

# 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 central 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.
- Conformity with the CE directives (CE-mark on the back side).

<ol> <li>Temperature sensor</li> </ol>	2. KNX bus	<ol><li>Analog/digital inputs</li></ol>	<ol><li>4. Programming button</li></ol>	<ol><li>Programming LED</li></ol>
6. Magnet	7. Display	8. Status LED	9. Main touch area	10. Central 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".

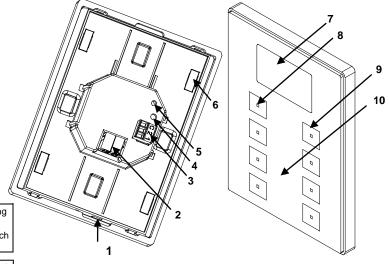


Figure 1. TMD-Display One

GENERAL SPECIFICATIONS					
CONCEPT			DESCRIPTION		
Device type			Electric operation control device		
Voltage (typical)			29VDC		
	Voltage range		2131VDC		
LAND.	Maximum consumption	Voltage	mA	mW	
KNX supply		29VDC (typical)	13	377	
		24VDC <sup>(1)</sup>	20	480	
	Connection type		Typical TP1 bus connector; 0.80mm <sup>2</sup> section		
Operating ten	perature		from 5°C to +40°C		
Storage temp	Storage temperature		from -20°C to +60°C		
Ambient humidity (relative)			from 3 to 95% RH (no condensation)		
Storage humidity (relative)			from 3 to 95% RH (no condensation)		
Complementary characteristics			Class B		
Safety class					
Operation type			Continuous operation		
Device action type			Type 1		
Electrical stress period			Long		
No. of automatic cycles per auto action		action	100.000		
Degree 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 voltage failure			Complete data saving		
Response to bus failure recovery		ŷ	Before failure data recovery		
Function indicator			Several on display as programmed		
Weight			130g (Aluminium frame version) / 122g (Polycarbonate frame version)		
PCB CTI index			175V		
Housing material			PC+ABS FR V0 halogen free		

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

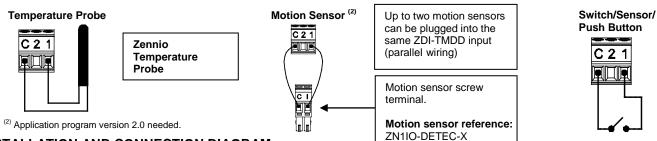
INPUT CONNECTIONS		
CONCEPT	DESCRIPTION	
Number of inputs per common	2	
Output voltage of the inputs	+3.3VDC for the common (do not connect external voltage into the inputs in any case)	
Output current of the inputs	1mA at 3.3V DC in every input	
Impedance of the inputs	Αρρτοχ. 3.3kΩ	
Switching type	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 (@ 25°C)	0.5°C	
Temperature measure precision	0.1°C	
Cable cross-section	From 0.13mm² to 1.3mm² (26-16AWG)	
Response time OFF → ON	Maximum 10ms	
Response time ON → OFF	Maximum 10ms	
Operation indicator	None	

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INTERNAL TEMPERATURE SENSOR SPECIFICATIONS			
CONCEPT	DESCRIPTION		
Measuring range	-10°C to 50°C		
Resolution	0.1℃		
Sensor precision @25°C	1%		

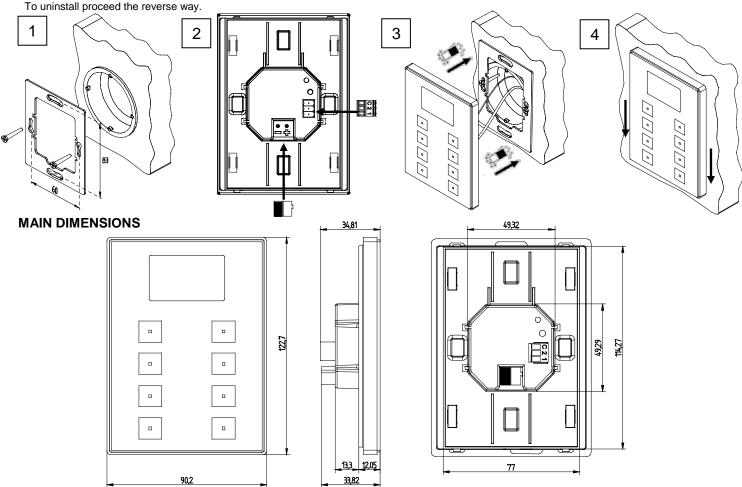
#### INPUT CONNECTIONS

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



# 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.
- **Step 2**: Connect the KNX bus at the rear of the device, as well as the inputs terminal.
- Step 3: Once inputs and bus KNX are connected, fit TMD-Display in the metal platform. The device is fixed thanks to the magnets.
- Step 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.



### **GENERAL CARE**

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

# NSAFETY INSTRUCTIONS

- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by
- Do not connect the main voltage (230VAC) 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 230VAC voltage cables and the KNX bus.
- Do not expose this device to direct sunlight, rain or high humidity.
- 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.



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