1. TOUCH PANEL

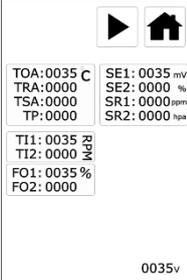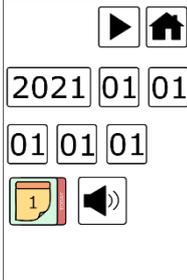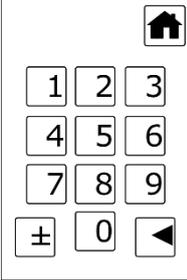## 1.1. Touch Panel (HRDLITE T-CONTROLLER)
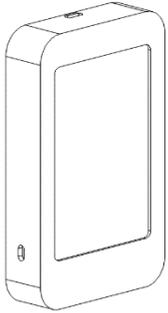
Touch Control Panel; It is designed to control all functions of the unit and to make settings related to the device. There are no keys on the panel. Some symbols on the screen are functional and are used instead of keys, while some symbols are used for informational purposes.

Equipment view	Dimensions
TFT Screen	105mm 65mm 18mm

1.2. Screenshots

1.Screen Heat Recovery Unit	1.Screen Heat Recovery Unit with Heat Pump	1.Screen Air Purifier Unit

2.Screen Timer	**3.Screen** Information	**4.Screen** Settings

5.Screen Company Logo	**6.Screen** Service Login Screen

Heat Recovery Unit / "1.Screen" Symbols: Main Screen
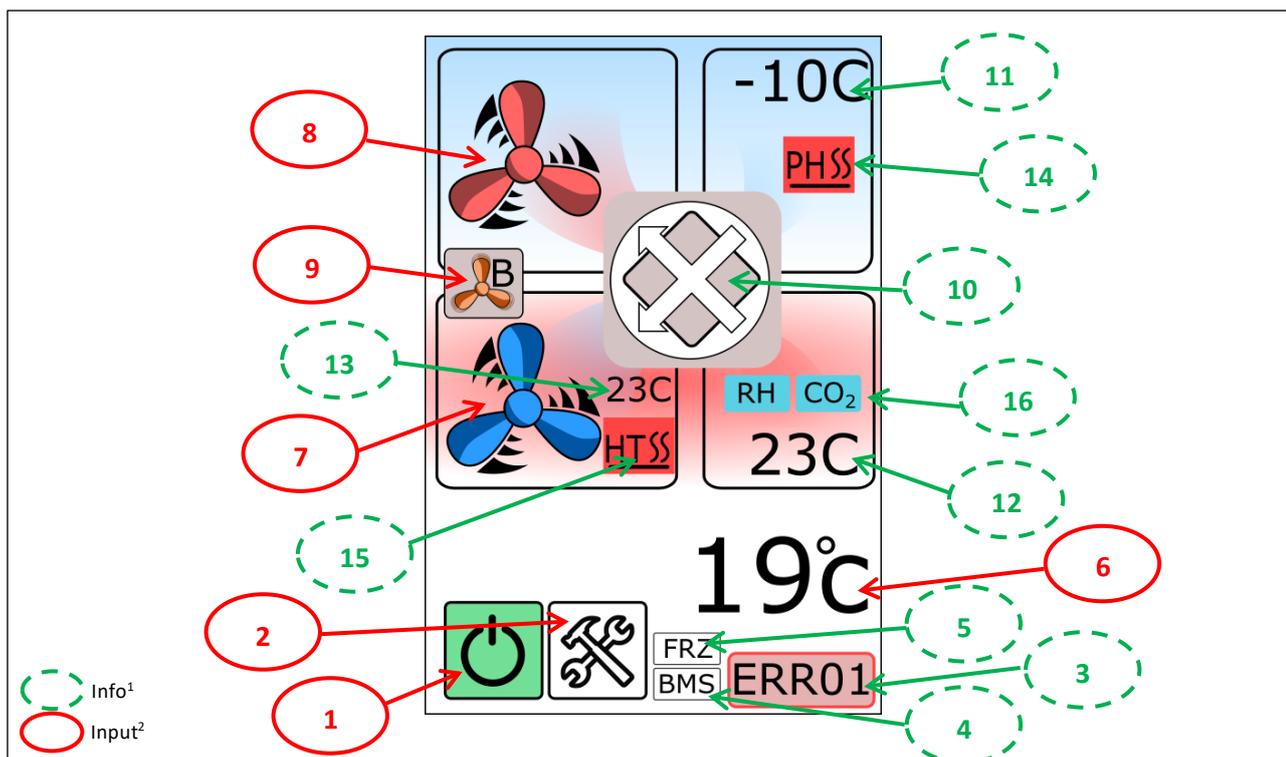
[1] Info symbols are to show the status of the equipment it is in.

[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

1.Symbol: Unit On/Off		
Symbol	**Description**	**Function**
	Unit is "On"	Turns "On" the unit
	Unit is "Off"	Turns "Off" the unit

2.Symbol: Service Screen Symbol		
Symbol	**Description**	**Function**
	Service Screen Symbol	Switch to 2.Screen

3.Symbol	Fault code.

4.Symbol: Timer	
	BMS or TIMER is inactive.
BMS	BMS is active.
TMR	TIMER is active.

