

# Instructions for use

Extension board  
EWP oil / gas / solar

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**BRUNNER**<sup>®</sup>  
*made in germany.*

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# 1 About this document

## 1.1 Target group of the instructions

These instructions for Extention board (EWP) Oil / Gas / Solar are intended for the operator of the system.  
The **PIN** code for the operator is **9999**.

## 1.2 Validity of the instructions

The documentation for the product Extention board (EWP) Oil / Gas / Solar is valid from November 2015.  
Ulrich Brunner GmbH reserves the right to make technical changes insofar as they serve technical progress or are required by safety regulations.

## 1.3 Storage of the documents

These instructions for Extention board (EWP) Oil / Gas / Solar are kept by the operator of Extention board (EWP) Oil / Gas / Solar after use **for future reference**.

### **IMPORTANT**

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

The operator is responsible for keeping these operating instructions and all other applicable documents.

## 1.4 Symbols used

A **hazard** is a potential source of injury or damage to health.

A **risk** is the combination of a probability and the severity of injury or damage to health that can occur in a hazardous situation.

The **danger zone** is the area and radius in which the boiler with/without the heating system is located, in which the safety or health of a person could be at risk.

A **person at risk** is a person who is wholly or partially located in a danger zone.

The **operating personnel** are the persons responsible for installing, operating, setting up, maintaining, cleaning, repairing or transporting the system.

In this documentation, a distinction is made between:

Operating personnel as the **operator of the system**, i.e. the end customer who has been instructed by the specialist personnel and does not need to have any additional qualifications.

Operating personnel as a **specialist company** are the qualified specialists who are authorized to carry out the specified specialist work.

The following symbols are used in this document:



#### **DANGER**

There is a high-risk hazard that will result in serious injury or death if this hazard is not avoided.

#### **WARNING**

There is a possible medium-risk hazard that can lead to serious injury or death if this hazard is not avoided.

#### **CAUTION**

There is a low-risk hazard that can lead to minor or moderate injury if this hazard is not avoided.

**NOTE**

Additional helpful information

## 1.5 Presentation rules

The following presentation rules apply in this document for Extention board (EWP) Oil / Gas / Solar:

**Action instruction with several action steps**

Used for activities or actions that contain several steps and where the chronological order of the individual action steps must be adhered to.

1. first action step;
  2. second action step;
  3. third action step, etc.
- Final result.

**Presentation of the display texts in the instructions**

The display texts are shown in bold for descriptions of the settings on the BRUNNER touch display.

## 2 For your safety

### 2.1 Dangers and safety measures

The assembly, installation, maintenance and servicing of Extention board (EWP) Oil / Gas / Solar may only be carried out by a specialist company.

- Only carry out activities that are described in these instructions.



#### **Electric shock**

Work on the electrical installation may only be carried out by a qualified specialist company.



#### **Avoid damage to the appliance and resulting hazards**

Sprays, solvents or chlorinated cleaning agents, paints, adhesives etc. can, under unfavorable circumstances, cause damage to the appliance.

- Do not use sprays, solvents or cleaning agents, paints, adhesives, etc. containing chlorine in the vicinity of the appliance.
- Do not under any circumstances make any changes to parts or equipment of the heating system if these changes could impair operational safety.

#### **Operate the Extention board (EWP) Oil / Gas / Solar safely.**

Only use the expansion board if it is in perfect technical condition and in accordance with its intended use and in compliance with the operating instructions.

Look out for visible damage and contact a specialist company if necessary.



- Never remove or cover the stickers with the safety instructions on the product.
- The stickers must remain legible for the entire service life of the Extention board (EWP) Oil / Gas / Solar.
- Replace the stickers with the safety instructions immediately if they are damaged or illegible.
- Do not store any highly flammable materials (e.g. solvents, petrol cans) near the Extention board (EWP) Oil / Gas / Solar.
- This appliance is not intended for use or maintenance by children or persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.

## 2.2 Warnings

Warnings in this document are emphasized by pictograms and signal words.

The pictogram and the signal word indicate the type, the source or causes of a certain action. The necessary precautions or instructions to be followed are indicated.

The same applies to results or desired effect of an action.

