



Gateway

For LPB/BSB plants

OCI670 V7.0

Gateway OCI670 allows for remote plant control and monitoring of plants via Climatix IC using web browser, a Smartphone app and ACS790. Up to 16 LPB devices from the Albatros2 product range can be connected to the gateway.

- Operate via Climatix IC with a web browser with PC/laptop and Smartphone
- Operate via Smartphone app (iPhone and Android)
- Connect to the Internet via ethernet
- Local operation for commissioning OCI670 with USB and ethernet
- Plant visualization in the web browser based on customized plant web pages
- Connection types: USB and Ethernet
- 2 digital inputs for fault messages
- Create trends, trend graphs and send trend data to 2 e-mail recipients
- Function "Energy indicator" to monitor data points for energy-related limit values, or "Green limits" and send to 2 e-mail recipients
- Encrypted with https and TLS for emails
- ACS790 functionality
- Secure tunnel connection for ACS via Climatix IC
- Time sync via NTP network time server

Use

Buildings

- Apartments in single and multi-family homes.
- Office and administrative buildings, residential housing.
- Schools, gymnasiums, leisure facilities, hotels.
- Municipal buildings, commercial and smaller industrial buildings.

Owners/operators

- End customers, HVAC and electrical installers, heating manufacturers.
- Real estate agencies, real estate management companies, service organizations.
- Building maintenance companies, facility management.

Functions

Commissioning

Commissioning is carried out via PC/Laptop and Web browser or ACS790.

Web operation (local)

Basic commissioning can be conducted using local web operation (ethernet or USB) as follows:

- Device list
- User account for web operation (user group, operating language)
- Gateway OCI670 settings

Web operation (via Climatix IC)

Siemens offers with the Climatix IC Internet portal simple and secure access to the Gateway.

- Simple and fast set up of access via the Internet – neither a fixed IP address, nor forwarding of a dynamic IP address, nor port forwarding (NAT/PAT) is required
- Climatix IC provides the following functions:
 - Manage multiple plants
 - Central user management
 - Plant overview with Energy indicator, connection and alarm state
 - Set up customized plant web pages
- Remote operation and monitoring of plants and devices on one LPB/BSB network with web browser on PC/laptop and smartphone
- Simultaneous support of multiple users
- Plant functional scope can be set for various plant roles
 - Logging fault messages as common faults
 - Send alarm notifications per e-mail
 - Secured communications through encryption (https)

Web interface

Gateway OC1670 is designed for remote access via Climatix IC. All settings are available via Climatix IC. Only settings required for commissioning are available on the local connection via USB or Ethernet.

User interface portal

The screenshot shows the Siemens user interface portal. At the top, there are navigation tabs for 'Dashboards', 'Operating', and 'Administration'. Below these, the current location is 'Operating > OC1670_2 Claudio (7 Zählerweg, Zug, Room 476) > Web access'. A sidebar on the left contains 'Alarms', 'Web access', 'Documentation', and 'Plant settings'. The main content area displays the 'SIEMENS' logo and system information: 'OC1670/109', '01.06.2017', '10:41', '1 Green limits crossed', and a red alarm indicator 'RVS43.143/109 Outside sensor error'. Below this, there are links for 'Home', 'Energy indicator', 'Faults', 'File transfer', 'User accounts', and 'Device web pages'. The main content area shows the 'Settings > Communication > Ethernet' configuration page. It contains two tables of network settings:

Datapoint	Value
DHCP client	On
IP address	192.168.10.112
Subnet mask	255.255.255.0
Default gateway	192.168.10.1
Preferred DNS server	192.168.10.1
Alternate DNS server	192.168.10.1

Set when DHCP client off	
IP address	192.168.2.10
Subnet mask	255.255.255.0
Default gateway	192.168.2.1
Preferred DNS server	192.168.2.1
Alternate DNS server	192.168.2.1

Physical address	00:a0:03:fb:37:37
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Click the symbol to open the Gateway user interface under a new tab. The operating elements on the portal are hidden and the entire window is used to display Gateway operation.

The portal symbol and e-mail address is displayed in place of the user symbol and user name.

