

Manual & Data sheet

Temperature evaluation + control instrument AT-1 with temperature sensor FT-1

The temperature evaluation+control instrument AT-1 with temperature sensor FT-1 is a universal temperature measuring system to gather and evaluate ambient / outdoor / indoor temperature. Individual and convenient adjustable switching thresholds and delay times are set to control illumination, light, jalousies, marquees, blinds, shutters, air conditioning, heaters, ventilation, flaps, roof hatches and build-ups.

The display at the control instrument shows the individual switching on/off thresholds and corresponding delay times. Furthermore the actual temperature is displayed.

The output relay, with potential-free changeover contact (no/nc), is operated, if adjusted threshold values are reached.

The maintenance-free and weather-proofed (IP67) temperature sensor FT-1 detects and gathers the ambient / outdoor / indoor temperature. The output signal is a square wave signal with proportional frequency to the temperature.



Connection – Installation – Commissioning:

! Connection, installation and commissioning only by qualified and skilled person with electrical education !

! Mount devices at the provided positions and wire according to the schematics !

Caution: Wrong connecting may cause damage of the instrument and sensor !

Check for correct wiring before switching on the power supply !

The temperature evaluation + control instrument AT-1 enclosure can be fixed on a standard DIN-rail as well as on a mounting plate in a switch cabinet. The screw-terminal strip is pluggable.

After switching on the power supply, the display will show the device name for 2 seconds. Hereafter the instrument is ready for operation.

The maintenance free and weather-proofed (IP67) temperature sensor FT-1 is boxed in a weather-resistant plastic enclosure (IP67). It is powered by the control instrument AT-1.

The cable connection (recommended: LiY(ST)Y 4x 0.8Lg) between sensor \leftrightarrow control instrument should not be longer than 250 m. In case of high disturbing environment, the cable shield is recommended to connect one-sided to Ground (0 V) at the control instrument.

Adjustments and readouts:

Push-button 'S/t' not pressed

Display	Description / Readout		Adjustments	
line 1	current temperature	Temp XX °C	none	
line 2	turn-on threshold	S _{ein} XX °C	Potentiometer S _{ein}	-5...+58 °C
line 3	turn-off threshold	S _{aus} XX °C	Potentiometer S _{aus}	-5...+58 °C

Push-button 'S/t' pressed

Display	Description / Readout		Adjustments	
line 1	current temperature	Temp XX °C	none	
line 2	turn-on delay time	t _{ein} XX min.	Potentiometer t _{ein}	0...25 minutes
line 3	turn-off delay time	t _{aus} XX min.	Potentiometer t _{aus}	0...25 minutes

Readout for special cases

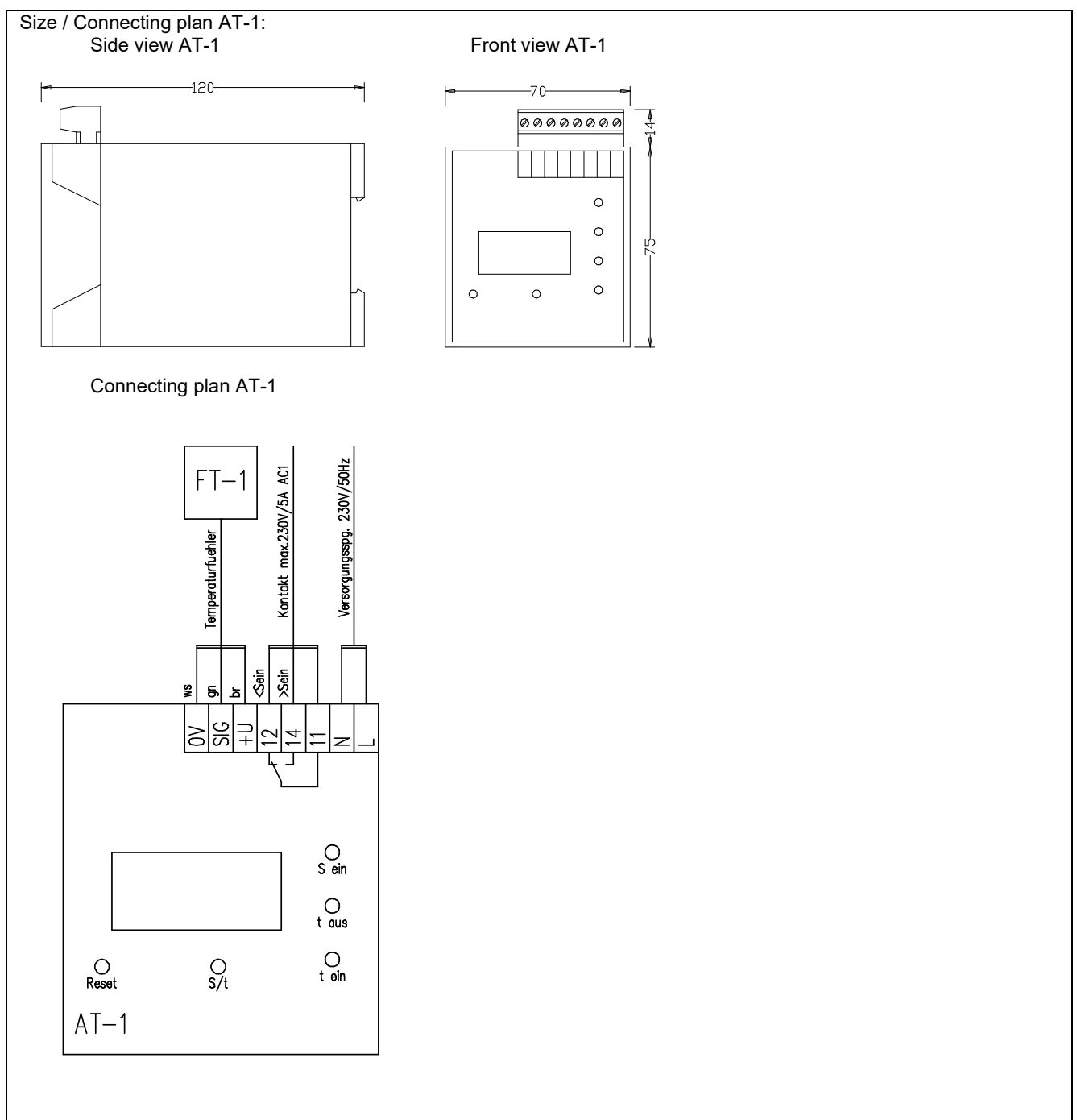
Display	Description / Readout		Comments
line 1	sensor error	Temp ? -5 °C	check connection of sensor
line 1	temperature less than -5 °C	Temp < -5 °C	value out of range
line 1	temperature more than +58 °C	Temp >+58 °C	value out of range
line 2	after power-on for 2 sec.	device name	none
line 3	relay activated / turned on	AKTIV	

