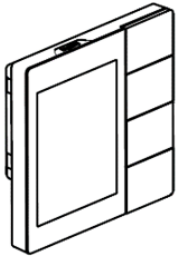
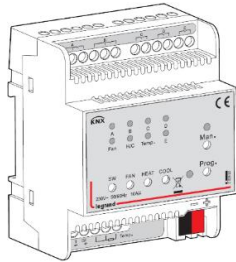


**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

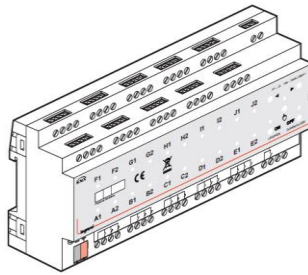
**Cat.No(s): 281027BB**  
**0 028 90**  
**0 026 72**



**281027BB**



**0 028 90**



**0 026 72**

<b>CONTENTS</b>	<b>PAGE</b>
1. USAGE SCENARIO .....	1
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5. KNX PROJECT .....	3
6. DEVICE PARAMETERS WITH ETS5.....	4
7. NOTES .....	12

**1. USAGE SCENARIO**

Hotel/residential room



Office/meeting room



**2. DESCRIPTION**

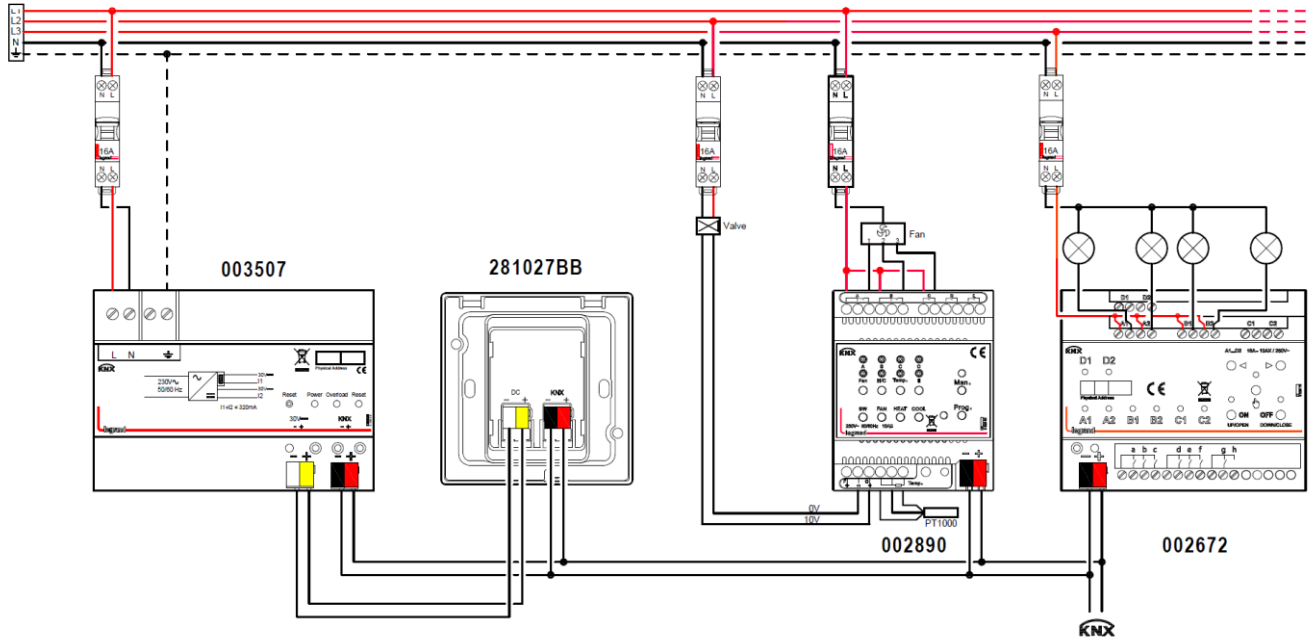
The thermostat combined with an HVAC actuator is used to control a fan coil equipped with 2 pipes, 0-10V valve and 3(ON/OFF) Speed ventilation. The system will regulate the temperature of an office around the set point. An external command can be used to switch from winter to summer mode and vice versa. Set HVAC actuator the mode (comfort, eco, standby and protection).

1. Using the thermostat's touch-sensitive buttons, the user can:

- Change the temperature setpoint.
- Select the mode (comfort, eco, standby and protection).
- Adjust the fan speed.

2.Using the thermostat buttons (4, 6 or 8), the user can also send a scene command to the bus. You can connect the corresponding actuator to execute the required scene.

