

# ECtemp 850 (EFIT 850)

**ECtemp 850 version III** is an advanced thermostat with LED display used for outdoor ground or roof applications. The sensors provide information about both moisture level and temperature, resulting in an optimal control of the heating system.


The ECtemp 850 can handle up to 2 independent areas, in any of the following combinations:

- Single system for roof or ground (1 system, 1–4 sensors).
- Combination system: 1 ground system and 1 roof system (2 systems, 2–4 sensors total, min. 1 sensor per system).
- Dual system: either 2 roof systems or 2 ground systems (2 systems, 2–4 sensors total, min. 1 sensor per system).

In the dual / combination systems it is possible to prioritize between the zones, e.g. if only a limited power output is available.



## Technical specifications

|   |   |   |
|---|---|---|
| <b>Benefits</b> <ul style="list-style-type: none"> <li>• Single, combination or dual zones</li> <li>• Up to 4 sensors</li> <li>• Moisture and temperature sensing</li> <li>• Self diagnosing programme</li> <li>• Safety level adjustment</li> <li>• Alarm function</li> </ul> <b>Approvals:</b><br><br><b>Standard compliance</b> <ul style="list-style-type: none"> <li>• EN/IEC 60730-1 (general)</li> <li>• EN/IEC 60730-2-9 (thermostat)</li> </ul> | Operation voltage:<br>PSU 24 VDC<br>ECtemp 850  | 180–250 VAC, 50–60 Hz / 24 VDC<br>24 VDC ±10%                         |
|   | Power consumption, max.:<br>ECtemp 850<br>Roof sensor<br>Ground sensor                              | 3 W<br>8 W (each)<br>13 W (each)                                      |
|   | Relay resistive load, max.:<br>System A / B relay<br>Alarm relay<br>Inductive load each relay, max. | 15 A (3450 W) @ 230 V<br>2 A @ 230 V<br>1 A @ 230 V, power factor 0,3 |
|   | Sensing unit  | DEVibus™ connected moisture sensor(s)                                 |
|   | Cable specification max   | 1 x 4 mm <sup>2</sup> or 2 x 2,5 mm <sup>2</sup>                      |
|   | Ball pressure test temperature  | 75 °C   |
|   | Pollution degree  | 2 (domestic use)  |
|   | Controller type   | 1 C   |
|   | Storage temperature   | -20 °C to +65 °C  |
|   | IP class  | 20  |
|   | Protection class  | Class II - □  |
|   | Dimensions ECtemp 850 (H/W/D)   | 85 x 105 x 53 mm  |
|   | Mounting method   | DIN rail  |
|   | Weight  | 720 g   |

## Types

| Item no. | Product name                 | Type   | Power | Size, mm        | Operation temperature | EAN no.       |
|----------|------------------------------|--|-------|-----------------|-----------------------|---------------|
| 088L0449 | <b>ECtemp 850 no sensors</b> | Without sensors, with PSU                      |       | 105 x 23,5 x 53 | -10...+50 °C          | 5703466130391 |
| 088L0459 | <b>Roof sensor</b>           | For ECtemp 850, with sensor tube, cable - 15 m | 13 W  | 15 x 24 x 216   | -50...+70 °C          | 5703466150290 |
| 088L0458 | <b>Ground sensor, 2 pcs</b>  | For ECtemp 850, cable - 15 m                   | 8 W   | ∅ 93 x 98       | -30...+70 °C          | 5703466150283 |



ECtemp 850 with PSU

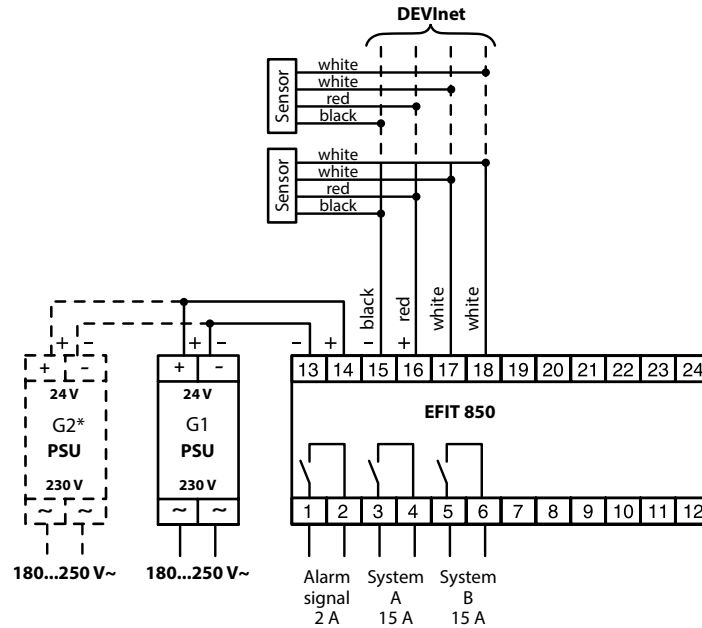


Ground sensor



Roof sensor

Connection scheme ECTemp 850



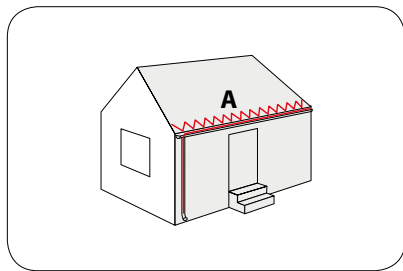
\* Additional PSU, if PSU output is less than 42 W and if number of sensors is 3 or 4.

**Note!** Check PSU Data Sheet / Quick Guide for possibility to connect 2 PSU in parallel.

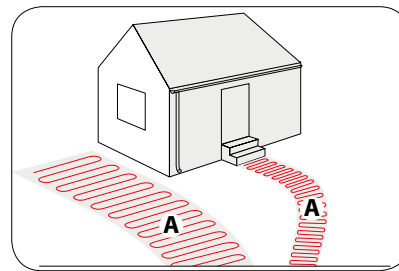
System configurations

**Zone support saves energy**

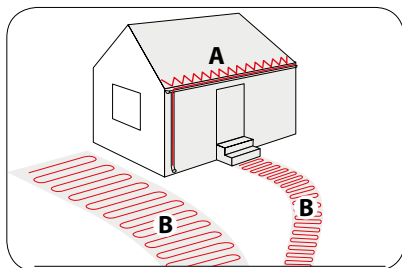
ECTemp 850 lets you divide your area in to 2 zones, e.g. a North and South side. In this way it is possible to save energy, when the South side is free of ice and snow faster because of the heat from the sun.



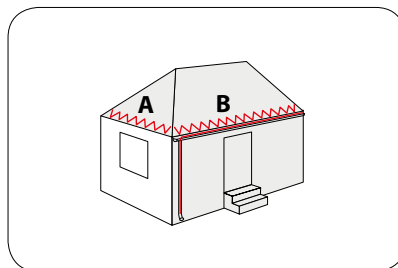
Single zone system for roofs (system A)



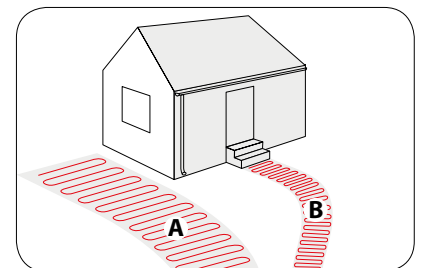
Single zone system for ground (system A)



Combined system - one zone for roof (system A), one zone for ground (system B)



Two zone system for roofs (systems A and B)



Two zone system for ground (systems A and B)