These warnings refer to possible misuse of the system, which seems likely based on our experience.

Certain residual risks are also indicated.

The residual risks are inevitable:

- despite the safety measures considered in product design,
- despite the safety precautions,
- despite the complementary protective measures.

For certain points we have provided recommendations and instructions on how to use protective measures, including personal protective equipment.

Special safety instructions and recommendations are applied for transport, handling and storage.

Instructions for safe set up and maintenance include separate protective measures too.

### Structure of warnings

The warnings that precede each assembly step, are shown as follows:



**Danger**

**Type, source and causes of danger**

Measures

Call for action

→ Result or safe use

## 2.3 Regulations

### Standards and guidelines

the relevant safety requirements of DIN, EN, DVGW, TRGI and VDE

- EN 12828 Heating systems in buildings - Design of hot water heating systems
- EN 12831 Heating systems in buildings - Method for calculating the standard heating load
- DIN 4753 Water heating systems for drinking and process water
- DIN 1988 Technical rules for drinking water installations (TRWI)
- VDI 2035 Prevention of damage in hot water heating systems
- DIN VDE 0100 Part 540 2007-06 DIN VDE 0100-540 Installation of low-voltage systems
- DIN VDE 0100 Part 701 2008-10 DIN VDE 0100-701 Installation of low-voltage systems

## **3 Product description**

### **3.1 Intended use**

For all other types of application, please contact Ulrich Brunner GmbH.

Intended use also includes observing all information on personal and material hazards in these operating instructions. Also comply with all country-specific standards and safety regulations.

Read and observe all information and recommendations on installation, operation and maintenance for the Extension board (EWP) Oil / Gas / Solar from this documentation.

### **3.2 Conformity**



We, the manufacturer, hereby declare that Extension board (EWP) Oil / Gas / Solar complies with the basic directives concerning the placing on the market in the EU.

### **3.3 Functional description**

The Basic extension board is responsible for the heat management of the heating system.

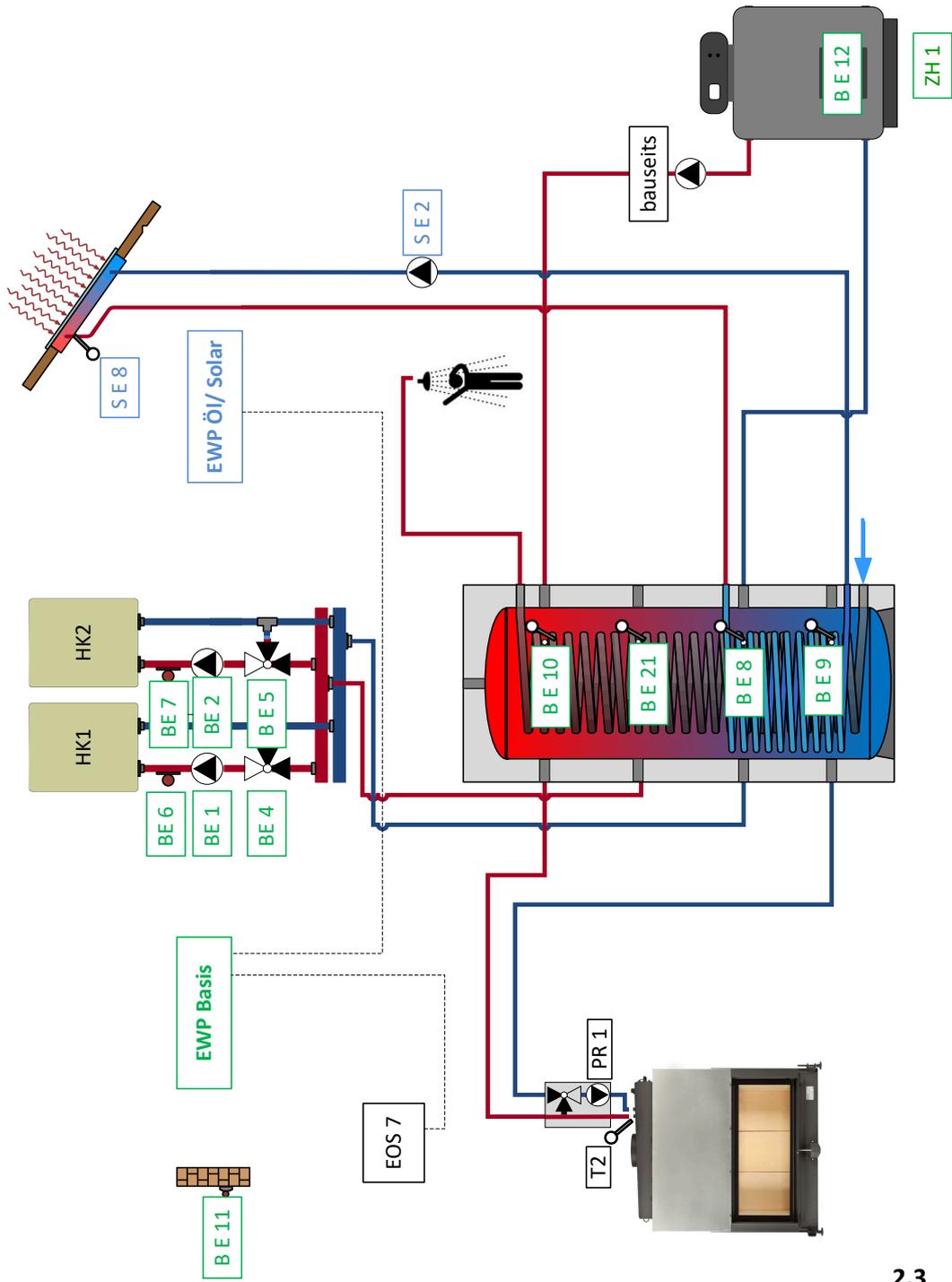
Heat generators can be all natural gas boilers and stoves from BRUNNER and can be operated with an additional solar system, oil or gas boiler, etc. when an oil-gas-solar extension board is connected.

