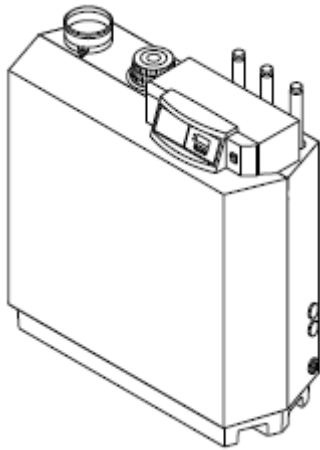


IF-01 - Interface 0-10V

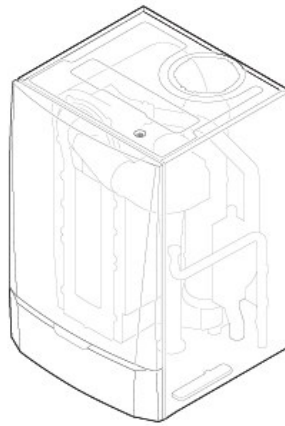
This document describes the IF-01 interface that receives a 0-10 V signal from a BMS. This signal is interpreted as a temperature control signal or capacity control signal, and communicated to a boiler over OpenTherm. On the PCB, by means of 2 jumpers, the user can switch between temperature and capacity 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

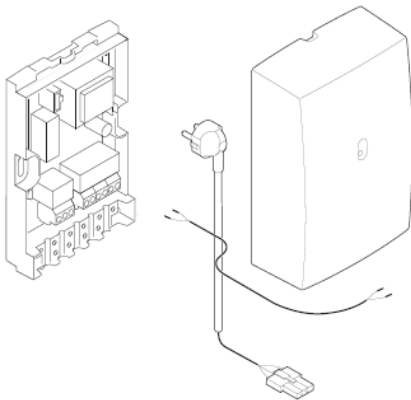
Gas 210 Eco Pro - S100325



Calenta & Quinta Pro - S100763



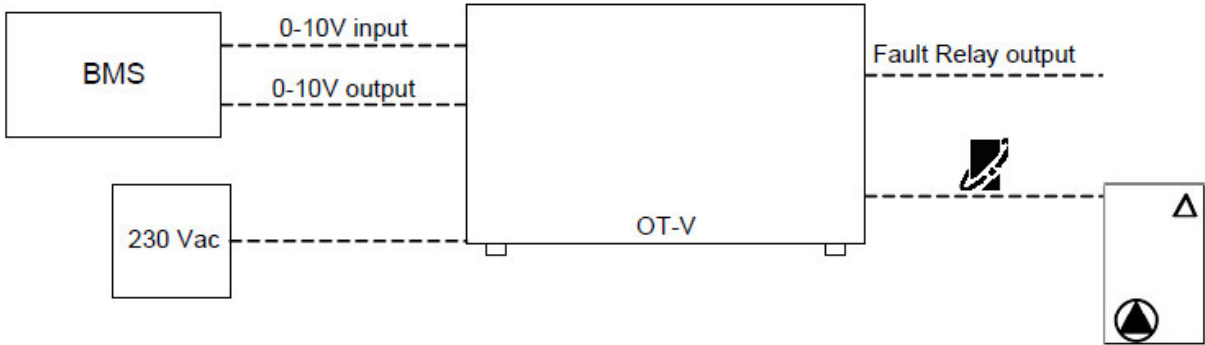
Wall mounting - S100865



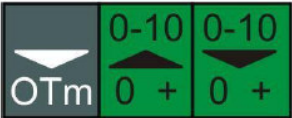
S101634

Obsolete (does not exist anymore)

