DAIKIN VRV 2-PIPE SYSTEM (WITHOUT HEAT RECOVERY)

ROOM CONTROLLER

- On/Off
- Setpoint
- Mode (Cool/Heat/Fan/Dry)
- Fan (2 or 3 speeds, depending on the internal unit. Unit 3 has two fan speeds, the rest of units have 3 fan speeds)
- Swing control (if it is available in the internal unit). In this example project, the unit 4 hasn't swing control.

INSTALLATION CONFIGURATION

- Integration of a system of 5 Daikin VRV 2-pipe AC units (without heat recovery), so only one internal unit must be configured as master of mode in this project.
- Bidirectional communication between KNX and Daikin Unit thanks to KLIC-DI (See the compatibility table)

MASTER/SLAVE CONFIGURATION

- Simultaneous control from KNX and Daikin remote control of the air conditioner thanks to the master/slave configuration of communication with the internal unit.
- Only one unit must be configured as master of mode, (this unit will establish the operating mode of the external unit), the rest of the units must be configured as slave of mode. Slave units can establish their modes depending on the mode selected by the Master of mode unit.

In the unit 3, the KLIC-DI is configured as slave of the communication. Due to this, the Daikin wired remote control sends the Ambient Temperature to the unit to do the comparison with the setpoint with the purpose of controlling the climate functions.

IMPORTANT: When checking ETS Project activating the option **"! Show changes"** on parameter tab the symbol **"!"** will appear showing the modified parameters on ETS.
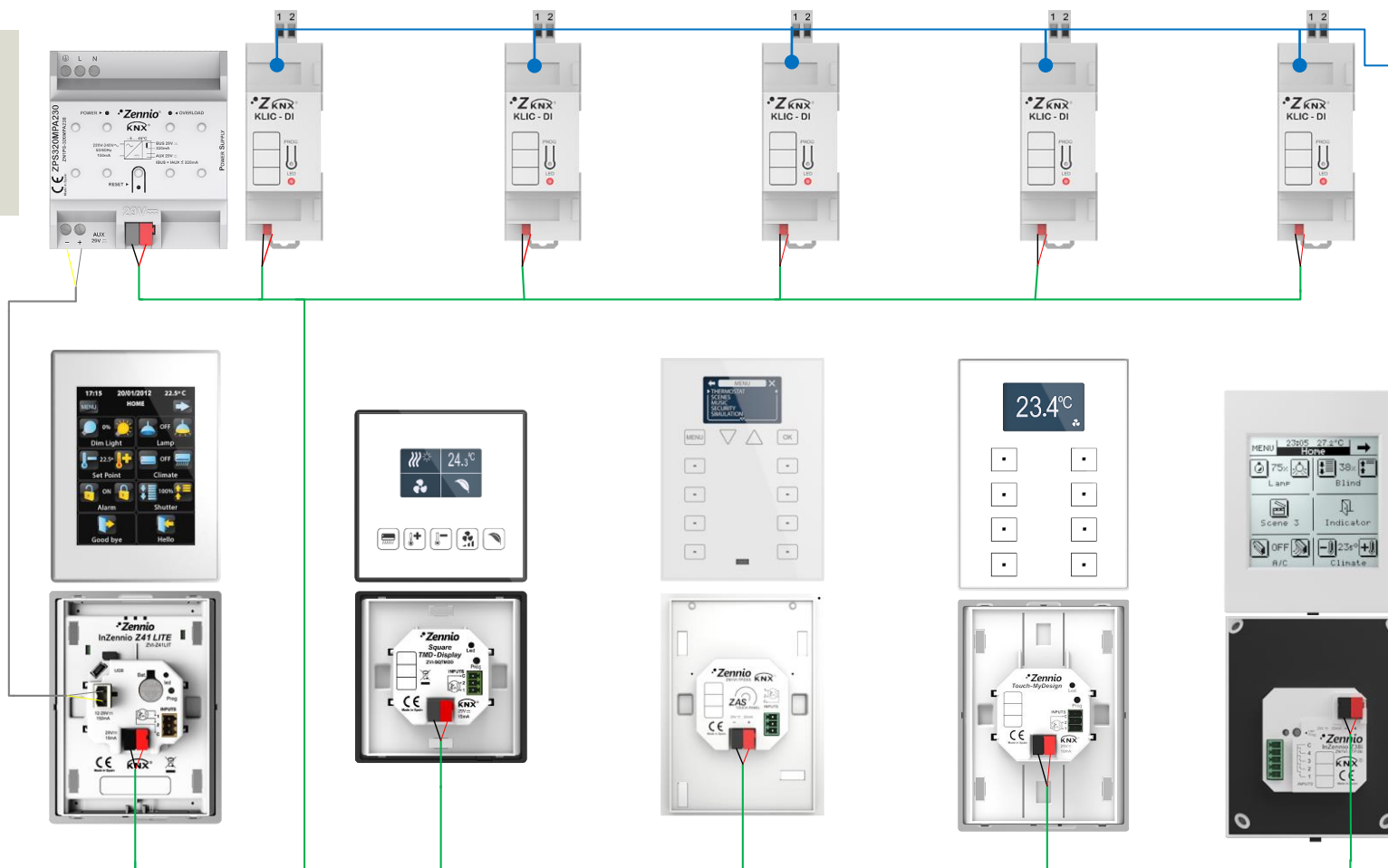
NEEDED DEVICES AND WIRING DIAGRAM