User interface Gateway local

The screenshot shows the Siemens user interface Gateway local. At the top, there are navigation tabs for 'Dashboards', 'Operating', and 'Administration'. Below these, the current location is 'Operating > OC1670_2 Claudio (7 Zählerweg, Zug, Room 476) > Web access'. A sidebar on the left contains 'Alarms', 'Web access', 'Documentation', and 'Plant settings'. The main content area displays the 'SIEMENS' logo and system information: 'OC1670/109', '01.06.2017', '10:46', '1 Green limits crossed', and a red alarm indicator 'RVS43.143/109 Outside sensor error'. Below this, there are links for 'Home', 'Energy indicator', 'Faults', 'File transfer', 'User accounts', and 'Device web pages'. The main content area shows the 'Settings > Communication > Ethernet' configuration page. It contains two tables of network settings:

Datapoint	Value
DHCP client	On
IP address	192.168.10.112
Subnet mask	255.255.255.0
Default gateway	192.168.10.1
Preferred DNS server	192.168.10.1
Alternate DNS server	192.168.10.1

Set when DHCP client off	
IP address	192.168.2.10
Subnet mask	255.255.255.0
Default gateway	192.168.2.1
Preferred DNS server	192.168.2.1
Alternate DNS server	192.168.2.1

Physical address	00:a0:03:fb:37:37
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Primary navigation

Primary navigation offers the following functions:

Home	Menu-based plant and device operation.
Energy indicator	Display and operate "Energy indicator" data points. (displayed only if a controller is connected with an Energy indicator)
Faults	Display system faults.
File transfer	Create and manage trend functions Download consumption data and event history, Upload documents, logos and system definitions as well as firmware update.
User accounts	User administration.
Device web pages	Create device list and operating pages.

Secondary navigation

The secondary navigation (menu tree) allows users to select devices and operating pages.

Display

The display range displays content corresponding to the selected primary and secondary navigation.

Plant state


The display indicates no fault or the most serious plant fault depending on plant state.

Faults

Fault sources

The Gateway recognizes failures and fault signals from LPB/BSB devices contained in the device list. Faults from digital inputs and own faults are detected also.

Fault indication

The LED  signals a fault on the Gateway. The LED is lit for as long as the fault is present.

Common fault

On the Climatix IC Internet portal, faults are logged as common faults. The portal sends alarm notifications to the defined e-mail addresses in the event of a common fault.

History

The last 500 fault events and fault messages are entered in the Gateway's circular message buffer. The events or history data can be read via web browser.

Time

The Gateway has a system clock with adjustable daylight saving/standard time changeover. It can send the time (date and time) as the time clock master to the LPB devices (time clock slave).

For the system clock, the NTP network time server can perform the time synchronization and, if used as a time clock master, forward the data to all KNX devices (time clock slaves).

Updates

We differentiate between the following:

- System definition updates to integrate device descriptions of new devices on the Gateway.
- Firmware updates to update the Gateway to the latest firmware version. The user settings and system definitions remain as part of a firmware update.
- Factory update to the Gateway to the latest version and load the latest system definitions. User settings are lost as part of a factory update.

A system definition update and the firmware update requires one simple action via the web browser.

Operator actions on the Gateway are required for the factory update. Procedures are communicated when a factory update is issued.

ACS790

The Gateway is compatible with the service and operating software ACS790 version 10.20 and higher.

Secured connection via portal

You can establish a secure Internet connection to the Gateway with the ACS790 and the "Remote Tool Access" software via the Climatix IC / Synco IC portal.

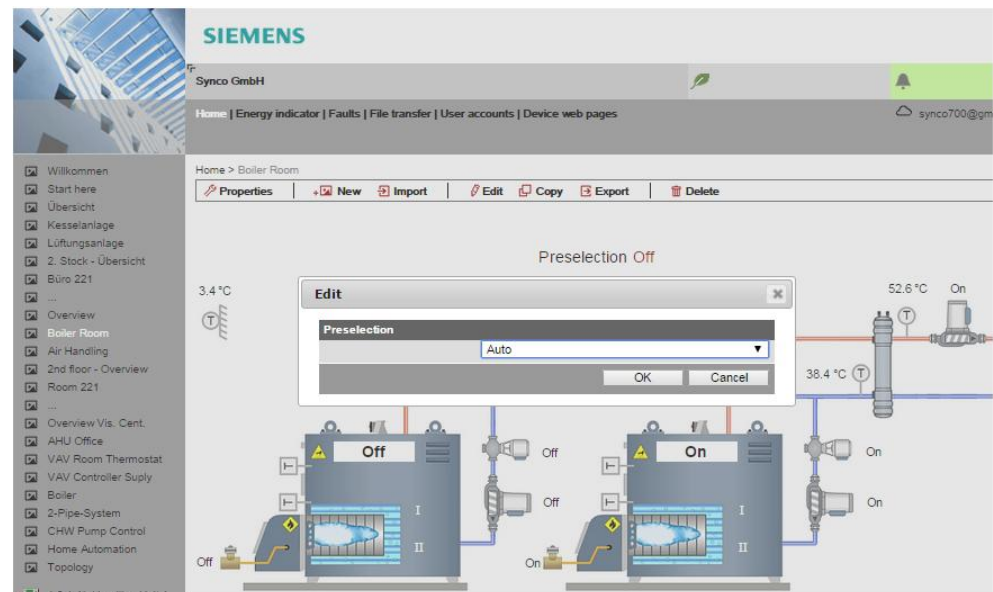
Visualize plants

Gateway OCI670 allows for visualizing technical equipment in buildings via plant web pages. For example, a plant web page can be set up visualizing a plant with data points (max. 100 data points per plant web page) on a floor plan.