The heat consumers can be Radiators, convectors, wall heating, underfloor heating.

The mixer, which hydraulically connects the additional heating 3 directly to the heating circuits or the hot water cylinder, is controlled via the EWP oil-gas-solar.

When using the expansion board, the software version on the system must be Rel. 5.0 or higher.

### 2.3 EOS 7, EWP Basis, EWP Öl/ Solar



### 2.3

Normen, Sicherheits- und örtliche Vorschriften beachten!

## 4 Operation basics

The images shown in the installation and operating instructions (including display views) do not claim to be an exact representation of the displays on your system. These depend on the installed system components, their measurement functions, control variants and set parameters. In some cases, these system parts are not part of the standard versions, but are provided as optional accessories.

### 4.1 Licenses

For the visualization of our user interface we use an open source operating system, which is subject to different license models.



You can see the licenses used in the software under the menu:  
„**Settings**“ → “**Display**“ → “**Licenses/Contact**“

#### **Written Offer (open source software)**

Our product contains software and sourcecode whose rightholders license it under the terms of the GNU General Public License, version 2 (GPLv2), version 3 (GPLv3), the GNU Lesser General Public License, version 2.1 (LGPLv2.1), version 3 (LGPLv3) and other open source software licenses.

If you send us a request for oversending the licensed source code of the software, please use the following address:

Ulrich Brunner GmbH  
Zellhuber Ring 17-18  
84307 Eggenfelden  
info@brunner.de

Upon request, we will send you a CD-ROM with the provided source codes. You have to pay the costs for material, packaging and delivery.

The offer is valid for at least three years from the date of delivery of the product on which the software is installed, and as long as we can offer spare parts and customer service for this product, or from the time of downloading the software from our homepage.

Please include the type of product for which you want to receive the source code in your request.

## 4.2 Data protection declaration of Ulrich Brunner GmbH

### Notes on protecting your personal data

Ulrich Brunner GmbH always endeavors to save and process only the personal data that are necessary and indispensable or that are required to be stored and processed by law.

We strictly adhere to the requirements of the General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG and BDSG new).

We do not pass on personal data to third parties; unless we are required to do so by law or by court order.

Persons under the age of 18 should only transfer personal data to us with the consent of their legal guardians. If there is reason for a complaint, it can be addressed to the responsible state authority.

