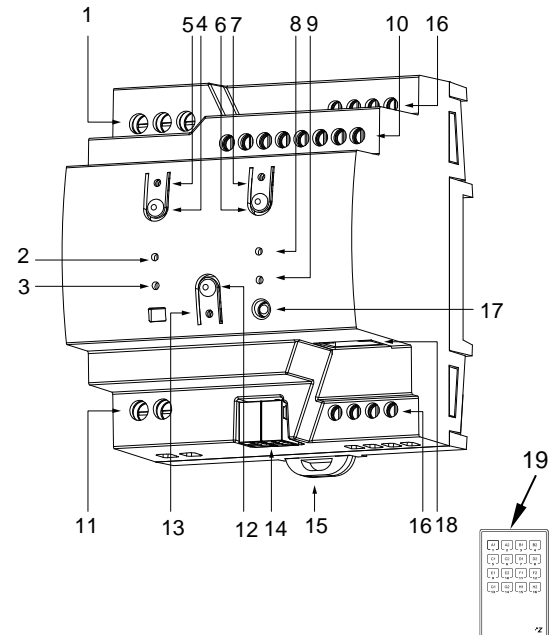


FEATURES

- 160mA KNX power supply with 29VDC auxiliary output
- 110-240VAC 50/60Hz power input
- KNX system voltage supply and monitorization
- Short-circuit and overvoltage protection
- Reset button and overload status LED
- KNXnet/IP tunneling protocol (up to 5 connections)
- Maximum APDU length of 254 bytes
- Ethernet 10/100 BaseT IP with RJ45 socket
- 1 configurable output block: shutter channels (up to 2), individual outputs (up to 4) and 2-pipe fan coil control (up to 1)
- Outputs suitable for capacitive loads, maximum 140µF
- Manual output operation through remote control
- 6 analog/digital inputs
- Climate control for up to 4 rooms
- Output timing
- 20 logic functions
- Total data saving on KNX bus failure
- Integrated KNX BCU
- Dimensions 67 x 90 x 79mm (4.5 DIN units)
- DIN rail mounting according to IEC 60715 TH35, with fixing clamp
- Conformity with the CE directives (CE-mark on the right side)



| | | | | |
|----------------------------|-----------------------------|--------------------------|---|---------------------------|
| 1. Main power supply | 2. Power supply status LED | 3. Overload status LED | 4. Reset button | 5. Reset status LED |
| 6. IP factory reset button | 7. IP factory reset LED | 8. Ethernet LED | 9. KNX bus LED | 10. Analog/digital inputs |
| 11. Auxiliary power output | 12. Programming/Test button | 13. Programming/Test LED | 14. KNX connector | 15. Fixing clamp |
| 16. Outputs | 17. IR input | 18. Ethernet connector | 19. Remote control (not included, ref. 9900024) | |

PROGRAMMING/TEST BUTTON: short press to set programming mode. If this button is held while providing main power supply to the device, it enters the safe mode. If this button is held for more than 3 seconds, the device enters the test mode.

RESET BUTTON: long press to completely reset the bus and auxiliary power output. It is recommended to hold it for at least 5 seconds to verify the reset of all the devices in the line.

PROGRAMMING/TEST LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. The manual mode is indicated by the green color. During the start-up (reset or after providing main power supply) and if the device is not in safe mode, it starts a blue blinking sequence.

POWER SUPPLY STATUS LED: it indicates the status of the power supply (green color: the device is working properly; off LED: power supply failure; green blinking: short-circuit on KNX bus and/or auxiliary power output).

OVERLOAD STATUS LED: it indicates an overload on the KNX line or on the auxiliary power output (red blinking: cut-off due to overload/short circuit on the KNX bus and/or the auxiliary power output*; red color: overload on bus and/or auxiliary power output line*).

*Reduce the load on the bus and/or the auxiliary power output lines until its total consumption does not exceed the maximum current specified.

