BIN-T 8X/6X/4X/2X

Universal interface with 8/6/4/2 configurable binary inputs / LED outputs and one temperature probe input

ZIOBINT8 / ZIOBINT6 / ZIOBINT4 / ZIOBINT2 — **TECHNICAL DOCUMENTATION**

FEATURES

- 8/6/4/2 connections configurable as binary input, LED output or solid-state relay control output

- Supports KNX Data Secure

- Input for temperature probe

- Total data saving on power failure

- Integrated KNX BCU (TP1-256)

- Reduced size: 39.0 x 39.0 x 13.6 mm

- Can be mounted within distribution boxes or wall back boxes

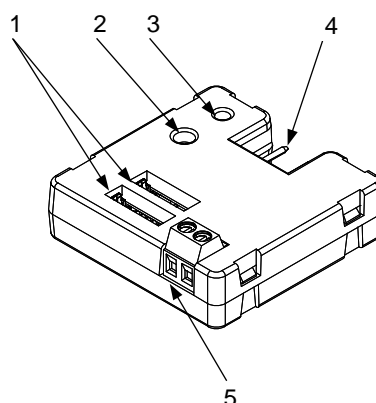- Conformity with the CE, RCM directives (marks on the back side)
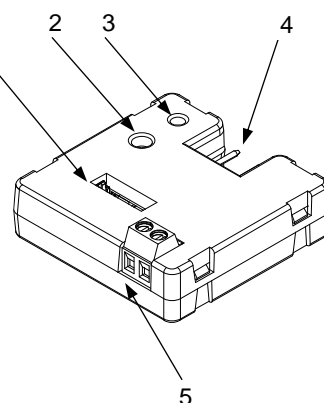

Figure 1: BIN-T 8X/6X

Figure 2: BIN-T 4X/2X

1. Binary inputs / Outputs	2. Programming button	3. Programming LED	4. KNX connector	5. Temperature probe input

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. In order to perform a KNX Secure factory reset, while the device is in safe mode, press the button for 10 seconds until the programming LED changes its state.

Programming LED: programming mode indicator (red). When the device enters the safe mode, it blinks (red) every half second. During the start-up (reset or after KNX bus failure) and if the device is not in safe mode, it emits a red flash.

GENERAL SPECIFICATIONS

CONCEPT			DESCRIPTION	
Type of device			Electric operation control device	
KNX supply	Voltage (typical)		29 VDC SELV	
	Voltage range		21-31 VDC	
	Maximum consumption	Voltage	mA	mW
		29 VDC (typical)	BIN-T 8X (14.6) BIN-T 6X (12.2) BIN-T 4X (9.5) BIN-T 2X (6.8)	BIN-T 8X (423.4) BIN-T 6X (353.8) BIN-T 4X (275.5) BIN-T 2X (197.2)
		24 VDC[1]	BIN-T 8X (17.5) BIN-T 6X (15) BIN-T 4X (12.5) BIN-T 2X (10)	BIN-T 8X (420) BIN-T 6X (360) BIN-T 4X (300) BIN-T 2X (240)
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			Not required	
Operation temperature			0 .. +55 °C	
Storage temperature			-20 .. +55 °C	
Operation humidity			5 .. 95%	
Storage humidity			5 .. 95%	
Complementary characteristics			Class B	
Protection class			III	
Operation type			Continuous operation	
Device action type			Type 1	
Electrical stress period			Long	
Degree of protection			IP20, clean environment	
Installation			Independent device to be mounted in distribution 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			The programming LED indicates programming mode (red).	
Weight			2X: 31 g / 4X: 33 g / 6X: 35 g / 8X: 36 g	
PCB CTI index			175 V	
Housing material			PC FR V0 halogen free	

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

BINARY INPUTS AND OUTPUTS SPECIFICATIONS AND CONNECTIONS

CONCEPT	DESCRIPTION
Number of inputs/outputs	8/6/4/2
Inputs per common	1
Input/output voltage	Adapted to the load up to a maximum value of 12 VDC for each output
Input/output current	2 mA
Switching type	Dry voltage contacts between input and common
Connection method	8-wire connector with cable (included)
Cable cross-section [2]	0.08 mm² (28 AWG) – 30 cm length
Maximum cable length	30 m (@ 1 mm²)
Maximum response time	10 ms

[2] Connection to any Zennio push button is possible, independently of the allowed cable cross-section.

## TEMPERATURE PROBE INPUT SPECIFICATIONS AND CONNECTIONS

| CONCEPT	DESCRIPTION
Number of inputs	1
Operation voltage	+3.3 VDC in the common
Operation current	1 mA @ 3.3 VDC
Switching type	Dry voltage contacts between input and common
Connection method	Pluggable screw terminal block (0.2 Nm max.)
Cable cross-section	0.2-1 mm² (IEC) / 26-16 AWG (UL)
Maximum cable length	30 m
NTC accuracy (@ 25 °C) [3]	±0.5 °C
Temperature resolution	0.1 °C
Maximum response time	10 ms

[3] For Zennio temperature probes.

WIRING DIAGRAMS

Any combination of following inputs/outputs can be connected, but the simultaneous connection of a push button and an output in the same port is not allowed.
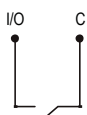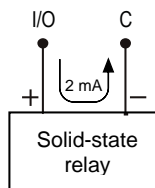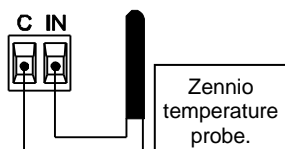
Binary input   **LED Output**   **Solid-state switch control output**
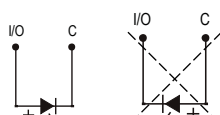
✓ Correct load wiring ✗ Incorrect load wiring

|	BIN-T 2X	BIN-T 4X	BIN-T 6X	BIN-T 8X
Wire 1	Red	Red	Red	Red
Wire 2	Purple	Purple	Purple	Purple
Wire 3	-	Green	Green	Green
Wire 4	-	Brown	Brown	Brown
Wire 5	-	-	Red	Red
Wire 6	-	-	Purple	Purple
Wire 7	-	-	-	Green
Wire 8	-	-	-	Brown
Commons	Black	Black	Black	Black

Temperature Probe*

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

⚠ Commons of different devices must not be connected together.

Common of temperature probe input and commons of binary inputs or outputs must not be connected together.

DIMENSIONS (mm)
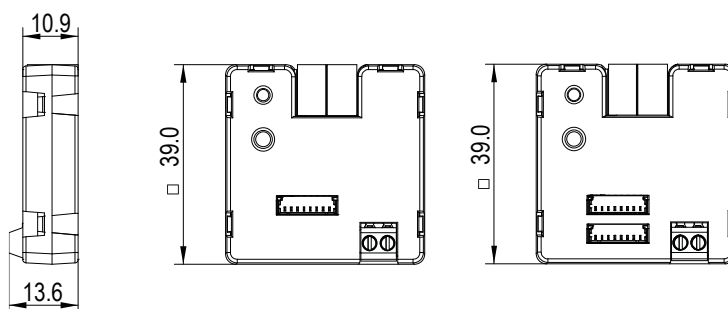
⚠ SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- 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.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- 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 https://zennio.com/licenses.