KNX Capacitive Touch Controller

ZVI-SQTMDD **Technical Documentation**

FEATURES

- Printout glass with touch surface
- Completely customized image for printout glass, through a web application
- 1,8" back-lighted display 128 x 64 pixels
- 5 touch areas.
- 2 analog/digital inputs
- No power supply different from the bus needed.
- 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).

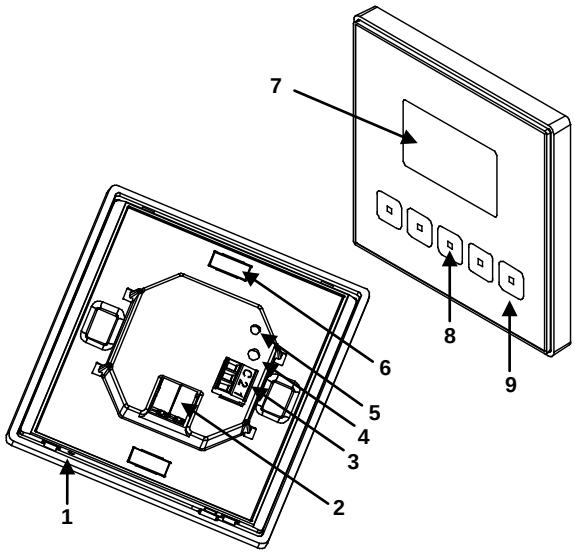


Figure 1. Square TMD-Display

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	

Programming button: used to set the device in "programming mode". If this button is held while plugging the device into the KNX bus, it goes into safe mode.
Programming LED: LED ON indicates programming mode. LED blinks every 0,5 seconds when device is in "safe mode".

GENERAL SPECIFICATIONS				
CONCEPT			**DESCRIPTION**	
Device type			Electric operation control device	
KNX supply	Voltage		29VDC	
	Voltage range		21…31VDC	
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	11	319
		24VDC[1]	15	360
	Connection type		Typical TP1 bus connector, 0,80mm^2 section	
Operating temperature			from 5ºC to +40ºC	
Storage temperature			from -20ºC to +60ºC	
Ambient humidity (relative)			from 5 to 95% RH (no condensation)	
Storage humidity (relative)			from 5 to 95% 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			234 gr.	
PCB CTI index			175 V	
Enclosure material			PC+ABS FR V0 halogen free	

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

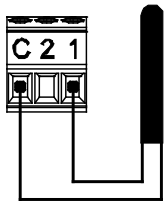
INPUT CONNECTIONS	
CONCEPT	**DESCRIPTION**
Number of inputs per common	2
Output voltage of the inputs	+3,3VDC for the common (do not connect external voltage into the inputs in any case)
Output current of the inputs	1mA at 3,3V DC in every input
Impedance of the inputs	Approx. 3,3kΩ
Switching type	Dry 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 0,15mm² to 1mm²
Response time OFF → ON	Maximum 10ms.
Response time ON → OFF	Maximum 10ms.
Operation indicator	None

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

INPUT CONNECTIONS

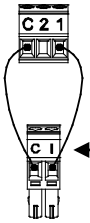
Any combination of the next **accessories** is allowed in the inputs:

Temperature Probe



Zennio Temperature Probe

Motion Sensor

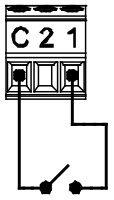


Up to two motion sensors can be plugged into the same device input (parallel wiring)

Motion sensor cable screw.