The required contact details can be found on the website: <https://www.lida.bayern.de>. If other sources of information or services (websites, apps, etc.) from Ulrich Brunner GmbH are used, the data protection declarations listed also apply.

### Purpose of data processing

We only collect, store and process personal data for the express or implicitly agreed purpose. These are e.g. Address data for processing an information request, or for making offers, invoicing etc. or bank data for processing payment transactions. Without an independent declaration of consent, this data is not e.g. used to send as newsletter or similar purpose.

### Saving and deleting

We only store personal data for as long as is necessary to fulfill the agreed purpose or as required by law. If the agreed purpose is fulfilled or there is no longer a legal basis for storage, this data will be deleted as far as possible. If deletion is not technically possible, the data will be marked in such a way that further processing is impossible.

Deletion requests, requests for information, requests for changes or revocation of a declaration of consent can be directed at any time to the data protection officer of Ulrich Brunner GmbH.

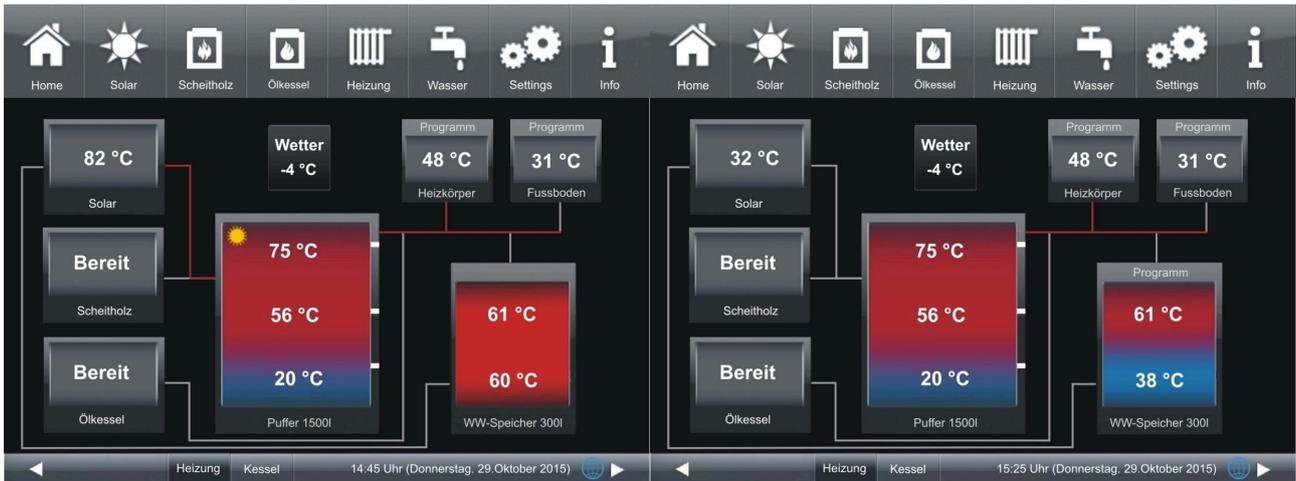
### Responsible for data processing

Ulrich Brunner GmbH  
Zellhuber Ring 17-18  
D-84307 Eggenfelden  
E-Mail: [info@brunner.de](mailto:info@brunner.de)  
Tel.: 08721/771-0

You can contact the data protection officer under: [datenschutzbeauftragter@brunner.de](mailto:datenschutzbeauftragter@brunner.de).

## 4.3 Display views

The Home view appears differently depending on the connected heat generator and heat consumer. In general, however, the heat generators are arranged on the left-hand side of the display view and the heat consumers on the right-hand side.



