![eelectron logo]

| MB80D01KNX | KNX Minipad 8 CH | Thermostat |

USER MANUAL

Version: **1.0**

Date: **17/06/2024**

Contents

VERSION	DATE	CHANGES
1.0	17/06/2024	-

Any information inside this manual can be changed without advice.

This handbook can be download freely from the website:

www.eelectron.com

Exclusion of liability:

Despite checking that the contents of this document match the hardware and software, deviations cannot be completely excluded. We therefore cannot accept any liability for this. Any necessary corrections will be incorporated into newer versions of this manual.

1. Introduction to the user manual

This manual is intended for use by KNX installers and describes functions and parameters of the **MB80D01KNX** push-button and how to change settings and configurations using the ETS software tool.

For the technical data of the device and the compatible accessories, please refer to the datasheet of the device itself.

Meaning of the symbols used

⚠️ **WARNING -** The operation or phase described must be carried out in compliance with the instructions provided and with the safety standards.

IMPORTANT NOTE - Details and specifications to be respected for the correct functioning of the device.

2. Product overview

The **MINIPAD KNX** push-button panel of the **eelecta®** series is equipped with **8 buttons** that can be configured for the management of lights, shutters, dimmers, or other programmable command and control functions.

There are also 8 white LEDs and one RGB, each freely configurable with ETS.

In the rear part, **3 inputs** are available, two of which are dedicated to interfacing potential-free contacts (clean – for example sensors, traditional buttons, etc.) and one freely configurable by ETS as a dry or analogue contact.

The push-button includes a **temperature sensor** that can also be configured as a **thermostat** for the control of two distinct areas, both with integrated PI controller for piloting heating, cooling, valves, 6-way valves, fan coils 2 and 4 pipes.

Moreover, **16 logic blocks** are available to implement simple expressions with logical or threshold operator or complex expressions with algebraic and conditional operators; It is possible to use predefined algorithms as proportional controls of temperature and humidity or dew point calculation.

The device also integrates the **"Virtual Holder Logic";** the field of application is the hotel room: through a magnetic sensor installed on the door and connected to a digital input, accurate presence information is managed. The presence detection solution can deduce the presence of people in the room using one or more dedicated sensors. It also detects an unexpected presence and is able to differentiate more behaviours.

The KNX communication interface is included.

The device can be configured via the ETS application program to communicate with the **KNX Data Secure protocol.**

The device can be used for permanent internal installations in dry places.

3. Installation instructions

⚠️ WARNING

- L'apparecchio non deve essere connesso per nessun motivo alla tensione si rete (230V)!

- Device must be installed at a minimum distance of 4 mm between electrical power line (mains) and input cables or red / black bus cable.

- The device must be mounted and commissioned by an authorized installer.

- The device must not be opened. Any faulty devices should be returned to manufacturer

- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

For a correct temperature measurement, insulate the flush-mounting box in order to limit the air flows coming from the rear pipes.

4. Configuration and commissioning

The configuration and commissioning of the device is made with the ETS® (Engineering Tool Software). For the configuration of the device parameters the corresponding application program or the whole eelectron® product database must be loaded in the ETS® program.

The commissioning of the device requires the following steps:

- connect the bus KNX (1)

- turn on the bus power supply

- press the programming button (2); the red programming LED turns ON

- download into the device the physical address and the configuration with the ETS® program
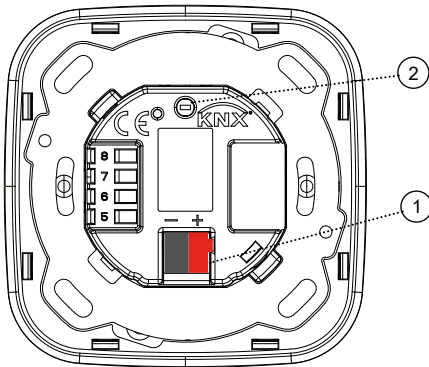
5. General parameters

Communication objects involved:

