TMD-Display. KNX Capacitive Touch Controller

ZVI-TMDD **Technical Documentation**

CHARACTERISTICS

- Printout glass with touch surface
- Completely customized image for printout glass, through a web application
- 1.8" back-lighted display 128 x 64 pixels
- 8 main touch areas and a slider touch control.
- 2 analog/digital inputs
- No power supply different from the bus needed.
- Thermostat.
- Temperature sensor.
- State LED indicators with custom luminosity
- KNX BCU integrated.
- Magnetic fit with security mechanism to avoid accidental extraction. Metallic stand included.
- Complete data saving in case of power failure.
- CE directives compliant.

1. Temperature sensor	**2**. KNX bus	**3**. Analog/digital inputs	**4.** Programming button	**5**. Programming LED
6. Magnet	**7**. Display	**8**. Status LED	**9**. Main touch area	**10.** Slider touch control

Programming button: used to set the device in "Programming mode". If kept pressed while KNX bus recovery, "safe mode" is set.
Programming LED: LED ON indicates programming mode. LED blinks every 0.5 seconds when device is in "safe mode".

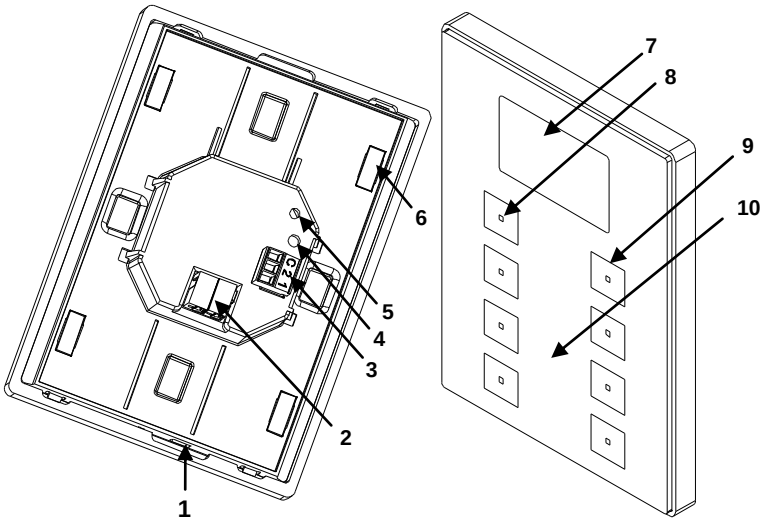


Figure 1. TMD-Display

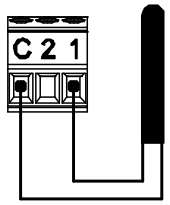
GENERAL SPECIFICATIONS			
CONCEPT			**DESCRIPTION**
Device type			Electric operation control device
KNX supply	Voltage		29V DC
	Voltage range		21…31V DC
	Consumption	29VDC	13mA
		24VDC	17mA
	Connection type		Typical bus connector TP1, 0.50mm^2 section
Operating temperature			from 10º C to +40º C
Storage temperature			from -20º C to +60º 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			III
Operation type			Continuous operation
Device action type			Type 1
Electrical solicitations period			Long
No. of automatic cycles per auto action			100.000
Type of protection			IP20, clean environment
Assembly			Vertical position. See example in "installation figure"
Minimum clearances			Keep away from heat and cold air flows to get better temperature sensor measures
Response to bus voltaje failure			Complete data saving
Response to bus failure recovery			Before failure data recovery
Function indicator			Several on display as programmed
Weight			170 gr. without metallic stand / 210 gr. with metallic stand
PCB CTI index			175 V
Enclosure material			PC+ABS FR V0 halogen free

INPUT CONNECTIONS	
CONCEPT	**DESCRIPTION**
Number of inputs per common	2
Output voltage of the inputs	+3.3VDC for the common (do not connect external voltage into the inputs in any case)
Output current of the inputs	1mA at 3.3V DC in every input
Impedance of the inputs	Approx. 3.3kΩ
Switching type	Dry voltage contacts between input and common
Connection method	Cable screw terminal
Max. cable length	30m.
NTC sensor cable length	1.5m. (extendable up to 30m.)
NTC accuracy (@ 25ºC)	0.5ºC
Temperature measure precision	0.1ºC
Cable cross-section	from 0.15 mm² to 1 mm²
Response time OFF → ON	Maximum 10ms.
Response time ON → OFF	Maximum 10ms.
Operation indicator	None

INPUT CONNECTIONS

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

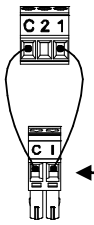
Temperature Probe



Temperature probe references:

ZN1AC-NTC68E
ZN1AC-NTC68F
ZN1AC-NTC68S

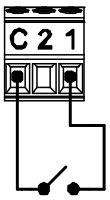
Motion Sensor (1)



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

Motion sensor screw terminal connector.
Motion sensor reference:
ZN1IO-DETEC-X
ZN1IO-DETEC-P(2)

