NOTE: *Functions written in blue are currently not active and will be made available after a software update.*

BR7000 with integrated web server

General

The BR7000-I/NET is a BR7000-I power factor controller with an integrated web server that enables remote access to the operating data via a TCP/IP network.
The following functions are available:

Remote display:

- Display of all readings and the stage status
- Display of all current and voltage harmonics
- Detailed information on the individual stages
- Display of the controller parameterization
- Display of the error memory
- Display of maximum values with time stamp

Remote adjustment options:

- Changing the parameterization of the controller
- Resetting the maximum values
- Clearing the error memory

E-mail functionality:

- Status reports at regular intervals and notification of warnings and errors via e-mail
- Creation of customized e-mail templates, which are automatically filled with the desired values before sending
- Multiple e-mail recipients can be specified

Modbus/TCP functionality:

- Remote access to the known Modbus registers of the controller via TCP/IP

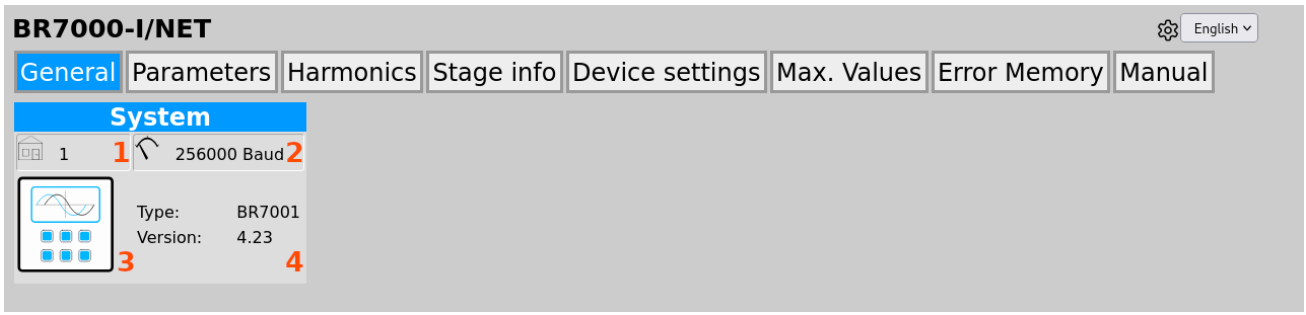
Properties

- Ethernet interface 10/100 Mbit/s
- Integrated website in German and English
- Updatable web server
- Protocols: HTTP (web server), Modbus/TCP (Port: 502, Unit ID: 1)

Web interface

1. General

The controller type and software version are displayed under General. You can assign a name for the compensation system here ("System" in this example).