3. WIRING DIAGRAM



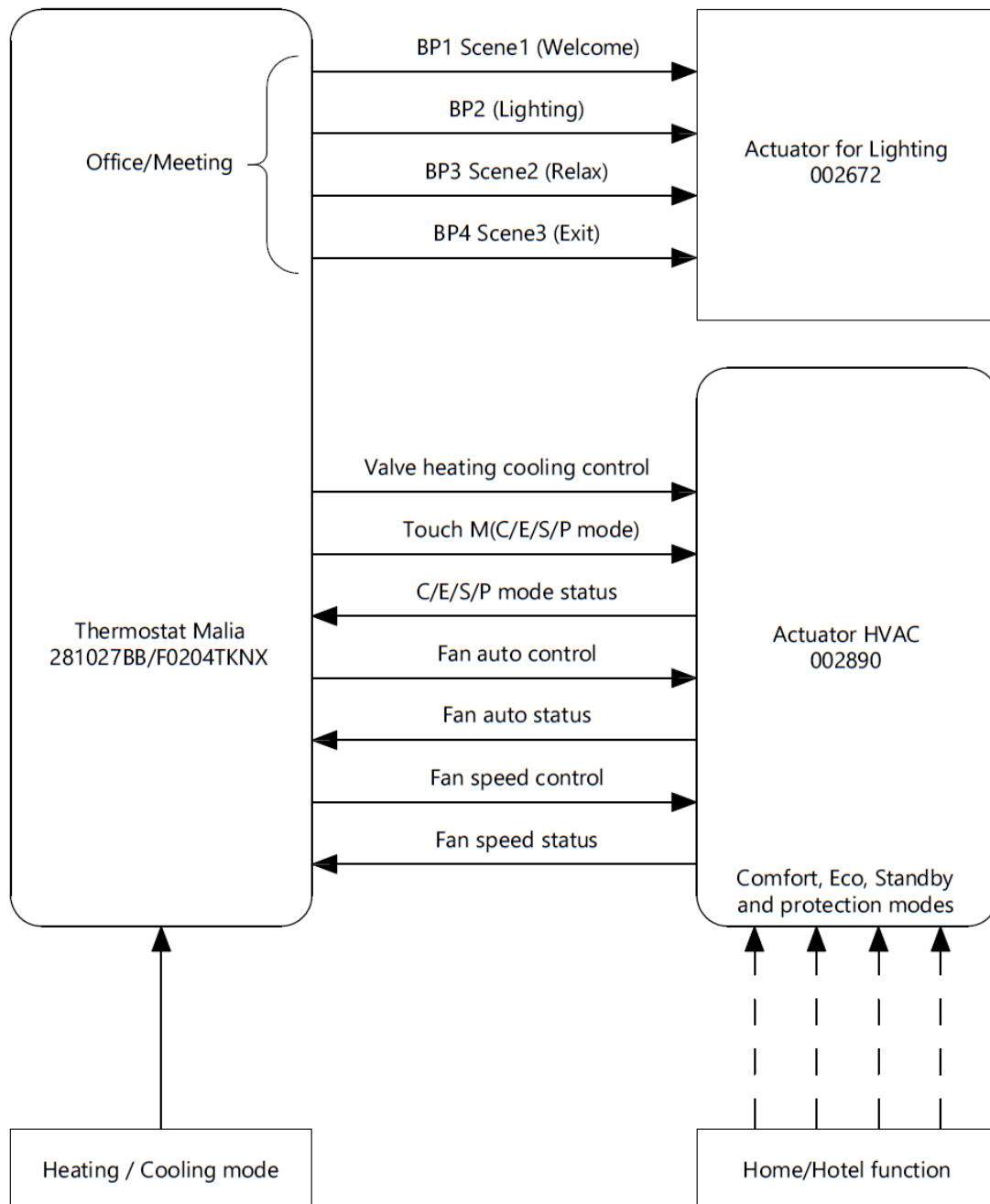
**NB:**

For more information about wiring each device, refer to the instructions on site.



[www.legrand.com](http://www.legrand.com)

4. KNX DIAGRAM



5. KNX Diagram

This project **002890\_Thermoregulation 2P 0-10V Valves ON-OFF Fan.knxproj** is available on [www.legrand.com](http://www.legrand.com) and can be imported into ETS5.

## 2-pipe temperature control

### 0-10V valves, 2 manual hot/cold change-over pipes

### 3(ON/OFF) Speed ventilation

Cat.No(s): 281027BB

0 028 90

0 026 72

#### 6. DEVICE PARAMETERS WITH ETS5

##### 6.1 Thermostat 281027BB

Devices ▾

+ Add Channels | ▾ | - Delete | Download | ▾ | ? Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > General > General setting

General	Normal day backlight [10..100]	70	%
General setting	Normal night backlight [10..100]	50	%
Proximity setting	Normal standby backlight [0..10]	5	%
+ Button	Normal to standby delay time [1..255]	30	s
+ Internal sensor	Buzzer volume level [0..5, 0=inactive]	5	
+ HVAC controller	Touch button vibration feedback	<input type="checkbox"/>	
	Long operation for touch after	1.0	s

Devices ▾

+ Add Channels | ▾ | - Delete | Download | ▾ | ? Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > General > Proximity setting

General	The Proximity function triggered via	Sensor
General setting	Object type of output value	1bit[On/Off]
Proximity setting	Output value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
+ Button	Delay time for sending [0..65535]s	0

Devices ▾

+ Add Channels | ▾ | - Delete | Download | ▾ | ? Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > Button setting

+ General	Delay time for no operation [0..255, 0=inactive]	10	s
- Button	LED status object read request after restart	<input type="checkbox"/>	
Button setting	Initial LED status	<input checked="" type="radio"/> No <input type="radio"/> As status as object value *0*	
Button 1	Brightness setting		
Button 2	Brightness of cool white LED	50	%
Button 3	Brightness of warm white LED	50	%