In the event of a fault, users can quickly access the impacted locations.

For writable parameters, users can click to open a dialog box and change the parameter (as e.g. the "Room temp reduced setpoint" displayed below).

Example Plant web page for heating plant



Import plant diagrams

For standard LPB/BSB controller applications, web-capable plant diagrams can be exported from ACS790 and imported to the Gateway.

Create own plant web pages

You can freely design plant web pages. As a hybrid form, you can also modify and extend downloaded plant diagrams.

Web page elements

Users can also embed additional data in a plant diagram such as links to plant, function and maintenance descriptions or data sheets. Moreover, users can integrate external links allowing, for example, to directly browse multiple plants. Users can embed current webcam images in a plant diagram.

Trend function

The trend function in Gateway OC1670 can be directly defined on the Gateway. Using the trend functions, you can log and query any number of data points from connected devices as a selectable sample rate.

Trend channels

5 trend channels are available. Each trend channel can contain up to 100 data points. The trend channel can be labeled using a free text name.

Sample rate

The sample rate can be individually created for each trend channel. Available sample rates ranging from 1 s up to 24 hours. The shortest possible sample rate over all 5 trend channels is 1 data point per second.

Trend period

RAM size determines possible trend periods for a channel. The trend period varies with the number of selected data points and their sample rates.

Examples for various trend channels:

Interval	Data points	Trend period	
		Channel 1	Channel 2...5
1 sec	1	14 days	1.8 days
5 sec	5	30 days	4.3 days
1 min	10	210 days	30 days
15 min	100	371 days	53 days

Trend channel 1 has 7 times the available memory for long-term trends or trends with a lot of data points or a short sample interval.

Synchronization

Trends are synchronized to simplify evaluation of trend data. The various query intervals for the trends are placed on an interval grid.

Operation

The web browser or ACS tool is used to create and manage trend functions.

The screenshot displays the Siemens Gateway OC1670 web interface. The top navigation bar includes the Siemens logo, the device ID 'OZW672.16', and a user menu for 'Administrator [Logout]'. The main content area features a table of trend functions with columns for Name, State, Query interval, Circular logging, Bus load, and Action. Below the table is a progress bar for the 'Current bus load' at 3%.

Name	State	Query interval	Circular logging	Bus load	Action
outside temperature	Running	1m	728 Days	2 %	[Action]
room temperature	Running	10m	730 Days	0 %	[Action]
infl.solar radiation	Running	5m	520 Days	0 %	[Action]
influence of wind	Running	2m	208 Days	1 %	[Action]
influence of room tmp	Running	15m	730 Days	0 %	[Action]

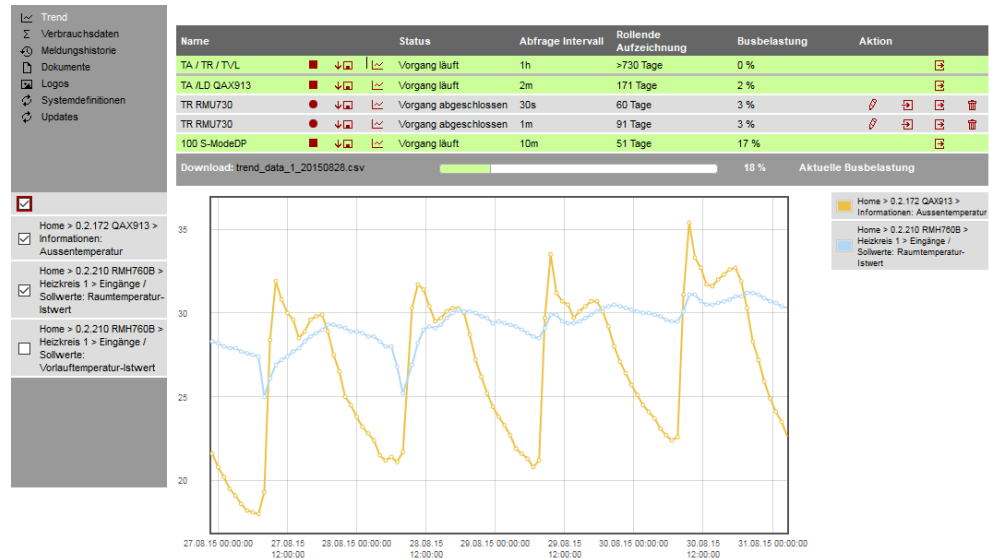
3 % Current bus load

Data query per web browser

A web browser allows you to download trend data for each channel and view it in a spreadsheet program or text editor. A calendar function allows limiting trend data to the desired period within trending. The Gateway can be accessed locally or via the Internet.