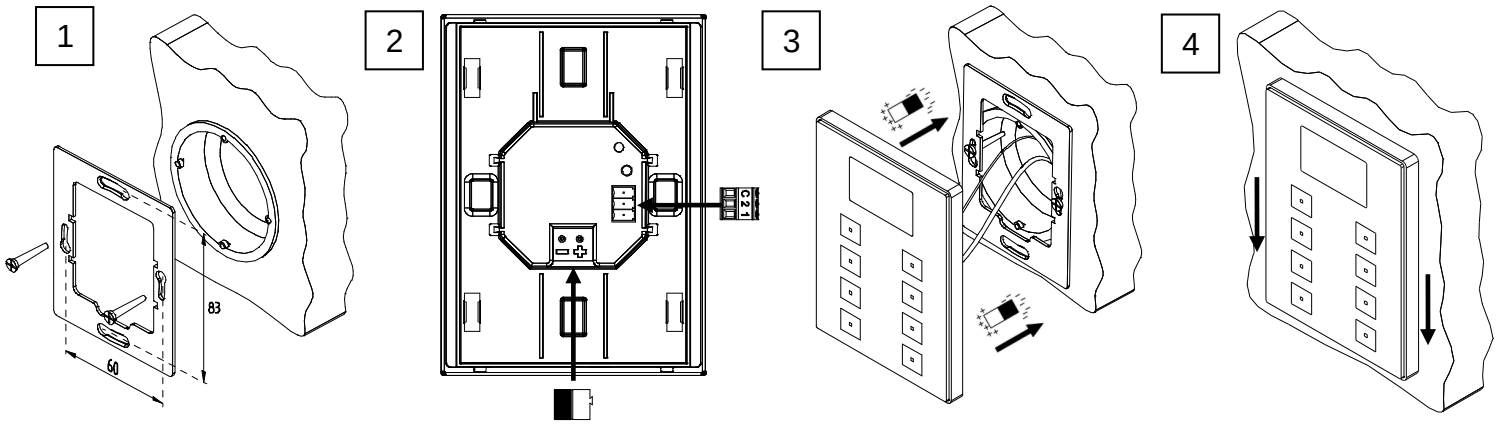
Switch/Sensor/ Push Button



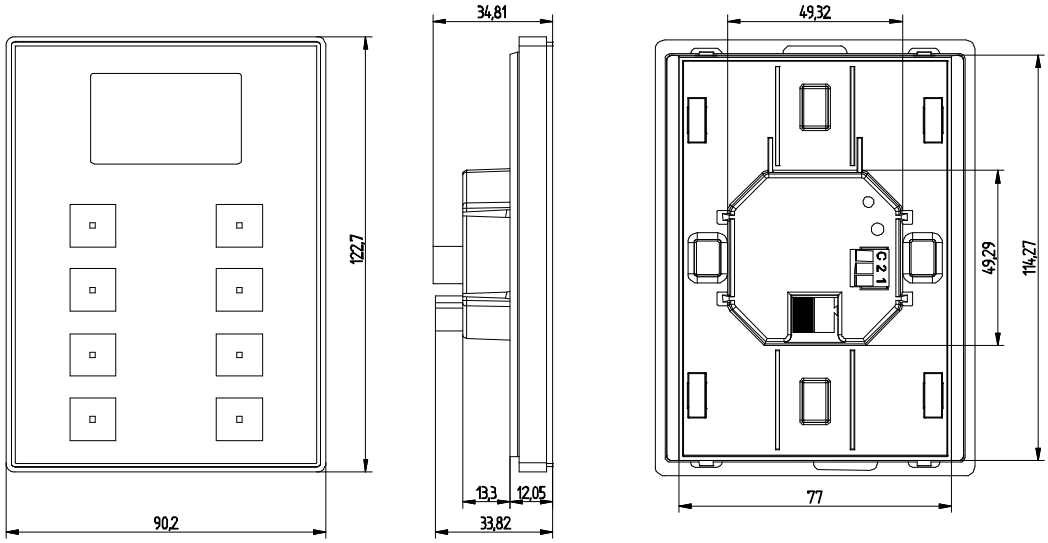
(1) Application program version 2.0 needed.
(2) The micro switch number 2 in the ZN1IO-DETEC-P **must be in Type B position** to work properly.

INSTALLATION AND CONNECTION DIAGRAM

Step 1: Place the metallic piece into a squared or rounded standard mounting box with the own screws from the box.
Paso 2: Connect the KNX bus at the rear of the device, as well as the inputs terminal.
Paso 3: Once inputs and bus KNX are connected, fit TMD-Display in the metal platform. The device is fixed thanks to the magnets.
Paso 4: Slid TMD-Display downwards to fix it with the security anchorage system. Check, from the side, that nothing unless TMD-Display outline can be seen.
To uninstall proceed the reverse way.



MAIN DIMENSIONS



GENERAL CARE

- Do not use aerosol sprays, solvents, or abrasives that might damage the device.
- Clean the product with a clean, soft, damp cloth.

SAFETY INSTRUCTIONS

- Do not connect the main voltage (230V) or any other external voltages to any point of the KNX bus. Connecting an external voltage might put the KNX system into risk.
- Ensure that there is enough insulation between the AC voltage cables and the KNX bus.
- Do not expose this device to direct sunlight, rain or high humidity.