Devices ▾

+ Add Channels | ▾ | - Delete | Download | ▾ | ? Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > Button 1

+ General	Function of button	Scene control
- Button	Distinction between short and long operation	<input checked="" type="radio"/> No <input type="radio"/> Yes
Button setting	Reaction on short operation or closing the contact	Recall scene
Button 1	8 bit scene number	Scene NO.1
Button 2	Reaction on long operation or opening the contact	No reaction
Button 3	Disable function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.1 Thermostat 281027BB (continued)**

Devices ▾

+ Add Channels | ✖ Delete | 📄 Download | ? Help | 🌟 Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > Button 2

+ General	Function of button	Scene control
- Button	Distinction between short and long operation	<input checked="" type="radio"/> No <input type="radio"/> Yes
Button setting	Reaction on short operation or closing the contact	Recall scene
Button 1	8 bit scene number	Scene NO.2
Button 2	Reaction on long operation or opening the contact	No reaction
Button 3	Disable function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Devices ▾

+ Add Channels | ✖ Delete | 📄 Download | ? Help | 🌟 Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > Button 3

+ General	Function of button	Scene control
- Button	Distinction between short and long operation	<input checked="" type="radio"/> No <input type="radio"/> Yes
Button setting	Reaction on short operation or closing the contact	Recall scene
Button 1	8 bit scene number	Scene NO.3
Button 2	Reaction on long operation or opening the contact	No reaction
Button 3	Disable function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

Devices ▾

+ Add Channels | ✖ Delete | 📄 Download | ? Help | 🌟 Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > Button 4

+ General	Function of button	Scene control
- Button	Distinction between short and long operation	<input checked="" type="radio"/> No <input type="radio"/> Yes
Button setting	Reaction on short operation or closing the contact	Recall scene
Button 1	8 bit scene number	Scene NO.4
Button 2	Reaction on long operation or opening the contact	No reaction
Button 3	Disable function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Button 4		

# 2-pipe temperature control 0-10V valves, 2 manual hot/cold change-over pipes 3(ON/OFF) Speed ventilation

Cat.No(s): 281027BB  
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## 6. DEVICE PARAMETERS WITH ETSS (continued)

### 6.1 Thermostat 281027BB (continued)

The screenshot shows the configuration page for the LED function of a thermostat. The breadcrumb path is: 1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Button > LED function. The left sidebar lists the device hierarchy: Dynamic Folders, 1.1.1 KNX-Mallia Senses command 4 push with..., 1.1.2 KNX 0-10V Fan coil Actuator, and 1.1.3 LG-002672 Room Control Unit, 8 Output. The main panel has a menu with 'LED function' selected. The configuration area contains four rows, each for an LED function (LED 1 to LED 4). Each row has two radio button options: 'Disable' (which is selected for all) and 'Control by external object'.

The screenshot shows the configuration page for the measurement settings of an internal sensor. The breadcrumb path is: 1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > Internal sensor > Measurement setting. The left sidebar is the same as in the previous screenshot. The main panel has a menu with 'Measurement setting' selected. The configuration area is titled 'Temperature sensor setting' and includes three input fields: 'Temperature calibration' set to 0.0 °C, 'Send temperature when the result change by [0..10]' set to 0.5 °C, and 'Cyclically send temperature [0..255,0=inactive]' set to 1 min.

The screenshot shows the configuration page for the HVAC controller settings. The breadcrumb path is: 1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > HVAC controller > Controller setting. The left sidebar is the same as in the previous screenshots. The main panel has a menu with 'Controller setting' selected. The configuration area includes three settings: 'Room temperature control function as' set to 'FCU control' (via a dropdown menu), 'Ventilation function' with an unchecked checkbox, and 'Floor heating function' with an unchecked checkbox.

# 2-pipe temperature control

## 0-10V valves, 2 manual hot/cold change-over pipes

### 3(ON/OFF) Speed ventilation

Cat.No(s): 281027BB

0 028 90

0 026 72

#### 6. DEVICE PARAMETERS WITH ETSS (continued)

##### 6.1 Thermostat 281027BB (continued)

Devices

Dynamic Folders

- ▶ 1.1.1 KNX-Mallia Senses command 4 push with thermostat...
- ▶ 1.1.2 KNX 0-10V Fan coil Actuator
- ▶ 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > HVAC controller > FCU setting

- General
- General setting
- Proximity setting
- + Button
- + Internal sensor
- HVAC controller
- Controller setting
- + FCU setting

Work mode  Master  Slave

Room temperature reference from  Internal sensor  External sensor

Control value after temp. error [0..100] (if 2-point control, set value '0'=0, set value '>0'=1) 0 %