Trend graph

Data for a trend channel can be graphically displayed on the web user interface.



Data transmission per e-mail

2 e-mail recipient can be defined for trend data. Each trend channel can send its data to one or both e-mail recipients.

The send interval can be individually set for each trend channel.

Import/export

Trend definitions can be imported to the Gateway or exported from the Gateway.

Function
"Energy indicator"

The Gateway uses the "Energy indicator" function to read selected data point values from the LPB and BSB bus devices and to compare the values to energy-related limit values, or so-called "Green limits".

The data points are also monitored for adherence to the "Green limits". As a result, the "Energy indicator" is displayed in the form of a tree leaf.

Note

The "Green limits" are used only together with the "Energy indicator" function. They do **not** represent process or safety limit values which trigger e.g. fault messages or turn off the plant in the event of limit violations.

Web server, e-mail


The "Energy indicator" can regularly send its information (set via the web server) to a maximum of 2 e-mail recipients.

Tree leaf as
"Energy indicator"

Green leaf 

"Green leaf" → Green tree leaf, leaf pointing up.

- The "Green leaf" symbol indicates that a data point value has not exceeded its "Green limit", i.e. the value is within a "green" range in terms of energy consumption.

Orange leaf 

"Orange leaf" → Orange tree leaf, leaf pointing down.

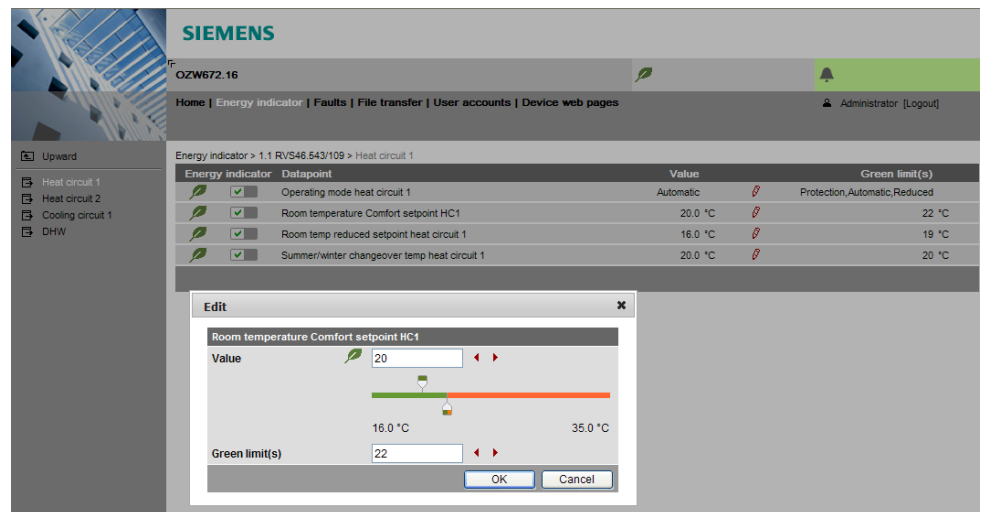
- The "Orange leaf" symbol indicates that a data point value has exceeded its "Green limit", i.e. the value is outside a "green" range in terms of energy consumption.

Standard EN 15232

The "Energy indicator" function is based on standard EN 15232 "Energy efficiency in buildings".

Example: Web page
"Energy indicator"

Web page with "Energy indicator" function; example with data points from "Heat circuit 1" and open dialog box to set data point value "Room temperature Comfort setpoint HC 1" and its "Green limit".



The screenshot shows the Siemens Energy indicator web interface. At the top, there is a navigation bar with 'Home | Energy indicator | Faults | File transfer | User accounts | Device web pages' and a user login 'Administrator [Logout]'. A table lists data points for 'Heat circuit 1' with columns for 'Energy indicator', 'Datapoint', 'Value', and 'Green limit(s)'. An 'Edit' dialog box is open for 'Room temperature Comfort setpoint HC1', showing a 'Value' of 20 and a 'Green limit(s)' of 22. A temperature scale is visible in the dialog, ranging from 16.0 °C to 35.0 °C.

Energy indicator	Datapoint	Value	Green limit(s)
	Operating mode heat circuit 1	Automatic	Protection_Automatic.Reduced
	Room temperature Comfort setpoint HC1	20.0 °C	22 °C
	Room temp reduced setpoint heat circuit 1	16.0 °C	19 °C
	Summer/winter changeover temp heat circuit 1	20.0 °C	20 °C

Web services



The "Web Application Programming Interface" (Web API) is an interface to make web services on a Gateway via Climatix IC accessible to clients.

