

FEATURES

- 2 outputs configurable as:
 - Shutter channel.
 - Individual outputs (up to 2).
- 4 inputs configurable as
 - Binary input.
 - Temperature probe.
 - Motion sensor.
- 10 logical functions.
- 4 thermostats.
- Master light control.
- Total data saving on KNX bus failure.
- Integrated KNX BCU.
- Dimensions Ø50 x 26mm.
- Can be mounted within distribution boxes, junction boxes or wall back boxes.
- Conformity with the CE directives (CE-mark on the back side).

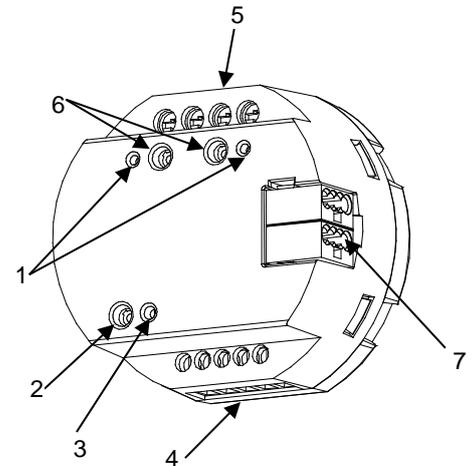


Figure 1. inBOX 24

1. Output status LEDs	2. Programming/Test button	3. Programming/Test LED
4. Inputs	5. Outputs	6. Output control buttons
		7. KNX connector

Programming/test button: short press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters the safe mode. If this button is held for more than 3 seconds, the device enters the test mode.

Programming/Test LED: programming mode indicator (red). When the device enters into safe mode, it blinks (red) every half second. The manual mode is indicated by the green color. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it starts a blue blinking sequence.

GENERAL SPECIFICATIONS				
CONCEPT		DESCRIPTION		
Type of device		Electric operation control device		
KNX supply	Voltage (typical)	29VDC SELV		
	Voltage range	21...31VDC		
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	5.22	125.3
	24VDC ⁽¹⁾	10	240	
Connection type		Typical TP1 bus connector; 0.80mm ² section		
External power supply		Not required		
Operation temperature		0°C to +55°C		
Storage temperature		-20°C to +55°C		
Operation humidity		5 to 95% RH (no condensation)		
Storage humidity		5 to 95% RH (no condensation)		
Complementary characteristics		Class B		
Protection class		II		
Operation type		Continuous operation		
Device action type		Type 1		
Electrical stress period		Long		
Degree of protection		IP20, clean environment		
Installation		Can be mounted within distribution boxes, junction boxes or wall back boxes		
Minimum clearances		Not required		
Response on KNX bus failure		Data saving according to parameterization		
Response on KNX bus restart		Data recovery according to parameterization		
Operation indicator		Programming LED indicates programming mode (red) and test mode (green). Each output LED indicates its status		
Weight		62g		
PCB CTI index		175V		
Housing material		PC FR V0 halogen free		

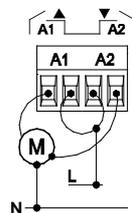
⁽¹⁾ Maximum consumption in the worst case scenario (KNX Fan-In model)

OUTPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT	DESCRIPTION	
Contact type	Potential free outputs through bistable relays with tungsten pre-contact.	
Disconnection type	Micro-disconnection	
Rated current per output	\sim 16(6)A * 250VAC (4000VA) \equiv 16(6)A * 30VDC (480W)	
Maximum power per output	Resistive	4000W
	Inductive	1500W
Maximum inrush current	800A/200 μ s (fluorescent lamps) 165A/20ms (resistive lamps)	
Number of outputs	2 outputs	
Outputs per common (Channel)	1 individual output	
Total maximum current in device	20A	
Connection type	Screw terminal block	
Recommended cable section	0.5mm ² to 4mm ² (20-12 AWG)	
Maximum response time	50ms	
Lifetime	Mechanical (min)	3 million cycles (60cpm)
	Electrical (min.)	100,000 cycles at max. current (6cpm and resistive load)

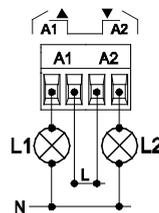
OUTPUTS WIRING DIAGRAM

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

Shutter channel



Individual outputs



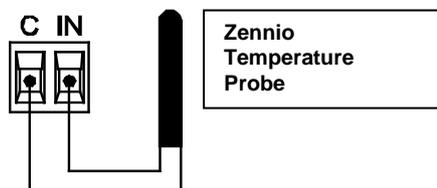
Note: In this device is not possible to connect different phases in adjoining outputs

INPUTS SPECIFICATIONS AND CONNECTIONS		
CONCEPT	DESCRIPTION	
Number of inputs	4	
Inputs per common	4	
Operation voltage	+3.3VDC in the common	
Operation current	1.0mA @ 3.3VDC (per input)	
Maximum impedance	Approx. 3.3k Ω	
Switching type	Dry voltage contacts between input and common	
Connection method	Screw terminal block	
Maximum cable length	30m	
NTC probe length	1.5m (up to 30m)	
NTC accuracy (@ 25°C)	\pm 0.5°C	
Temperature resolution	0.1°C	
Cable cross-section	0.5 mm ² to 1mm ² (26-16AWG)	
Maximum response time	10ms	

INPUTS WIRING DIAGRAM

Any combination of the next accessories is allowed in the inputs:

Temperature Probe



Motion Sensor

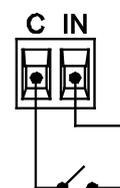


Up to two motion sensors can be plugged into the same device input (parallel wiring)

Motion sensor screw terminal.

Motion sensor references:
 ZN1IO-DETEC-P⁽²⁾
 ZN1IO-DETEC-X

Switch/Sensor/ Push button



(2) The micro switch number 2 in the ZN1IO-DETEC-P sensor **must be in Type B position** to work properly.

SAFETY INSTRUCTIONS

- 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.
- Once the device is installed (in the box), it must not be accessible from outside.
- Keep the device away from water 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 <http://zennio.com/weee-regulation>.