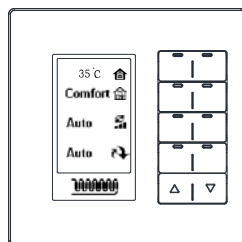
M/DLP04. 1



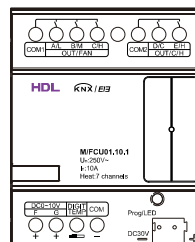
M/FCU.01.10.1

+

→ Floor heating control



M/DLP04. 1

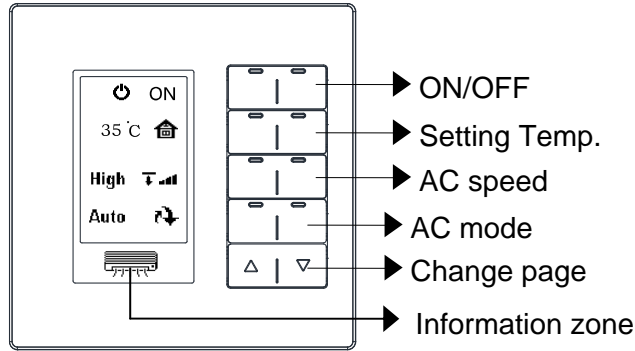


M/FCU.01.10.1

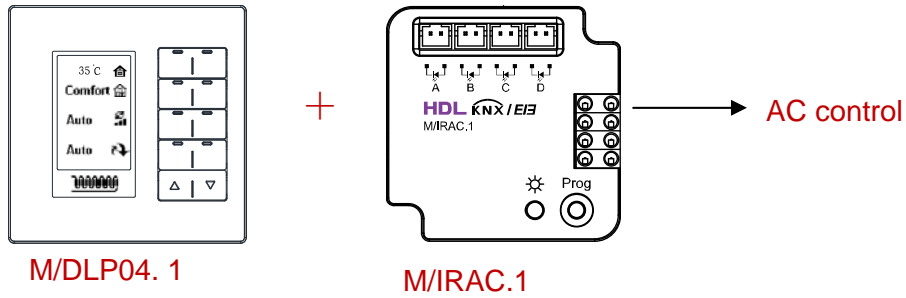
+

→ HVAC control

6.4 AC control



NOTE: This function is must coordinating with HDL's infrared signal transmitter (M/IRAC.1).



Basic information setting

Basic information setting: keep pressing 9 and 10 buttons together for 2s, LCD brightness and LED brightness will be setting.
conversion Celsius and Fahrenheit temperature.

LCD: 96, LCD's brightness, the range is 0-100

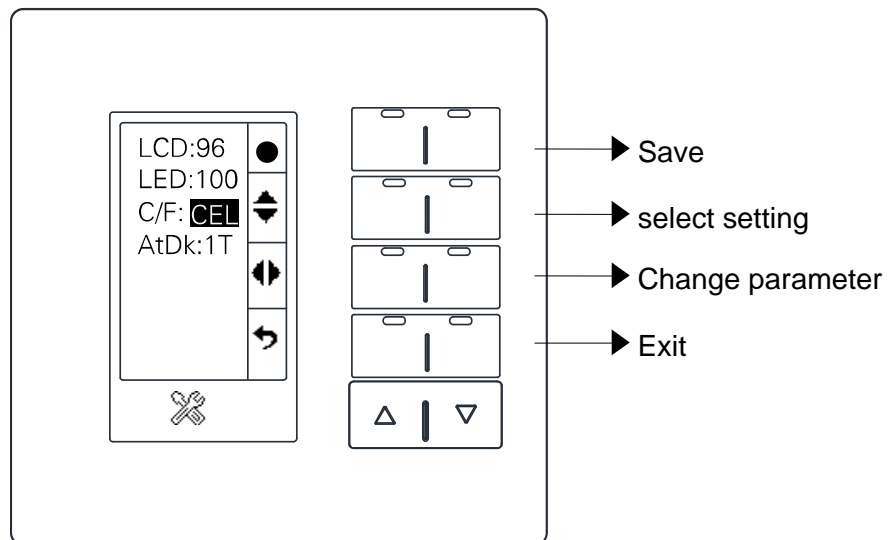
LED: 100, LED's brightness, the range is 0-100

C/F: CEL, temperature's unit,

ATDk: 1T/2T, the backlight will dim down after no operation for 10s(if set 10s) ,When operation again...