System Block Diagram



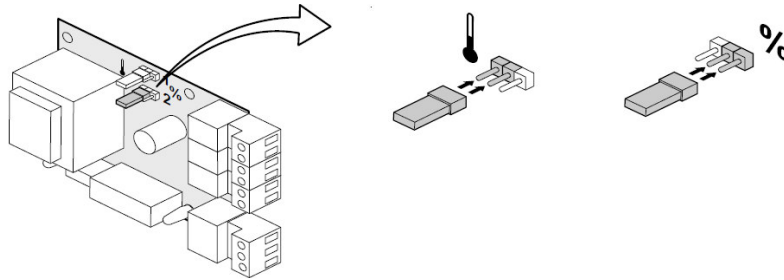
Terminals



Analog Input

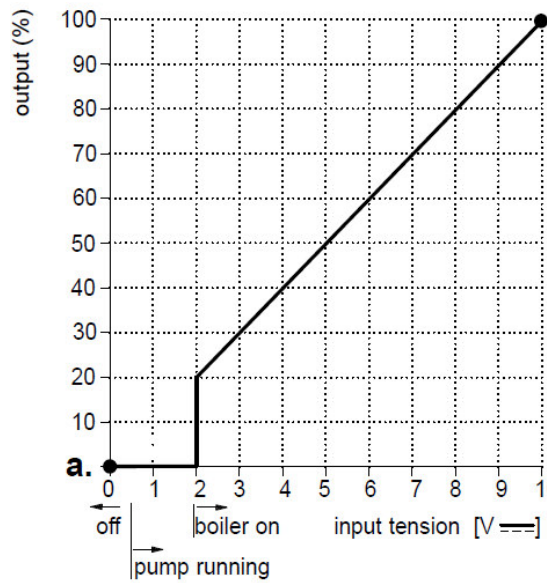
In case the jumper for OpenTherm control is placed on position 2, capacity control is active.

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



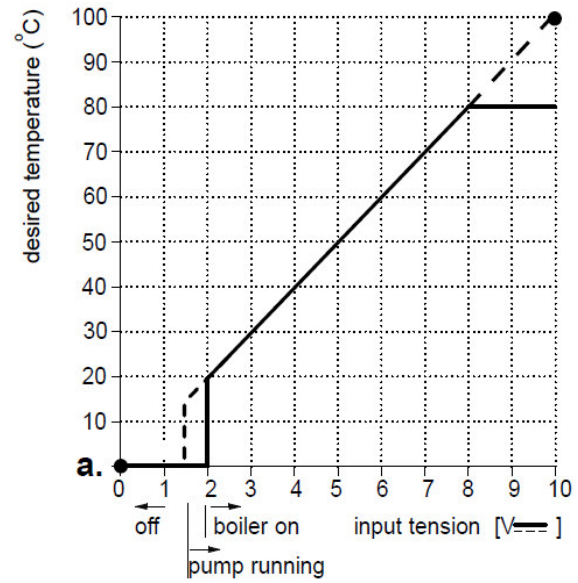
Capacity:

- 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.

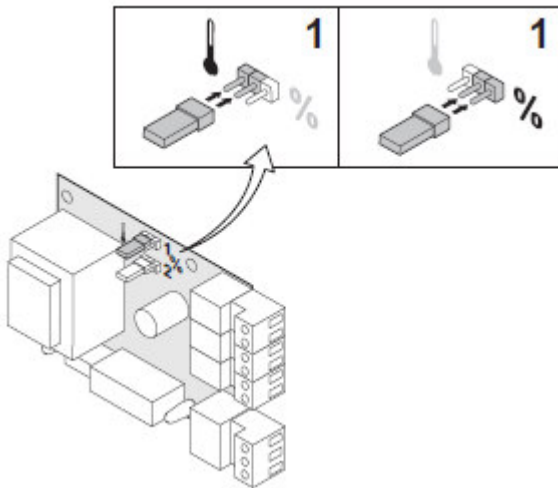
Analog output (capacity)

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

Alarm : relay is powerless.

No alarm : relay is powered.

Green LED

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

LED

Off

Short blink twice

Short blink three times

Short blink four times

On

Description

No OpenTherm slave detected (after power-up)

No OT communication (> 60 seconds, successive)

OT-slave doesn't support 14 while in capacity control for OpenTherm

No jumper(s) detected (after power-up)