5.Symbol: Defrost	
FRZ	Frost protection is active.
FDF	Frost protection is active for DX system

6.Symbol: Temperature		
Symbol	Description	Function
19℃	Air temperature on Panel (T_PA)	Set temperature

Temperature Set Area		
Symbol	Description	Function
G	Return symbol	Return to 1.Screen.
22℃	Temperature set value.	-----
△	Up symbol	Increase existing value.
▽	Down symbol	Decrease existing value.

Info[1]

Input[2]
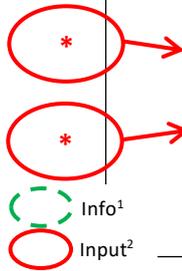
7.Symbol: Fresh Air Fan		
Symbol	**Description**	**Function**
	Closed	Fan runs at "low" speed.
	Fan speed "low".	Fan runs at "med" speed.
	Fan speed "med"	Fan runs at "high" speed.
	Fan speed "high"	Fan runs at VOD mode.
	VOD mode is active	Fan turns "off"
	Fan speed "boost"	---

8.Symbol: Exhaust Air Fan		
Symbol	**Description**	**Function**
	Closed	Fan runs at "low" speed.
	Fan speed "low".	Fan runs at "med" speed.
	Fan speed "med"	Fan runs at "high" speed.
	Fan speed "high"	Fan runs at VOD mode.
	VOD mode is active	Fan turns "off"
	Fan speed "boost"	---

9.Sembol: Fan Boost Symbol		
Symbol	**Description**	**Function**
	"Boost" speed symbol	Fan runs at "boost" speed.
	"Boost" speed is active	-----

10.Symbol: Heat exchanger (Plate or Rotor) & By-Pass damper Symbol				
	Exchanger: Plate type By-Pass: not available Unit: Closed		Exchanger: Plate type By-Pass: Available / Closed Unit: Closed
	Exchanger: Plate type By-Pass: not available Unit: Working		Exchanger: Plate type By-Pass: Available / Closed Unit: Working
	Exchanger: Rotor type By-Pass: not available Unit: Closed		Exchanger: Plate type By-Pass: Available / Open Unit: Working
	Exchanger: Rotor type By-Pass: not available Unit: Working		

11.Symbol	Outdoor air temperature (T_OA).
12.Symbol	Return air temperature (T_RA).
13.Symbol	Supply air temperature (T_SA) (If sensor is available).

14.Symbol: Preheater Symbol	
	Not available
PH	Type: Preheater Status: Closed
PHSS	Type: Preheater Status: Open

15.Symbol: Heating and/or Cooling Equipment Symbol			
	Not available	**CW**	Type: Water coil Status: Closed
HT	Type: Heater Status: Closed	**CW✳**	Type: Water coil Status: Open / Cooling mode
HTSS	Type: Heater Status: Open	**CWSS**	Type: Water coil Status: Open / Heating mode

16.Symbol: Sensor	
CO$_2$	CO$_2$ sensor is available (Part I – Section 4.1.3 or 4.1.4)
RH	Humidity sensor is available (Part I – Section 4.1.2 or 4.1.4)

"2.Screen" Symbols: Timer
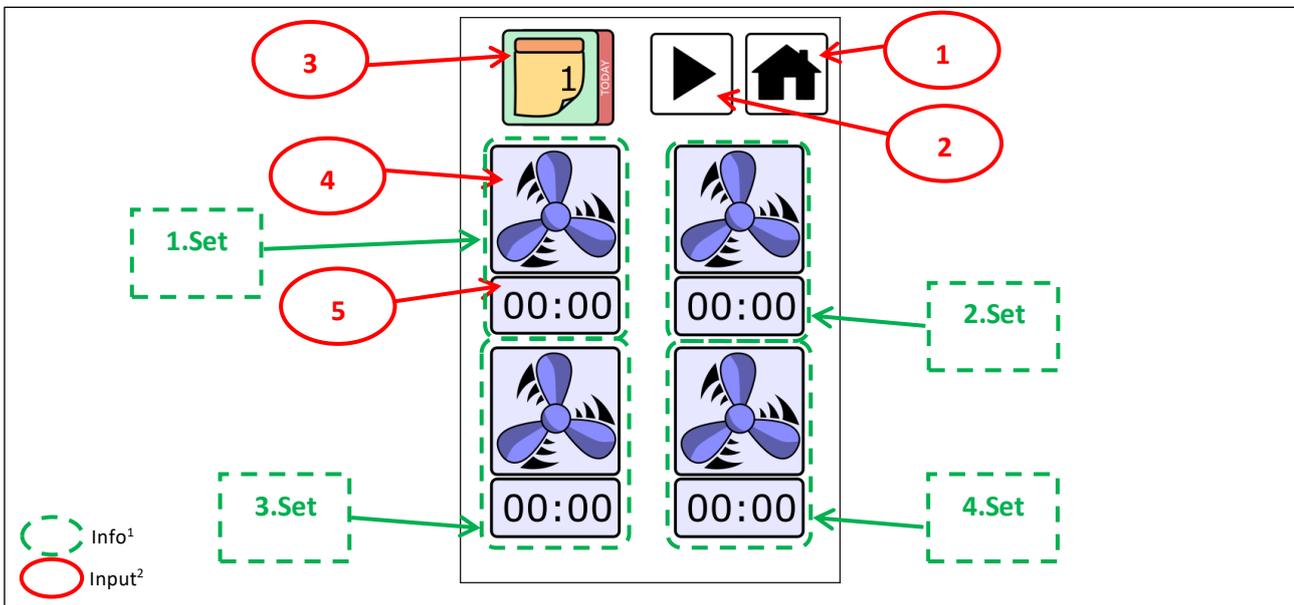
[1] Info symbols are to show the status of the equipment it is in.

