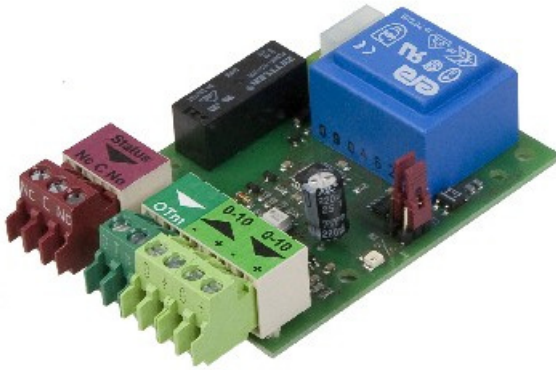


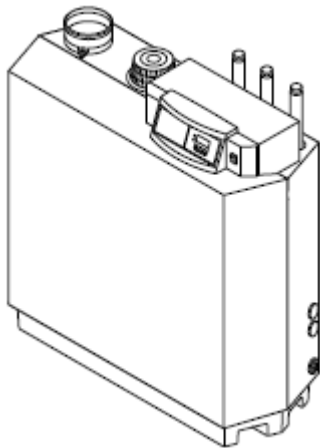
IF-01 - Interface 0-10V

This document describes the IF-01 interface that receives a 0-10 V signal from a BMS. This signal is interpreted as a temperature control signal or capacity control signal, and communicated to a boiler over OpenTherm. On the PCB, by means of 2 jumpers, the user can switch between temperature and capacity control for both the OpenTherm control and the 0-10 V feedback interface. The interface also has a 0-10 V output for feedback purposes to the BMS, and an alarm relay for fault indication. Finally, a green LED on the PCB indicates the interface status.

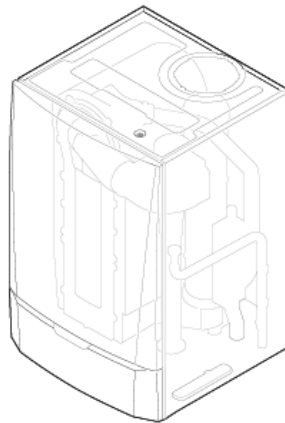


Article Numbers

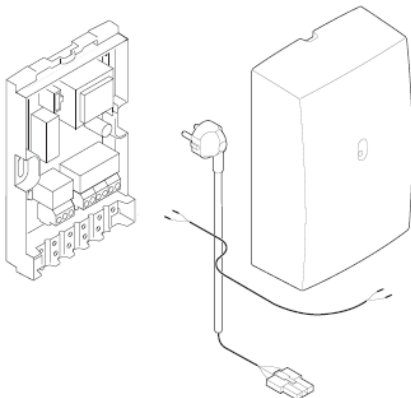
Gas 210 Eco Pro: S100325



Calenta & Quinta Pro: S100763

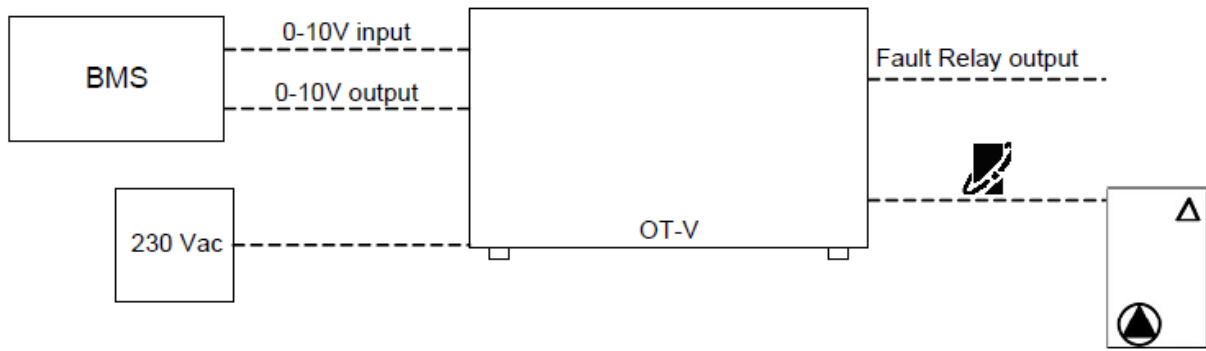


Wall mounting: S100865

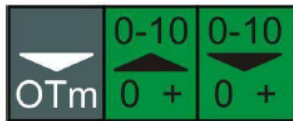


Obsolete: S101634
(does not exist anymore):