ZPS320MPA230
KNX power supply 320mA with ancillary power supply 29VDC. Vin: 230 V
REF: ZN1PS-320MPA230

KLIC-DI
Bus KNX to Daikin Industrial
REF: ZN1CL-KLIC-DI

InZennio Z41
KNX capacitive colour touch panel
REF: ZN1VI-TP41C

Square TMD-Display
Square capacitive touch panel with 5 buttons and upper graphical display with thermostat
REF: ZVI-SQTMDD

Roll-ZAS
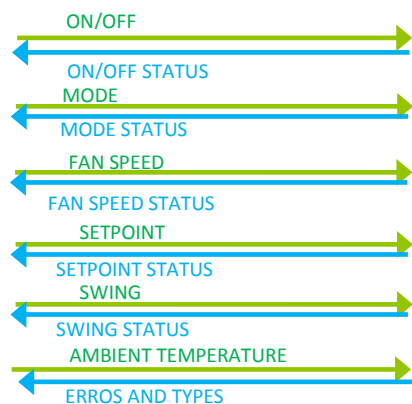Touch Controller Roll-ZAS
REF: ZN1VI-TPZAS

TMD-Display One
KNX Capacitive Room Controller
REF: ZVI-TMDD

InZennio Z38i
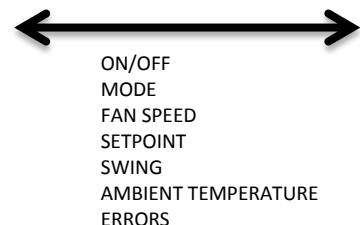Touch Panel KNX
REF: ZN1VI-TP38i

KNX COMMUNICATION OBJECTS

ROOM CONTROLLER   **KLIC-DI**   **AIR CONDITIONER UNIT**

ON/OFF
ON/OFF STATUS
MODE
MODE STATUS
FAN SPEED
FAN SPEED STATUS
SETPOINT
SETPOINT STATUS
SWING
SWING STATUS
AMBIENT TEMPERATURE
ERROS AND TYPES