[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	🏠	Main screen symbol	Switch to 1.Screen.
2.Symbol	▶	Next screen symbol	Switch to 3.Screen.
3.Symbol	📝1	Day of the week	Select day.
4.Symbol	🌀	Fan mode	Select fan speed.
5.Symbol	00:00	Clock	Select activating time for Fan speed.

"3.Screen" Symbols: Information

[1] Info symbols are to show the status of the equipment it is in.

[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	🏠	Main screen symbol	Switch to 1.Screen.
2.Symbol	▶	Next screen symbol	Switch to 4.Screen.

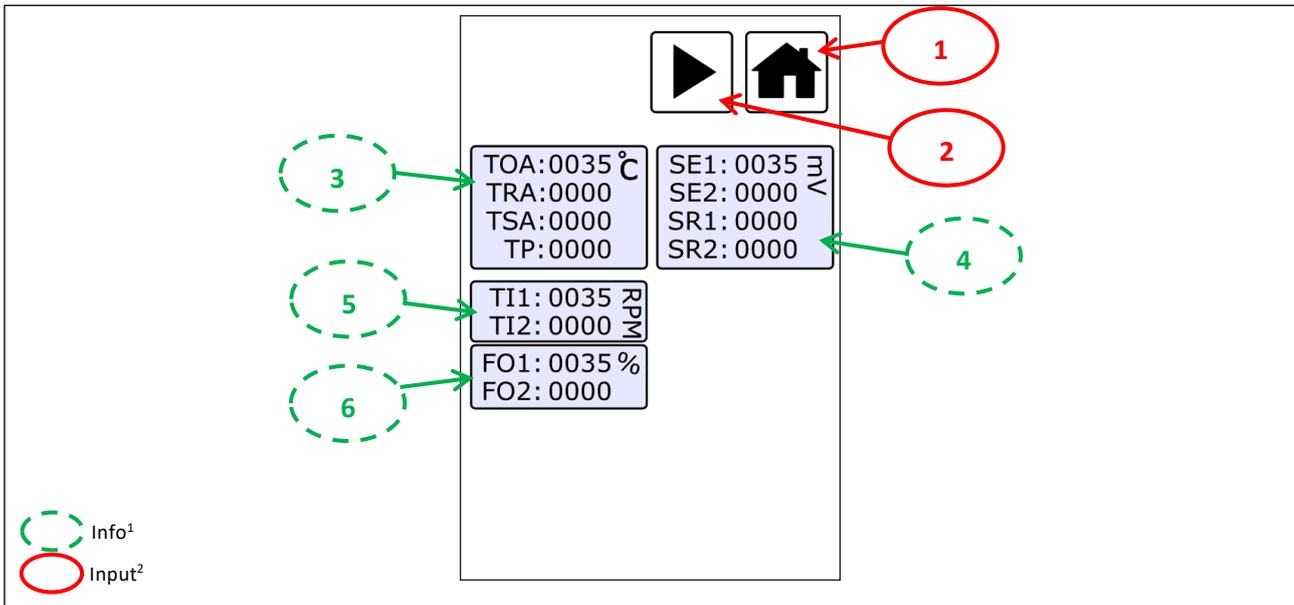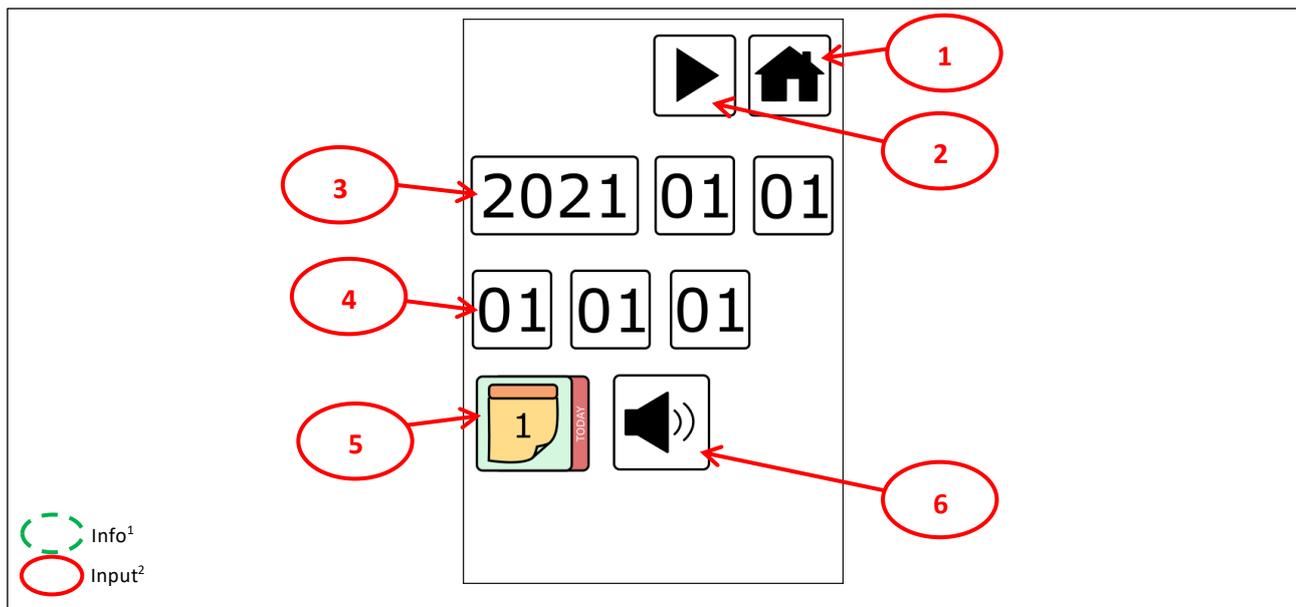|	
3.Field	Temperature sensor values [°C]
4.Field	Sensor values [mV]
5.Field	Fan speed values [rpm] (If fan tacho connection is available)
6.Field	Fan speed values [%]