KNX BUS LED: it indicates that the device is powering up the KNX bus (green color).

ETHERNET LED: it indicates that the device is connected to Ethernet and has an IP address assigned (green color).

RESET INDICATOR LED: it indicates that a reset of the KNX system has been performed by using the corresponding reset button (red blinking). To reset the bus power supply, the Reset button should be pressed (it is recommended to hold it for at least 5 seconds to verify the reset of all the devices in the line). The reset LED will blink slightly in red while the Reset button is pressed.

IP FACTORY RESET INDICATOR LED: it indicates that the device has just performed an IP factory reset (red color). To reset the KNX IP Interface, the IP Factory reset button must be pressed for at least 3 seconds.

MANUAL CONTROL: In order to perform manual control of the device, an IR remote control (not included; ref. 9900024) is necessary. When the device is in Test On mode, the manual control can be done by pressing the corresponding buttons on the IR remote control (please, be sure that the remote IR emitter is pointing to the IR input of ALLinBOX 46).

| GENERAL SPECIFICATIONS | | |
|---|---|---|
| CONCEPT | | DESCRIPTION |
| Type of device | | Electric operation control device |
| External power supply | Voltage | 110-240VAC 50/60Hz |
| | Maximum consumption | 150mA@110VAC / 75mA@230VAC |
| KNX supply | Voltage (typical) | 29VDC SELV (with KNX coil) |
| | Maximum rated current (I _{BUS}) | 160mA |
| | Connection type | Typical TP1 bus connector for 0.80mm Ø rigid cable |
| Additional output | Voltage (typical) | 29VDC SELV |
| | Maximum rated current (I _{AD}) | I _{AD} + I _{BUS} ≤ 250mA |
| Operation temperature | | -5°C .. +45°C |
| Storage temperature | | -20°C .. +55°C |
| Operation humidity | | 5 .. 95% |
| Storage humidity | | 5 .. 95% |
| Complementary characteristics | | Class B |
| Protection class / Overvoltage category | | II / III (4000V) |
| Operation type | | Continuous operation |
| Device action type | | Type 1 |
| Electrical stress period | | Long |
| Degree of protection / Pollution degree | | IP20 / 2 (clean environment) |
| Installation | | Independent device to be mounted inside electrical panels with DIN rail (IEC 60715) |
| Minimum clearances | | Not required |
| Power failure back-up time | | 110ms |
| Maximum current before overload notification | | 300mA |
| Response on KNX bus failure | | Data saving according to parameterization |
| Response on KNX bus restart | | Data recovery according to parameterization |
| Operation indicator | | See page 1 |
| Weight | | 300g |
| PCB CTI index | | 175V |
| Housing material / Ball pressure test temperature | | PC FR V0 halogen free / 75°C (housing) - 125°C (connectors) |

| MAIN POWER SUPPLY SPECIFICATIONS AND CONNECTIONS | | |
|---|---------------|--|
| CONCEPT | | DESCRIPTION |
| Power supply protection fuse | Voltage | 110-240VAC 50/60Hz |
| | Current | 4A |
| | Response type | F (Fast acting) |
| Connection method | | Screw terminal block |
| Cable cross-section | | 1.5-4mm ² (IEC) / 26-10AWG (UL) |

| AUXILIARY POWER OUTPUT SPECIFICATIONS AND CONNECTIONS | | |
|--|--|--|
| CONCEPT | | DESCRIPTION |
| Connection method | | Screw terminal block |
| Cable cross-section | | 1.5-4mm ² (IEC) / 26-10AWG (UL) |

