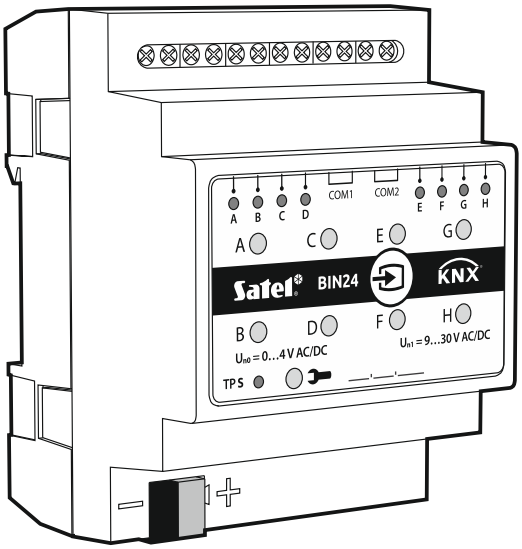
KNX-BIN24

Universal binary input module



Quick installation guide

Full manual is available on **www.satel.eu**

Firmware version 1.01

knx-bin24_sii_en 11/19

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IMPORTANT

The device should be installed by qualified personnel.

Prior to installation, please read carefully this manual.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

SATEL aims to continually improve the quality of its products, which may result in changes in their technical specifications and software. Current information about the changes being introduced is available on our website.
Please visit us at:
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The declaration of conformity may be consulted at www.satel.eu/ce

The following symbols may be used in this manual:

 - note;

 - caution.

This manual only regards the installation of module KNX-BIN24. For more information about module and its configuration, please refer to the full manual available at **www.satel.eu**.

1. Description

KNX-BIN24 is a universal module of KNX binary inputs that enables electrical (voltage) signals to be converted into control telegrams for other KNX devices on the bus.

The module has eight physical inputs which allow it to handle 8 independent signals ranging from 0 to 30 VDC/AC. Each physical input in the module corresponds to one physical channel (A – H).

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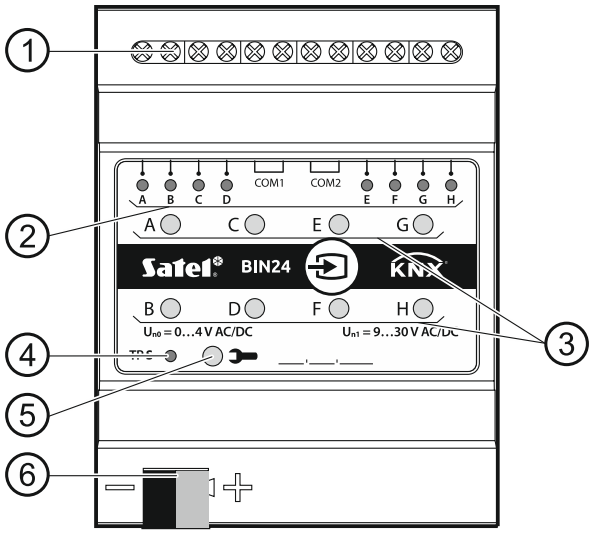


(1) physical input terminals.

(2) green LEDs indicating the status of module physical channels. One channel status LED is assigned to each channel:

ON – channel is ON,

OFF – channel is OFF.

(3) buttons to manually switch the state of physical channels (to simulate changes on physical inputs).

