

MAIN FEATURES

- Reduced size: 90 x 60 x 35 mm (2 DIN rail units).
- No external supply required different from BUS.
- KNX BCU integrated.
- **2 actuation channels** to be configured as:
 - 2 shutter channels or,
 - 1 shutter channel and 2 individual outputs or,
 - 4 individual outputs.
- **6 multi-function opto-coupled inputs** configurable as:
 - **4 binary inputs** for free potential contacts.
 - **2 binary or A/D Inputs**, from serial number **10AAF**.
A NTC temperature probe and a **motion sensor** can be connected.
- Input and output connector wiring can be executed without the device.
- Designed to be mounted within distribution boxes, junction boxes and cabinets.
- Including advanced logical functions.
- Input and output timing facilities.
- CE directives compliant.

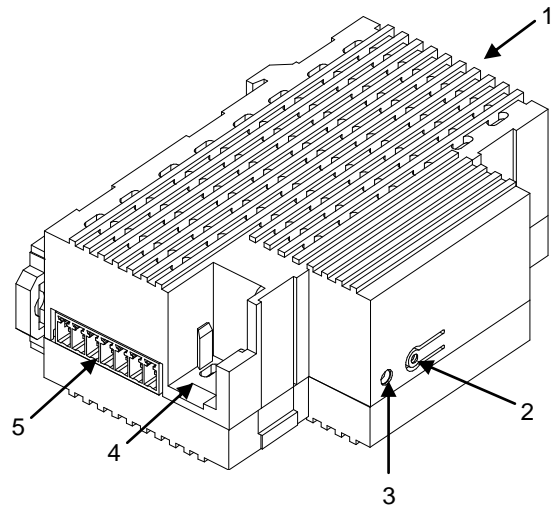


Figure 1: ACTinBOX Hybrid AD

1. Outputs 2. Programming button 3. Programming LED 4. KNX terminal 5. Inputs

Programming button: short button press to set the programming mode. If this button is held while plugging the device into the KNX bus, it goes into safe mode.

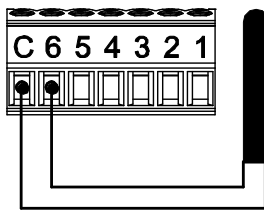
LED: programming mode indicator (red). When the device goes into safe mode, it blinks (red) every half second.

GENERAL SPECIFICATIONS		
Concept		Description
Device type		Electric operation control device.
Bus supply	Operation voltage	29V DC SELV
	Voltage margin	21.....31VDC
	Power consumption	Max. 240mW (all inputs connected)
	Bus connection	Typical bus connector TP1, 0.50 mm ² section
External supply		No
Ambient temperature		from 0°C to +55°C
Storage / transport temperature		from -20°C to +70°C
Ambient humidity (relative)		from 30 to 85% RH (No condensation)
Storage humidity (relative)		from 30 to 85% RH (No condensation)
Complementary characteristics		Class B
Safety class		II
Operation type		Continuous operation
Device action type		Type 1
Electrical solicitations period		Long
Protection class		IP20, clean environment
Fitting method		Snap onto DIN rail (EN 50022) or install in electrical box
Response to bus voltage failure		Data saving and relays open if channel configured as a shutter
Response in case of restarting		Data recovery and outputs changes as programmed
Operation indication		Programming led lighting when pushing programming bottom
Weight		170 g
PCB CTI index		175 V
Enclosure		PC FR V0 halogen free

INPUTS. SPECIFICATIONS AND CONNECTIONS	
Isolation method	Opto-coupler
Input voltage	+5V DC for the common
Input current	1mA at 4.75V DC in every input
Inputs per common	6
Input impedance	Approx. 3.3kΩ
Switch type	Dry contacts between input and common.
Connection method	Cable screw terminal and matching socket
NTC probe cable	1.5 m. (extending up to 30m.)
NTC accuracy (@ 25°C)	0.5°C
Temperature measure precision	0.1°C
Max. cable length	30 m.
Max. section	0.15 mm ² to 1 mm ²
Response time	<10 msec.
Number of digitals inputs	6 (inputs 1, 2, 3, 4, 5 y 6)
Number of analog/digital inputs	2 (inputs 5 and 6)

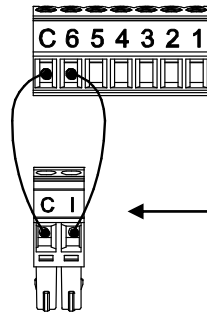
Connections diagrams for ACTinBOX Classic-Hybrid (from serial number 10AAF)
Application program ACTinBOX Classic-Hybrid 1.3 o higher version required.

Temperature Probe



Temperature probe references:
 ZN1AC-NTC68E
 ZN1AC-NTC68F
 ZN1AC-NTC68S

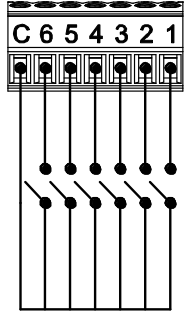
Motion Sensor



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

Motion sensor cable screw terminal.
Motion sensor references:
 ZN1IO-DETEC
 ZN1IO-DETEC-N
 ZN1IO-DETEC-X
 ZN1IO-DETEC-P⁽¹⁾

Switch/Sensor



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

OUTPUTS. SPECIFICATIONS AND CONNECTIONS		
Contact type	Potential-free make contact. Outputs 1 and 2 NOT VALID for Capacitive Load. Outputs 3 and 4 VALID for Capacitive Load from serial number 09AAD0001 (maximum C-load 140 μF / output)	
Type of disconnection	Micro-disconnection	
Rated current by output	10A 250V AC (2500 VA), 10A 30V DC (300W)	
Rated current by channel	15A 250V AC (3750 VA), 15A 30V DC (450W)	
Outputs per common (channel)	2 outputs per common /per channel	
Switching of different phases	Not possible	
Connection type	Cable screw terminal and matching socket	
Cable section	0.25 mm ² to 2.5 mm ²	
Cable type	Flexible cable using crimping terminals or rigid cable	
Number of automatic cycles per automatic action	Mechanical (min)	10 million operations (300cpm)
	Electrical (min.)	100.000 cycles at max. current (20cpm and resistive load)



SAFETY INSTRUCTIONS

- Do not connect the main voltage (230 V) or any other external voltages to any point of the bus. Connecting an external voltage might put all the KNX system into risk.
- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by law. Once the device is installed, it shouldn't be accessible.
- Ensure there is enough insulation between the AC voltage cables and the bus ones. A minimum spacing of 4 mm must be ensured.
- To avoid interfering EMC beams, the circuits for the inputs should not be installed in parallel to mains conducting lines.
- Flexible cable with crimping terminals or rigid cable without terminals must be used for output connection.
- Do not connect different phases to the output channels (channel A and B).

Technical Documentation