1T:The button will reaction immediate, In the meantime also can control the device.

2T:The first times click button is only lighten the backlight, the second press button for control device.



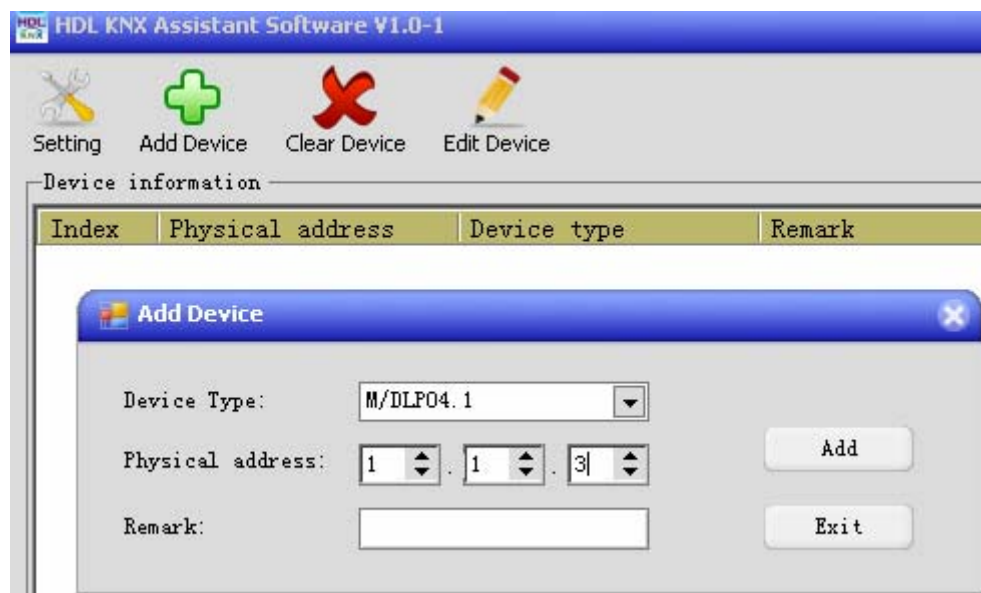
7-Buttons image setting

The buttons image must download by special software, HDL KNX Assistant Software.

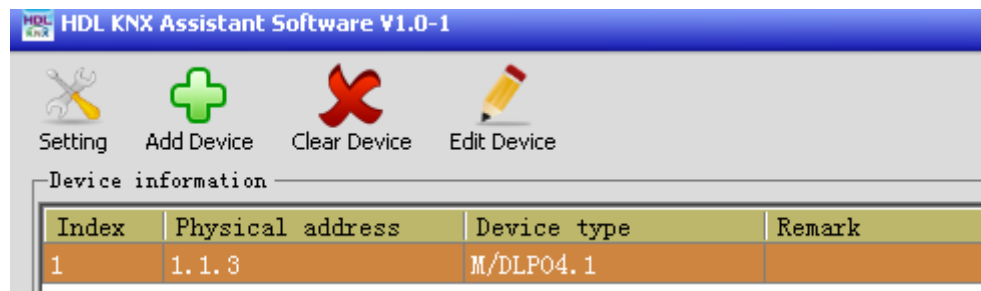
7.1 HDL KNX Assistant Software.exe' s setting

- Add one device.

Main form->Add device->set physical address and remark->Add OK.

