

For the heating engineer

Installation manual

# Interface 0-10V VR34



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## 1 Notes on the documentation

The following information is intended to help you throughout the entire documentation. Further documents apply in combination with this installation manual.

**We accept no liability for any damage caused by failure to observe these instructions.**

### 1.1 Storage of the documents

Please pass on this installation manual to the owner of the system. It is advised to store all boiler and accessory manuals together.

### 1.2 Symbols used

Please observe the safety instructions in this installation manual for the installation of the appliance.



#### **Danger**

**Immediate risk of serious injury or death!**

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#### **Caution**

**Potentially dangerous situations for the product and environment!**

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#### **Note**

**Useful information and instructions!**

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- Symbol for a necessary task

## 2 Safety instructions and regulations

### 2 Safety instructions and regulations

This bus coupler must only be installed by a competent person in accordance with the Gas Safety (Installation and Use) Regulations 1998. In the UK 'CORGI' registered installers undertake the work in compliance with safe and satisfactory standard. We accept no liability for any damage caused by failure to observe these instructions.

#### 2.1 Safety instructions

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##### **Danger!**

**Risk of fatal electric shock from touching live connections. Before working on the appliance, switch off the power supply and secure it against reconnection. Using the mains switch on the controllers is not sufficient to isolate all terminals of the system.**

#### 2.2 Regulations

All wiring must be in accordance with Building Regulations Part P and BS 7671 (IEE Wiring Regulations), and must be carried out by a suitably qualified person. Use standard wires for wiring. Maximum length between VR34 and BEMS 0-10V controller is 6m.

## 3 Description of the appliance

### 3.1 Intended use

The 0-10V VR34 interface allows you to connect a proprietary Building Energy Management System (BEMS) with a Vaillant eBus boiler.



#### Caution!

**Any use beyond this is considered improper and is prohibited!**

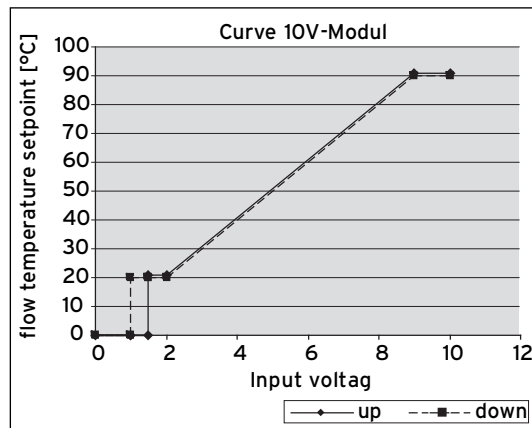
### 3.2 CE labelling

The 0-10V VR34 interface complies with the relevant directives and standards when correctly installed according to the regulations.

### 3.3 Application

The 0-10V VR34 interface is used to connect BEMS equipment to a Vaillant boiler with an eBus interface. It transfers a voltage input on terminal "I" into a temperature setpoint for the boiler. Terminal "F" can be used to signal a boiler fault (24V). This signal will remain

until the fault is corrected and the boiler has been reset. Use terminal "F" and "24V" to connect a 24V relay with a maximum current of 30mA.



#### Note:

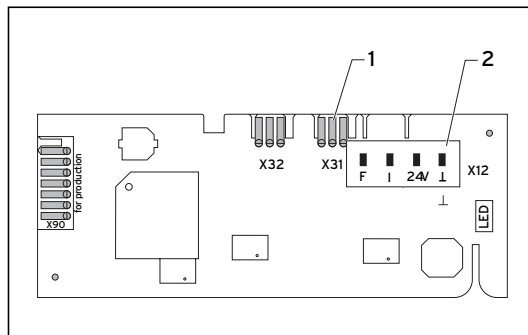
**The earth terminal has ground potential.**

## 3 Description of the appliance

### 3.4 Scope of delivery and accessories

- Check the scope of delivery of the bus coupler.
  - 1 VR34 0-10V interface
  - 1 connection terminal for eBus line
  - 1 cable clamp

