

### FEATURES

- 2 Channel for R L C loads and for dimmable CFL and LED lamps.
- Automatic detection of R L C load type.
- Dimming pattern selection for CFL and LED lamps.
- Optional manual dimming control.
- 2 analog/digital inputs.
- Total data saving when power failure occurs.
- Size: 60 x 90 x 80mm (4,5 DIN rail units).
- To be mounted in electrical panels with DIN rails.
- KNX BCU integrated.
- Conformity with the CE directives (CE-mark on the right side).

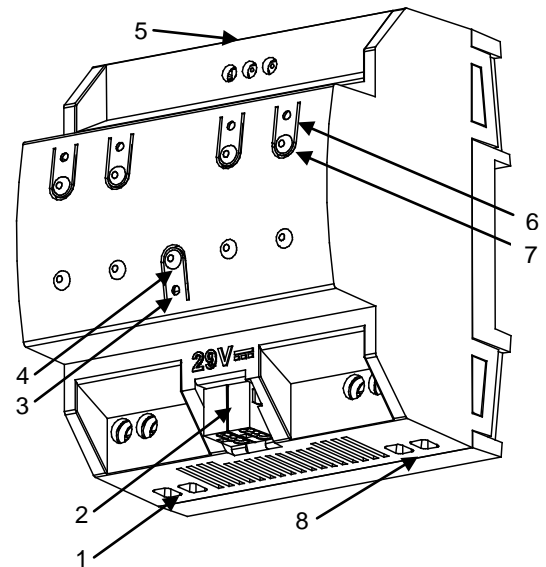


Figure 1. DIMinBOX 2CH

1. Terminal block (neutral and phase)	2. KNX bus connection	3. Programming/Test LED	4. Programming/Test push button
5. Analog/Digital inputs	6. Output LED indicator	7. Manual control push button	8. Output channels

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

**Programming LED:** lighting red = programming mode; blinking red = safe mode; lighting green = test mode.

**Output LED indicators:** lighting during a press button with manual control enabled. Moreover, it indicates the error present in the outputs. For further information, consult the "error notifications" section.

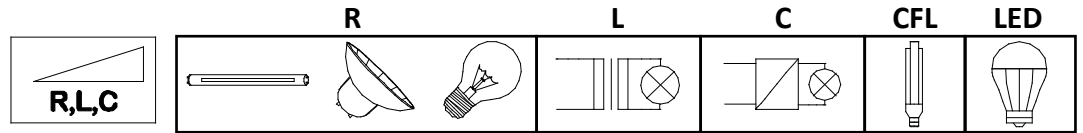
### GENERAL SYSTEM SPECIFICATIONS

Device type		Electric operation control device		
KNX supply	Voltage (typical)	29VDC SELV		
	Voltage range	21...31VDC		
	Maximum Consumption	Voltage	mA	mW
		29VDC (typical)	8.8	255
24VDC <sup>(1)</sup>	12,5	300		
Connection type		Typical TP1 bus connector for rigid cable 0.80mm Ø		
External power supply		<b>110-125VAC or 230VAC (50 or 60Hz)</b>		
Device action type		Type I		
Protection class		II		
Electrical stress period		Long		
Degree of protection		IP 20, clean environment		
Operation temperature		-5°C to +45°C		
Storage temperature		-20°C to +70°C		
Operation humidity		5 to 95% RH (no condensation)		
Storage humidity		5 to 95% RH (no condensation)		
Installation		To be mounted inside distribution boxes or electrical panels with DIN rail		
Response on KNX bus failure		Data saving		
Operation indicator		Programming LED (red) ON when pushing the programming button. Test LED (green) ON when device is in Test mode		
Weight		216g		
PCB CTI index		175V		
Housing material		PC FR V0, halogen free		

<sup>(1)</sup> Maximum consumption in the worst case scenario (KNX Fan-In model)

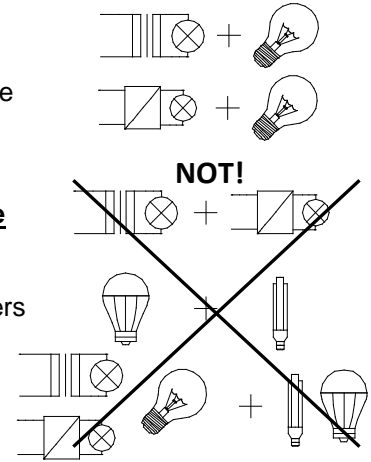
## SUPPORTED LOADS

- R= Resistive
- L= Inductive
- C= Capacitive
- CFL = Dimmable Compact Fluorescent Lamps
- LED = Dimmable LED lamps

