



## Web Server Manual

# Electronic pressure-independent characterised control valve with energy monitoring Belimo Energy Valve™ Thermal Energy Meter

Edition 2021-10/A



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# General

## Version information

This manual applies to products listed below:

Belimo Energy Valve™ DN 15...50  
EV0..R2+(K)BAC/EV0..R2+MID

3-way Belimo Energy Valve™ DN 15...50  
EV0..R3+BAC

Thermal Energy Meter DN 15...50  
22PE(M)-1U..

Earlier versions may have different representations and functions. If in doubt, please contact your Belimo representative.

# Access

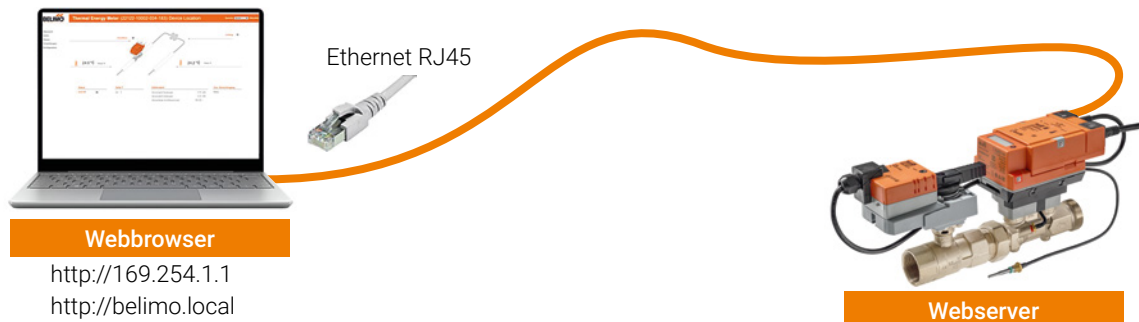
## Preconditions

For direct access, you will need a PC with one of the web browsers listed below as well as a network cable (RJ45).

- Microsoft Edge
- Mozilla Firefox
- Safari on iOS platform
- Google Chrome

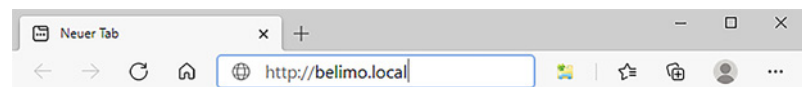
## "Peer-to-peer" connection

Easy access to the device is possible via the link local address. For this, the laptop must be connected as "peer-to-peer" with the device. The IP address does not need to be known.



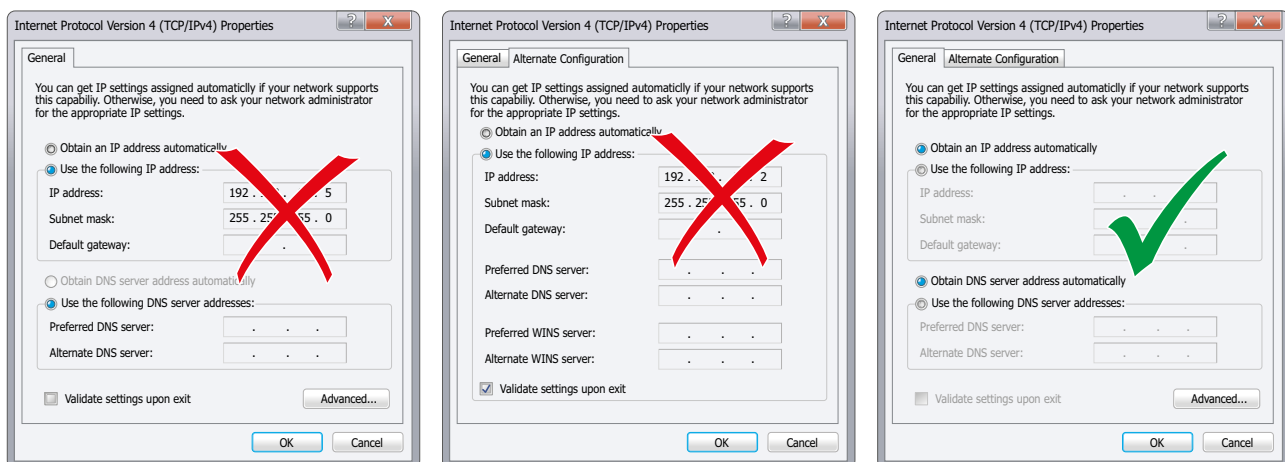
Note: The device must be supplied with voltage. If the device is powered via PoE, you can access the device only via the IP address or through the Belimo Assistant App.