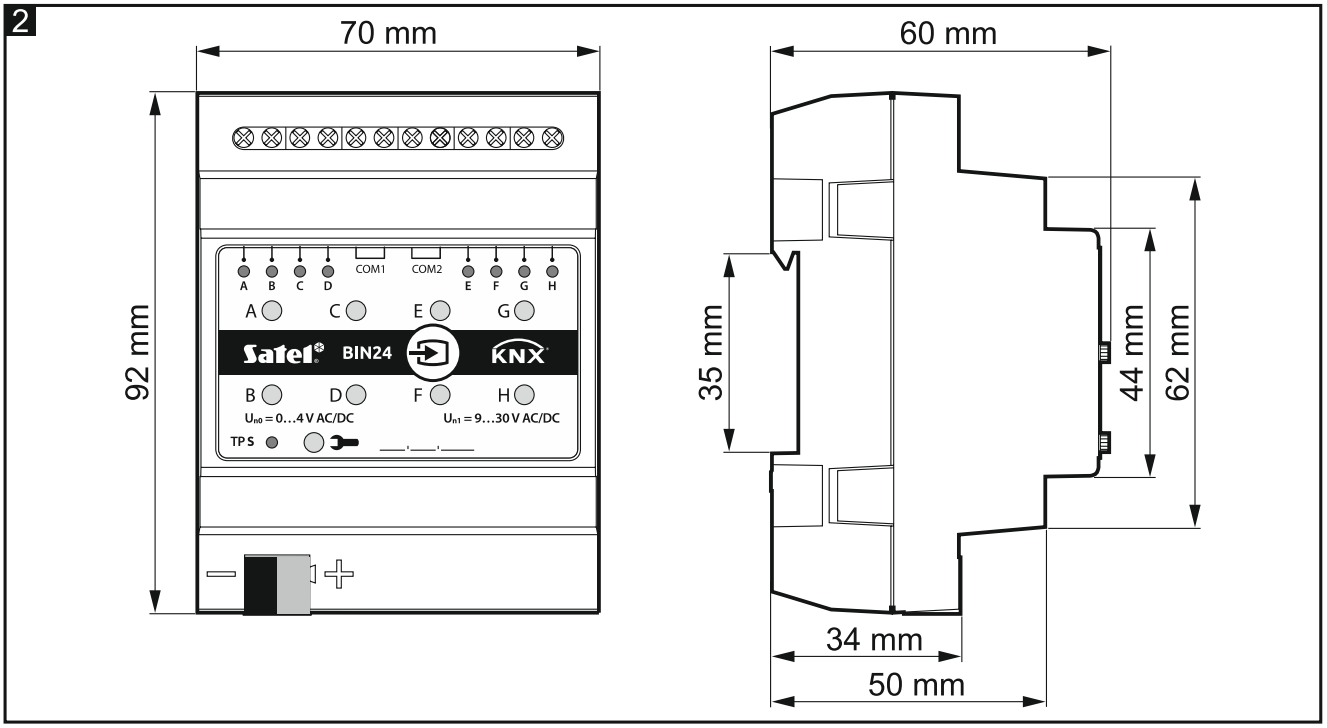
Each button can work as monostable or bistable switch. How the button will operate can be defined separately for each channel in ETS program (for more information, refer to the full manual of the module).

(4) red LED – is ON when physical address is being set using the ETS program. Setting the address may be activated manually, using the button on the enclosure, or remotely from the ETS program.

(5) programming button (used when setting the physical address).

(6) terminal to connect KNX bus.

1.1 Enclosure



The module takes up 4 units on the 35 mm DIN rail.

2. Installation

Disconnect power before making any electrical connections.

The module is designed for indoor installation, in spaces with normal air humidity, e.g. in distribution boxes on 35 mm DIN rail.

1. Mount the module on the mounting rail.
2. Connect the devices to the terminals. For designations of the terminals see the front panel.

All connections should be made as recommended in section "Wiring diagram".

3. Use the connection terminal to connect the KNX bus cable to the module.

The module is supplied with voltage from the KNX bus and requires no additional power supply.

4. Connect a computer running ETS program to the KNX bus and configure the module.

To configure the module, you will require a computer running the ETS program version 5.5 or newer, provided with USB or Ethernet (TCP/IP) connector. The SATEL ETS application file, which can be downloaded from www.satel.eu/ets, must be imported into the program.

2.1 Wiring diagram

The KNX-BIN24 module has two independent circuits. Each circuit includes four inputs: A, B, C, D – circuit 1, and E, F, G, H – circuit 2. DC or AC voltage can be applied to each module input, allowable input voltage ranging from 0 to 30 V.

Input voltage from 0 to 4 V is interpreted as "0" and voltage from 9 to 30 V – as "1". To avoid malfunctioning of the module, voltage ranging from 4 to 9 V must not be applied to any input.

