» WRF06 LCD 2V

Flush mounting room temperature sensor

thermokon®
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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Fits all 55x55 switch ranges

(Illustration may be similar or different)

»APPLICATION

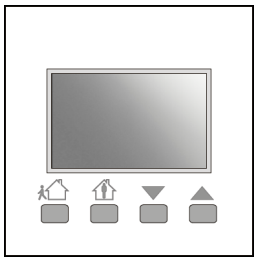
The flush-mounted room operating unit with setpoint adjustment and occupancy button is used for individual temperature control in living, hotel and office rooms. The device with 4 control buttons and LCD can be integrated into the most common switch ranges It is available in many color versions and suitable for design-oriented facilities. Depending on the type, it is also possible to control continuous valves for heating or cooling. The removable terminal block allows pre-wiring.

»TYPES AVAILABLE

Room operating unit temperature – aktiv 2x 0..10 V (temperature & set point)

WRF06 LCD 2V

Printing type 1

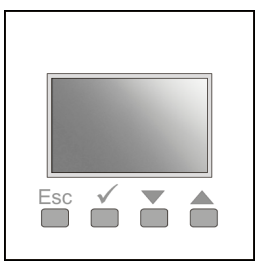


Type1: Button function

➔ Set point adjustment

➔ Adjustment of room occupancy (occupied / unoccupied)

Printing type 3



Type3: Button function

➔ Set point adjustment

➔ Cancel or confirm setpoint value

»SECURITY ADVICE – CAUTION

The installation and assembly of electrical equipment should only be performed by authorized personnel.

The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

»NOTES ON DISPOSAL

As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

»GENERAL REMARKS CONCERNING SENSORS

Especially with regard to passive sensors in 2-wire conductor versions, the wire resistance of the supply wire has to be considered. If necessary the wire resistance has to be compensated by the follow-up electronics. Due to self-heating, the wire current affects the measurement accuracy, so it should not exceed 1 mA.

When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.

Sensing devices with a transducer should always be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of the transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage (±0,2 V). When switching the supply voltage on/off, onsite power surges must be avoided.

»BUILD-UP OF SELF-HEATING BY ELECTRICAL DISSIPATIVE POWER

Temperature sensors with electronic components always have a dissipative power, which affects the temperature measurement of the ambient air. The dissipation in active temperature sensors shows a linear increase with rising operating voltage. This dissipative power has to be considered when measuring temperature. In case of a fixed operating voltage (±0,2 V) this is normally done by adding or reducing a constant offset value. As Thermokon transducers work with a variable operating voltage, only one operating voltage can be taken into consideration, for reasons of production engineering. Transducers 0..10 V / 4..20 mA have a standard setting at an operating voltage of 24 V =. That means, that at this voltage, the expected measuring error of the output signal will be the least. For other operating voltages, the offset error will be increased by a changing power loss of the sensor electronics. If a re-calibration should become necessary later directly on the sensor, this can be done by means of a trimming potentiometer on the sensor board.

Remark: Occurring draft leads to a better carrying-off of dissipative power at the sensor. Thus temporally limited fluctuations might occur upon temperature measurement.

»PRODUCT TESTING AND CERTIFICATION

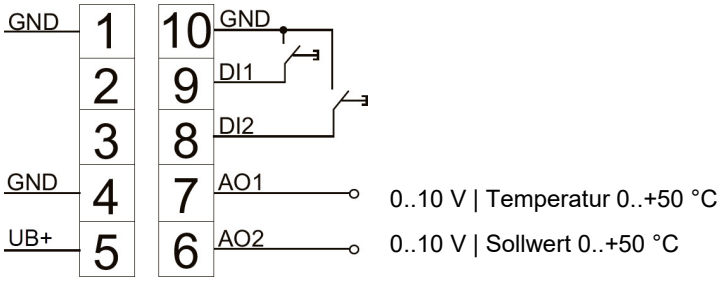
Declaration of conformity

The declaration of conformity of the products can be found on our website https://www.thermokon.de/.