Establish a direct connection between the PC/laptop and the Belimo device via an RJ45 cable. You can then access the device via a supported web browser by calling up the address `http://169.254.1.1` or `http://belimo.local`.

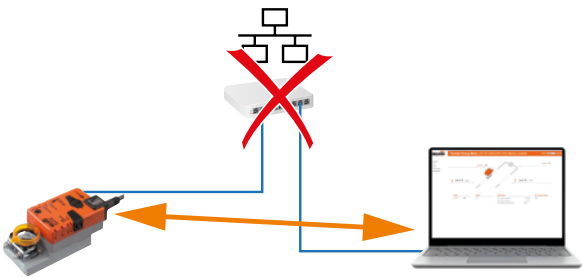


The following preconditions must be met:

- No static IP address
- No alternative IP address set
- PC/laptop must be set to "DHCP"



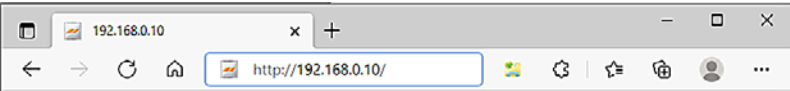
A direct connection must exist in order to access the device via peer-to-peer. This type of connection cannot be used in a network with other consumers.



IP address

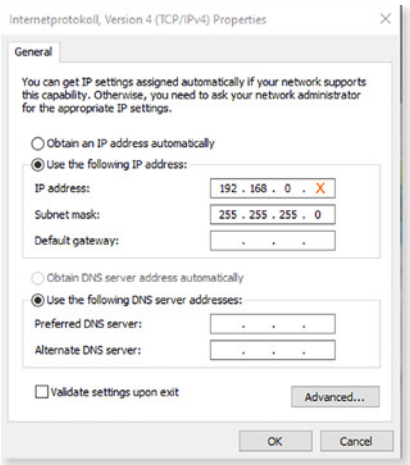
As an alternative to the link local address and "peer-to-peer" connection, you can also access the device using the IP address. This type of connection can also be used in a network with multiple consumers. If there are several devices in the network, valid IP settings have to be assigned to the consumers in advance (IP address and subnet mask).

- IP settings for deliveries are as follows:
  - IP address 192.168.0.10
  - Subnet mask 255.255.255.0
- Open the web browser and enter the following address: http://192.168.0.10, or the one assigned by the network administrator



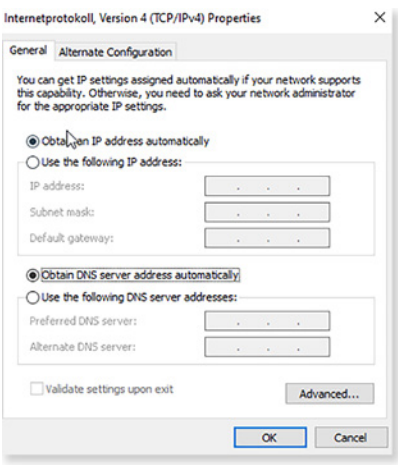
Please note that the following conditions are to be observed:

Laptop static IP address



Example: When the device is in delivery condition:  
**x = not equal to 10**  
If the device is already connected to a network, matching IP settings must be assigned to the laptop.

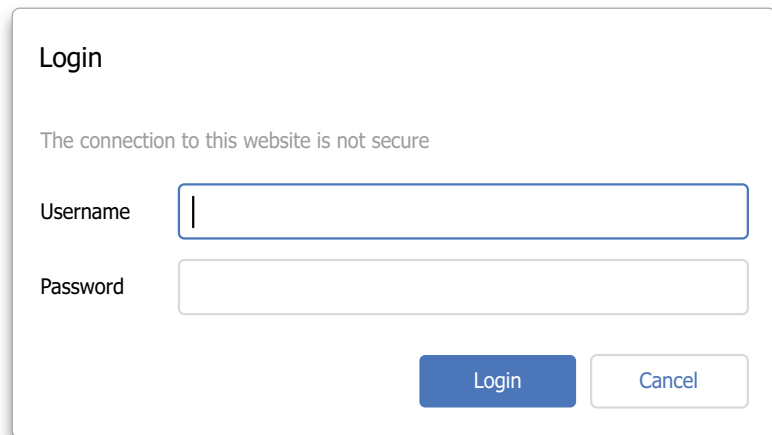
Laptop settings DHCP



If the network has a DHCP server and the network adapter settings on the laptop are set to DHCP, the IP settings will be assigned automatically.

## User name and password

Access to the device is password-protected.