BIDIRECTIONAL COMUNICATION

ON/OFF
MODE
FAN SPEED
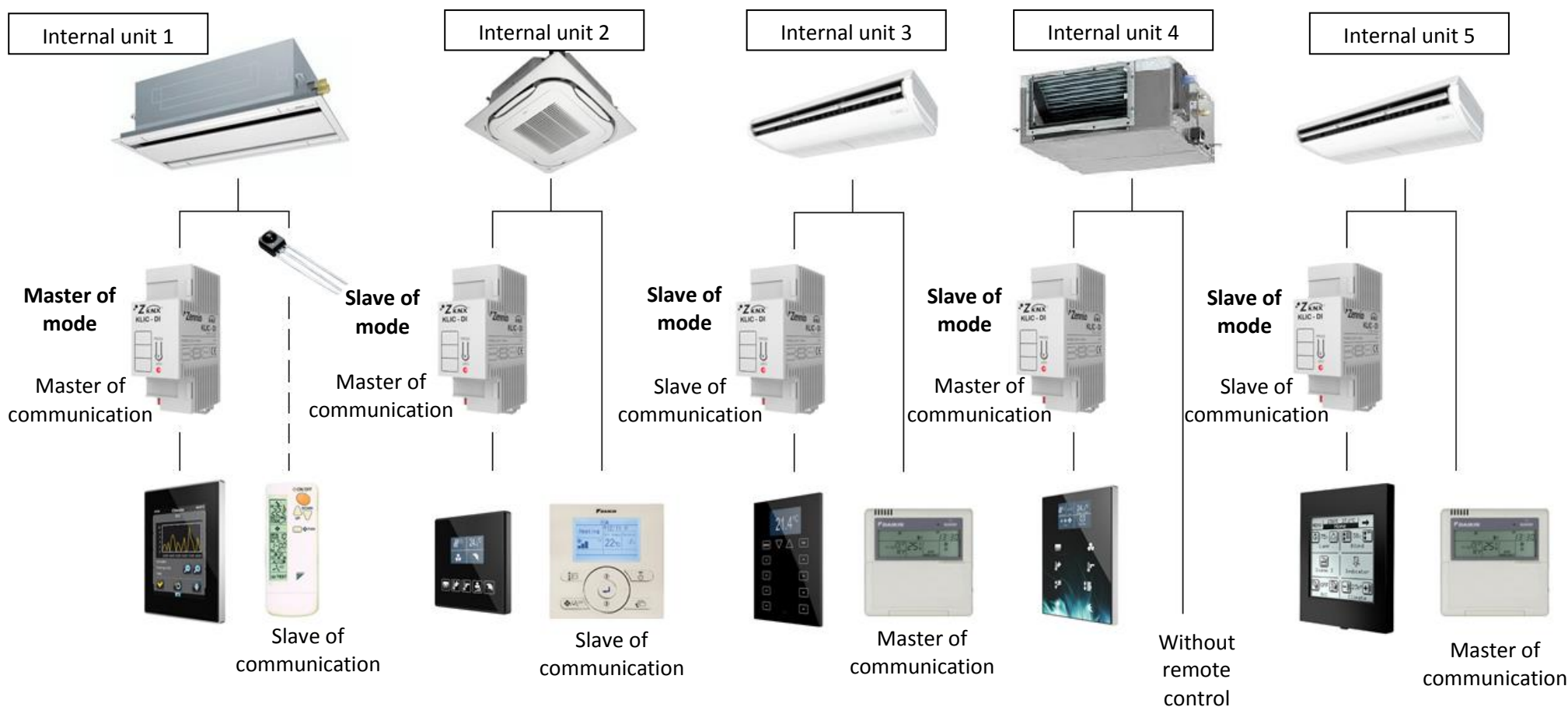SETPOINT
SWING
AMBIENT TEMPERATURE
ERRORS

NOTE: Respect to the operating mode, the unit 1 will establish the system mode because it will be configured as master of mode. The rest of units (slaves of mode) will work of one of the following ways depending on its configuration (see the ETS project):

- The operating mode of the units 2 and 5 will be the same than the one established by the unit 1 in the InZennio Z41.
- The operating mode of the units 3 and 4 will depend on the system mode established by the unit 1 according to the next table:

Modes available for selection									
Master of mode	Cool			Heat		Fan	Dry		
Slave of mode	Cool	Fan	Dry	Heat	Fan	Fan	Cool	Fan	Dry

MASTER/SLAVE CONFIGURATION

- The indoor unit can be controlled from KNX and the Daikin remote controller simultaneously provided that one of the controllers is configured as Master and the other as Slave.
- The operating mode control will depend on the Master/Slave of mode configuration. See page 2.

| Internal unit 1 | Internal unit 2 | Internal unit 3 | Internal unit 4 | Internal unit 5 |

Master of mode

Master of communication

Slave of mode

Master of communication

Slave of mode

Slave of communication

Slave of mode

Master of communication

Slave of mode

Slave of communication

Slave of communication

Slave of communication

Master of communication

Without remote control

Master of communication

Note: All Daikin remotes are configured as slave of mode. Daikin IR remote controllers must be configured as Slave of communication.