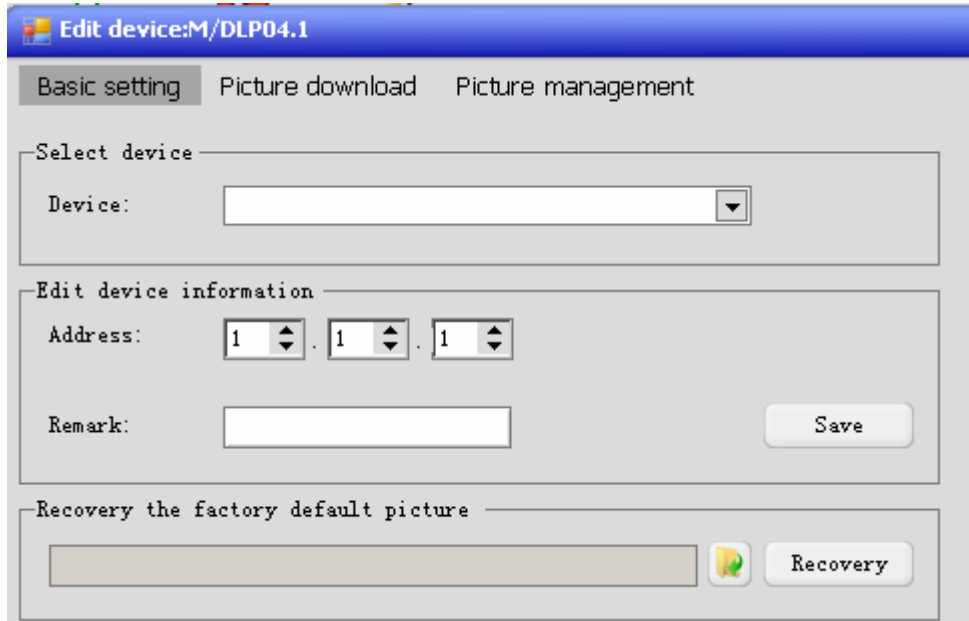


Add result:

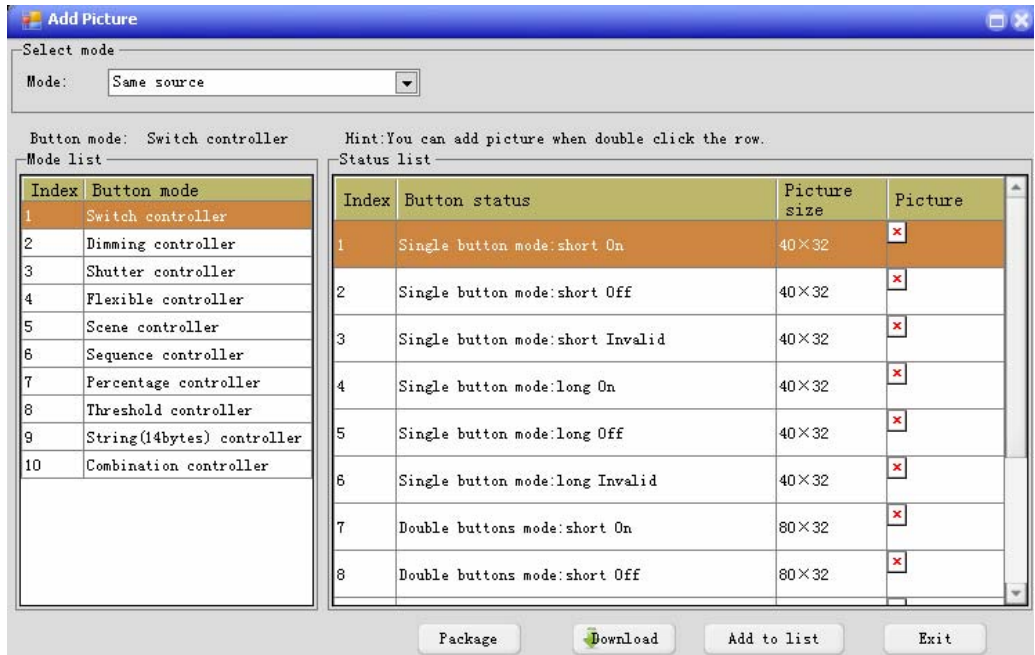


- Add one device.