»TECHNICAL DATA

Measuring values	Temperature
Output voltage	2x 0..10 V, min. load 1 kΩ
Power supply	15..24 V = (±10%) or 24 V ~ (±10%) SELV
Power consumption	typ. 0,8 W (24 V =) | 2,5 VA (24 V ~)
Measuring range temperature	0..+50 °C
Accuracy temperature	±0,5 K (typ. at 21 °C)
Display	2x digital input for floating contact, for activation of messages on the LCD display
Switch range Berker	S.1, B.3 aluminum, B.7 glass, Q.1, Q.3, K.1, K.5 aluminum | stainless steel
Switch range Busch-Jaeger	Busch-balance® SI, Busch-Duro 2000® SI, Reflex SI, solo®, future® linear, impuls, Busch-axcent®, alpha nea®
Switch range Feller	EDIZIOdue
Switch range Gira	E2, Standard 55, Esprit, Event, F100
Switch range Jung	LS 990, A 500, AS 500, A plus, A creation, CD 500
Switch range Merten	M-Smart, M-Arc, M-Plan, 1-M, Atelier-M, M-Pure, Artec, Artec stainless steel, Antique
Switch range Peha	Aura, Aura glass
Display	LCD 34x21 mm, monochrome
Enclosure	PC, pure white brilliant, pure white matt, aluminium, anthracite, frame color may differ slightly
Protection	IP30 according to EN 60529
Connection electrical	terminal block, max. 1,5 mm², pluggable
Ambient condition	0..+50 °C, max. 85% rH non-condensing
Mounting	flush mounted in standard EU box (Ø=60 mm)

»CONNECTION PLAN



»FUNCTION BUTTONS

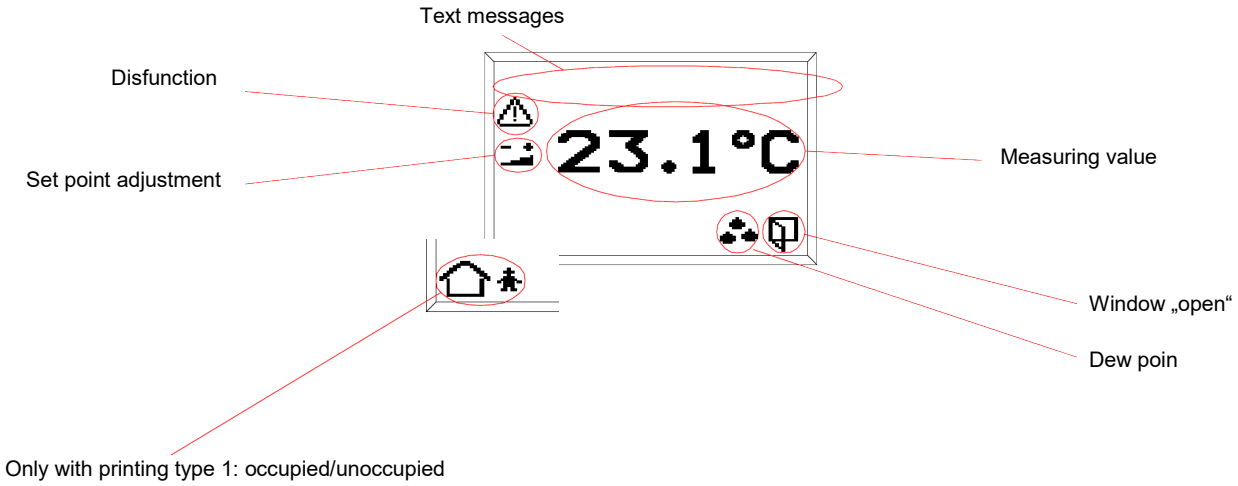
1. Press any menu button once to turn on the LCD backlight.
2. Press the ▲ or ▼ key once to enter the setpoint adjustment.
3. Press the ▲ or ▼ key again to change the setpoint.
4. Accepting the set setpoint: push-button ✓ or 10 sec no interaction
5. Abort: **Esc** key setpoint adjustement is cancelled

»CONFIGURATION MENU

The configuration menu allows the user to make subsequent changes to basic settings. The configuration menu is opened by simultaneously pressing the key ▲ and the Esc key (both outer keys) for approx. 5 seconds. The following parameters can be changed: minimum setpoint adjustment, maximum setpoint adjustment, basic setpoint (after reset), setpoint change per push-button operation. In addition, it is possible to recalibrate the temperature sensor by entering an offset in the event of measurement inaccuracies.

»DISPLAY

The following symbols can be activated and displayed. The symbols depend on the type and function of the device.



»DIMENSIONS (MM)