System Block Diagram



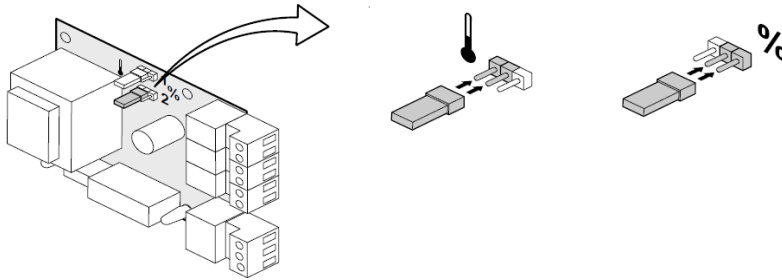
Terminals



Analog Input

In case the jumper for OpenTherm control is placed on position 2, capacity control is active.

In case the jumper for OpenTherm control is placed on position 1, temperature control is active.

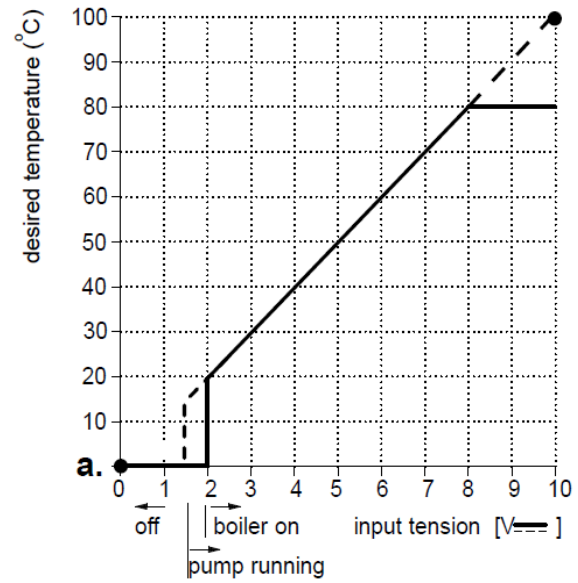
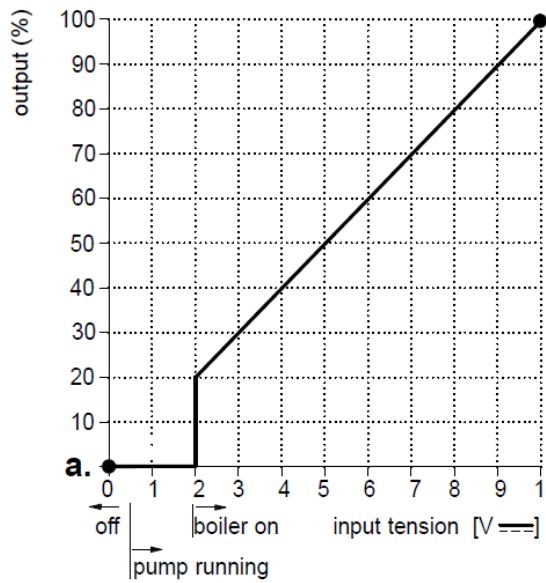


Capacity:

- 0,0 - 2,0 V = boiler off
- 2,0 - 2,2 V = boiler off , pump on
- 2,0 - 10 V = desired output between minimum en maximum

Temperature:

- 0,0 - 1,5 V = boiler off
- 1,5 - 1,8 V = boiler off, pump on
- 1,8 - 10 V = boiler on



Analog output (temperature)

In case the jumper for the feedback interface is placed on position 1, temperature feedback is active. The 0-10 V output is controlled based on the actual flow temperature of the boiler. Minimum output value when there is no Alarm = 1V.