All Web API functions are called up via "http" or encrypted "https". Each session begins with authentication on the web server.

If the "HomeControl IC" App is installed on a smart phone, the web services can access the data points of the devices on the LPB network via the Web API (communication connection for smart phone see page 11).

Type summary

Name		Product number
Gateway	for 16 LPB devices	OCI670/109

Ordering and delivery

When ordering, please specify the name and **product number**.

Example: Gateway **OCI670/109**

The Gateway is delivered in a cardboard box.

The following is included in the package:

- Mounting instructions A6V101022092_----_a
- Power cable, power supply AC 230 V
- Ethernet cable
- 2 cable ties

Equipment combinations

LPB/BSB devices

The following devices from the Sigmagyr/Albatros product range can be connected to each Gateway OCI670 via LPB/BSB.

- District heating controller RVD2..
- Heating controllers RVS..
- Boiler management units LMU.., LMS..

Note

Download a detailed list of compatibility of LPB/BSB devices at <https://support.industry.siemens.com/cs/ww/en/view/62567396>.

Product documentation

	Document type	Document no.
Gateway OCI670	Data sheet (this document)	A6V101022127_de--_a
	Mounting instruction, package insert	A6V101022092_----_a
	Installation instructions	A6V101022113_de--_a
	Commissioning instructions	A6V101022140_de--_a

CE declaration of conformity	T5711
Environmental product declaration	E5711
ACS790 software	Data sheet
	N5649

Technical design

Web browser

Devices	Demand
PC/Laptop (1024 x 786)	html5 compatible web browser
Smart phone	Specific to the particular end device

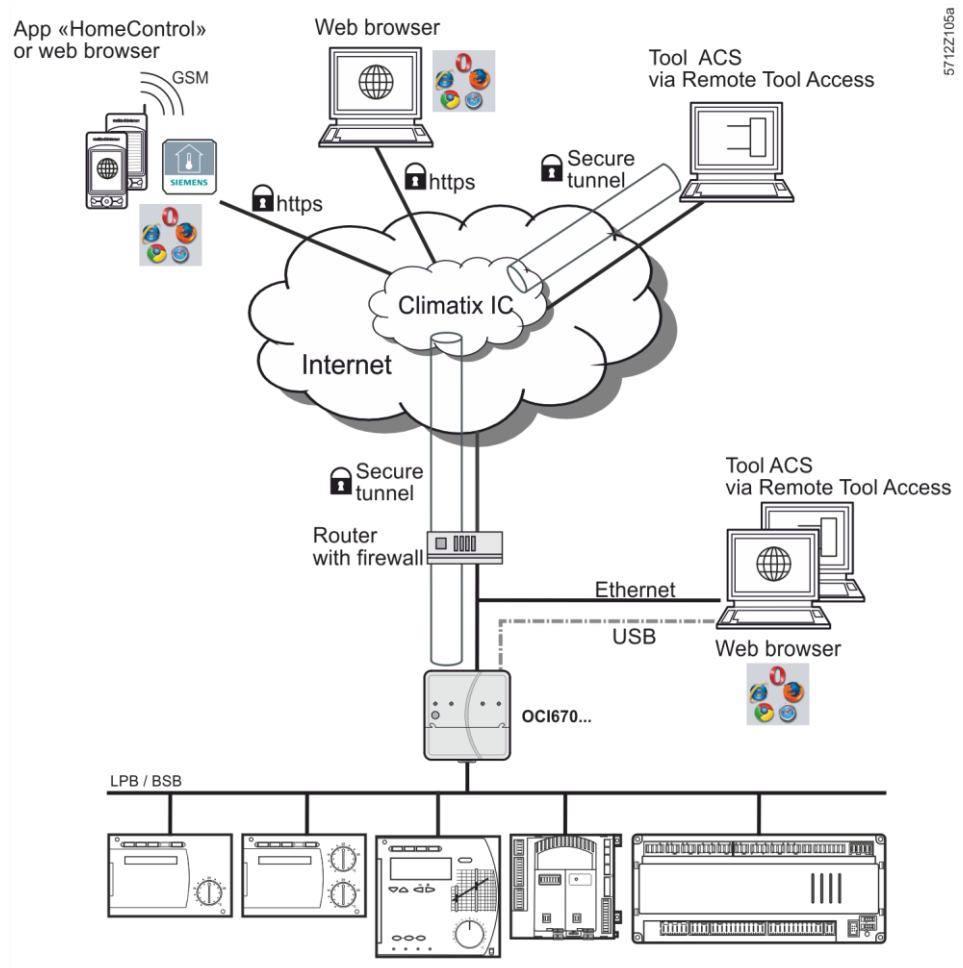
Concurrent operation

Concurrent operation is unlimited. The maximum data throughput is shared between the users. Operation slows down as the number of users increases accordingly.