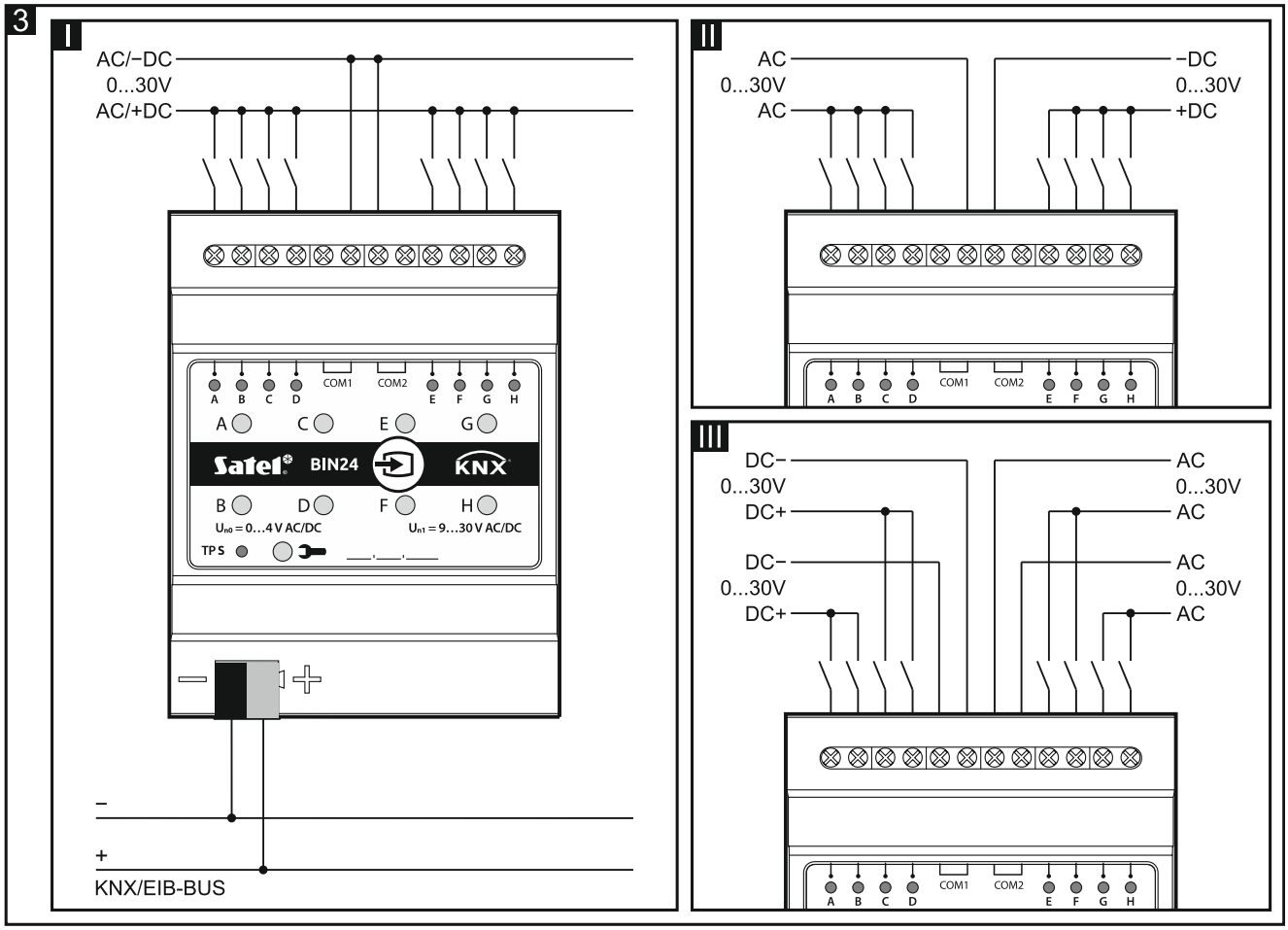
Each module input can be connected to a different current source, but one type of voltage, either DC or AC, must be applied to inputs belonging to one circuit.

Fig. 3 shows some examples of module connection:

I – voltage from one source, AC or DC, is applied to all inputs of the module,

II – voltage from two different sources is applied to inputs of circuits 1 and 2 (DC voltage is applied to inputs of one circuit, and AC voltage to inputs of the other circuit),

III – voltage from different sources is applied to inputs within one circuit (DC voltage is applied to inputs of one circuit, and AC voltage to inputs of the other circuit).



3. Specifications

Power supply

Supply voltage (KNX bus) ..... 20…30 VDC

Current consumption from KNX bus ..... <15 mA

Inputs

Number of inputs 8

Input current I_n ..... 1.5 mA

Permitted voltage range U_n ..... 0…30 VAC/DC

Signal level for U_{n0} signal ..... 0…4 VAC/DC

Signal level for U_{n1} signal ..... 9…30 VAC/DC

Connections

Maximum wire cross-section ..... 2.5 mm^2
Maximum tightening torque ..... 0.5 Nm

KNX parameters

Maximum time of reaction to telegram ..... <20 ms
Maximum number of communication objects 108
Maximum number of group addresses 256
Maximum number of associations 256

Other parameters

Operating temperature range ..... 0°C...+45°C
Storage/transport temperature range ..... -25°C...+70°C
IP code IP20
Number of units on DIN rail 4
Enclosure dimensions ..... 70 x 92 x 60 mm
Weight ..... 144 g

Exceeding the limit values of the module working parameters may damage the module and pose hazard to human health or life.