

IO22D02KNX	Inwall module 2 Input / 2 Output LED - KNX®
IO44D02KNX	Inwall module 4 Input / 4 Output LED - KNX®
IO44D02KNX-S	Inwall module Secure 4 Input / 4 Output LED - KNX® Secure
IO62D02KNX	Inwall module 6 Input / 2 Output LED - KNX®



USER MANUAL

Translation of the original instructions

Version: 1.0

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VERSION	DATE	CHANGES
1.0	15/10/2025	-


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.

Symbol for relevant information 

Symbol for warning 

 **DISPOSAL** : The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the reuse and/or recycling of the construction materials.



1. Purpose of the manual

This manual is intended for use by KNX® installers and describes functions and parameters of the **IOxxD02KNX(-S)** devices and how to change settings and configurations using the ETS software tool.

For the technical characteristics of the devices, please refer to the datasheet of the devices themselves.

2. Product overview

The IOxxD02KNX(-S) products are devices for interfacing dry contacts via digital inputs and have outputs to drive LEDs. Digital inputs can interface sensors, traditional buttons, etc; the low voltage output channels can drive LEDs for displaying states of synoptic panels or conventional switches.

IO22D02KNX: 2 inputs / 2 outputs LED

IO44D02KNX(-S): 4 inputs / 4 outputs LED

IO62D02KNX: 6 inputs / 2 outputs LED

Device IO44D02KNX-S integrates with the KNX Data Secure communication protocol.

The devices have extremely compact size (only 34 x 34 x 11 mm) and can also be used in installations where the inwall space available is reduced.

The following functions are available for each input channel:

- Commands on closing/opening contact
- Commands on short/long closure
- Command on multiple closing options
- Dimming control
- Control of shutters and blinds
- Scenes control
- 3 command sequences over short/long closure
- 3 command sequences over toggle
- Step-by-step on/off 1 bit combinations on 2 or 3 objects
- Pulse counter on rising and/or falling edge
- RGB commands
- MUR/DND commands
- Loop value commands
- Enable/disable object

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 devices also integrate 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 behaviors.

The devices can be configured via the ETS® application program and the KNX communication interface is included.

3. Installation instructions

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



- When a clear separation between the low voltage (SELV) and the dangerous voltage (230V) is NOT possible, the device must be installed maintaining a minimum guaranteed distance of 4 mm between the dangerous voltage lines or cables (230V not SELV) and the cables connected to the EIB / KNX BUS (SELV).
- The device must be mounted and commissioned by an authorized installer.
- The applicable safety and accident prevention regulations must be observed.
- 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.
- KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.
- Relays are always switched opened before delivering but, it is possible they get closed during transportation. It is recommended, when device is installed, to connect and supply the bus before the load voltage to ensure the opening of the contacts.

For more information: www.eelectron.com

4. General parameters

Communication objects involved:

"<General> Heartbeat"	1 Bit	CRT
"<General> Power On Event"	1 Bit	CRT

KNX PARAMETER	SETTINGS
Delay to send telegrams on power-up	5 + 15 sec
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
The parameter allows you to notify a hierarchically superior control or supervision system of your existence / correct online activity. The notification can take place spontaneously (periodically - settable period value) or following a query (upon request). The value of the 1-bit notification telegram can be set.	
Telegram value	off / on / toggle
Defines the value of the 1 bit notification telegram. The toggle value is not available for "on demand" configuration.	
Period - time unit	seconds / minutes / hours
Defines the unit of measure of the notification time interval. This parameter is not available for the "on demand" configuration.	
Period - time value	1 ... 255
Defines the notification interval time. This parameter is not available for the "on demand" configuration.	
Virtual Holder	disabled / enabled
By setting this parameter, it is possible to enable a "virtual pocket", i.e. 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 others devices, see the specific " Virtual Holder " manual).	

5. Inputs

Please refer to the "[Digital input](#)" user manual.

6. LEDs

Please refer to the "[LEDs and RGB Led](#)" user manual.

7. Logics

Please refer to the "[Logics](#)" user manual.

In the devices described, the logical expression can have a maximum of 32 characters.

Available functions:

- Bit/byte no transfer function
- NOT, AND, OR, NAND, NOR, XOR, XNOR;
- Bit to byte conversion/ Byte to bit; conversion
- Byte threshold;
- 2/4 bytes float threshold;
- Proportional fancoil;
- Proportional/speed fancoil conversion;
- Dew point humidistat;
- Surveillance;
- Constant illuminance;
- Multiplexer;
- Cyclic read;
- Expression.

8. Virtual Holder

Please refer to the "[Virtual Holder](#)" user manual.

9. Behaviour on bus failure, recovery and download

Behaviour 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 then KNX/EIB led starts blinking and device is not operative on the bus. A power reset must be done or the correct ETS® application must be downloaded.