Operation, monitoring, alarming

Communication connections for local commissioning (USB) and remote operation, remote monitoring and alarming via Ethernet.

The Gateway is not suited for direct connection to the Internet, but rather must be connected via a firewall. A router typically includes a firewall.



Interfaces

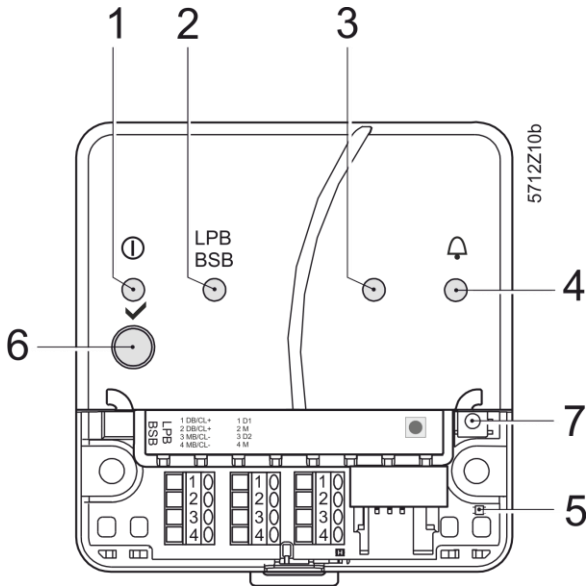
USB	The USB interface directly connects the PC/laptop on site.
Ethernet	The router/network is connected to the Ethernet RJ45 plug. The Ethernet interface features Auto-MDI(X) for crossed and non-crossed Ethernet cables. An Ethernet category 5 cable is supplied.
LPB/BSB	The LPB/BSB bus is connected to terminals DB/CL+ and MB/CL- . For information on the LPB/BSB bus, see Local Process Bus System Engineering, basic documentation P2370.
Digital inputs	The digital inputs D1, D2 help connect potential-free status contacts. They work as fault inputs.

Protocols

Web operation	<p>Web operation via portal takes place through an HTTPS encrypted connection (Port 443) via TCP/IP. The required certificate is accredited.</p> <p>Web operation without portal takes place through an HTTPS encrypted connection (Port 443) via TCP/IP. The required certificate is not accredited. The self signed certificate by Siemens is saved to the web server and cannot be changed.</p>
Send email	"Energy indicator" reports and trend files are sent in an email via SMTP. The email is encrypted using TLS if supported by the mail server.
DHCP client	The Gateway can be manually configured or take over its network configuration as a client of a DHCP server.

Design

The Gateway consists of the housing lower section with printed circuit boards and interfaces as well as connection terminals. The upper housing section contains the printed circuit boards. The upper housing section contains the LED displays and one operating button. The connection terminals and additional display and operating elements are located under the removable cover for the upper housing section. All display and operating elements are labeled.



Pos	Element	Designation
1	⓪ LED (red / green / orange)	On-LED Operation, portal connection display and "Energy indicator"
2	LED (green)	LPB/BSB
3	LED	No function
4	🔔 LED (red)	Fault LED
5	LED	No function
6	✓ Button	Remote button
7	⊠ Button	Service button


LED indicators



<p>1 ⓪ (red/green/orange)</p>	<ul style="list-style-type: none"> • Off • Red on • Flashing red • Green on • Orange on • Flashing green / orange 	<ul style="list-style-type: none"> No power Web server is starting the operating system Web server starting the application Web server operational, Energy indicator = Green leaf Web server operational, Energy indicator = Orange leaf Web server operational, connected to the portal (LED 0.8 s on, 0.2 s off)
<p>2 LPB/BSB (green)</p>	<ul style="list-style-type: none"> • Off • On • Blinking 	<ul style="list-style-type: none"> No bus power LPB/BSB operational Communication on LPB/BSB
<p>3 (LED)</p>		<ul style="list-style-type: none"> No function
<p>4 Faults 🔔 (red)</p>	<ul style="list-style-type: none"> • Off • On 	<ul style="list-style-type: none"> No fault (normal operating state) Fault
<p>5 (LED)</p>		<ul style="list-style-type: none"> No function

Operating buttons

<p>6 Remote ✓</p>	<ul style="list-style-type: none"> • Long (> 6 s) 	<ul style="list-style-type: none"> See Button combination
<p>7 Service ⊠</p>	<ul style="list-style-type: none"> • Long (> 6 s) 	<ul style="list-style-type: none"> See Button combination

Button combination

✓ and 

- Long (> 6 s) Simultaneously press buttons ✓ and  to restore the device to the factory settings.
: All configuration data and settings are reset. The device list, plant diagrams, and unsent messages are deleted. History data is not deleted.