---

Interface display temperature  Setpoint temperature  Actual temperature

Setpoint temperature adjustment step  0.5K  1K

Min. setpoint temperature [5..37] 16 °C

Max. setpoint temperature [5..37] 33 °C

---

Power on/off status after download  OFF  ON

Power on/off status after voltage recovery As before voltage failure

---

Low temperature protection when power off

---

Room temperature control mode Heating and Cooling

Heating/Cooling switchover  Only via object  Automatic changeover

Heating/Cooling status after download  Heating  Cooling

Heating/Cooling status after voltage recovery As before voltage failure

Room temperature control system  2 pipes system  4 pipes system

---

Room temperature operation mode

Controller status after download Standby mode

Controller status after voltage recovery As before voltage failure

Extended comfort mode [0..255,0=inactive] 0 min

---

Window contact input function

Bus presence detector function

---

Fan

Timer

Scene

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.1 Thermostat 281027BB (continued)**

Devices ▾

+ Add Channels | - Delete | Download | Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > HVAC controller > FCU setting > Setpoint

- + General
- + Button
- + Internal sensor
- HVAC controller
  - Controller setting
  - FCU setting
    - Setpoint
    - Heating/Cooling control
    - Fan

Setpoint method for operating mode  Relative  Absolute

**Heating**

Setpoint temperature in comfort mode [5..37] 21 °C

Setpoint temperature in standby mode [5..37] 19 °C

Setpoint temperature in economy mode [5..37] 17 °C

Setpoint temperature in frost protection [5..10] 7 °C

**Cooling**

Setpoint temperature in comfort mode [5..37] 23 °C

Setpoint temperature in standby mode [5..37] 25 °C

Setpoint temperature in economy mode [5..37] 27 °C

Setpoint temperature in heat protection [30..37] 35 °C

Note: The heating setpoint must be always less than the cooling setpoint.

Devices ▾

+ Add Channels | - Delete | Download | Help | Highlight Changes | Default Parameters | Grant Customer Access

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > HVAC controller > FCU setting > Heating/Co

- + General
- + Button
- + Internal sensor
- HVAC controller
  - Controller setting
  - FCU setting
    - Setpoint
    - Heating/Cooling control
    - Fan

Type of heating/cooling control Switching on/off(use 2-point control)

Invert control value

**Heating**

Lower Hysteresis [0..200] 10 \*0.1K

Upper Hysteresis [0..200] 10 \*0.1K

**Cooling**

Lower Hysteresis [0..200] 10 \*0.1K

Upper Hysteresis [0..200] 10 \*0.1K

Cyclically send control value[0..255] 0 min

Devices ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.1 KNX-Mallia Senses command 4 push with thermostat brushed black > HVAC controller > FCU setting > Fan

- + General
- + Button
- + Internal sensor
- HVAC controller
  - Controller setting
  - FCU setting
    - Setpoint
    - Heating/Cooling control
    - Fan

Object datatype of 1byte fan speed  Percentage (DPT\_5.001)  Fan stage (DPT\_5.100)

**Output value for Fan speed**

Output value for Fan speed low 1

Output value for Fan speed medium 2

Output value for Fan speed high 3

**Status feedback for Fan speed**

Status value for Fan speed low 1

Status value for Fan speed medium 2

Status value for Fan speed high 3

Automatic operation function External controller



**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.2 Actuator HVAC 0 028 90**

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > General**

General	Relay operation delay after power voltage recovery[5...250s]	5
Interface Setting	Sending cycle of "In operation" telegram (1...240s,0=inactive)	0
HVAC-General	Manual operation	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Temperature	Manual to automatic by	<input type="radio"/> Only long press <input checked="" type="radio"/> Both long press and automatic Delay time
Heating/Cooling valve (0-10V)	Delay time*1s[10...6000]	10
Fan	Report operation status function for HVAC	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
Auto.operation	Central control for switch function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > Interface Setting**

General	Fan drive interface	Relay control(CH A-C)
Interface Setting	HVAC Control mode	Heating and Cooling
HVAC-General	HVAC System	<input checked="" type="radio"/> 2 pipes system <input type="radio"/> 4 pipes system
	Heating/Cooling valve drive interface	0-10V(CH G)

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > HVAC-General**

General	Controller define	<input type="radio"/> Local <input checked="" type="radio"/> Bus
Interface Setting	Control value object type	<input checked="" type="radio"/> 1bit <input type="radio"/> 1byte
HVAC-General	Monitoring control value	<input checked="" type="radio"/> No <input type="radio"/> Yes

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > Temperature**

General	Temperature measure by	External sensor
Interface Setting	Time period for requesting external sensor[0..255]*min	1
HVAC-General		
Temperature		

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > Heating/Cooling valve (0-10V)**

General	Valve control mode	<input checked="" type="radio"/> 2 state-10V/0V <input type="radio"/> Continuous control
Interface Setting	Valve type	<input checked="" type="radio"/> Normal (de-energised closed) <input type="radio"/> Inverted (de-energised open)
HVAC-General	The Controller use 2-point control method	<--Attention
Temperature	Reply mode of Obj."status of valve position" 1bit function	<input type="radio"/> Respond after read only <input checked="" type="radio"/> Respond after change
Heating/Cooling valve (0-10V)	Valve purge function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Fan	"Disable heating/cooling" object function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Auto.operation		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.2 Actuator HVAC 0 028 90 (continued)**