*Illustration 1: EWP oil-gas-solar; solar loading buffer is active; hot water/buffer loading, CH 3 is not active; heating circuit loading via system cylinder*

*Illustration 2: EWP oil-gas-solar. Solar loading is not active. Auxiliary heating 3 not active. Heating circuit charging via system storage tank*



*Illustration 3: EWP oil-gas-solar; solar loading for hot water cylinder. Heating circuit charging via system cylinder*

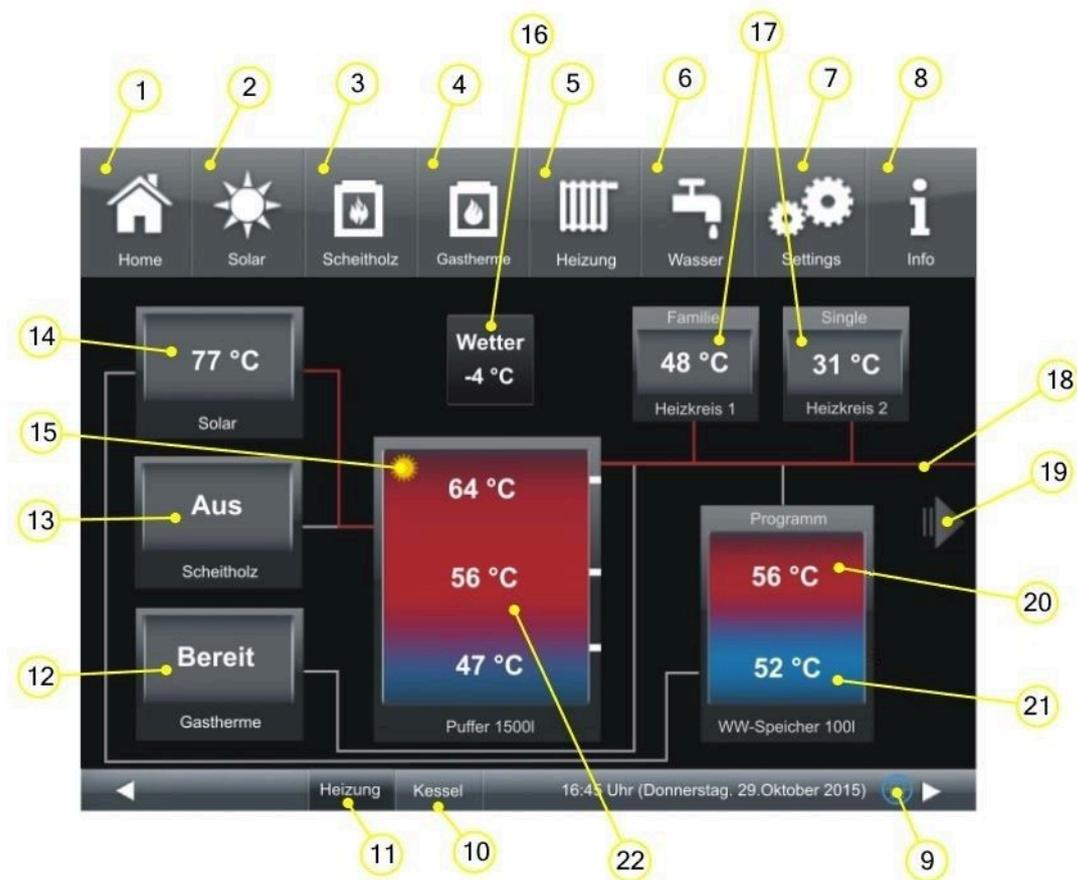
*Illustration 4: EWP oil-gas-solar; hot water loading is not active. Auxiliary heating 3 supplies heat directly to the heating circuits.*

An important difference to conventional central heating systems is the direct charging of the hot water cylinder during operation of the solar thermal system. The relevant pipe is routed under the system cylinder directly to the hot water cylinder.

Once the hot water cylinder has been fully heated (temperature threshold in the upper area of the hot water cylinder), the buffer is charged.