### 3.5 Connections



**Abb. 3.1 Connections**

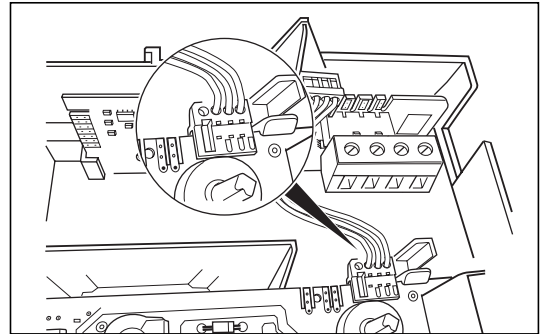
#### Key

- 1 Terminal for connection to boiler
- 2 BEMS controller terminal

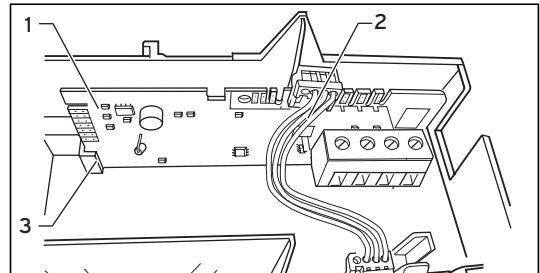
## 4 Installation

### Mounting the 0-10V interface

- Open the electronics box of the boiler as described in its installation manual.
- Connect the 0-10V interface and the boiler with the enclosed cable (2). The boiler socket and the 0-10V interface are marked X31
- Install the 0-10V interface (1) in the electronics box. Push the interface (1) into the guide (3) in the lower part of the electronics box, making sure the fastening clip grips the groove on the partition in the electronics box.

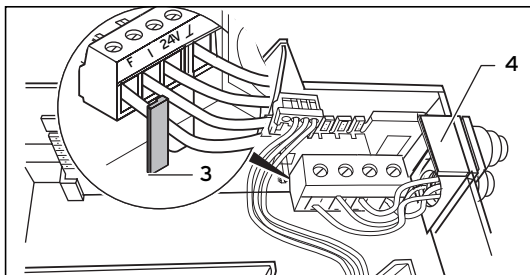


**Abb. 4.1 Connection of bus line to terminal**



**Abb. 4.2 Installation of interface board**

## 5 Electrical installation



**Abb. 4.3 Cable feedthrough**

- Secure the 0-10V interface with the enclosed cable clamp (**4**).

## 5 Electrical installation

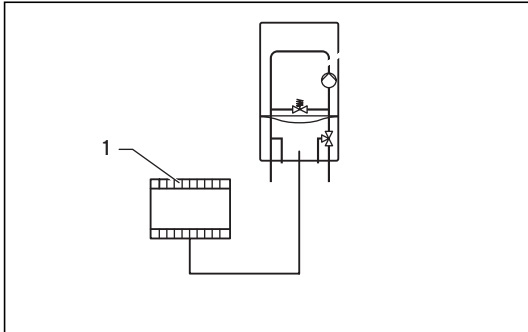


### **Danger!**

**Risk of fatal electric shock from touching live connections. Before working on the appliance, switch off the power supply and secure it against reconnection. Using the mains switch on the controllers is not sufficient to isolate all terminals of the system.**

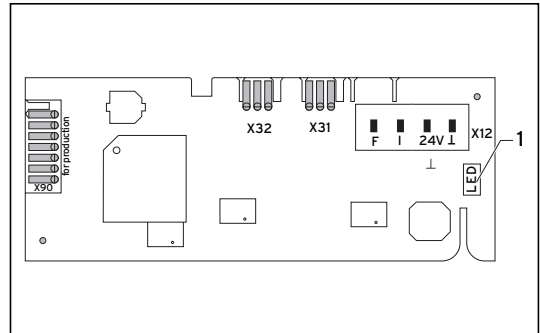


## Connecting the 0-10V interface



**Abb. 5.1** Connect interface 0-10V

- Connect the external BEMS controller (**3**) to the 0-10V VR34 interface. Take care to note the polarity of the connection.
- The control signal from the BEMS controller has to be connected to terminal "I". Connect the earth lead to terminal „**L**“.



**Abb. 5.2** LED

### Key

- 1 Status LED

## 6 Recycling and disposal

### **Statusdisplay of the LED**

The green LED (1) displays the status of the 0-10V interface.

- LED lit without blinking: there is no BEMS connected or voltage lower 0,5V
- LED blinks fast: no connection to eBus on boiler
- LED flashes: data transmission between

## **6 Recycling and disposal**

Both the Vaillant 0-10V interface and its packaging are primarily made of recyclable raw materials.

### **Appliance**

Do not dispose of your Vaillant 0-10V interface with household waste. Make sure that used devices are taken for proper disposal.

### **Packaging**

Make sure that the packaging is taken for proper disposal and recycling.



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