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > Fan**

General	Fan type	<input type="radio"/> One level <input checked="" type="radio"/> Multi-level
Interface Setting	Fan speeds on 2 limit	<input checked="" type="radio"/> No <input type="radio"/> Yes
HVAC-General	Fan operation mode	<input checked="" type="radio"/> Changeover switch <input type="radio"/> Step switch
Temperature	Delay between fan speed switch*ms [50...5000]	500
Heating/Cooling valve (0-10V)	When bus failure, Fan speed is	Unchange
	When bus recovery, fan speed is	Unchange
<b>Fan</b>	After downloading, fan speed is	OFF
Auto.operation	Threshold value for Fan speed 1[1...255]	1
Fan status	Threshold value for Fan speed 2[1...255]	2
Scene	Threshold value for Fan speed 3[1...255]	3
Output D	"Forced operation" function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Output E	Auto. operation function (only for HVAC)	<input type="radio"/> Disable <input checked="" type="radio"/> Enable
	Direct operation function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
	Delay time for function OFF *0.1s [0...65535]	0
	Starting characteristic of fan	<input checked="" type="radio"/> Disable <input type="radio"/> Enable

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator**
- 1.1.3 LG-002672 Room Control Unit, 8 Output

**1.1.2 KNX 0-10V Fan coil Actuator > Auto.operation**

General	Auto.operation on object value	<input type="radio"/> 0=Auto/1=Cancel <input checked="" type="radio"/> 1=Auto/0=Cancel
Interface Setting	State of Auto.operation after startup	<input type="radio"/> Disable auto.operation <input checked="" type="radio"/> Enable auto.operation
HVAC-General	Automatically enable auto.operation	<input checked="" type="radio"/> No <input type="radio"/> Yes
Temperature	Threshold value OFF <--> speed 1[1...255] (For 2 point,it's Tem.difference*0.1°C)	10
Heating/Cooling valve (0-10V)	Threshold value speed 1 <--> speed 2 [1...255](For 2 point,it's Tem.difference*0.1°C)	20
Fan	Threshold value speed 2 <--> speed 3 [1...255](For 2 point,it's Tem.difference*0.1°C)	30
<b>Auto.operation</b>	Hysteresis value is threshold value in +/- [0...50](For 2 point,it is unused)	10
Fan status	Minimum time in fan speed[0...65535]*s	10
Scene	Limitation function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
Output D		

# 2-pipe temperature control

## 0-10V valves, 2 manual hot/cold change-over pipes

### 3(ON/OFF) Speed ventilation

Cat.No(s): 281027BB

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#### 6. DEVICE PARAMETERS WITH ETSS (continued)

##### 6.2 Actuator HVAC 0 028 90 (continued)

Devices ▾

1.1.2 KNX 0-10V Fan coil Actuator > Fan status

Dynamic Folders	General	Reply mode of Obj. "status ON/OFF mode" 1bit function	Respond after change ▾
1.1.1 KNX-Mallia Senses command 4 push with...	Interface Setting	Reply mode of Obj. "status Auto. mode" 1bit function	Respond after change ▾
1.1.2 KNX 0-10V Fan coil Actuator	HVAC-General	Reply mode of Obj. "Status fan speed x" 1bit function	Respond after change ▾
1.1.3 LG-002672 Room Control Unit, 8 Output	Temperature	Reply mode of Obj. "Status fan speed" 1byte function	Respond after change ▾
	Heating/Cooling valve (0-10V)	Object value for Status Fan speed 1 [1...255]	1 ▾
	Fan	Object value for Status Fan speed 2 [1...255]	2 ▾
	Auto.operation	Object value for Status Fan speed 3 [1...255]	3 ▾
	<b>Fan status</b>		

Devices ▾

1.1.2 KNX 0-10V Fan coil Actuator > Scene

Dynamic Folders	General	Scene function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
1.1.1 KNX-Mallia Senses command 4 push with...	Interface Setting		
1.1.2 KNX 0-10V Fan coil Actuator	HVAC-General		
1.1.3 LG-002672 Room Control Unit, 8 Output	Temperature		
	Heating/Cooling valve (0-10V)		
	Fan		
	Auto.operation		
	Fan status		
	<b>Scene</b>		

Devices ▾

1.1.2 KNX 0-10V Fan coil Actuator > Output D

Dynamic Folders	General	Switch function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
1.1.1 KNX-Mallia Senses command 4 push with...	Interface Setting		
1.1.2 KNX 0-10V Fan coil Actuator	HVAC-General		
1.1.3 LG-002672 Room Control Unit, 8 Output	Temperature		
	Heating/Cooling valve (0-10V)		
	Fan		
	Auto.operation		
	Fan status		
	Scene		
	<b>Output D</b>		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
0 028 90  
0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.2 Actuator HVAC 0 028 90 (continued)**

Devices ▾

1.1.2 KNX 0-10V Fan coil Actuator > Output E

Dynamic Folders	General	Switch function	<input checked="" type="radio"/> Disable <input type="radio"/> Enable
1.1.1 KNX-Mallia Senses command 4 push with...	Interface Setting		
1.1.2 KNX 0-10V Fan coil Actuator	HVAC-General		
1.1.3 LG-002672 Room Control Unit, 8 Output	Temperature		
	Heating/Cooling valve (0-10V)		
	Fan		
	Auto.operation		
	Fan status		
	Scene		
	Output D		
	Output E		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72**

