# The TP-82IR wireless thermostat with IR sensor

The TP-82IR is an indoor thermostat which can be used to set and measure the temperature in a room. Temperature adjustment can be performed simply by turning the setting knob. This knob can be locked to avoid accidental setting. The thermostat does not use any programmed scheduling. The following features are also available:

- **Anti-freeze protection** – any drop in temperature under the (configurable) *AL Lo* value is detected and signalled to the receiver.
- **Floor temperature detection** – the thermostat is equipped with an IR sensor. This is especially suitable for under-floor heating control – using the IR-measured temperature floor heating regulation can be performed with higher precision and allows for a comfortable floor temperature with no additional risk of damaging the floor.
- **When combined with an Oasis** wireless security system (Jablotron), the following are possible:
  - Switching the heating ON and OFF remotely (by mobile phone, remote control or Internet).
  - Disabling the heating when windows are open.
  - Informing the user about heating faults and frost threats (if the temperature drops below a pre-configured value a warning SMS is sent).
  - Informing on the occurrence of fire (when the temperature is above a pre-configured value).

The thermostat is compatible with AC-82, AC-83, AC-8014 receivers and GD-04 + GD-04R.
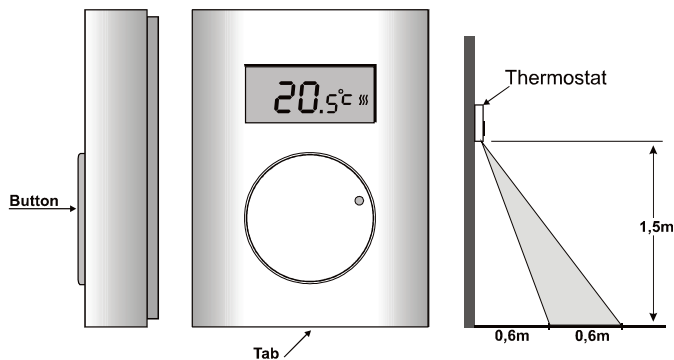
Installation

The TP-82IR should be mounted in a dry indoor location. Choose a mounting location about 1.5 meters above the floor in an area with good air circulation. The view of the IR sensor on the bottom must be direct and must not be shielded by any object – see the picture. Avoid places with draughts, dead air spots and radiant heat from the sun or appliances.

1. Release the upper cover by pressing the plastic tab on the bottom side of the housing
2. Mount the back part on to the desired location.
3. Insert the battery (the polarity is marked on the holder).
4. Close the thermostat.

Enrollment

Install and connect the receiving unit to the heating system. If the receiving unit was purchased separately then the thermostat must be enrolled to it – enter enrollment mode on the receiving unit (see its manual) and either enter the adjustment menu or connect the battery to the thermostat (both operations cause an enrollment signal to be sent).

Configuring the fixed parameters

The thermostat works with the following temperature thresholds:

t Lo (economic), *t Hi* (comfort), *AL Lo* (fault/freeze), *FL Lo* (floor low temperature) and *FL Hi* (floor high temperature). Each of the parameters is configurable within a corresponding temperature range – see the table below.

You can enter the adjustment menu by keeping the knob pressed for 10 seconds. Scrolling the menu is done by turning the knob. The display will show temperature parameter names – see the table below. The currently displayed parameter can be adjusted by pressing the knob briefly, turning the knob until the desired temperature is displayed, and confirming the setting by re-pressing the knob (this will also cause a return to the menu so that you can configure other parameters immediately). The adjustment menu is escaped from by pressing the knob while *OK* is displayed or automatically after 30 seconds. The parameter ranges are restricted according to the table.

Parameter	Adjustment range	Factory	Description
SPAN	0.1°C;0.2°C;0.5°C	0.2°C	Hysteresis for switching
t Lo	+6°C to +40°C*	6°C	Economical temperature
t Hi	+6°C to +40°C*	40°C	Maximal temperature
FL	On/Off	On	Floor sensor ON/OFF
FL Lo	+6°C to +40°C*	22°C	Lower floor-temperature threshold
FL Hi	+6°C to 40°C*	27°C	Upper floor-temperature threshold
FL t	Current temperature of the floor (displayed after pressing the knob)		
AL Lo	-9°C to +20°C	3°C	Critically low temperature
AL Hi	+30° to +70°C	60°C	Critically high temperature
Corr	±1°C	0	Correction

* *t Lo* to *t Hi* and *FL Lo* to *FL Hi* must be valid ranges: *t Lo* must not be greater than *t Hi* and *FL Lo* must not be greater than *FL Hi*.