ROOM CONTROLLER

ON/OFF CONTROL AND INDICATOR

⭕ Unit turned off

❚ Unit turned on

CONTROL AND INDICADOR OF MODE

💧 Dry mode

🌀 Fan mode

❄️ Cool mode

☀️ Heat mode
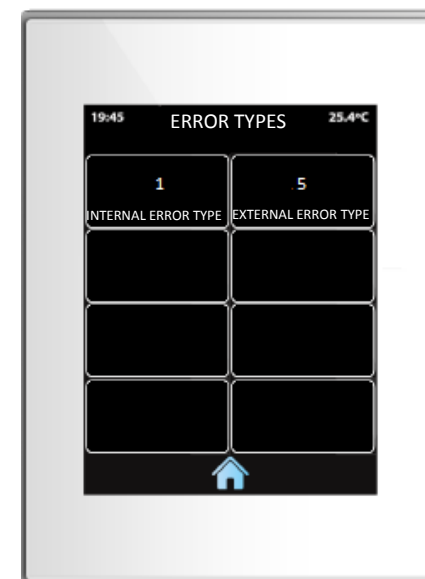
CONTROL AND INDICATOR OF FAN SPEED

🌀 Minimum fan speed

🌀 Medium fan speed
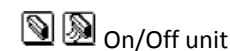
🌀 Maximum fan speed

INTERNAL ERROR TYPE INDICATOR

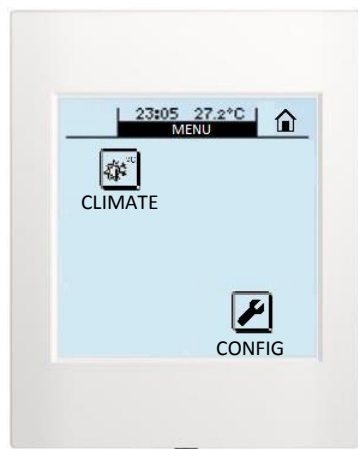| Error number	Internal error type
1	Data reception failed
2	Communication time exceded
3	Incorrect checksum
4	Incorrect response from the machine

EXTERNAL EEROR TYPE INDICATOR

1 – 239: See Errors table. Annex II of the manual

ON/OFF CONTROL AND INDICATOR

CLIMATE

CONFIG

MENU   23:05   27.2°C

ON   OFF/ON   25 º   SETPOINT

MODE   FAN SPEED

ON   SWING

On/Off unit
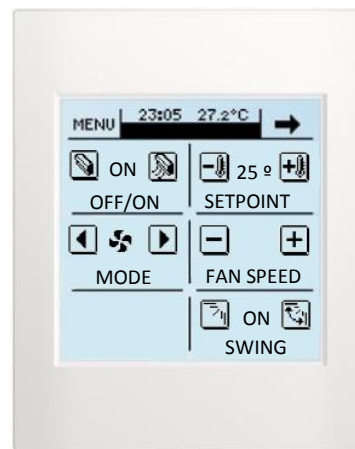
CONTROL AND INDICATOR OF SETPOINT

Increase/Decrease Setpoint

CONTROL AND INDICATOR OF MODE

For this configuration, although apparently able to change the mode, only the master so it can actually do for this indoor unit, so this option should be taken as an indicator and never as a control

CONTROL AND INDICATOR OF FAN SPEED

Increase/Decrease Fan Speed

CONTROL AND INDICATOR OF SWING

Swing fixed/swing moving
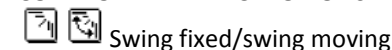
On/Off and swing Indicators