"<General> Heartbeat"	1 Bit	CRT
"<General> Power On Event"	1 Bit	CRT
"<General> Brightness in OFF mode"	1 Byte	CW
"<General> Brightness in ON mode"	1 Byte	CW
"<Temperature> Alarm"	1 Bit	CRT

KNX PARAMETER	SETTINGS
Delay in sending telegrams on power-up	5 ÷ 15 seconds
Through this parameter it is possible to set the telegram transmission delay after switch-on by selecting the time beyond which the device is authorized to send telegrams. In large systems after a power outage or shut-down, this delay avoids generating excessive traffic on the bus, causing slow performance or a transmission crash. If there are several devices that require telegrams to be sent on the bus after a reset, these delays must be programmed to prevent traffic congestion during the initialization phase. Input detection and object values are updated at the end of the transmission delay time At the end of ETS programming, the device behaves as it did after it was switched on.	

Heartbeat (periodic alive notification)	nothing periodic on request
Through this parameter you can enable the object "<General> Heartbeat" for notification of the correct operation of the device: • nothing: heartbeat function disabled; • periodic: you can define the interval and the message sent on the bus for the notification of the status; • on request: no message is sent but the object can be read through the object "<General> Heartbeat".	
Telegram value	off / on / toggle
This parameter defines the telegram sent by the object "<General> Heartbeat". The value "toggle" is only available in case of periodic sending.	
Period - time unit	seconds / minutes / hours
This parameter defines the unit of measures of the Heartbeat period.	
Period - time value	1 ... 255
This parameter defines the time interval for sending the "<General> Heartbeat" object.	
Input 3 type	digital / analog
Sensor input 3 can be configured as digital (for push-button interfacing) / analog (for NTC probe interfacing).	
Temperature function	Temperature function disabled Temperature sensor Thermostat
Temperature sensor: 2-point temperature control module with hysteresis, selection of the control band variable from the bus, enabling and disabling the module from the bus. **Thermostat:** complete temperature control module, PI algorithm, dedicated functions for on / off valve management - PWM - continuous - 6-way; fan coil, etc.	
Temperature alarm object	disabled / enabled
The "temperature alarm" object is used to report alarms relating to the sensor connected to input 3 (if enabled) or if surveillance time-out occurs when KNX-Probe (enabled via BUS).	
Brightness in OFF mode	0 % to 100%
It defines the brightness of LEDs when they are OFF. This value can be overwritten runtime by the object : "<General> Brightness in OFF mode".	
Brightness in ON mode	0 % to 100%
It defines the brightness of LEDs when they are ON. This value can be overwritten runtime by the object : "<General> Brightness in ON mode".	
Enable brightness objects	disabled / enabled
This parameter enable / disabled the objects: • "<General> Brightness in OFF mode" ; • "<General> Brightness in ON mode"; to change the brightness of LEDs.	
Virtual holder	disabled / enabled
By setting this parameter, it is possible to enable a "Virtual Holder", that is a logical function that automatically recognizes the presence of a person in a room. This function can be used in hotels or similar installations and requires connection to other devices (see "Virtual Holder")	

6. Button

Please refer to the "Button" user manual.

7. Inputs

Please refer to the "Digital input" user manual.
For analog input, please refer to the "Thermostat and additional probe" user manual.

8. LEDs and RGB Led

Please refer to the "LEDs-RGB Led" user manual.

9. Temperature function

Please refer to the "Thermostat and additional probe" user manual.

10. Logics

Please refer to the "Logics" user manual.

In the devices described, the logical expression can have a maximum of 24 characters.

11. Virtual Holder

Please refer to the "Virtual Holder" user manual.

12. Behavior in case of bus failure, recovery and downloadBehaviour on bus voltage failure

On failure of bus voltage no actions are executed by the device; behaviour of controlled actuators must be set using their own parameters.

Behaviour on bus voltage recovery

On bus voltage recovery all the communication objects are set to 0 except for objects for which a parameter is defined for the initial value.

Wrong application download

If the wrong ETS application is downloaded, a power reset must be done and the correct ETS application must be downloaded.