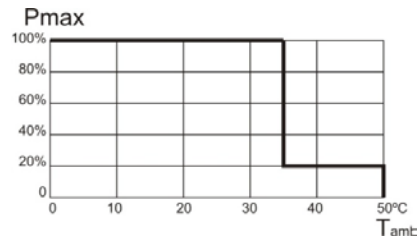


## LOAD MIXING

- For mixed resistive (R) with inductive (L) loads, do not exceed a 50% share for the resistive load.
- For mixed resistive (R) with capacitive (C) loads, do not exceed a 50% share for the resistive load.
- **NEVER connect capacitive loads and electronic transformers with inductive loads in the same channel.**
- Do not mix in the same channel CFL or LED lamps with R L C loads.
- It is not advisable to mix different models of CFL lamps, LED lamps or transformers in the same channel since correct functioning can be affected.



## OVERHEATING PROTECTION

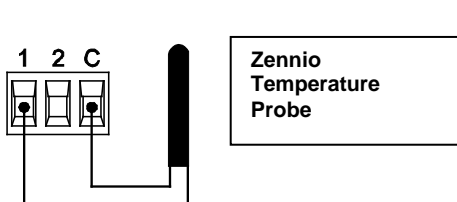


- When the ambient temperature is too high the universal dimmer actuator will regulate itself, at a maximum of 20%.
- Once the ambient temperature decreases, the dimmer will resume normal operation. Refer to user manual.

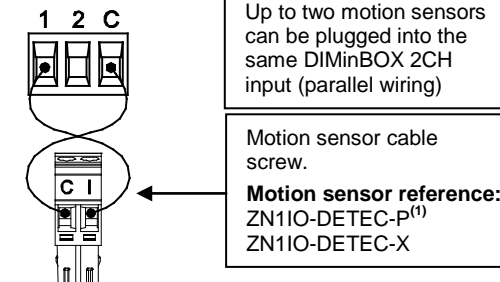
INPUT SPECIFICATION AND CONNECTIONS	
CONCEPT	DESCRIPTION
Number of inputs per common	2
Input voltage	+3.3VDC for the common
Input current	1mA @ 3.3VDC (each input)
Input impedance	Approx. 3.3kΩ
Switching type	Dry voltage contacts between input and common
Connection method	Screw terminal block
Max. cable length	30m
NTC probe length	1,5m
NTC accuracy (@ 25°C)	0.5°C
Temperature measure resolution	0.1°C
Cable cross-section	0.15mm <sup>2</sup> to 1.5mm <sup>2</sup>
Maximum response time	10ms

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

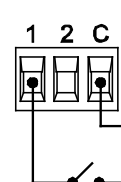
### Temperature Probe



### Motion Sensor



### Switch/Sensor/ Push Button



(1) The micro switch number 2 in the ZN110-DETEC-P **must be in Type B position** to work properly.