## 4.4 Home view overview

**Example:** Connection of a basic expansion board and an oil-gas-solar expansion board with the heat generators: Solar system, Brunner log boiler, gas boiler and the heat consumers: Heating circuit 1 and 2



Buttons on the menu bar:	
1	Home view; start page; button to start all applications
2	Solar system (= <b>Solaranlage</b> ) - heat generator (additional heating solar system); button
3	Log boiler (= <b>Scheitholzkessel</b> ) - heat generator Button for the customer parameters of the log boiler
4	Gas boiler (= <b>Gastherme</b> ) - heat generator Button for customer parameters of the additional heating system
5	Heating (= <b>Heizung</b> ) - heat consumer Button for the existing heating circuits, their heating programs and customer parameters
6	Hot water - heat consumer Button for the hot water programs and customer parameters
7	Settings; Access is via a PIN (different for the system operator or specialists) Enables access to various parameter levels for configuration and parameterization;
8	Info If error messages are present, the Info button is highlighted in orange.
9	Network and myBrunner status: no symbol = no network; gray globe = in the network, but offline with my-brunner; blue globe = online with mybrunner
10	Button for the home view of the BRUNNER boiler, the entire boiler control system
11	Home view of the heating system; complete control of the heat generators and heat consumers (example view above)
Graphics of the home view:	

12	Gas boiler or oil boiler with current operating status: <b>OFF (= AUS)</b> = additional heating is switched off; <b>Ready (= Bereit)</b> = additional heating <b>on</b> , on standby + no heat request; <b>Active (= Aktiv)</b> = additional heating with heat request + boiler output=0 <b>xx kW</b> = display of boiler output (planned) <b>Fault (= Störung)</b> = sensor error, emergency operation Button for customer parameters
13	Log boiler with current operating status, button for customer parameters
14	Solar system
15	The sun symbol appears in the buffer when it is being loaded by the solar thermal system; the sun symbol appears in the hot water cylinder when it is being loaded by the solar thermal system; if there is no loading, no sun symbol is displayed;
16	Outdoor temperature display
17	Heating circuit 1 or 2 with display of the program used (program name) + current temperature
18	Supply lines; the coloring shows the operating status of the installed pumps or current use of the lines (red= active, grey= inactive)
19	Arrow for overall view of the system (for more than 2 heating circuits)
20	Hot water cylinder with temperature display in the upper area; cylinder volume display in liters
21	Display of the hot water cylinder temperature (bottom) when operating a solar thermal system with loading of the hot water cylinder
22	System/buffer cylinder, cylinder volume, temperature display in the areas of the cylinder (bottom, middle, top)

## 4.5 Displays and setting options under Home

### 4.5.1 Auxiliary heating 3 of the EWP oil-gas-solar

An additional heating system, either an oil boiler or gas boiler, can be connected to the EWP oil-gas-solar extension board without measuring the heat quantities. The mixer, which hydraulically switches on the auxiliary heating, is controlled via the EWP oil-gas-solar. Auxiliary heaters 1 and 2 of the EWP Basis are offered when an EWP oil-gas-solar is connected on side 2 and side 3.

#### Setting options for auxiliary heaters of the EWP oil-gas-solar

Abbreviation	M.E.	Explanations (+ selection menu)
Oil boiler or gas boiler (= Ölkessel / Gastherme)	name	On / Off
Boiler (= Kessel)	°C	Display of boiler temperature
Heat for (= Wärme für)		Heating - setpoint has not been reached in the buffer and additional heating has been activated, Hot water tank - setpoint has not been reached in the hot water tank and additional heating has been activated; Frost protection, if the frost protection conditions are met, the additional heating is activated; if there is no requirement, the field remains empty
Exhaust gas test (= Abgastest)		Off / On - the conditions for carrying out a flue gas test are given

Abbreviation	M.E.	Explanations (+ selection menu)
Program (= Programm)		Selection of a set program for the operational readiness of the auxiliary heating
Periods (= Zeiträume)		Option to set the periods during which the gas booster heater should be activated (see “Setting periods” section)
Status		Off / ready / active

## 4.5.2 Displays during solar operation

Tapping the “Solar” icon or the solar system button displays the following information:

Short name	M.E.	Explanation
Collector (= Kollektor)	°C	Temperature of the collector sensor
WW storage bottom (= WW-Speich. unten)	°C	Temperature of the hot water tank in the lower area
Loading (= Beladung)	Buffer / DHW cylinder	Current setting of zone valve E3 (options: buffer or DHW cylinder)

## 5 Information and error messages

Based on the highest industry standards, all BRUNNER expansion boards have a detailed safety concept. The controller not only regulates and monitors the current operating status, but also independently and continuously checks the function of all connected sensors, motors and mixers.