"4.Screen" Symbols: Settings

[1] Info symbols are to show the status of the equipment it is in.
[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	🏠	Main screen symbol	Switch to 1.Screen.
2.Symbol	▶	Next screen symbol	Switch to 5.Screen.

3.Field	Date setting [YYYY.MM.DD]
4.Field	Clock setting [HH:MM]
5.Field	1st day of the week selection. For example, if the 1st day of the week is Monday and today is Wednesday, the entry value should be 3, if the 1st day of the week is Sunday and today is Wednesday, the entry value should be 4

6.Symbol: Key tone Symbol		
Symbol	**Description**	**Function**
🔊	Key tone is on.	Switch off the key tone.
🔊	Key tone is off.	Switch on the key tone.

"5.Screen" Symbols: Company Logo

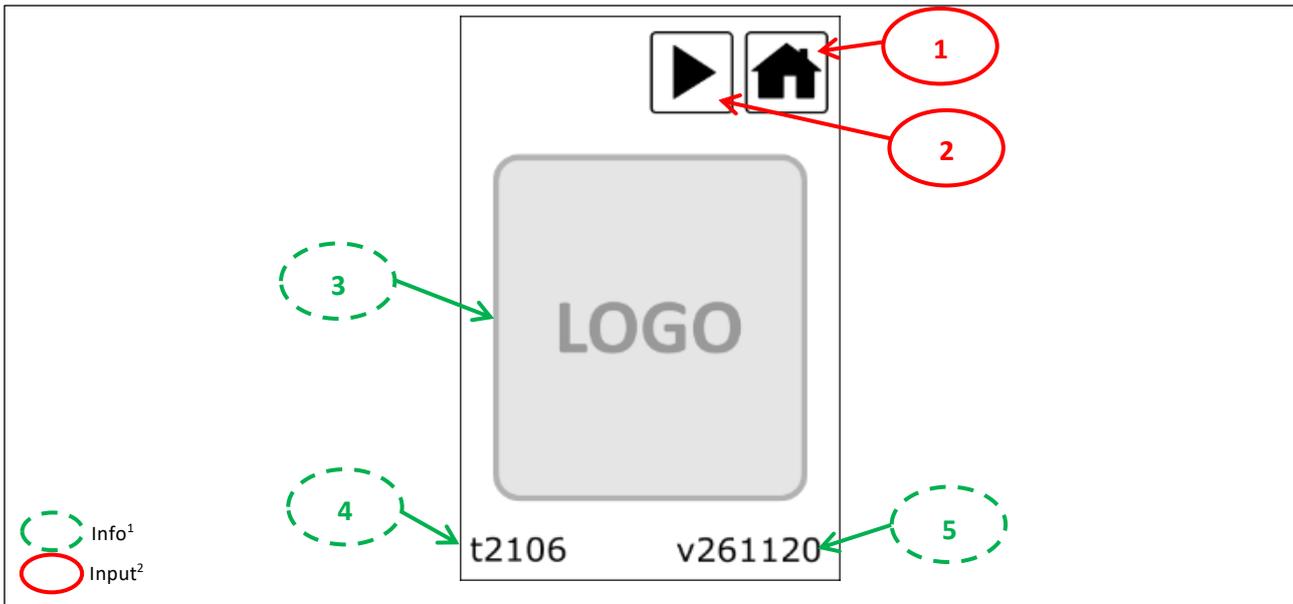[1] Info symbols are to show the status of the equipment it is in.
[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	🏠	Main screen symbol	Switch to 1.Screen.
2.Symbol	▶	Next screen symbol	Switch to 6.Screen.

3.Field	Company logo
4.Field	Touch Panel theme number.
5.Field	Touch Panel software version number.

