Flat RGB 70 Display

Capacitive touch panel with round display, 7 buttons with RGB backlight and customisable printed glass

ZVIFR70D **TECHNICAL DOCUMENTATION**

FEATURES

- Customizable printed glass touch panel with 7 touch areas with RGB backlight and image customizable through web application (https://tmd.zennioapps.com)
- Available colours, please refer to: https://www.zennio.com/finishes
- KNX Data Secure supported
- 1.18" OLED display (128x128 pixels)
- 2 analog/digital inputs (binary input or temperature probe)
- Built-in temperature sensor
- Thermostat
- Clock functionality (subject to updating through devices with RTC or NTP client)
- Touch confirmation through acoustic feedback
- Proximity sensor
- Total data saving on KNX bus failure
- Integrated KNX BCU (TP1-256)
- Dimensions 70.0 x 70.0 x 36.1 mm (it protrudes 9.5 mm from the wall)
- Flush mount on back box
- Conformity with the CE, RCM directives (marks on the back side)

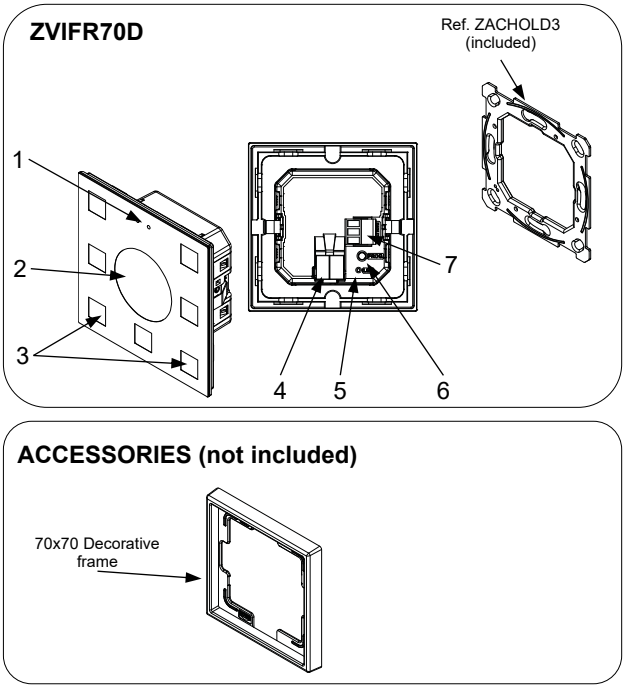


Figure 1: Flat RGB 70 Display

1. Proximity sensor	2. Display	3. Touch areas	4. KNX connector
5. Programming LED	6. Programming button	7. Inputs connector	

Programming button: short press to set programming mode. If this button is held while plugging the device into the KNX bus, it enters the safe mode. In order to perform a KNX Secure factory reset, while the device is in safe mode, press the button for 10 seconds until the programming LED changes its state.

Programming LED: programming mode indicator (red). When the device enters the 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)		29 VDC SELV	
	Voltage range		21-31 VDC	
	Maximum consumption	Voltage	mA	mW
		29 VDC (typical)	15.4	446.6
		24 VDC[1]	20	480
	Connection type		Typical TP1 bus connector for 0.8 mm Ø rigid cable	
External power supply			Not required	
Operation temperature			0 .. +55 °C	
Storage temperature			-20 .. +55 °C	
Operation humidity			5 .. 95%	
Storage humidity			5 .. 95%	
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			Flush mount on back box	
Minimum clearances			Not required	
Response on KNX bus failure			Data saving according to parameterization	
Response on KNX bus restart			Data recovery according to parameterization	
Operation indicator			The programming LED indicates programming mode (red). Backlighting of touch areas and display depending on their parameterization.	
Weight			52 g	
Housing material			PC+ABS FR V0 halogen free	

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

INPUTS SPECIFICATIONS AND CONNECTIONS	
CONCEPT	**DESCRIPTION**
Number of inputs	2
Inputs per common	2
Operation voltage	3.3 VDC in the common
Operation current	1 mA @ 3.3 VDC (per input)
Switching type	Dry voltage contacts between input and common
Connection method	Pluggable screw terminal block (0.2 Nm max.)
Cable cross-section	0.2-1.5 mm² (IEC) / 28-14 AWG (UL)
Maximum cable length	30 m
NTC accuracy (@ 25 °C) [2]	±0.5 °C
Temperature resolution	0.1 °C
Maximum response time	10 ms

[2] For Zennio temperature probes.