Technical data AT-1:

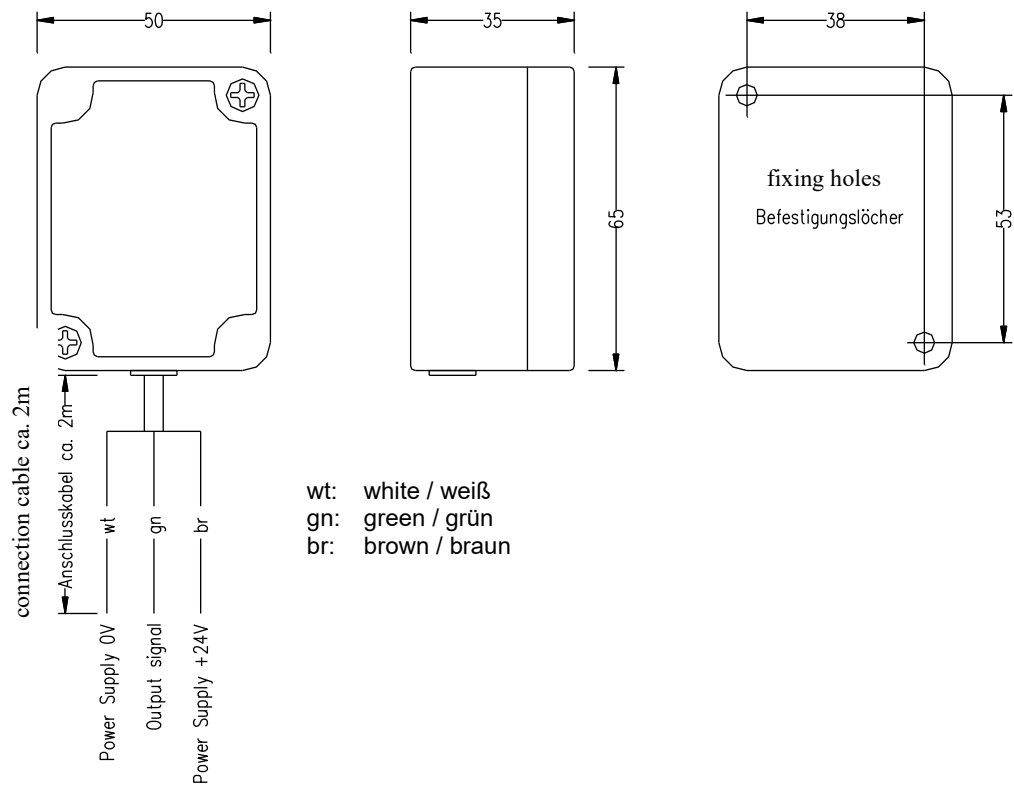
Operating voltage typ.: 230 V AC / 50 Hz $\pm 5\%$
 Input signal: 24V square-wave signal, 320...2000 Hz
 Output: change-over contact (no/nc), potential-free, 230 V / 5 A (AC1)
 Display: LC-Display, 3x 12 character, character height 5 mm
 Size housing: 70 x 75 x 120 mm (WxHxD)
 Ambient temperature: 0...+70 °C

Technical data FT-1:

Operating voltage typ.: 24 V DC $\pm 10\%$ (powered by control instrument AT-1)
 Measurement range: -5...+65 °C
 Ambient temperature: -30...+80 °C
 Protection degree: IP 67
 Output signal: 24V square-wave signal: 320...2000 Hz, (open-collector, with protecting resistor)
 Connection: ca. 2 m wired-ready cable, 3-wire, 3x 0.25 mm²
 Size housing: 50 x 65 x 35 mm (WxHxD)



Size / Connecting plan FT-1:



Installation and mounting:

Mounting is in any position possible.

If used as outdoor temperature sensor the place of installation should be on the north side (of the building), in order that direct sun irradiation does not falsify the measured temperature