Capacitive color touch panel

ZVI-Z41LIT

Technical Documentation

FEATURES

- 4.1'' capacitive color touch panel.
- 16 million color LCD display.
- Up to 12 configurable pages.
- Up to 96 configurable direct control and/or indicator functions.
- 2 independent thermostats.
- 2 analog/digital inputs.
- Customized device orientation (Vertical or Horizontal)
- Built-in temperature sensor.
- Real Time Clock (RTC) with watch battery.
- External 12-29VDC power supply.
- Integrated KNX BCU.
- Mini-USB connection.
- Magnetic fit.
- Complete data saving in case of KNX bus failure.
- Conformity with the CE directives (CE-mark on the back side).

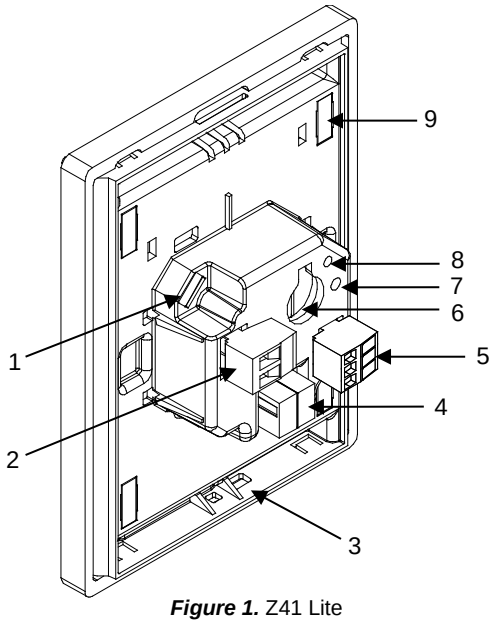


Figure 1. Z41 Lite

1. Mini-USB connector	**2**. External power supply connector	**3**. Temperature probe	**4.** KNX connector	
5. A/D inputs	**6**. Battery	**7**.Programming button	**8**. Programming LED	**9**. Magnet

Programming button: short button press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters into safe mode.
Programming LED: programming mode indicator (red). When the device enters into 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)		29VDC SELV	
	Voltage range		21…31VDC	
	Maximum consumption	Voltage	mA	mW
		29VDC (typical)	6	174
		24VDC[(1)]	10	240
	Connection type		Typical bus TP1 connector for rigid cable 0.80mm ø	
External Power Supply			12- 29 VDC. Maximum consumption: 150mA (12VDC), 76mA (24VDC), 63mA (29VDC). **Do not connect 29VDC KNX bus as external power supply**	
Operating Temperature			0ºC to +45ºC	
Storage Temperature			-20ºC to +60ºC	
Operating humidity			5 to 95% RH (no condensation)	
Storage humidity			5 to 95% RH (no condensation)	
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			Vertical or Horizontal position, with the temperature sensor at the bottom or right, respectively. Magnetic fit. See *Installation and Connection Diagram* section	
Minimum clearances			Please, keep away from heat and cold air flows to get better temperature measurements.	
Response on KNX bus failure			Complete data saving. Initialization screen.	
Response on KNX bus restart			Before failure data recovery	
Response to external power supply failure			Complete data saving. Display is switched off	
Response to external power supply failure recovery			Current data recovery	
Function indicator			Several on display as programmed	
Accessories			Mini USB A-B cable Ref. ZN1AC-UPUSB (not included)	
Weight			229g (Aluminium frame version) / 221g (Polycarbonate frame version) including battery 1g	
PCB CTI Index			175V	
Housing material			PC+ABS FR V0 halogen free	

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

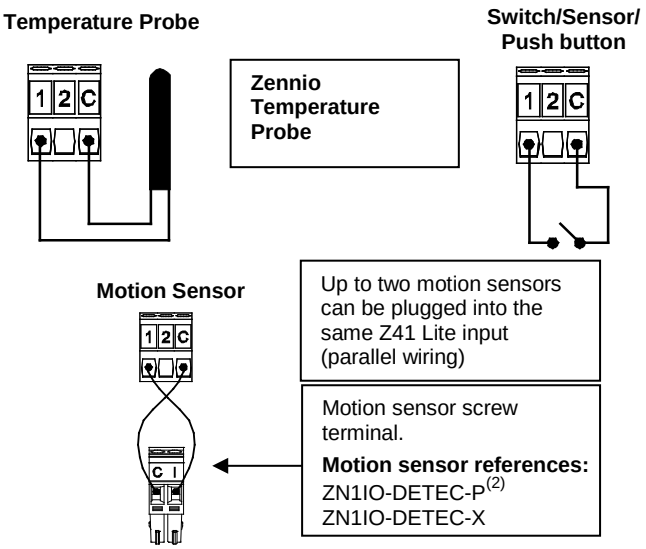
POWER SUPPLY AND PORT SPECIFICATIONS

CONCEPT	DESCRIPTION
External power supply connection	Pluggable screw terminal block
USB Connector	Mini USB Type A connector. Version 2.0. Use this port only for firmware updates. Consult the *Manual for Firmware Update* at www.zennio.com. Do not connect to PC, hard drives or other devices with consumption higher than 150mA.