1.3. Cable connection

+12V
GND } Control
A1   } Board
B1

A2 } Modbus
B2

Control
Board
+12V
GND
A1
B1

+12V
GND } Modbus
A
B

MODBUS
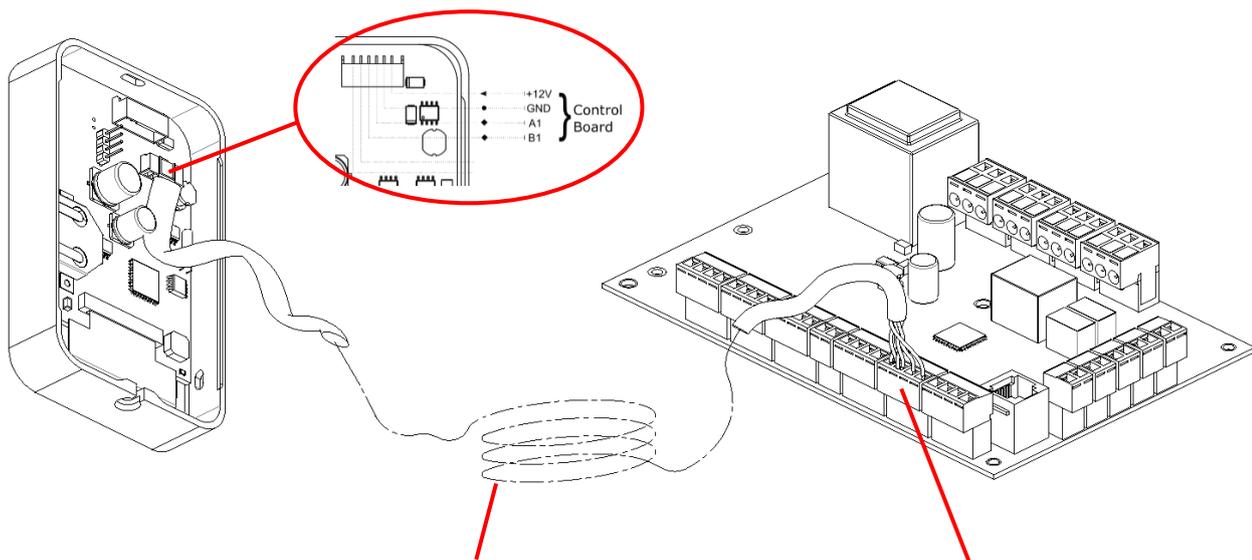
Cable type: Cat6
Maximum length: 50m
+12V: Blue & Blue-White
GND: Brown & Brown-White
A: Orange-White
B: Orange
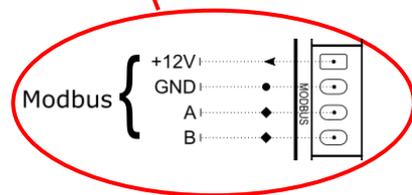
1.4. Surface mounting
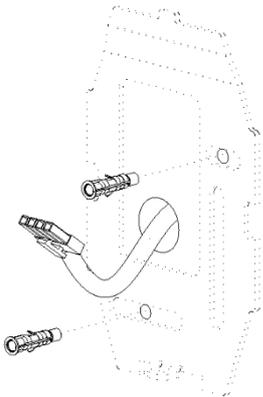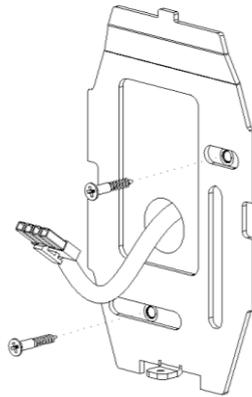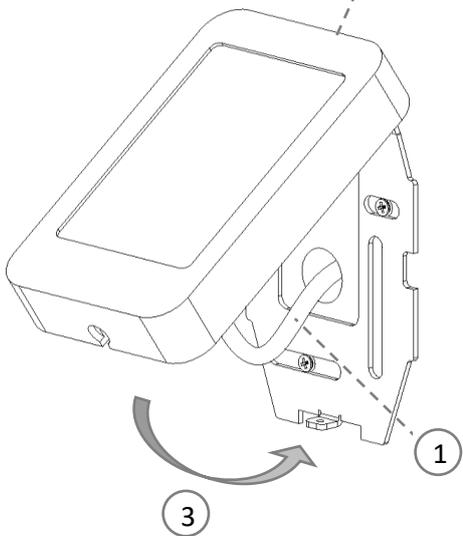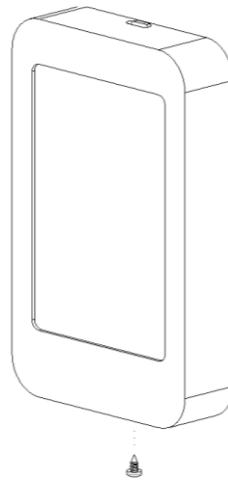
SCREENS

6.Screen Service Login Screen	**7.Screen** I/O Configure	**8.Screen** Sensor Configure	**9.Register** Register Configure
1 2 3 4 5 6 7 8 9 ± 0 ◄	I O S I R ⌂ DO1 [FLT] DI1 [BST] DO2 [RUN] DI2 [BMS] LP0 [BYP] DI3 [FRE] LP1 [PH1] DI4 [FIL] LP2 [HT1] DI5 [HTI] LP3 [HT2] LP4 [RTR]	I O S I R ⌂ SE1 [HUM] [Manuel] SE2 [CO2] 600 SR1 [---] [TOA 12.0] SR2 [---] [TRA 22.5] [TSA 21.7] [TP 23.0] [Cons. Flow] Max Pa Ref K const. Sen2 Pa - 10V 800 66 1000	I O S I R ⌂ R 038 00000 △ ▽