Notes

Mounting

You can mount the the Gateway in a panel, distribution box, or on a wall. Include space for wiring when planning. Make sure service can easily access the unit and the unit is ventilated properly.

- Standard mounting On standard rail TH 35-7.5.
- Wall mounting. Attached with 2 screws.
- Mounting position Horizontal or vertical.
- Mounting and dimensions See "Dimensions".

Install

Important notes

Observe the following when installing:

- Run fuses, switches and wiring as per local regulations for electrical installations.
- We do not recommend plant monitoring via USB interface in environments with strong electromagnetic interference (e.g. in industrial environments with electrical welding equipment).
- See "Technical data" for electromagnetic compatibility.

Operating voltage

The supplied AC 230 V power supply provides the DC 24 V operating voltage for the Gateway.

Wiring	<p>The operating voltage, USB and Ethernet plugs are located on the upper part of the housing.</p> <p>The terminals on the device for the LPB/BSB bus are located under the removable cover.</p>
Connection terminals	<p>The connection terminals are designed for wire diameters of min. 0.5 mm or cross-sections of 0.25...1.5 mm² or stranded wire cross-sections of 0.25...1.0 mm².</p>
Commissioning Connections	<p>The Gateway is commissioned directly via the portal with a PC/Laptop. A web browser required on the PC/Laptop.</p> <p>The Gateway can be commissioned locally via USB or with ACS790. The USB cable type A – Type Mini-B connects the Gateway to the PC/laptop.</p> <p>Additional information is available in the Mounting instructions A6V101022092_----_a inserted in the package or the Installation guide A6V101022113_en--_a and commissioning instructions A6V101022140_ene--_a, available in the Download Center at: http://www.siemens.com/btproduct?oci670.</p>
Router	<p>You need a suitable router for remote operation via Internet. The router must support NAT/PAT to access via the portal.</p>
IP address	<ul style="list-style-type: none"> • The IP address via USB is set: 192.168.250.1. • Default setting for the IP address via Ethernet: 192.168.2.10. • The network administrator must provide an IP address for the Gateway before you can connect the Gateway via Ethernet to a managed network.

User groups

User accounts are created and assigned to specific user groups for customized user operation.

End-user

- Access to end-user data and fault overview.
- Operate and monitor via menu tree and plant diagrams.
- Administer own user accounts.

Technical service

Same as end user. In addition:

- Access service data.
- Create, download, and manage trend data
- Download consumption data and message history.
- Upload customized logos and documents.
- System definitions update.
- Firmware update
- Update device web pages.

Administrator

Same as service. In addition:

- Edit device list.
- Create device web pages.
- Create, copy, change, and delete plant diagrams.
- Select "Energy indicator" data points and change the default values of the data points and/or "Green limits" as needed.
- Administer all user accounts.

Maintenance

Gateway OCI670 is maintenance free (no battery changes, no fuses). Clean the housing only with a dry towel.

Repair

Gateway OCI670 cannot be repaired on site. If faulty, return to the Repair Center at the relevant Regional Company.

Disposal



The devices are considered electronic waste in terms of the European Directive 2012/19/EU and may not be disposed of as household waste.

- Use only proper channels to dispose the device.
- Comply with all local, applicable laws and regulations.