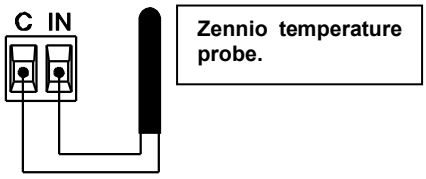
INTERNAL TEMPERATURE SENSOR SPECIFICATIONS	
CONCEPT	**DESCRIPTION**
Measuring range	-30 .. +90 °C
Temperature resolution	0.1 °C
NTC accuracy (@ 25 °C) [3]	±0.5 °C

[3] The accuracy of the NTC sensor may be reduced in case of keeping the backlight status LEDs permanently on.

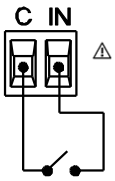
INPUTS CONNECTION

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

Temperature Probe*



Switch/Sensor/ Push button

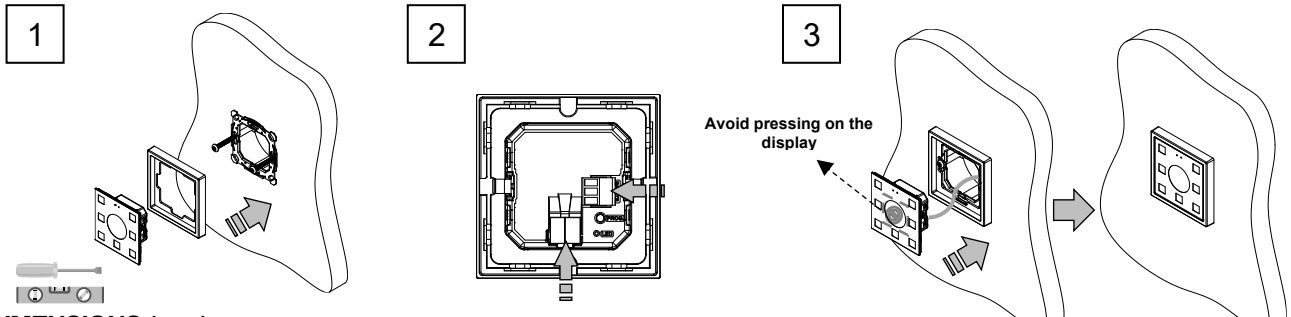


⚠ Commons of different devices must not be connected together.

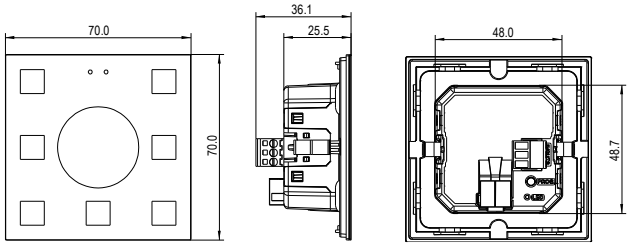
* May be a Zennio temperature probe or any NTC with known resistance values at three points in the range [-55, 150 ºC].

INSTALLATION INSTRUCTIONS

1. Fix the metal plate into a square or round back box by using the screws from the box, checking that it is levelled. Insert the device in the frame.
2. Connect the KNX bus and the inputs terminal to the back of the device.
3. Fit the device and its frame into its final position and check that the strength of the clips is enough to fix the device. Avoid pressing on the display during this step, in order to prevent accidental damages to the device.



DIMENSIONS (mm)



SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- 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 (condensation over the device included) and do not cover it with clothes, paper or any other material while in use.
- In order to improve the lifespan of the LED indicators, parameterising constant lighting is not recommended.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at https://www.zennio.com/weee-regulation.
- This device contains software subject to specific licences. For details, please refer to https://zennio.com/licenses.