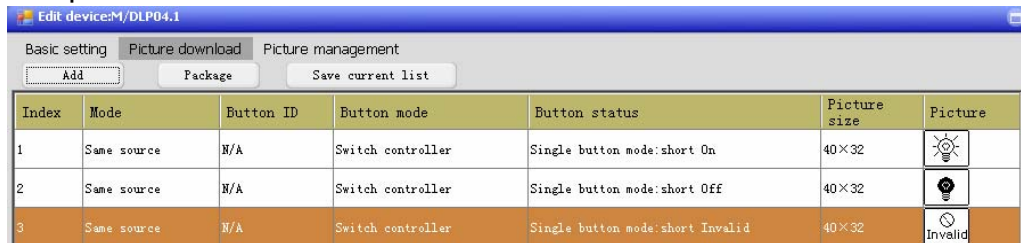
Select the row where need to edit. Mouse double click the row or click edit device to open the edit form.



Picture download->Add.



Edit these pictures need to download. Click add to list to add pictures to edit device list.



Click download picture .

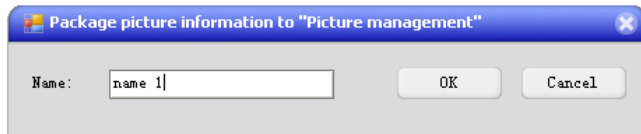


Download completed.

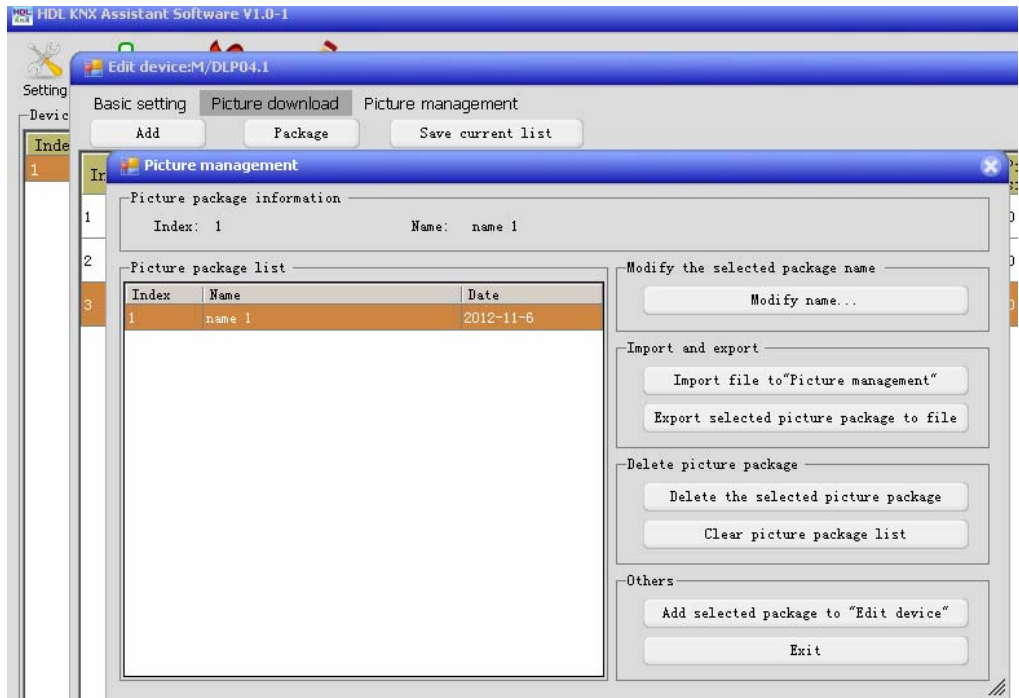
7.2 Package picture

You can package these pictures edited to database.
Click package ,input name, OK completed.

Index	Mode	Button ID	Button mode	Button status	Ps
1	Same source	N/A	Switch controller	Single button mode:short On	40
2	Same source	N/A	Switch controller	Single button mode:short Off	40
3	Same source	N/A	Switch controller	Single button mode:short Invalid	40



Click picture management, see the package information.



In this form ,we can import or export or add package info to edit device list.

7.3 Set communicate mode

Download picture data to device can throw two modes : usb and NetIP.

Main form->Setting->Communication mode->select mode -> save