Adjustment ranges as depicted on a coordinate axis:
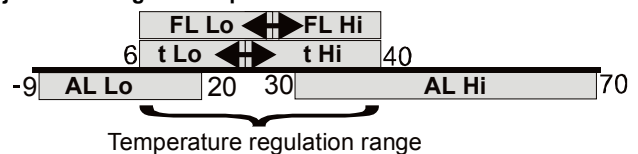
Temperature accuracy adjustment: The thermostat allows you to configure the hysteresis – the accuracy to which the temperature is regulated. The setting is done via the *SPAN* item in the adjustment menu (proceed the same way as with the threshold parameters mentioned above). Turning the knob lets you select one of the following accuracy ranges: ±0.1˚C, ±0.2˚C or ±0.5˚C (the factory default setting is ±0.2˚C).

Example: *If the accuracy is adjusted to ±0.5˚C and the temperature is set to 24˚C, the thermostat switches the heating on when the temperature drops below 23.5˚C and it switches it off if the temperature goes above 24.5˚C. In reality the temperature scatter can be slightly higher because of the temperature persistence of the room.*

Warning: too high an accuracy can cause the heating to turn on and off too frequently.

Temperature measurement correction: Possible temperature measurement offsets can be corrected via the *Corr* item in the adjustment menu. The range of adjustable corrections is ±1°C.

Manual operation

- When not being handled, the thermostat shows the current temperature in the room.
- **By turning the knob the desired temperature can be set** from *t Lo* to *t Hi* (during setting, a hand symbol is shown on the display). If the temperature cannot be set, see "Locking the thermostat".

  Setting the *t Lo* and *t Hi* limits allows the installer to prevent the regulated temperature from being set to undesirably high or low values by manual operation.

  Example: *If t Lo = +15°C and t Hi = +22°C then the regulation temperature can only be set within the range of +15 to +22°C (unless the adjustment menu is entered).*

- If you stop turning the knob the current temperature in the room will be displayed again (3 seconds after the last movement of the knob).
- If the **current temperature is lower than the desired temperature minus the hysteresis**, the thermostat will switch the heating on (a symbol of wavy lines will appear on the display).
- If the **current temperature is higher than the desired temperature plus the hysteresis**, the thermostat will switch the heating off (the symbol of wavy lines will disappear).

Floor heat detection

If enabled by setting *FL On*, floor temperature detection is performed using an IR sensor. The *FL Lo* and *FL Hi* parameters allow you to set temperature thresholds for under-floor heating regulation:

- If the current **floor temperature is lower than** *FL Lo*, the thermostat will switch the heating on. This way a comfortable floor-temperature is maintained even if no switch-on request is generated due to the room temperature.
- If the current **floor temperature is higher than** *FL Hi*, the thermostat will switch the heating off. This prevents the floor from being damaged by too high a temperature.

Note: Floor heat detection is of higher priority than room temperature detection. This means that the current temperature in the room is taken into account only when the current floor-temperature is between FL Lo and FL Hi.

You can display the current floor temperature by entering the menu, scrolling to the *FL t* parameter and pressing the knob (a re-press will cause a return to the menu).

Displaying the set temperature

As mentioned above, normally the thermostat displays the current temperature in the room. If you want to display the set temperature, **press the knob briefly** (no matter if the thermostat is locked). The set temperature will then flash on the display for 3 seconds.

Locked
Heating on
Low battery
Parameter setting
Temperature
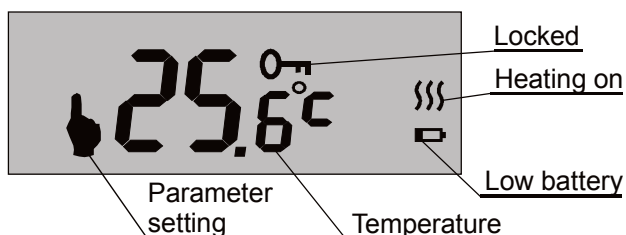
Locking the thermostat

- To prevent the accidental changing of the set temperature the thermostat can be **locked by pressing and holding the knob** (the key symbol will appear on the display for about 2 seconds).
- To unlock the thermostat simply **press and hold the turning knob** (the key symbol will disappear on the display for about 2 seconds).