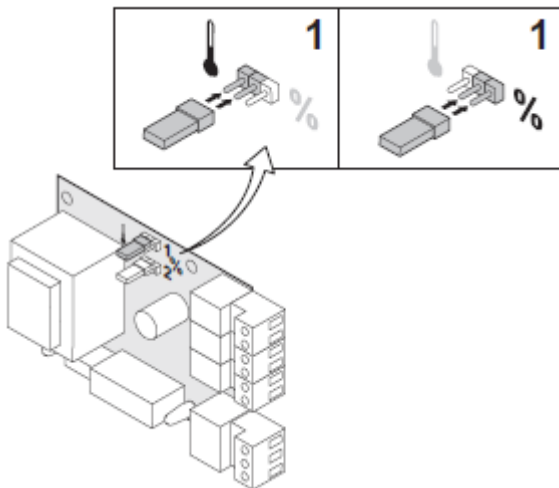
Analog output (capacity)

In case the jumper for the feedback interface is placed on position 2, capacity feedback is active. The 0-10 V output is controlled based on the actual capacity in operation of the boiler. When there is no alarm and Flame Off or CH not-Active, the output is 0 V. Minimum output value = 1V.

When there is no alarm and (Flame Off (ID0, LB bit 3 == 0) or CH not-Active (ID 0, LB bit 1 == 0)), the output is 0 V.

When there is no alarm and Flame On (ID0, LB bit 3 == 1) and CH Active (ID0, LB bit 1 == 1), the output is calculated as following: 0-10V output = $((17 * (100 - ID15, LB)) / 100 + ID15, LB) / 10$

Minimum output value (when calculated) = 1V



Digital Output alarm relay

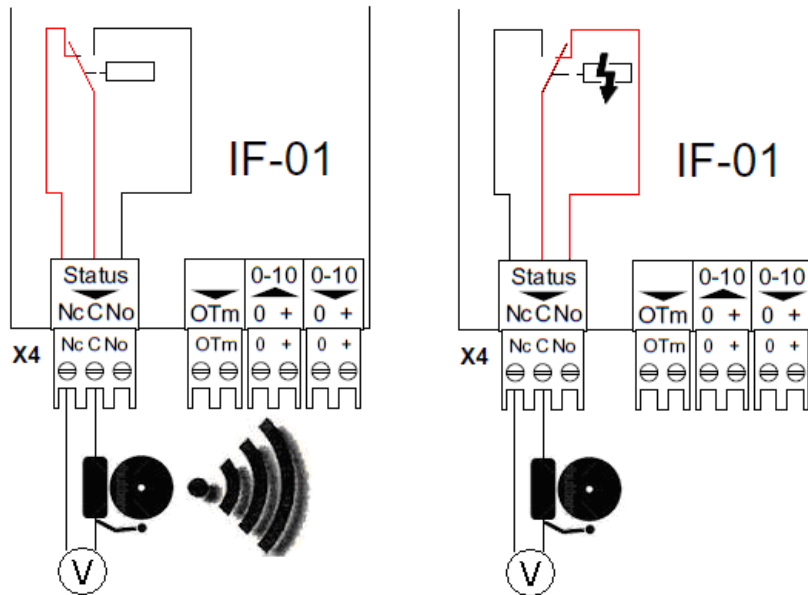
If the boiler locks out, a relay is de-energised and the alarm can be transmitted via a potential-free contact (maximum 230 V, 1 A) on terminals Nc and C of terminal X4. The output is potential free.

Normally Closed contact

- No power
- Power + alarm

Normally Open contact

- Power + no alarm



Green LED

A green LED on the PCB indicates the interface status, according to the table below:

LED	Description
Off	No OpenTherm slave detected (after power-up)
Short blink twice	No OT communication (> 60 seconds, successive)
Short blink three times	OT-slave doesn't support 14 while in capacity control for OpenTherm
Short blink four times	No jumper(s) detected (after power-up)
On	No fault