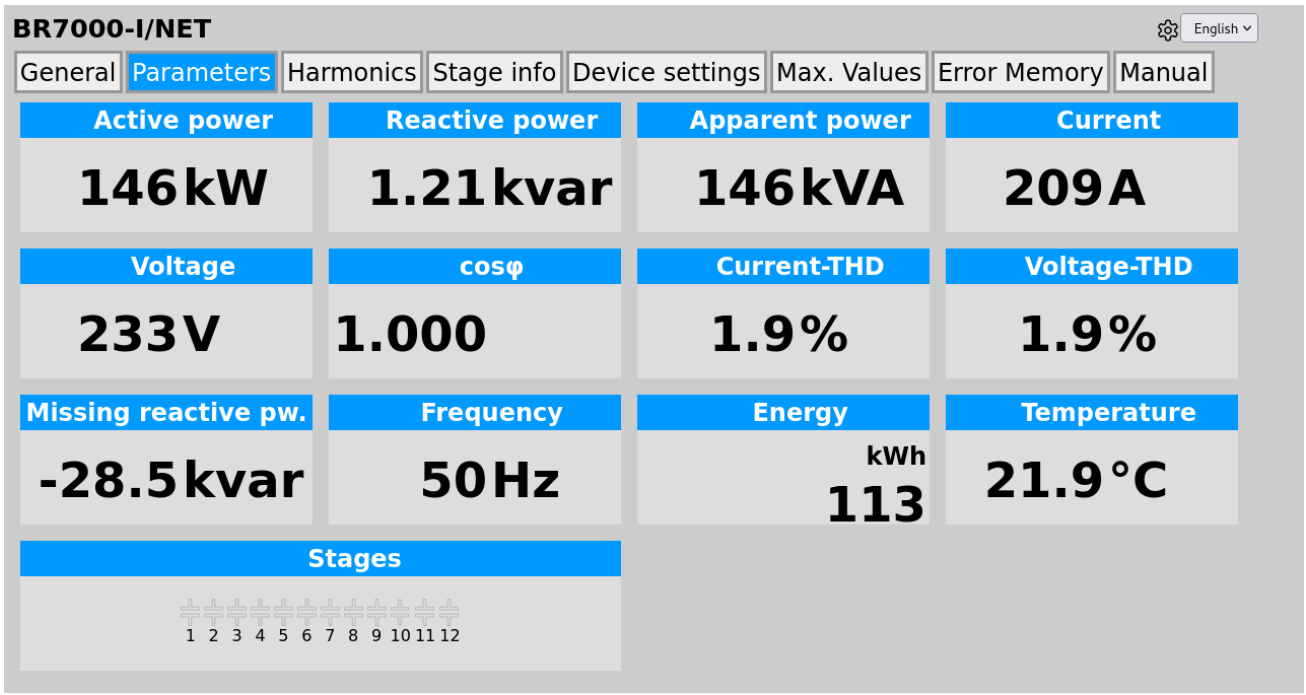


1) Modbus Unit ID
2) Internal baud rate
3) Icon
4) Controller info

2. Display of readings

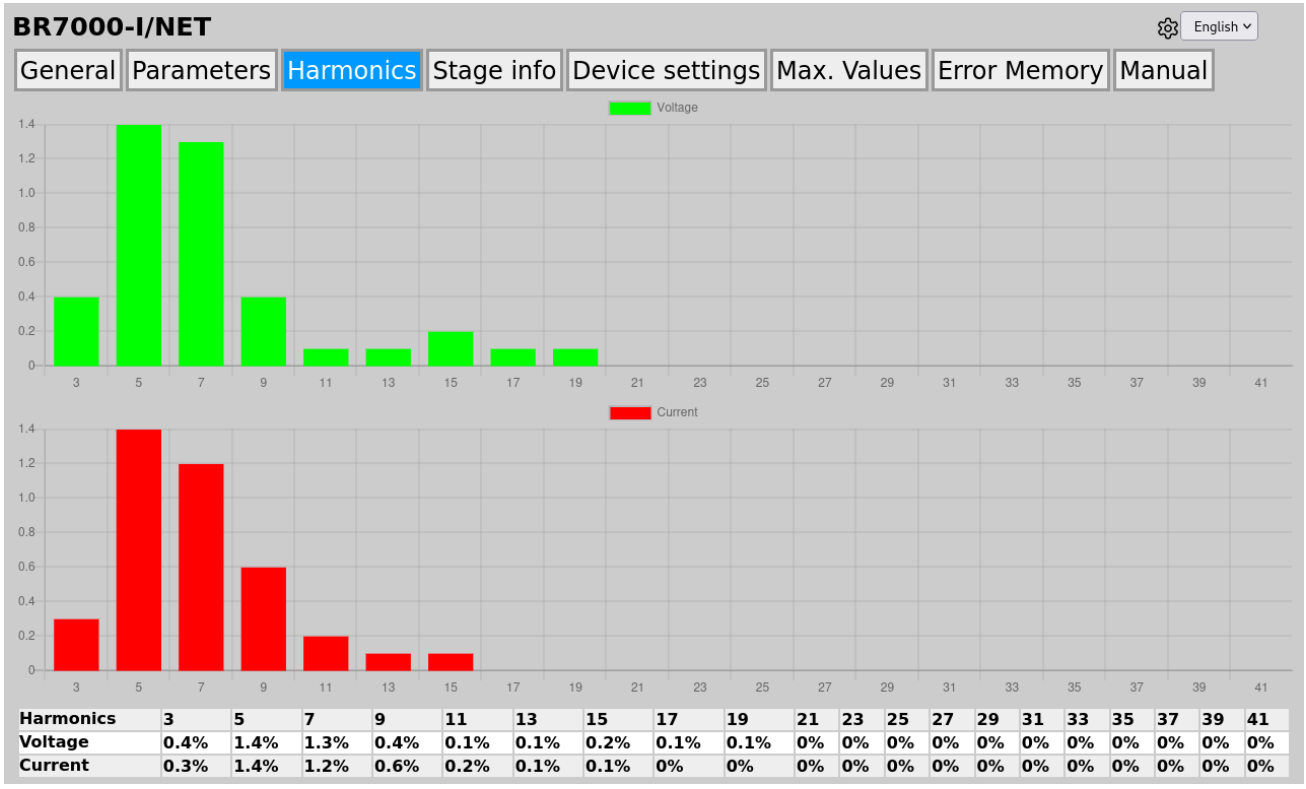
The current readings of the power factor controller are displayed in the second tab. By default, all available readings and the current stage status (switched-on capacitors) are shown.