"6.Screen" Symbols: Service Login Screen
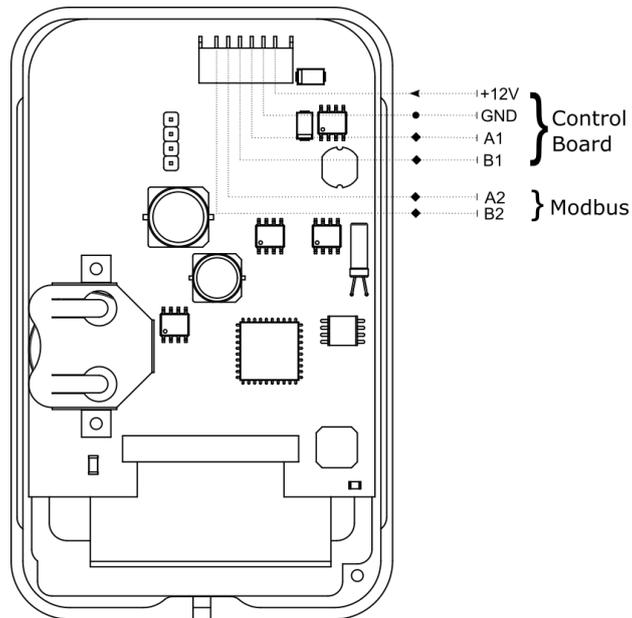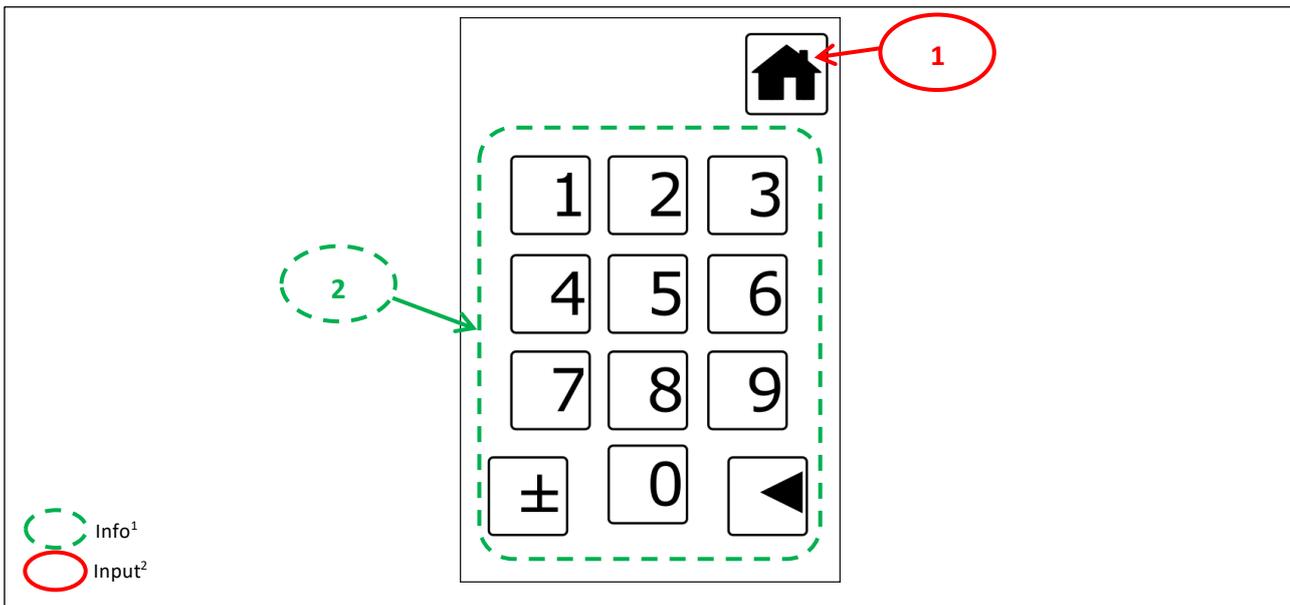

( ) Info[1]

( ) Input[2]

[1] Info symbols are to show the status of the equipment it is in.
[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	**Symbol**	**Description**	**Function**
1.Symbol	⌂	Main screen symbol	Switch to 1.Screen.

2.Field	Password entry

"7.Screen" Symbols: I/O Configure Screen

¹ Info symbols are to show the status of the equipment it is in.

² Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

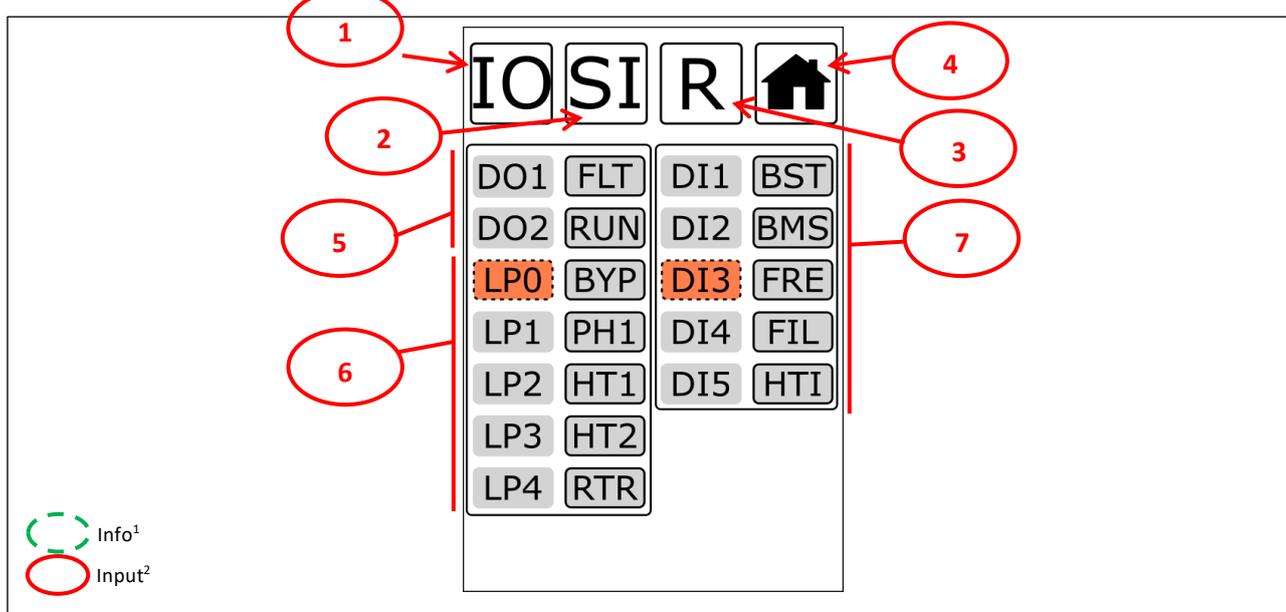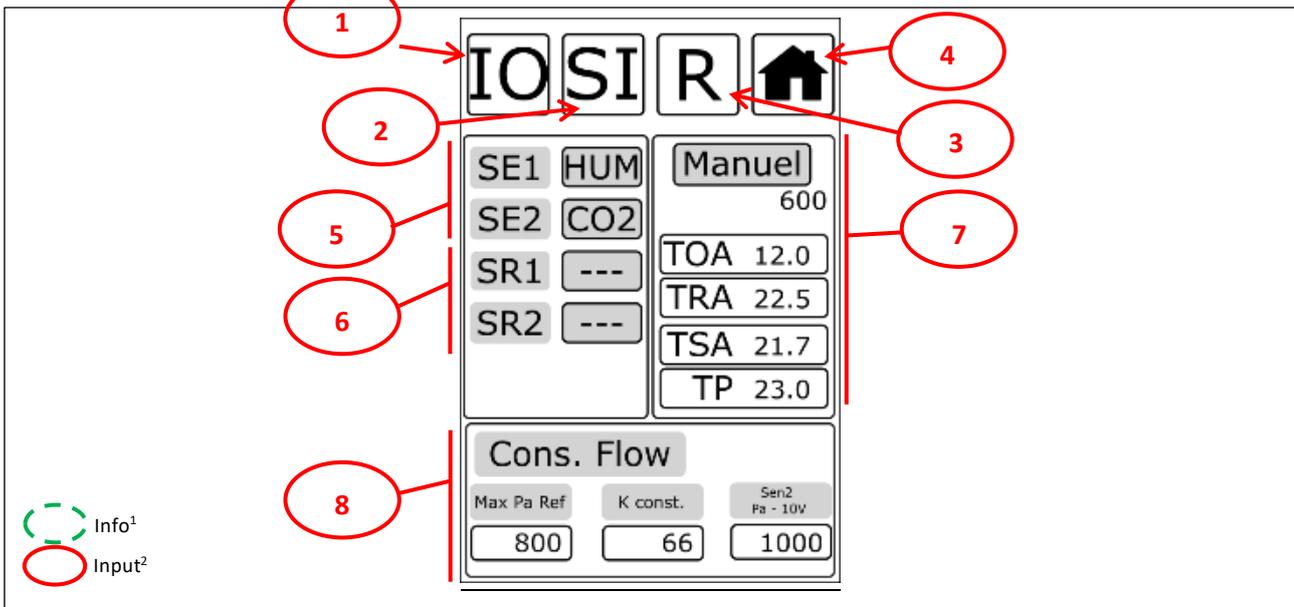| Field	Symbol	Description	Function
1.Symbol	IO	I/O configure screen	Switch to 7.Screen.
2.Symbol	SI	Sensor configure screen	Switch to 8.Screen.
3.Symbol	R	Register configure screen	Switch to 9.Screen.
4.Symbol	🏠	Main screen symbol	Switch to 1.Screen.

5.Field	Outputs selection (dry contact) (DO)
6.Field	Power output selection (PO)
7.Field	Inputs selection (dry contact) (DI)

Inputs Code List (DI)			
Code	**Description**	**Code**	**Description**
---	Not connected	DXH	Freon system pressure failure info (Part II – Section 5.3)
BST	Boost function (Part II – Section 2)	DXL	Freon system pressure failure info (Part II – Section 5.3)
BMS	BMS unit on/off (BMS in) (Part II – Section 8.1)	FI2	Filter-2 mechanical info (Part II – Section 3)
FRE	Fire info (Part II – Section 11)	CWI	Water coil failure info (Part II – Section 5.2)
HTI	Heater failure info (Part II – Section 5.1 and Section 6)	DXI	DX system failure info (Part II – Section 5.3)
FI1	Filter-1 mechanical info (Part II – Section 3)	SDI	Service door info