| OUTPUTS SPECIFICATIONS AND CONNECTIONS | | |
|--|-----------|--|
| CONCEPT | | DESCRIPTION |
| Number of outputs | | 4 |
| Output type / Disconnection type | | Potential-free outputs through bistable relays with tungsten pre-contact / Micro-disconnection |
| Rated current per output | | AC 16(6)A @ 250VAC (4000VA) DC 7A @ 30VDC (210W) |
| Maximum load per output | Resistive | 4000W |
| | Inductive | 1500VA |
| Maximum inrush current | | 800A/200µs 165A/20ms |
| Different phases connection | | Possibility of connecting different phases between outputs of different channels. It is not allowed to connect power supplies of different order, SELV with NO SELV, in the same block |
| Maximum current | | 40A |
| Maximum current per output | | 16A |
| Short-circuit protection | | NO |
| Overload protection | | NO |
| Over-voltage protection | | NO |
| Connection method | | Screw terminal block |
| Cable cross-section | | 0.5-2.5mm ² (IEC) / 26-12AWG (UL) |
| Outputs per common | | 1 |
| Maximum response time | | 10ms |
| Mechanical lifetime (min. cycles) | | 3 000 000 |
| Electrical lifetime (min. cycles) ¹ | | 100000 @ 8A / 25000 @ 16A (VAC) |

¹ Lifetime values could change depending on the load type.

WIRING DIAGRAMS

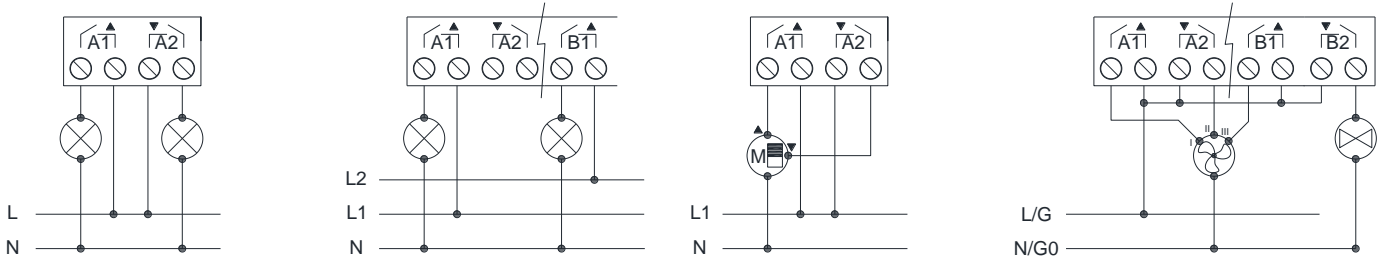


Figure 1: Wiring example (from top to bottom and left to right): 2 loads, 2 loads connected to different phases, shutter channel, 2-pipe fan coil three-speed fans and open/close valve.

⚠ In order to ensure the expected status of the relays, please check that the device is connected to the main power supply before energizing the power circuit.

The fan and the valves to be connected must have the same nominal supply voltage.

INPUTS SPECIFICATIONS AND CONNECTIONS

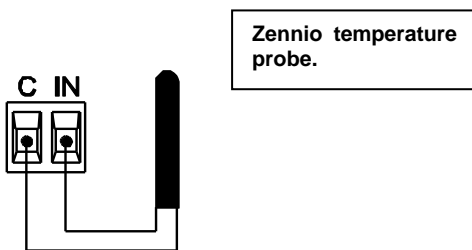
| CONCEPT | DESCRIPTION |
|------------------------------------|---|
| Number of inputs | 6 |
| Inputs per common | 3 |
| Operation voltage | +3.3VDC in the common |
| Operation current | 1mA @ 3.3VDC (per input) |
| Switching type | Dry voltage contacts between input and common |
| Connection method | Screw terminal block |
| Cable cross-section | 0.5-2.5mm ² (IEC) / 26-12AWG (UL) |
| Maximum cable length | 30m |
| NTC probe length | 1.5m (extensible up to 30m) |
| NTC accuracy (@ 25°C) ² | ±0.5°C |
| Temperature resolution | 0.1°C |
| Maximum response time | 10ms |

² For Zennio temperature probes.