Integration into the OASiS system

- The thermostat can be **enrolled to a control panel as a detector.** If the temperature decreases below *AL Lo* a panic alarm will be triggered = **frost threat** (heating failure).
- If the temperature exceeds *AL Hi* then a **fire alarm** will be triggered.
- An AC-82 receiving unit has two output relays (X and Y). Thermostats can be enrolled separately to each relay in order to **control two independent heating circuits.**
- **To operate a heating system the Oasis control panel** can also be enrolled (sequence 299) to the same relay of the receiving unit as the thermostat is enrolled to. A thermostat enrolled to the X relay **can be operated via the PGX programmable output,** and a

thermostat enrolled to the **Y** relay operated via **PGY.** If the programmable **output of the control panel is switched on,** the thermostat maintains the programmed temperature. If the control panel's output is **switched off** the thermostat only triggers heating if the temperature drops **below *t Lo*.**

- **To operate the heating,** RC-80 or RC-88 **remote controls** can also be enrolled to a receiving unit (AC-82). The heating can be **switched on** by remote controls to heat to the desired temperature and also **switched off where it only heats when the temperature is below *t Lo*.**
- **To disable heating when windows are open** JA-80M or JA-82M **detectors** can also be enrolled to the same relay as the thermostat is enrolled to**.** If the windows are closed it **heats** to the desired temperature and if windows are open it **heats only when the temperature is below *t Lo*.**
- **Up to 8 thermostats** can be enrolled to a single relay. If at least one thermostat transmits a heat command then the relay will be switched on.

RESET

The RESET function allows you to reset the device to the factory defaults listed in the table. You can perform a RESET by selecting *Res* in the adjustment menu and pressing and holding the knob for 5 seconds.
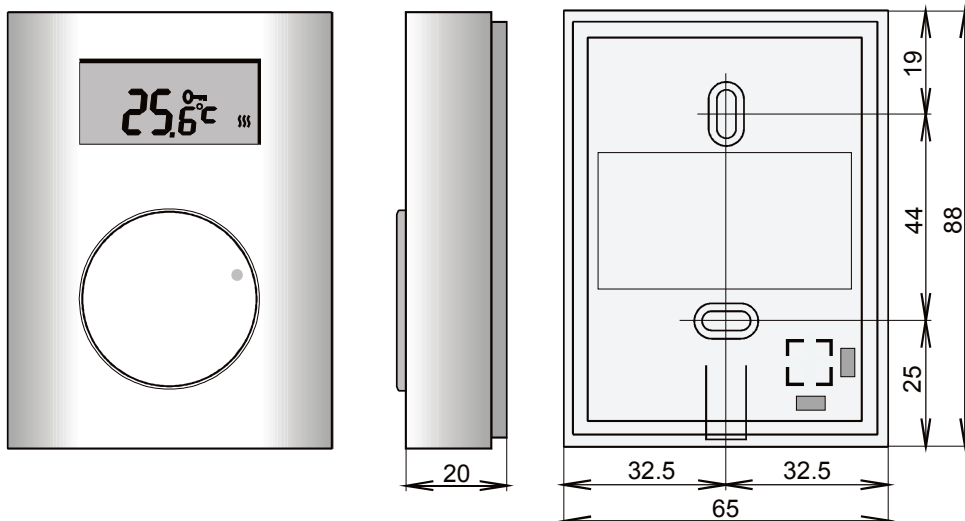
Specification

Power:	*1x AA LR6 1.5 V / 2.4 Ah alkaline battery*
	Please note: Battery is not included
Temperature measurement:	*+6 to +40 ˚C*
Temperature accuracy:	*adjustable: ± 0.1, ± 0.2 or ± 0.5 ˚C*
Freeze alarm (panic transmission) temperature threshold:	*<AL Lo*
	configurable from –9°C to +20°C
Operational range:	*up to 200 m (twisted cable)*
Floor sensor type	*TS-80*
Operational temperature range:	*-10°C to + 70°C (low humidity)*
Dimensions:	*65 x 88 x 20 mm*
Complies with:	
EMC	*EN 50130-4, EN 55022*

JABLOTRON ALARMS a.s. hereby declares that the TP-82IR is in a compliance with the relevant Union harmonisation legislation: Directives No: 2014/53/EU, 2014/35/EU, 2014/30/EU, 2009/125/ES, 2011/65/EU. The original of the conformity assessment can be found at www.jablotron.com - Section Downloads.

Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the manufacturer after use.

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