The displayed tiles can be arranged freely.



3. Display of harmonics

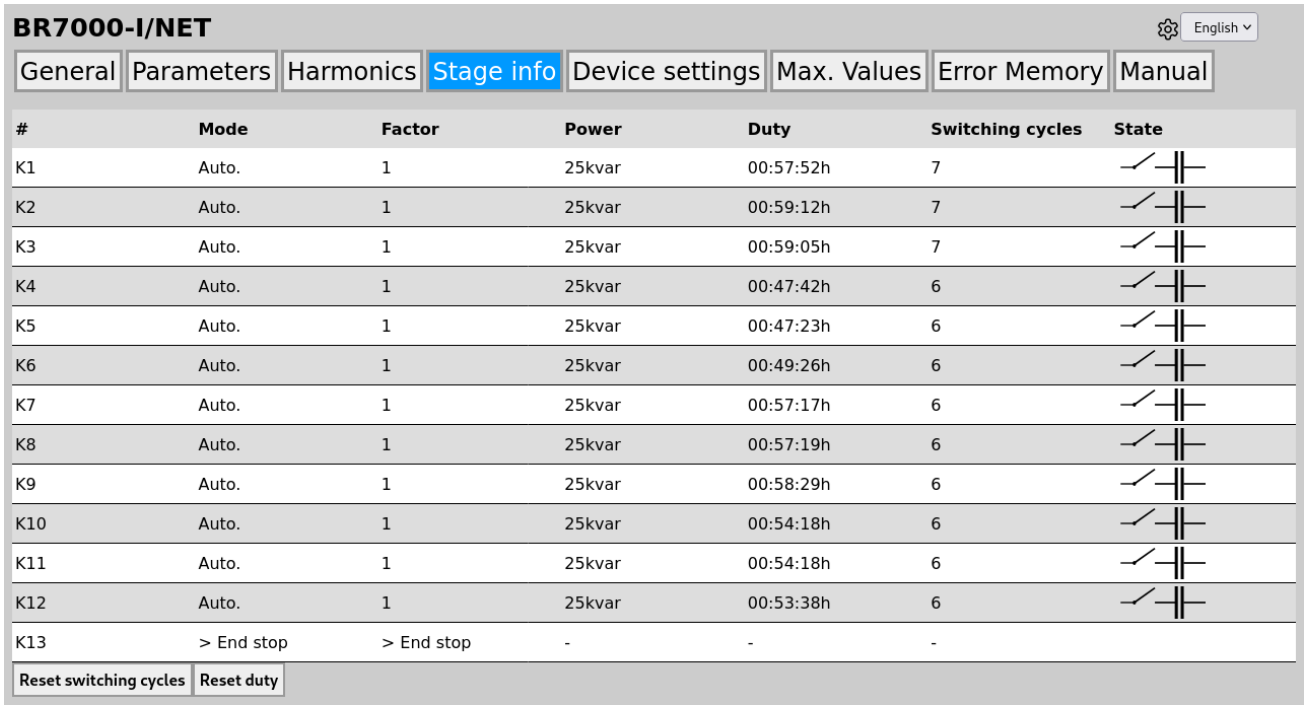
In this view, the current values of the measured harmonics of voltage and current are visualized as a bar chart. The percentage values are listed in tabular form as well.



Harmonics	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41
Voltage	0.4%	1.4%	1.3%	0.4%	0.1%	0.1%	0.2%	0.1%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Current	0.3%	1.4%	1.2%	0.6%	0.2%	0.1%	0.1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

4. Stage info

This table shows an overview of all relay outputs. In addition to the operating mode of each stage (automatic/ fixed/ off), its factor and the resulting stage power, the individual operating times and the number of switching cycles are displayed. Switching cycles and operating time can be reset with the corresponding buttons.