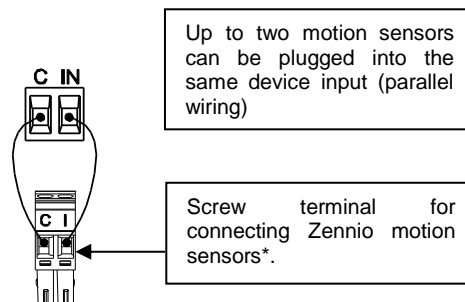
INPUTS CONNECTION

Any combination of the following **accessories** is allowed in the inputs:

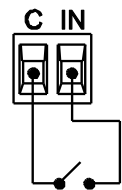
Temperature Probe**



Motion Sensor



Switch/Sensor/ Push button



* In case of using ZN110-DETEC-P sensor, its micro switch number 2 must be in **Type B position**.

** Zennio temperature probe or any NTC with known resistance values at three points in the range [-55, 150°C].

⚠ Commons of different devices must not be connected together.

INSTALLATION AND CONNECTION

- This device must be exclusively installed in a 35mm DIN rail inside a distribution box or an electrical panel.
- Ensure suitable ventilation to prevent the temperature from exceeding the permissible range.
- Main power must be connected to L, N and ground terminals.
- The coil integrated bus output must be connected through a standard KNX connector.
- The additional output connection must be connected according to the polarity indicated on the housing.

Attaching ALLinBOX 46 to DIN rail:

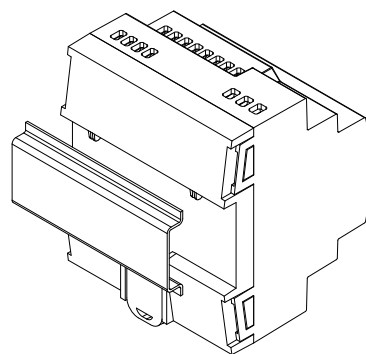
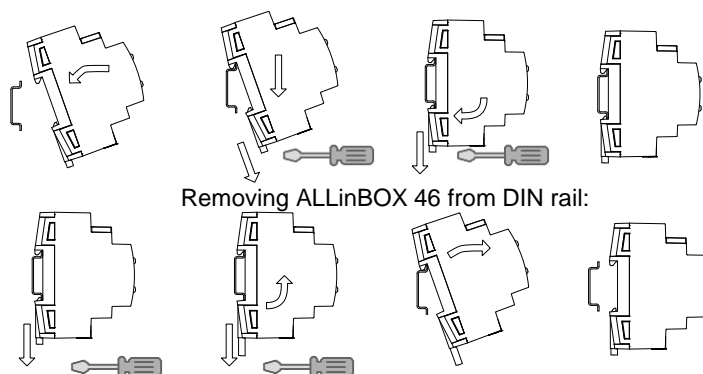


Figure 2: Mounting ALLinBOX 46 on DIN rail



SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- Installation should only be performed by qualified professionals according to the laws and regulations applicable in each country.
- Do not connect the mains voltage nor any other external voltage to any point of the KNX bus; it would represent a risk for the entire KNX system. The facility must have enough insulation between the mains (or auxiliary) voltage and the KNX bus or the wires of other accessories, in case of being installed.
- The facility must be equipped with a device that ensures the omnipolar sectioning. Installation of a 10A mini-circuit-breaker is recommended. To prevent accidents, it must remain open in case of manipulation of the device.
- The device has a short-circuit protection fuse that, in case of activation, should only be rearmed or replaced by the Zennio technical service.
- This device contains a security short-circuit proof transformer.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- For indoor use only
- Keep the device away from water (condensation over the device included) and do not cover it with clothes, paper or any other material while in use.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at <https://www.zennio.com/en/legal/wEEE-regulation>.
- This device contains software subject to specific licences. For details, please refer to <http://zennio.com/licenses>.

