

FEATURES

- 4.1" capacitive color touch panel.
- LCD display of 16 million colors.
- 2 independent thermostats.
- 2 analog/digital inputs.
- Built-in temperature sensor.
- Real Time Clock (RTC) with watch battery.
- External power supply 12-29VDC needed.
- KNX BCU integrated.
- Mini-USB and Ethernet connection.
- Magnetic fit.
- Complete data saving in case of power failure.
- CE directives compliant.

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

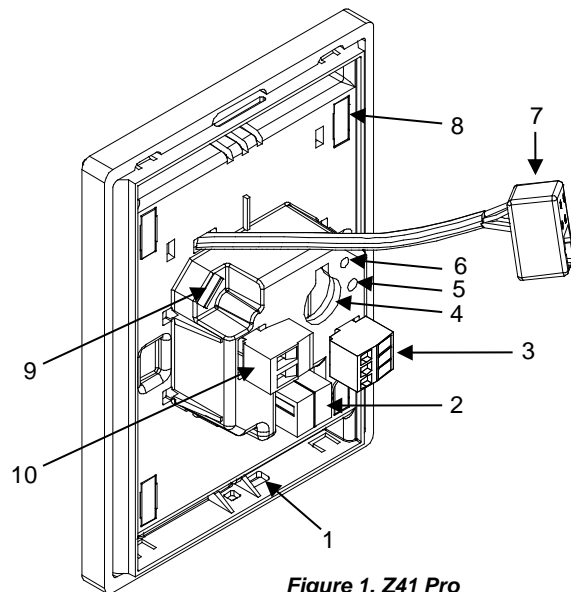


Figure 1. Z41 Pro

Programming button: a push button to set programming mode. If this button is held while plugging the device into the KNX bus, it goes into safe mode.
Programming LED: programming mode indicator (red). When the device goes into safe mode, it blinks (red) every half second.

GENERAL SYSTEM 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		
Bus connection		Typical bus connector TP1; 0.80mm ² section		
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		0°C to +45°C		
Storage temperature		-20°C to +60°C		
Ambient humidity (relative)		5 to 95% RH (no condensation)		
Storage humidity (relative)		5 to 95% RH (no condensation)		
Complementary characteristics		Class B		
Safety class		III		
Operation type		Continuous operation		
Device action type		Type 1		
Electrical stress period		Long		
Degree of protection		IP20, clean environment		
Assembly		Vertical position, with the temperature sensor to the bottom. Magnetic fit. See <i>Installation</i> section		
Minimum clearances		Keep away from heat and cold air flows to get better temperature sensor measurements		
Response to bus voltage failure		Complete data saving. Initialization screen		
Response to bus failure recovery		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		

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

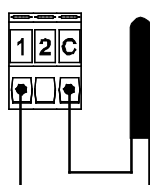
POWER SUPPLY AND PORT SPECIFICATIONS	
CONCEPT	DESCRIPTION
External power supply connection	Cable screw terminal and matching socket
Ethernet connector	RJ45 connector with 4 poles: Rx(+), Rx(-), Tx(+) and Tx(-). To use this port, consult the <i>Manual for Firmware Update</i> at www.zennio.com .
USB connector	Mini USB Type A connector. Version 2.0. Use this port only for firmware updates. Consult the <i>Manual for Firmware Update</i> 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°C to 50°C
Resolution	0.1°C
Sensor precision @25°C	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

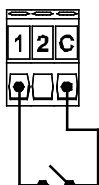
Any combination of the next **accessories** is allowed in the inputs:

Temperature Probe



Temperature probe references:
 ZN1AC-NTC68E
 ZN1AC-NTC68F
 ZN1AC-NTC68S
 ZAC-SQAT-W/S/A

Switch/Sensor



Motion Sensor



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

Motion sensor cable screw terminal.

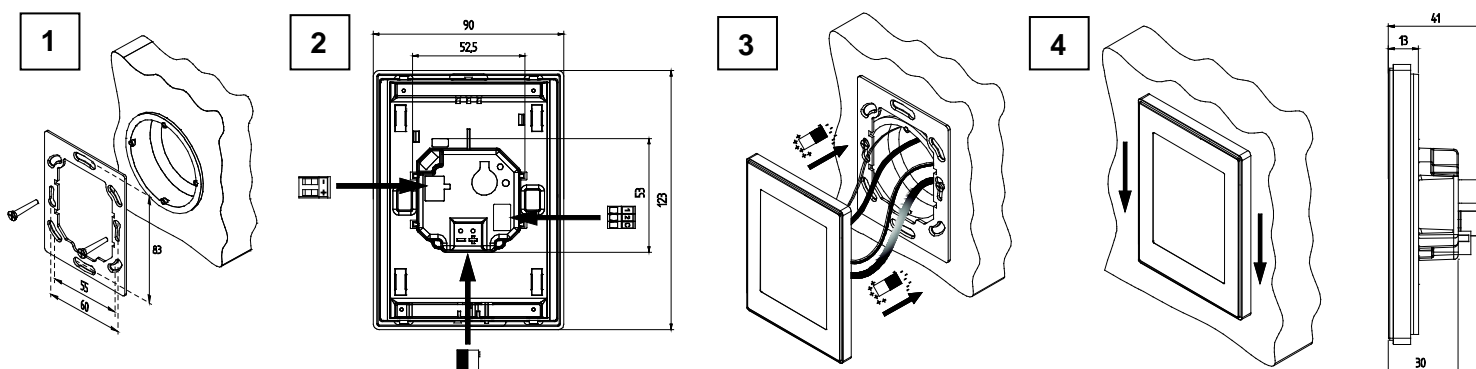
Motion sensor references:
 ZN1IO-DETEC-P⁽²⁾
 ZN1IO-DETEC-X

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	Cable screw terminal
Max. cable length	30m
NTC probe length	1.5m
NTC accuracy (@ 25°C)	0.5°C
Temperature measure precision	0.1°C
Cable cross-section	0.2mm ² to 1.5mm ² (28-14 AWG)
Response time	Max. 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 the own screws from the box.
- 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 thanks to 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>.