Setpoint Status

Mode Status

Fan Speed Status

On/Off control of the unit

Swing control

Setpoint control

Mode control

Fan Speed control

i 1

OFF/ON   SWING

SETPOINT   (23)

HEAT MODE

FAN (MIN. SPEED)

MENU   OK
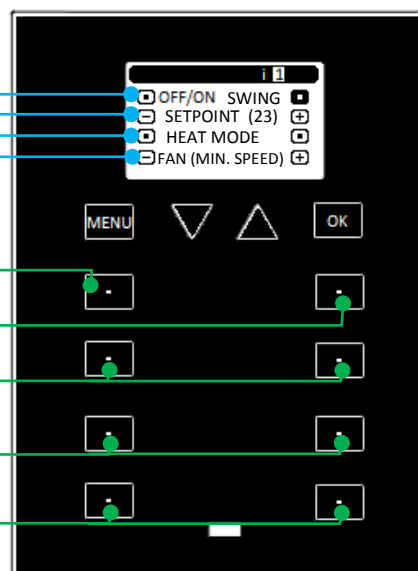
Status Indicators

Note: Two mode statuses are shown on the display, system and indoor unit indicators. Although different modes can be shown (see the table of the page 2), the indoor unit cannot work in a mode incompatible with the system mode.

CLIMA   i 1

ON/OFF: ON
SETPOINT: 23.0 ºC
FAN SPEED: MAX SPEED
SWING: OFF
SYSTEM MODE: HEAT
UNIT MODE: FAN

MENU   OK

System mode Status

🌨 **Cool mode**
💨 **Fan mode**
💧 **Dry mode**
☼ **Heat mode**

Working Status
① **Turned on**
⏻ **Turned off**

Fan Speed Status
🌀 🌀 🌀 **Low, med. & and high speed**

Setpoint Status

Ambient Temperature Stauts

28.5ºC
ON/OFF MODE SETPOINT
30ºC
FAN SP SWING ROOM TEMPERA

Mode Status of this unit

Swing Status
① **Turned on**
⏻ **Turned on**

28 ºC
ON/OFF SYS MO SETPOINT
25.6 ºC
FAN SP UNIT M ROOM TEMPER