INTERNAL TEMPERATURE SENSOR AND CLOCK SPECIFICATIONS	
CONCEPT	**DESCRIPTION**
INTERNAL TEMPERATURE SENSOR	
Measuring range	-10 to 50ºC
Resolution	0.1ºC
Sensor precision @25ºC	1%
Calibration	The temperature sensor should be calibrated through the application program according to the external power supply connected and the frequency of usage
INTERNAL CLOCK	
Resolution	1 minute in display / 1 second in KNX bus
Precision	30ppm
Power supply	CR1225 3V battery
Data/time Set	Manual (set from screen) or auto (through KNX Clock telegrams in bus)
Response to power failure (bus or external power supply)	It does not affect to internal clock
Response to power recovery	The internal error shows current time

INPUT SPECIFICATIONS AND CONNECTIONS

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



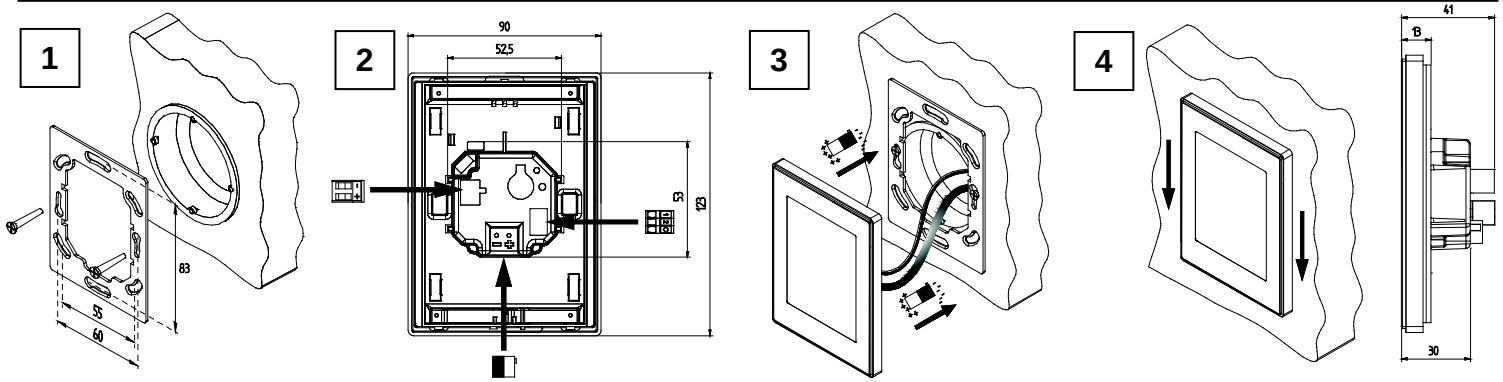
CONCEPT	DESCRIPTION
Number of inputs	2
Inputs per common	2
Operation voltage	+3.3VDC on the common
Operation current	1.0mA @ 3.3VDC (per input)
Maximum impedance	Aprox. 3.3kΩ
Switching type	Dry voltage contacts between input and common
Connection method	Pluggable screw terminal block
Maximum cable length	30m
NTC probe length	1.5m (up to 30m)
NTC accuracy (@ 25ºC)	0.5ºC
Temperature measure precision	0.1ºC
Cable cross-section	0.5mm² to 1.5mm² (28-14 AWG)
Maximum response time	10ms

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

INSTALLATION AND CONNECTION DIAGRAMS

Step 1: Place the metallic piece into a squared or rounded standard mounting box with screws.
Step 2: Connect the KNX bus at the rear of Z41 Lite, as well as the external power supply and the A/D input terminals.
Step 3: Once the power supply and KNX bus are connected, fit Z41 Lite in the metal platform. The device is fixed through the magnets.
Step 4: Slid Z41 Lite downwards to fix it with the security anchorage system. Check, from the side, that nothing unless Z41 Lite outline can be seen (the metal platform should be completely hidden by Z41 Lite).
In case of landscape configuration, please follow the steps considering a 90º counter-clockwise rotation.

To uninstall proceed in the reverse way.



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 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.
- Keep the device away from water 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 http://zennio.com/weee-regulation.