Outputs Code List (DO)			
Code	**Description**	**Code**	**Description**
---	Not connected	RTR	Rotor heat exchanger (Part II – Section 4.2)
RUN	Unit run out info (Run out) (Part II – Section 8.2)	UVL	Ultraviolet lamp
FLT	Failure info (Fault out) (Part II – Section 8.3)	CWO	Water coil (Part II – Section 5.2)
BYP	By-Pass (Part II – Section 4.1)	DX1	Freon system 1.stage (Part II – Section 5.3)
HT1	Electric Heater 1.stage (Part II – Section 5.1)	DX2	Freon system 2.stage (Part II – Section 5.3)
HT2	Electric Heater 2.stage (Part II – Section 5.1)	FWV	Freon system four-way valve (Part II – Section 5.3)
HT3	Electric Heater 3.stage (Part II – Section 5.1)	FRZ	Frost protection info (Part II – Section 6)
PH1	Electric preheater 1.stage (Part II – Section 6)	SEA	Season info
PH2	Electric preheater 2.stage (Part II – Section 6)	FDF	DX System defrost info

"8.Screen" Symbols: Sensor configure screen

[1] Info symbols are to show the status of the equipment it is in.

[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	IO	I/O configure screen	Switch to 7.Screen.
2.Symbol	SI	Sensor configure screen	Switch to 8.Screen.
3.Symbol	R	Register configure screen	Switch to 9.Screen.
4.Symbol	🏠	Main screen symbol	Switch to 1.Screen.

5.Field	Inputs selection (sensor) (AI)
6.Field	RF sensor inputs (RF) selection (not active)
7.Field	Manual temperature login
8.Field	Constant flow function parameters

Inputs Code List (AI)			
Kod	**Tanım**	**Kod**	**Tanım**
---	Not connected	RH	Humidity Sensor (Part I – Section 4.1.2)
CO2	CO_2 sensor (Part I – Section 4.1.3)	GEN	0~10V sensor (user preference)

"9.Screen" Symbols: Register configure screen

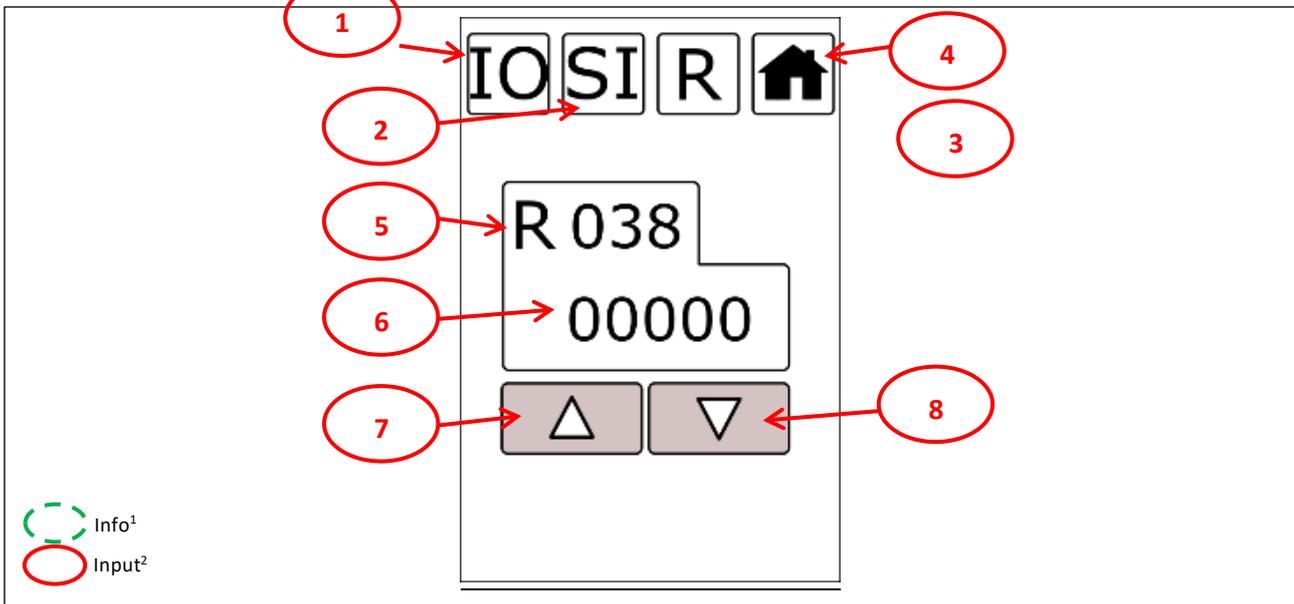[1] Info symbols are to show the status of the equipment it is in.

[2] Input symbols are to show the status of the equipment and have active button feature. By tapping on it, the function is changed.

Field	Symbol	Description	Function
1.Symbol	IO	I/O configure screen	Switch to 7.Screen.
2.Symbol	SI	Sensor configure screen	Switch to 8.Screen.
3.Symbol	R	Register configure screen	Switch to 9.Screen.
4.Symbol	🏠	Main screen symbol	Switch to 1.Screen.

5.Field	Register number
6.Field	Register value

Field	Symbol	Description	Function
7.Symbol	△	Up symbol	Increase existing value.
8.Symbol	▽	Down symbol	Decrease existing value.