28.5ºC
ON/OFF MODE SETPOINT
30ºC
FAN SP SWING ROOM TEMPERA

Turned On/Off of the unit
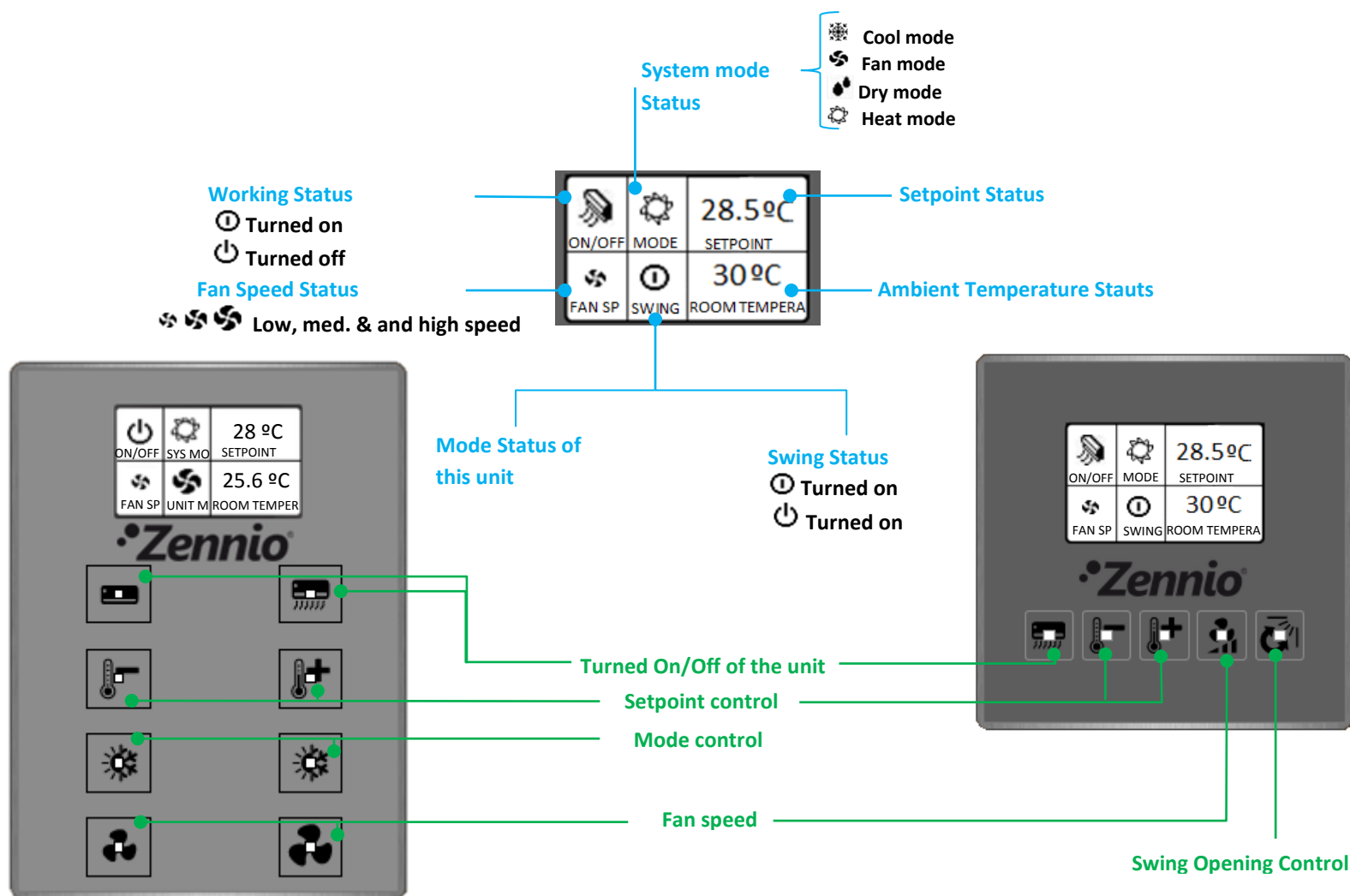
Setpoint control

Mode control

Fan speed

Swing Opening Control
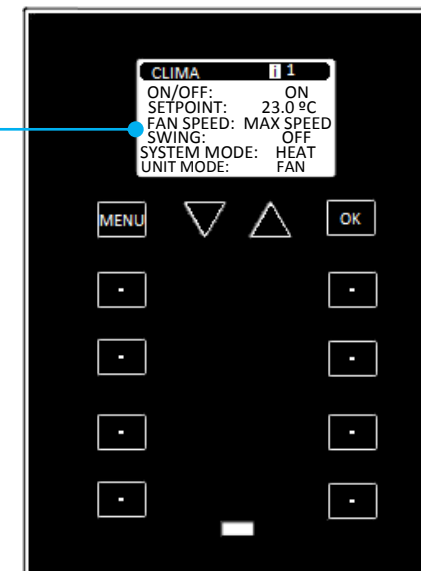
Note: Two mode statuses are shown on the display, system and indoor unit indicators. Although different modes can be shown (see the table of the page 2), the indoor unit cannot work in a mode incompatible with the system mode.

ALTERNATIVE PRODUCTS

ROOM CONTROLLER ALTERNATIVES

Z41 Lite (Ref. ZVI-Z41LIT)
Full Color Capacitive Touch Panel Lite

KNX-INTERNAL UNIT INTERFACES ALTERNATIVES
(Depends of the internal unit, will be used a different interface)

KLIC-DD (Ref. ZN1CL-KLIC-DD)
Bus KNX to Daikin Residential

Only for Daikin residential units
See compatibility table

KLIC-DA (Ref. ZN1CL-KLIC-DA)
Bus KNX to Daikin Altherma LT

Only for Daikin Altherma LT bibloc and integrated bicloc units.
See compatibility table

IRSC (Ref. ZN1CL-IRSC)
A/C Unit control device

To unidirectional communication
See compatibility table