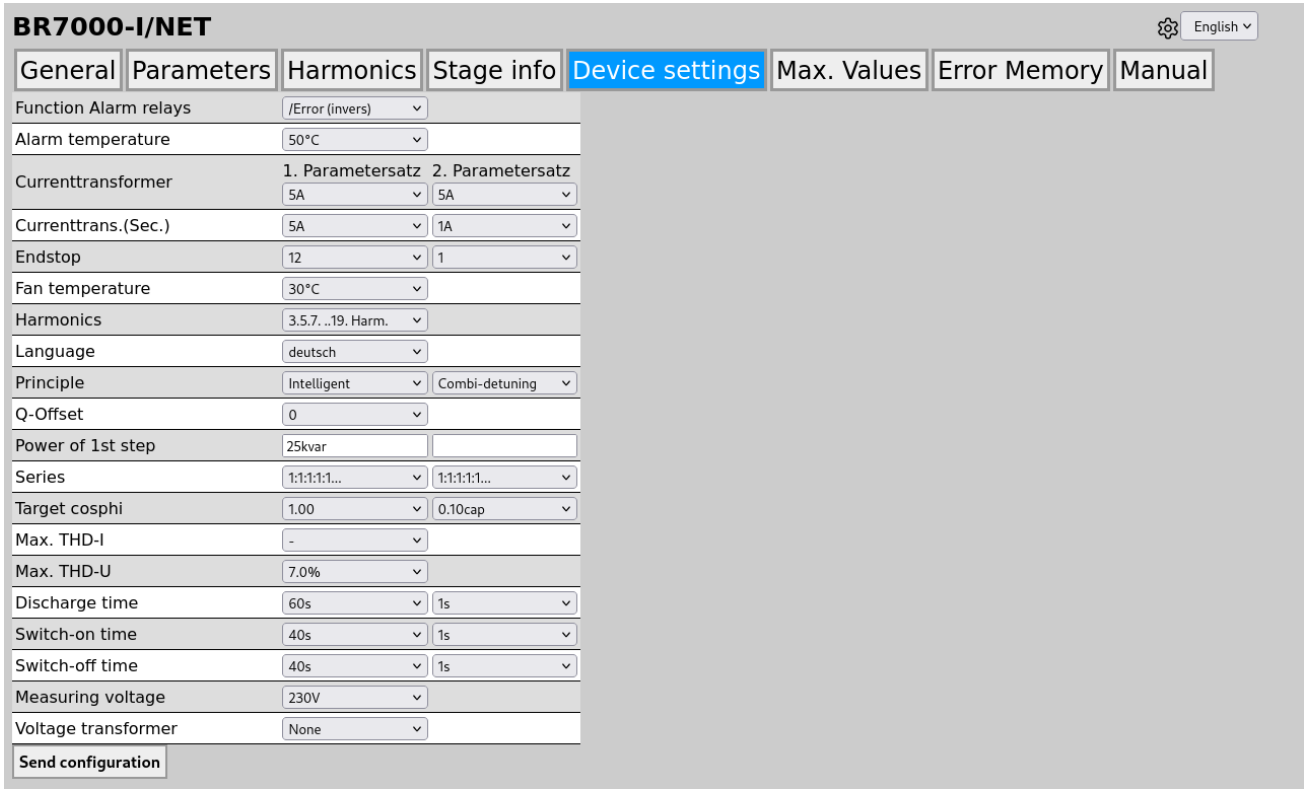
#	Mode	Factor	Power	Duty	Switching cycles	State
K1	Auto.	1	25kvar	00:57:52h	7	
K2	Auto.	1	25kvar	00:59:12h	7	
K3	Auto.	1	25kvar	00:59:05h	7	
K4	Auto.	1	25kvar	00:47:42h	6	
K5	Auto.	1	25kvar	00:47:23h	6	
K6	Auto.	1	25kvar	00:49:26h	6	
K7	Auto.	1	25kvar	00:57:17h	6	
K8	Auto.	1	25kvar	00:57:19h	6	
K9	Auto.	1	25kvar	00:58:29h	6	
K10	Auto.	1	25kvar	00:54:18h	6	
K11	Auto.	1	25kvar	00:54:18h	6	
K12	Auto.	1	25kvar	00:53:38h	6	
K13	> End stop	> End stop	-	-	-	