Motion sensor reference: ZN1IO-DETEC-X

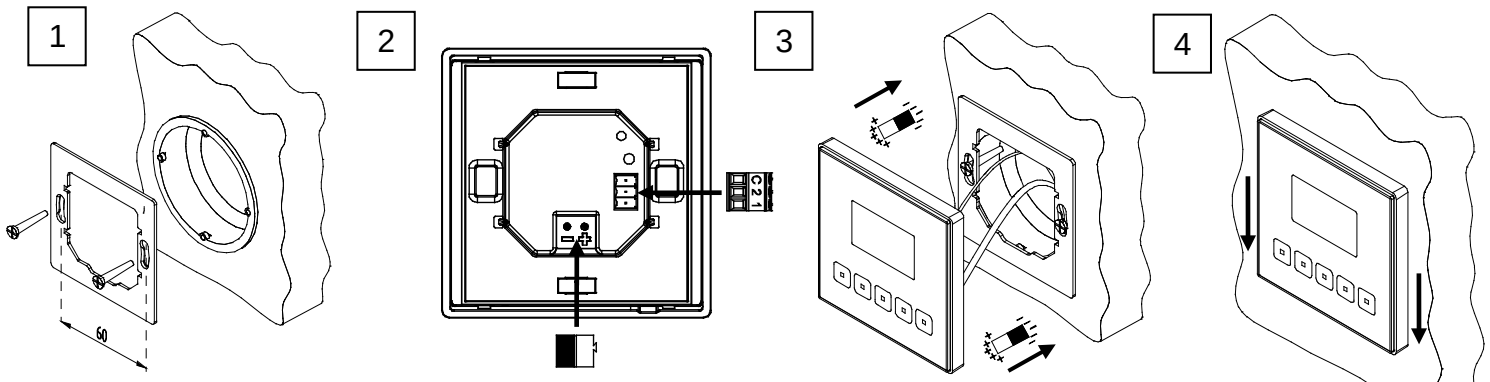
Switch/Sensor/Push Button



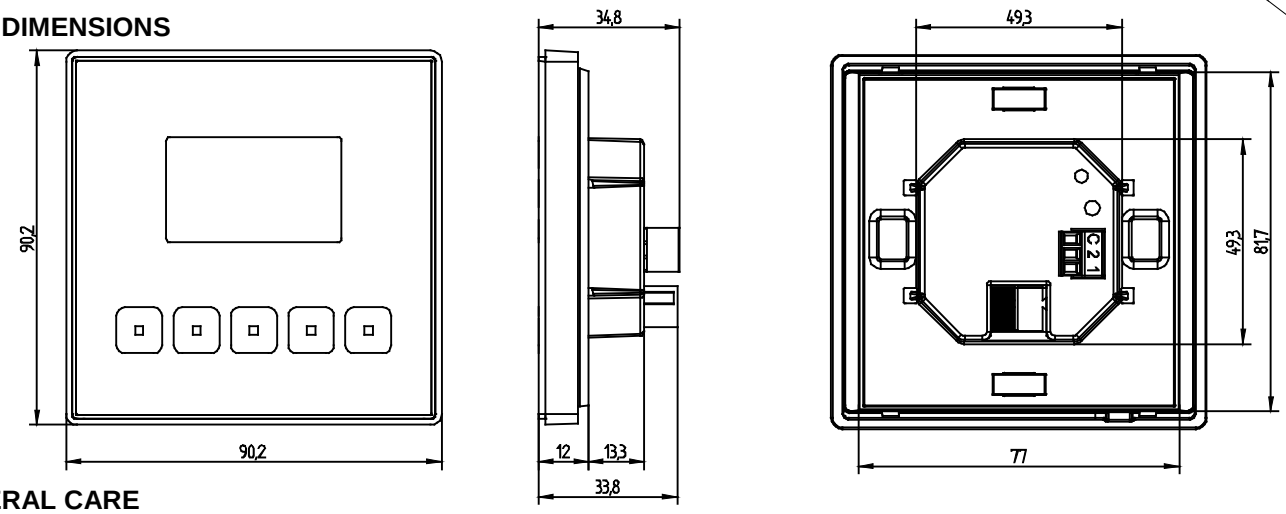
INSTALLATION AND CONNECTION DIAGRAM

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 Square TMD-Display in the metal platform. The device is fixed thanks to the magnets.
Step 4: Slid Square TMD-Display downwards to fix it with the security anchorage system. Check, from the side, that nothing unless Square 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

- Installation should only be performed by qualified electricians following applicable regulations on preventing accidents, as required by law.
- 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.
- 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.