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output**

**1.1.3 LG-002672 Room Control Unit, 8 Output > General**

General	Enable manual operation	<input type="radio"/> disable <input checked="" type="radio"/> enable
Enable Output A...J	Reset manual operation to KNX operation	<input checked="" type="radio"/> via push button <input type="radio"/> automatically and via push button
A1 - General	Device alive operation active	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Function	First telegram send time in s[2...255]	2 ▾
A1 - Scene	Telegram limit active	<input type="radio"/> yes <input checked="" type="radio"/> no
A2 - General	Activate scene	<input checked="" type="radio"/> yes <input type="radio"/> no
A2 - Function	Weather alarm function	<input type="radio"/> yes <input checked="" type="radio"/> no

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output**

**1.1.3 LG-002672 Room Control Unit, 8 Output > Enable Output A...J**

General	Output group A and B	individually ▾
Enable Output A...J	Output group A	<input type="radio"/> shutter/blind AC <input checked="" type="radio"/> 2 x switch
A1 - General	Output group B	<input type="radio"/> shutter/blind AC <input checked="" type="radio"/> 2 x switch
A1 - Function	Output group C and D	no function ▾

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output**

**1.1.3 LG-002672 Room Control Unit, 8 Output > A1 - General**

General	Contact type	<input type="radio"/> normally closed <input checked="" type="radio"/> normally open
Enable Output A...J	Send switch status feedback telegram	after change or request ▾
A1 - General	Create status object "Status Switch"	<input checked="" type="radio"/> yes <input type="radio"/> no
A1 - Function	Send status after bus voltage return	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene	Behavior after ETS program or after ETS reset	keep position ▾
A2 - General	Behavior bus voltage failure	keep position ▾
A2 - Function	Behavior bus voltage return	state as before bus voltage failure ▾

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output**

**1.1.3 LG-002672 Room Control Unit, 8 Output > A1 - Function**

General	Enable staircase	<input type="radio"/> yes <input checked="" type="radio"/> no
Enable Output A...J	Enable external logic	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - General	Enable priority	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Function	Enable sweep	<input type="radio"/> yes <input checked="" type="radio"/> no

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72 (continued)**

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.3 LG-002672 Room Control Unit, 8 Output > A1 - Scene

General	Override scene on download	<input checked="" type="radio"/> yes <input type="radio"/> no
Enable Output A...	1...64 scene number (0 = no assignment)	1
A1 - General	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
A1 - Function	1...64 scene number (0 = no assignment)	2
A1 - Scene	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
A2 - General	1...64 scene number (0 = no assignment)	3
A2 - Function	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
A2 - Scene	1...64 scene number (0 = no assignment)	4
B1 - General	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B1 - Function	1...64 scene number (0 = no assignment)	0
B1 - Scene	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B2 - General	1...64 scene number (0 = no assignment)	0
B2 - Function	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B2 - Scene	1...64 scene number (0 = no assignment)	0
	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.3 LG-002672 Room Control Unit, 8 Output > A2 - General

General	Contact type	<input type="radio"/> normally closed <input checked="" type="radio"/> normally open
Enable Output A...	Send switch status feedback telegram	after change or request
A1 - General	Create status object "Status Switch"	<input checked="" type="radio"/> yes <input type="radio"/> no
A1 - Function	Send status after bus voltage return	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene	Behavior after ETS program or after ETS reset	keep position
A2 - General	Behavior bus voltage failure	keep position
A2 - Function	Behavior bus voltage return	state as before bus voltage failure

**Devices** ▾

Devices ▾

- Dynamic Folders
- 1.1.1 KNX-Mallia Senses command 4 push with...
- 1.1.2 KNX 0-10V Fan coil Actuator
- 1.1.3 LG-002672 Room Control Unit, 8 Output

1.1.3 LG-002672 Room Control Unit, 8 Output > A2 - Function

General	Enable staircase	<input type="radio"/> yes <input checked="" type="radio"/> no
Enable Output A...	Enable external logic	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - General	Enable priority	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Function	Enable sweep	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene		
A2 - General		
A2 - Function		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72 (continued)**

**Devices** ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > A2 - Scene

General	Override scene on download	<input checked="" type="radio"/> yes <input type="radio"/> no
Enable Output A...	1...64 scene number (0 = no assignment)	1
A1 - General	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
A1 - Function	1...64 scene number (0 = no assignment)	2
A1 - Scene	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
A2 - General	1...64 scene number (0 = no assignment)	3
A2 - Function	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
<b>A2 - Scene</b>	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B1 - General	1...64 scene number (0 = no assignment)	0
B1 - Function	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B1 - Scene	1...64 scene number (0 = no assignment)	0
B2 - General	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B2 - Function	1...64 scene number (0 = no assignment)	0
B2 - Scene	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON

**Devices** ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > B1 - General

General	Contact type	<input type="radio"/> normally closed <input checked="" type="radio"/> normally open
Enable Output A...	Send switch status feedback telegram	after change or request
A1 - General	Create status object "Status Switch"	<input checked="" type="radio"/> yes <input type="radio"/> no
A1 - Function	Send status after bus voltage return	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene	Behavior after ETS program or after ETS reset	keep position
A2 - General	Behavior bus voltage failure	keep position
A2 - Function	Behavior bus voltage return	state as before bus voltage failure
A2 - Scene		
<b>B1 - General</b>		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72 (continued)**