Reset switching cycles | Reset duty

5. Settings

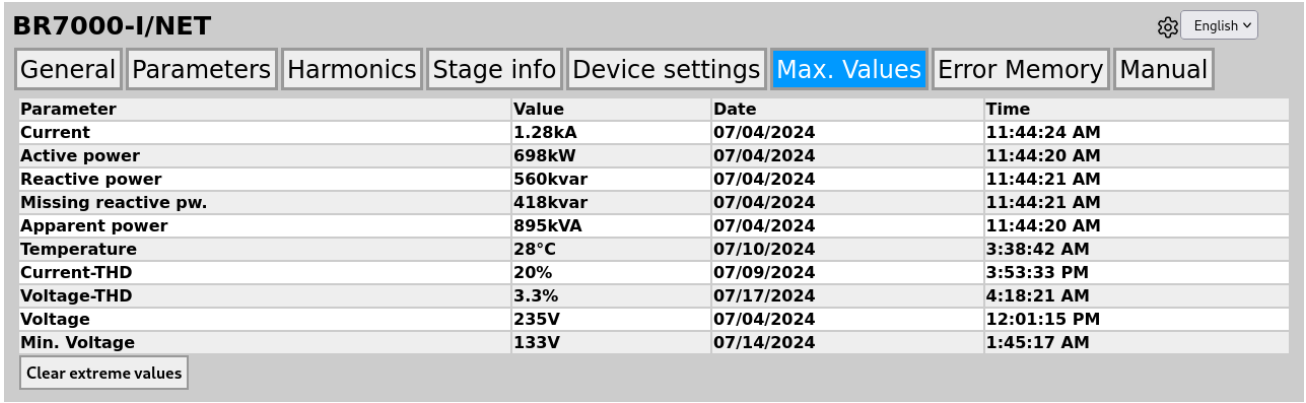
All current parameters of the controller can be viewed and changed via the "Device settings" input screen. This allows for convenient remote maintenance (checking the set values and changing the parameterization if necessary). Modified values are transferred to the controller via "Send configuration"

An option for saving the configuration on a local PC for archiving or as a template for other systems is planned.



6. Maximum values

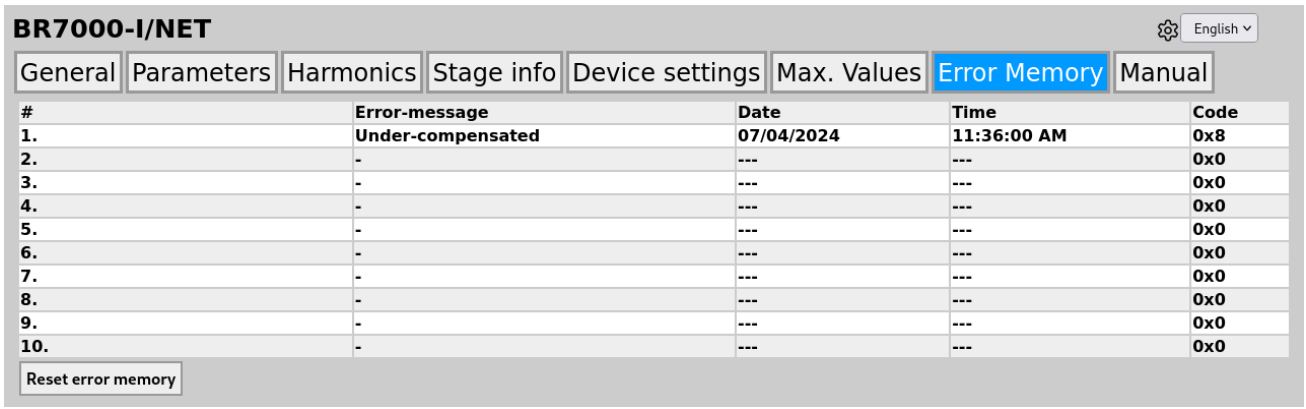
The "Max. Values" tab shows the maximum values of the power grid that were seen by the controller with a time stamp. These values can be reset using the "Clear extreme values" button.



7. Error memory

The "Error memory" view displays the latest 10 errors that were recorded by the controller with their corresponding timestamp.
The following errors can occur:

- Measuring voltage, overvoltage, undervoltage
- Overcurrent, overcompensated, undercompensated
- Harmonics
- Overtemperature



#	Error-message	Date	Time	Code
1.	Under-compensated	07/04/2024	11:36:00 AM	0x8
2.	-	---	---	0x0
3.	-	---	---	0x0
4.	-	---	---	0x0
5.	-	---	---	0x0
6.	-	---	---	0x0
7.	-	---	---	0x0
8.	-	---	---	0x0
9.	-	---	---	0x0
10.	-	---	---	0x0

The "Reset error memory" button can be used to delete all entries of the error memory in the controller.

8. Manual

The manual for the controller and the web interface can be called up under "Manual".

9. Modbus/TCP

The BR7000-I/NET supports Modbus/TCP via port 502, unit ID 1. The register table is identical to the one of the BR7000-I/485 and can be loaded via the web server or is provided on request.

10. Technical data

Languages	German, English
Ethernet	10/100 Mbit/s; TCP/IP
Supported protocols	HTTP – TCP Port 80 Modbus/TCP – TCP Port 502, Unit ID 1