Capacitive color touch panel with IP connection
ZVI-Z41PRO

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 and Ethernet connection.
- Magnetic fit.
- Complete data saving in case of power failure.
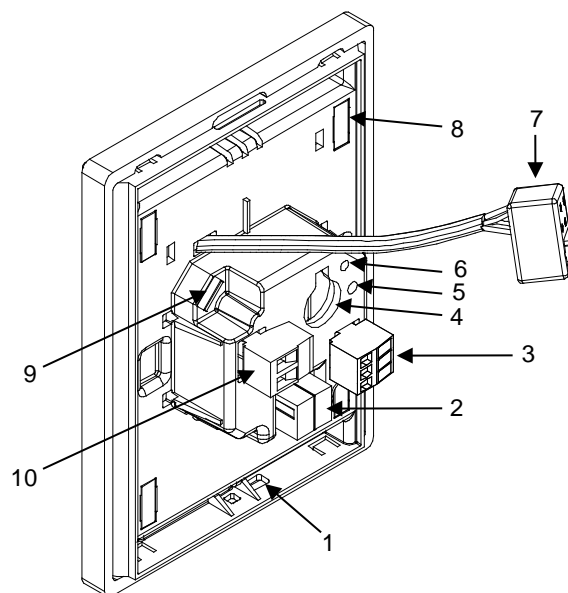- Conformity with the CE directives (CE-mark on the back side).

1. Temperature probe	**2**. KNX connector	**3**. Input connector	**4**. Battery	**5.**Programming button
6. Programming LED	**7**. Ethernet connector	**8**. Magnet	**9**. Mini-USB connector	**10**. External power supply connector

Figure 1. Z41 Pro

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 TP1 bus connector for rigid cable 0.80mm ø		
External power supply			12- 29 VDC. Maximum consumption: 160mA (12VDC), 76mA (24VDC), 64mA (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			RJ45 cable connector (included). Mini USB A-B cable Ref. ZN1AC-UPUSB (not included)		
Weight			237g (Aluminium frame version) / 226g (Polycarbonate frame version) including battery 1g		
PCB CTI index			175 V		
Housing material			PC+ABS FR V0 halogen free		

POWER SUPPLY AND PORT SPECIFICATIONS

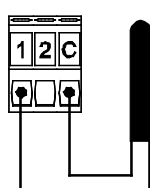| CONCEPT	DESCRIPTION
External power supply connection	Pluggable screw terminal block
Ethernet connector	RJ45 connector with 4 poles: Rx(+), Rx(-), Tx(+) and Tx(-). To use this port, consult the *Manual for Firmware Update* at www.zennio.com.
USB connector	Mini USB Type A connector. Version 2.0. Use 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	-10ºC 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
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

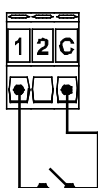## INPUT SPECIFICATIONS AND CONNECTIONS

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

Temperature Probe

Zennio Temperature Probe

Switch/Sensor

Motion Sensor

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

Motion sensor screw terminal.
Motion sensor references:
ZN1IO-DETEC-P[2]
ZN1IO-DETEC-X

CONCEPT	DESCRIPTION
Number of inputs per common	2
Input voltage	+3.3VDC for the common
Input current	1.0mA @ 3.3VDC (each input)
Input impedance	Aprox. 3.3kΩ
Switching type	Dry voltage contacts between input and common
Connection method	Pluggable screw terminal block
Max. 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 sensor **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 Pro, as well as the external power supply, the A/D input terminals and the Ethernet connector.
Step 3: Fit Z41 Pro in the metallic piece. The device is fixed through the magnets.
Step 4: Slid Z41 Pro downwards to fix it with the security anchorage system. Check, from the side, that nothing unless Z41 Pro outline can be seen (the metallic piece should be completely hidden by Z41 Pro).
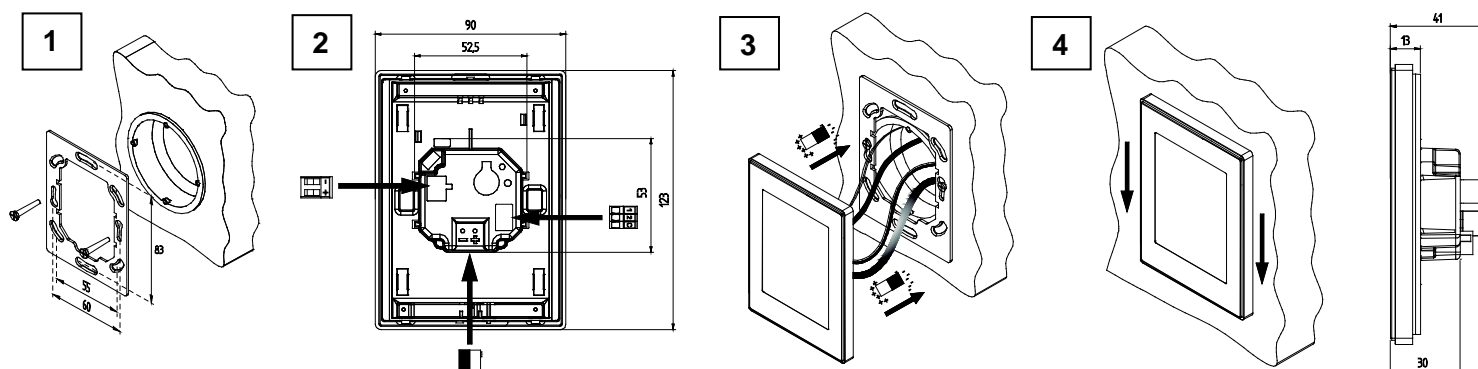
GENERAL CARE

- 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 (230VAC) or any other external voltages to any point of the KNX bus or the device.
- 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.