Devices ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > B1 - Function

General	Enable staircase	<input type="radio"/> yes <input checked="" type="radio"/> no
Enable Output A..J	Enable external logic	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - General	Enable priority	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Function	Enable sweep	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene		
A2 - General		
A2 - Function		
A2 - Scene		
B1 - General		
<b>B1 - Function</b>		

Devices ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > B1 - Scene

General	Overwrite scene on download	<input checked="" type="radio"/> yes <input type="radio"/> no
Enable Output A..J	Assignment to scene number (no 1...64, 0 = no assignment)	1
A1 - General	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
A1 - Function	Assignment to scene number (no 1...64, 0 = no assignment)	2
A1 - Scene	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
A2 - General	Assignment to scene number (no 1...64, 0 = no assignment)	3
A2 - Function	Value	<input type="radio"/> OFF <input checked="" type="radio"/> ON
A2 - Scene	Assignment to scene number (no 1...64, 0 = no assignment)	4
B1 - General	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B1 - Function	Assignment to scene number (no 1...64, 0 = no assignment)	0
<b>B1 - Scene</b>	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B2 - General	Assignment to scene number (no 1...64, 0 = no assignment)	0
B2 - Function	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
B2 - Scene	Assignment to scene number (no 1...64, 0 = no assignment)	0
	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON
	Assignment to scene number (no 1...64, 0 = no assignment)	0
	Value	<input checked="" type="radio"/> OFF <input type="radio"/> ON



**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72 (continued)**

Devices ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > B2 - General

General	Contact type	<input type="radio"/> normally closed <input checked="" type="radio"/> normally open
Enable Output A...	Send switch status feedback telegram	after change or request
A1 - General	Create status object "Status Switch"	<input checked="" type="radio"/> yes <input type="radio"/> no
A1 - Function	Send status after bus voltage return	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene	Behavior after ETS program or after ETS reset	keep position
A2 - General	Behavior bus voltage failure	keep position
A2 - Function	Behavior bus voltage return	state as before bus voltage failure
A2 - Scene		
B1 - General		
B1 - Function		
B1 - Scene		
B2 - General		

Devices ▾

1.1.3 LG-002672 Room Control Unit, 8 Output > B2 - Function

General	Enable staircase	<input type="radio"/> yes <input checked="" type="radio"/> no
Enable Output A...	Enable external logic	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - General	Enable priority	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Function	Enable sweep	<input type="radio"/> yes <input checked="" type="radio"/> no
A1 - Scene	Enable current detection	<input type="radio"/> yes <input checked="" type="radio"/> no
A2 - General		
A2 - Function		
A2 - Scene		
B1 - General		
B1 - Function		
B1 - Scene		
B2 - General		
B2 - Function		

**2-pipe temperature control**  
**0-10V valves, 2 manual hot/cold change-over pipes**  
**3(ON/OFF) Speed ventilation**

Cat.No(s): 281027BB  
 0 028 90  
 0 026 72

**6. DEVICE PARAMETERS WITH ETSS (continued)**

**6.3 Actuator for Lighting 0 026 72 (continued)**

Devices ▾		1.1.3 LG-002672 Room Control Unit, 8 Output > B2 - Scene	
▾ Devices		General	Overwrite scene on download <input checked="" type="radio"/> yes <input type="radio"/> no
▾ Dynamic Folders		Enable Output A...J	
▾ 1.1.1 KNX-Mallia Senses command 4 push with...		A1 - General	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="1"/>
▾ 1.1.2 KNX 0-10V Fan coil Actuator		A1 - Function	Value <input checked="" type="radio"/> OFF <input type="radio"/> ON
▾ 1.1.3 LG-002672 Room Control Unit, 8 Output		A1 - Scene	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="2"/>
		A2 - General	Value <input type="radio"/> OFF <input checked="" type="radio"/> ON
		A2 - Function	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="3"/>
		A2 - Scene	Value <input type="radio"/> OFF <input checked="" type="radio"/> ON
		B1 - General	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="4"/>
		B1 - Function	Value <input checked="" type="radio"/> OFF <input type="radio"/> ON
		B1 - Scene	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="0"/>
		B2 - General	Value <input checked="" type="radio"/> OFF <input type="radio"/> ON
		B2 - Function	Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="0"/>
		<b>B2 - Scene</b>	Value <input checked="" type="radio"/> OFF <input type="radio"/> ON
			Assignment to scene number (no 1...64, 0 = no assignment) <input type="text" value="0"/>
			Value <input checked="" type="radio"/> OFF <input type="radio"/> ON