Technical data

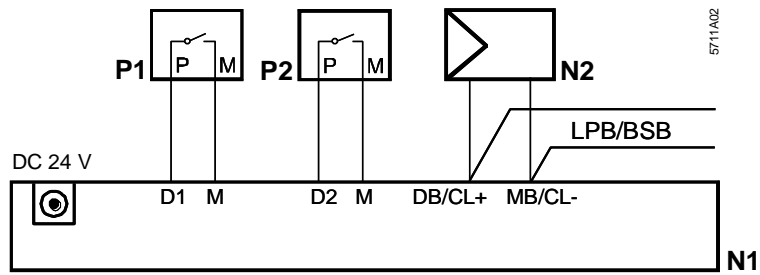
Power cable for Gateway OCI670	Operating voltage	AC 230 V ± 15 %
	Rated voltage "Euro plug"	AC 230 V EN 50075 and VDE 0620-1
	Frequency	50/60 Hz
	Power consumption (including web server Gateway OCI670)	3 VA typical
	Protection class	II.
	Output voltage	SELV 24 VDC
	Supply line fusing	Max. 16 A
	Cable length (distance from AC 230 V plug to Gateway)	Max. 1.6 m
Web server OZW672...	Operating voltage	SELV 24 VDC ± 5 %, 625 mA max.
	Power consumption	2 W typical
Functional data	Clock reserve	Min. 72 hours
	Number of connectable devices OCI670	Max. 16 LPB devices
LPB/BSB bus	Interface type 2-wire bus Bus load	2-wire connection DB/CL+, MB/CL- (non-exchangeable) E 5
	Permissible line length and cable types	See: Local Process Bus, System engineering, Basic documentation P2370
	Connection, screw terminals for Solid/stranded wire (twisted or with ferrule) 1 solid wire per terminal 1 stranded wire per terminal	Min. dia. 0.5 mm 0.25...1.5 mm ² 0.25...1.0 mm ²
USB	Interface type Device class Baud rate	USB V2.0 RNDIS Max. 12 Mbps (full speed)
	Connecting cable Cable length Cable type for connection to PC/laptop Cable type for connection to OCI670	Max. 3 m USB type A USB type Mini-B
Ethernet	Interface type Bit rate Protocol Identification	100BaseTX, IEEE 802.3 compatible Max. 100 Mbps TCP/IP Auto MDI-X
	Connection, plug Cable type Cable length	RJ45 plug (screened) Standard Cat-5, UTP or STP Max. 100 m
Directives and standards	Product standard	EN 60950-1 Information technology equipment – Safety
	EU conformity (CE)	CE1T5711xx ^{*)}
	RCM conformity	CE1T5711en_C1 ^{*)}
Environmental compatibility	The product environmental declaration CE1E5711en ^{*)} contains data on environmentally compatible product design and assessments (RoHS compliance, materials composition, packaging, environmental benefit, disposal).	
Degree of protection	Protective category	IP30 to EN 60529
	Protection class	III as per EN 60950-1

*) The documents can be ordered at <http://siemens.com/bt/download>.

Degree of protection	Protective category	IP30 to EN 60529
	Protection class	III as per EN 60950-1
Ambient conditions	Operation	IEC 60721-3-3
	Climatic conditions	Class 3K5
	Temperature (housing and electronics)	0...50 °C
	Humidity	5...95 % r. h. (non-condensing)
	Mechanical conditions	Class 3M2
	Transport	IEC 60721-3-2
Climatic conditions	Class 2K3	
Temperature	-25...+70 °C	
Humidity	< 95 % r. h.	
Mechanical conditions	Class 2M2	
Materials and colors	Upper housing section	PC + ASA, RAL 7035 (light-gray)
	Lower housing section	PC + ASA, RAL 5014 (dove blue)
Dimensions	Length x width x height (max. dimensions)	87.5 mm x 90.0 mm x 39.2 mm
Weight	Gateway OC1670	0.136 kg
	Gateway with packaging, installation instructions, power unit, Ethernet cable, cable ties.	0.589 kg
	Packaging	Cardboard box
Terms, abbreviations	Auto Medium Dependent Interface - Crossed	Auto-MDI(X)
	Boiler System Bus	BSB
	Dynamic Domain Name System	DynDNS
	Dynamic Host Configuration Protocol	DHCP
	HVAC Integrated Tool von Siemens	HIT
	Hyper Text Transfer Protocol	HTTP
	Hyper Text Transfer Protocol Secure	HTTPS
	Internet Protocol	IP
	Local Process Bus	LPB
	Network Address Translation	NAT
	Network Time Protocol	NTP
	Port and Address Translation	PAT
	Remote Network Driver Interface Specification	RNDIS
	Shielded Twisted Pair	STP
	Simple Mail Transfer Protocol	SMTP
	Transport Layer Security	TLS
	Transmission Control Protocol	TCP
	Universal Serial Bus	USB
	Unshielded Twisted Pair	UTP
	Web Application Programming Interface	Web API

Connection diagrams

Connection diagram

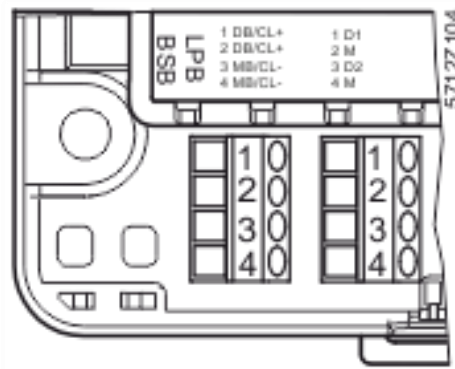


- N1 Gateway
 N2 LPB/BSB device
 P1, P2 Devices with potential-free contact output for fault indication

Connection terminals

LPB/BSB bus

Digital inputs



LPB/BSB

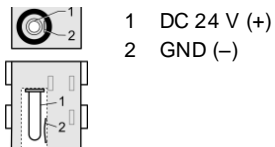
- 1 DB/CL+
- 2 DB/CL+
- 3 MB/CL-
- 4 MB/CL-

Digital

- 1 D1
- 2 M
- 3 D2
- 4 M

Operating voltage

DC 24 V



Dimensions

