



# FL1-S

Electronic thermostat for underfloor heating,  
for wallbox mounting

FL1-S is an electronic 1-stage thermostat with on/off switch, sensor and input for connecting an external sensor.

- Setpoint range 0...40°C
- On/off switch
- Built-in sensor and input for an external sensor. External floor sensor included.

Floorigo FL1-S is an electronic one-stage thermostat for controlling underfloor heating. It is intended for mounting in a standard wallbox with 60 mm fastening screw distance.

The unit comes with two front covers to suit ELKO or ELJO casing installation systems.

### Sensors

The thermostat has a built-in sensor and an input for an external floor sensor, which is included.

It can be used with a combination of internal and external sensor. When using two sensors, one is the main sensor and one is the limiting sensor.

### Setpoint

The main sensor setpoint is set with the knob on the front. The setpoint range can be mechanically limited with the limiting rings behind the setpoint knob.

### Minimum/maximum limitation

It is possible to min. and max. limit the temperature to 0...40°C. The limit value is set on the internal potentiometer.

The DIP-switches on the circuit board are used to set which of the sensors is to be the main sensor and which is to be the limiting sensor, and if maximum or minimum limiting is to be applied (see table on the next page).

- Minimum/maximum limitation
- Closing relay 13 A, 230 V
- Setpoint range can be limited

### Economy setback

FL1-S has an economy setback of 5 K. Multiple FL1-S units can be connected to one common contact.

### Indications

The thermostat has a LED that is lit when the relay is active. It also indicates certain error events:

- Single flash: Interruption or short-circuit in the cable to the external sensor.
- Double flash: High ripple voltage on external sensor. The sensor cable is positioned so that it takes up disturbances. Move the cable or/and use a screened cable. The screen should be grounded at one end.
- Triple flash: Error on internal sensor or invalid choice has been set for the DIP-switches.

## Technical data

Supply voltage	230 V AC $\pm 10\%$ , 50...60 Hz
Connection	Screw terminal
Ambient temperature	0...50°C
Ambient humidity	Max 90 % RH
Protection class	IP21
Setpoint	0...40°C



**Low Voltage Directive (LVD) standards:** This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC through product standards EN 60730-1 and EN 60730-2-9.

**EMC emissions & immunity standards:** This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 61000-6-1 and EN 61000-6-3.

**RoHS:** This product conforms to the Directive 2011/65/EU of the European Parliament and of the Council.

## Inputs

Sensor input	One for external temperature sensor
Economy setback	One for potential-free closing contact from external control switch. Gives 5 K economy setback.

## Outputs

Relay contact	One closing contact, 230 V, maximum 13 A, heating function
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## Indications (LED)

Lit LED	Relay active
Single flash	Interruption or short-circuit in the cable to the external sensor
Double flash	High ripple voltage on external sensor
Triple flash	Error on internal sensor or invalid choice has been set for the DIP-switches

Sensor (included)	TG-G240N, screened floor sensor 0...40°C, supplied with 3 m cable, $\varnothing$ 6.5 mm
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## Sensor function

The sensor function is set using the DIP-switches on the circuit board. OFF is towards the wall and ON is towards the room.

Function	DIP1	DIP2	DIP3
Only external sensor	OFF	OFF	OFF
External main sensor with internal min limiting	ON	OFF	OFF
External main sensor with internal max limiting	OFF	ON	OFF
Only internal sensor	ON	ON	OFF
Internal main sensor with external min limiting	OFF	OFF	ON
Internal main sensor with external max limiting	ON	OFF	ON
Invalid choice	OFF	ON	ON
Invalid choice	ON	ON	ON

## Wiring and dimensions