## 2-pipe temperature control 0-10V valves, 2 manual hot/cold change-over pipes 3(ON/OFF) Speed ventilation

Cat.No(s): 281027BB

0 028 90

0 026 72

### 6. DEVICE PARAMETERS WITH ETSS (continued)

#### 6.4 Group address ETSS

Group Addresses	Device	Object	Sending	Data Type	C	R	W	T	U	Product	Program	Length	Priority	Group Ad	Description
1/0/0 HVAC ON/OFF	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	90: FCU - ON/OFF, Out	S	switch	C	R	-	T	-	KNX-Mal...KNX-Malli...		1 bit	Low	1/0/0	HVAC ON/OFF
1/0/1 HVAC mode	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	95: FCU - Operation mode, Out	S	HVAC mode C	R	-	T	-	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/1	HVAC mode
1/0/2 Valve Heating/Cooling	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	96: FCU - Heating/cooling control value, Out	S	switch	C	R	-	T	-	KNX-Mal...KNX-Malli...		1 bit	Low	1/0/2	Valve Heating/Cooling
1/0/2 Fan speed control	11.2 KNX 0-10V Fan coil Actuator	34: Valve Heating/Cooling - Control value	S	switch	C	-	W	-	-	KNX 0-1... KNX 0-10V...		1 bit	Low	1/0/2	Valve Heating/Cooling
1/0/3 Fan speed control	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	98: FCU - Fan speed, Out	S	fan stage L	C	R	-	T	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/3	Fan speed control
1/0/3 Scenes	11.2 KNX 0-10V Fan coil Actuator	10: Fan - Fan speed	S	percentag...	C	-	W	-	-	KNX 0-1... KNX 0-10V...		1 byte	Low	1/0/3	Fan speed control
1/0/4 Fan automatic control	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	99: FCU - Fan Automatic operation, Out	S	enable	C	R	-	T	-	KNX-Mal...KNX-Malli...		1 bit	Low	1/0/4	Fan automatic control
1/0/4 Fan automatic control	11.2 KNX 0-10V Fan coil Actuator	20: Fan - Automatic function	S	enable	C	-	W	-	-	KNX 0-1... KNX 0-10V...		1 bit	Low	1/0/4	Fan automatic control
1/0/5 Scenes	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	10: Button 4 - Short/Close, Scene	S	scene num...	C	-	T	-	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/5	Scenes
1/0/5 Scenes	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	7: Button 3 - Short/Close, Scene	S	scene num...	C	-	T	-	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/5	Scenes
1/0/5 Scenes	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	4: Button 2 - Short/Close, Scene	S	scene num...	C	-	T	-	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/5	Scenes
1/0/5 Scenes	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	1: Button 1 - Short/Close, Scene	S	scene num...	C	-	T	-	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/0/5	Scenes
1/0/5 Scenes	11.2 LG-002672 Room Control Unit, 8 Output	1: General - Scene 8-bit	S	scene cont...	C	-	W	-	-	LG-0026... LG-00267...		1 byte	Low	1/0/5	Scenes
1/1/0 HVAC ON/OFF	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	78: FCU - ON/OFF status, In	S	switch	C	-	W	-	U	KNX-Mal...KNX-Malli...		1 bit	Low	1/1/0	HVAC ON/OFF
1/1/1 HVAC mode status	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	82: FCU - Operation mode, In	S	HVAC mode C	-	W	-	U	-	KNX-Mal...KNX-Malli...		1 byte	Low	1/1/1	HVAC mode status
1/1/2 Valve Heating/Cooling status	11.2 KNX 0-10V Fan coil Actuator	37: Valve Heating/Cooling - Status of valve position	S	switch	C	R	-	T	-	KNX 0-1... KNX 0-10V...		1 bit	Low	1/1/2	Valve Heating/Cooling status
1/1/3 Fan speed Status	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	83: FCU - Fan speed, In	S	fan stage L	C	-	W	T	U	KNX-Mal...KNX-Malli...		1 byte	Low	1/1/3	Fan speed Status
1/1/3 Fan speed Status	11.2 KNX 0-10V Fan coil Actuator	16: Fan - Status Fan speed	S	counter pu...	C	R	-	T	-	KNX 0-1... KNX 0-10V...		1 byte	Low	1/1/3	Fan speed Status
1/1/4 Fan automatic status	11.1 KNX-Mallia Senses command 4 push with thermostat brushed black	84: FCU - Fan automatic operation, In	S	enable	C	-	W	T	U	KNX-Mal...KNX-Malli...		1 bit	Low	1/1/4	Fan automatic status
1/1/4 Fan automatic status	11.2 KNX 0-10V Fan coil Actuator	21: Fan - Status Automatic	S	enable	C	R	-	T	-	KNX 0-1... KNX 0-10V...		1 bit	Low	1/1/4	Fan automatic status

### 7. NOTES

The whole HVAC system is managed by thermostat 281027BB (heating/cooling regulation, setpoint mode and automatic ventilation).

When the customer arrives in the room, can set the temperature to comfort mode, and when they leave the temperature returns to economy mode or standby mode. (touch "M" button on the thermostat 281027BB to switch each mode.)

The HVAC valve is connected to controller 002890 (G connector) and fan is connected to controller 002890 (A, B, C connector); the room controller 002890 provide ON/OFF to switch or shut valve.

The setpoint value can be altered on thermostat 281027BB by touching the buttons "+" and "-".

The fan speed can be altered by touching the button on the bottom of the thermostat. There are 3 manual fan speed levels and an automatic mode run by the thermostat.