### The safety concept

- Continuous electronic monitoring of all connected sensors, such as boiler and flue gas sensors, as well as monitoring of connected electrical components;
- Automatic and permanent archiving of sensor values and error messages.
- Visual display of error messages.

### Display of an information or error message

If a message or error message occurs, a corresponding message window appears on each existing operating display within the BRUNNER network environment, as well as a short signal tone.

To confirm the message, proceed as follows:

- Tap **O.K.** to confirm  
→ The message is deleted from the operating display and, in the event of an error message, permanently saved in the history.



*Illustration 5: Note/error message*

### Display error messages

If there are active error messages, the **Info** button is highlighted in orange.

To display error messages, proceed as follows:

- tap **Info** in the top menu bar of the Home view  
→ Error messages are displayed.

Error messages can only be acknowledged in the top menu bar of the Home view in the Info submenu.

### 5.1 Acknowledging error messages

To acknowledge an **error message**, proceed as follows:

1. tap the **Info** button;
2. in the lower half of the display, press **Reset**  
→ The error message has been acknowledged.

If the error is still present, the error message appears again.

Error messages can only be acknowledged in the top menu bar of the Home view in the Info submenu.

## 5.2 List of error codes

The following error codes can appear on the oil-gas-solar expansion board and are shown on the display:

Error text	Error text Description	Note to the operator
Fehler EWP Sensor Defekt S-E08 = Error EWP Sensor defect S-E08	The temperature sensor in the collector field of the collector circuit is defective or not connected.	Contact a specialist company
Fehler EWP Sensor Defekt S-E10 = Error EWP Sensor defect S-E10	The temperature sensor in the oil boiler - oil boiler sensor (S-E10) is defective or not connected.	Contact a specialist company
Fehler EWP Sensor Defekt S-E11 = Error EWP Sensor defective S-E11	The temperature sensor in the bottom of the hot water cylinder is defective or not connected.	Contact a specialist company

## 5.3 Troubleshooting

### Switch emergency program

In the event of faults during the heating period, the query appears on the display:

**Switch emergency program (= Notprogramm schalten)** with the selection options: **Yes/No (= Ja/Nein)**

In this case, contact a specialist immediately.

The radiators should also heat up in winter if sensors are faulty. However, there is a protective function for the underfloor heating.

The system display is in the heating circuit **emergency program (= Notprogramm)**.

The **reset** for the error can be ended here or under **Info**.

## 6 Technical data

Surface-mounted box dimensions (H x W x D)	cm	24 x 29 x 12
Supply voltage	V / Hz	230VAC +/-10 % 50Hz
Outputs Voltage	V / Hz	AC 230V / 50 Hz
Outputs Power max.	W	100
Relay outputs Power max.	W	500
Temperature sensor inputs	Type	Pt1000
Ambient temperature	°C	0 - 50
Power consumption	W	6,5
Fine-wire fuse power supply unit	mA (T)	250
Microfuse for outputs	A (T)	6,3
Protection class	IP	20
Labeling		CE MARKING
Stand-by	W	4

## 7 Declaration of conformity

	
<h3>EG-Konformitätserklärung</h3>	
Die:	Ulrich Brunner GmbH Zellhuber Ring 17-18 D-84307 Eggenfelden
erklärt hiermit, dass nachfolgend aufgeführtes Gerät zum Zeitpunkt der Auslieferung, in der gelieferten Ausführung:	
Erweiterungsplatine	
den Anforderungen der Normen:	<b>Emission Standard, EN61000-6-3:2007</b> Residential, commercial and light industry Environments
	<b>Immunity Standard EN61000-6-2:2005 + Berichtigung1:2011</b> Immunity for industrial environments
und der Richtlinie:	<b>2004/108/EG</b>
entsprechen.	
Diese EG-Konformitätserklärung verliert ihre Gültigkeit, wenn das Produkt ohne Zustimmung umgebaut oder verändert wird.	
Eggenfelden, den <u>20.8.17</u>	 Ulrich Brunner GmbH Dr.-Ing. Jürgen Vorwerk

**Ulrich Brunner GmbH**

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Current data: [www.brunner.de](http://www.brunner.de)

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