## ERROR NOTIFICATIONS

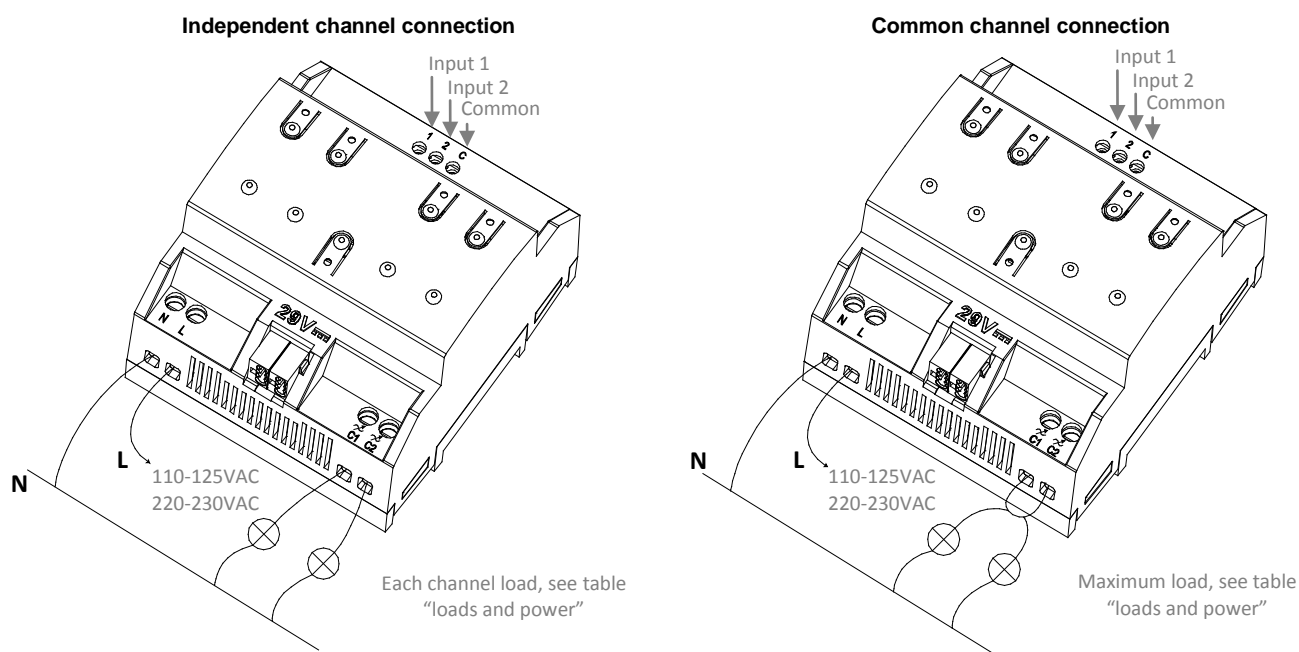
ERROR	LED BEHAVIOR	VISUAL NOTIFICATION
Short circuit	The two LED of the channel with the error blink alternately each 0,5 seconds	
Voltage Surge	Continuous "down" LED lighting and "up" LED blinking each 0,5 seconds.	
Overheating	The four LED light continuously.	
Anomalous Frequency	The four LED alternately blink each 0,5 seconds.	
Supply Voltage Failure	"Up" LED of the two channels blinks each second.	
Open circuit	The two LED of the channel with the error blink each second.	
Parameterization Error	The "up" LED of the channel with the error lights continuously and the "down" LED blinks each 0,25 seconds.	

OUTPUT SPECIFICATIONS AND CONECTIONS	
Contact type	Solid state swithching device
Load protection	Yes; overheating, voltage surge and short-circuit protection.
Dropping voltage	Negligible
Connection type	Screw terminal block
Recommended cable section	1,5mm <sup>2</sup> to 2,5mm <sup>2</sup>
Cable type	Stranded or solid wire
Response time	Negligible

LOADS AND POWER (@ 25°C ambient temperature around the device)			
		230VAC	110-125VAC
RLC	Individual channel	5 to 310W	5 to 200W
	Common channel <sup>(2)</sup>	20 to 600W	20 to 400W
CFL and LED <sup>(1)</sup>	Individual channel	5 to 200W	5 to 200W
	Common channel <sup>(2)</sup>	10 to 400W	10 to 400W

<sup>(1)</sup>depending on manufacturer and model. It is recommended to test with the maximum load to use in the installation

<sup>(2)</sup>it is mandatory to connect the load as shown in the “common channel connection” diagram and to choose “no” in the parameter “independent channel control” in ETS.



## ⚠ SAFETY INSTRUCTIONS

- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by law.
- Do not connect the mains voltage (110-230VAC) or any other external voltages to any point of the KNX bus. Connecting an external voltage might put the entire KNX system at risk.
- Once installed, the device must not be accessible from the outside.
- In case of changing load, disconnect the main voltage (110-230VAC).
- Ensure there is enough insulation between the AC voltage cables and the KNX bus cables.
- Keep away from water or humidity and do not cover the device with clothes, paper or any other material when in use.
- Not observing these safety instructions may cause fire or other hazards.
- The WEEE logo means that this device contains electronic parts and it must be discarded properly following the instructions of <http://zennio.com/wEEE-regulation>.