A login dialog box with a white background and a thin grey border. At the top left, the word "Login" is written in a bold, black, sans-serif font. Below it, a smaller, grey, sans-serif font message reads "The connection to this website is not secure". Underneath this message are two input fields. The first is labeled "Username" in a grey, sans-serif font and contains a single vertical cursor line. The second is labeled "Password" in a grey, sans-serif font and is empty. At the bottom right of the dialog box are two buttons. The first button is blue with the word "Login" in white, sans-serif font. The second button is white with a grey border and the word "Cancel" in blue, sans-serif font.

Login

The connection to this website is not secure

Username

Password

Login Cancel

There are three standard users with different read and write permissions. All standard users and passwords can be seen in the chapter "User administration".

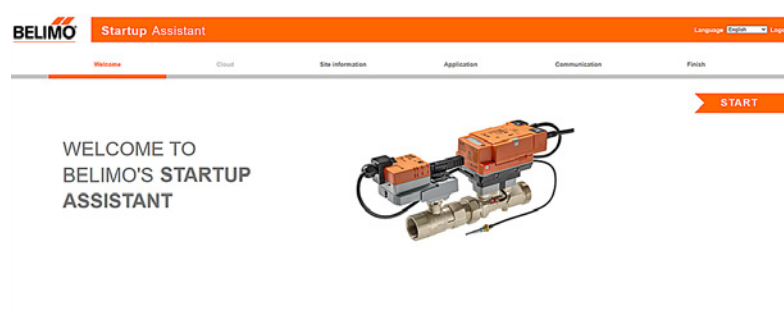
# Startup assistant

## General

The startup assistant is started after initial entry. The assistant helps to ensure that the main settings of the device are undertaken right from the start. After the greeting, it guides you through the following set-up steps:

- Cloud
- Site information
- Application
- Communication

You can still change all the settings you have entered later.





## Cloud

If you want a connection to the Belimo Cloud, you can enter the data here.

**Cloud owner**

Enter the email address or group name of your Cloud account

Transfer Device

If you don't have an account, please visit our website later to create one: <https://cloud.belimo.com>

**Cloud settings**

- ☒ Allow automatic updates ⓘ
- ☒ Activate Cloud services ⓘ
- ☒ Enable Cloud. I herewith accept the terms & conditions

By using our Belimo Energy Valve Cloud Services, you agree to our terms and conditions and confirm that you have read, understood and accepted them.

Terms and conditions: [www.belimo.com/privacy](http://www.belimo.com/privacy)

### Cloud account email

If you already have a Belimo Cloud account, enter the email address here.

### Allow automatic updates

This allows software updates to be automatically installed. After the update, the device will reboot automatically and all settings will remain the same.

### Cloud services

You can activate the cloud services such as delta T Optimisation and Support via Cloud here. If the cloud services are not activated, you cannot use the following functions: Delta T Optimisation via the Cloud, Online Support and Remote Parametrisation.

## Site information

You can add details about the device here, e.g. mounting location, application details or the building address. This information is especially important when managing multiple devices. This allows you to identify a device when it is accessed.

**Site information**

Device name	Energy Valve PM 5/6 ⓘ	Address	
Location	Hirwil ⓘ	City	
Device description		Zip code	
Project name	ⓘ	State	
Building type	Industrial ▾	Country	▾
Application type	Heat / Cooling distribution ▾		

## Application

This is where you enter the settings for installation, control settings (only for Energy Valve) and flow values (only for Energy Valve).

Belimo Energy Valve		1/2"   DN 15		Control Settings	
Vnom	1499.976	l/h	▼	Control mode	Power Control ▼
Pnom	90	kW	▼	Setpoint source	Analog ▼
				Control signal range	0.5-10V ▼
Application				Limitation	
Media	Water			Vmax	702.44 l/h
				Range	374.994 - 1499.976
Installation position	Supply			Pmax	0.45 kW
				Range	0.5 - 99.0

## Communication

This is where you adjust all bus-related settings.

### BACnet, MP and Modbus Settings

#### Communication Protocol

- ☐ BACnet IP
- ☐ BACnet MS/TP
- ☐ MP-Bus
- ☐ Modbus TCP
- ☐ Modbus RTU
- ☒ None

Submit

## Finish

Parametrisation by the startup assistant is now complete. Three notes are displayed:

### Security

Direct access to user administration. To ensure secure operation, you need to change the password for the standard users, and in particular for the admin user.

### Advanced settings

Direct access to the application settings. You can also download a commissioning report here.

### IT infrastructure

Direct access to the IP settings. You can configure the IP settings here according to the existing IT infrastructure.

## You have successfully finished configuration

### Security

*change user administration*



### Advanced settings

*Application settings & report*



### IT infrastructure

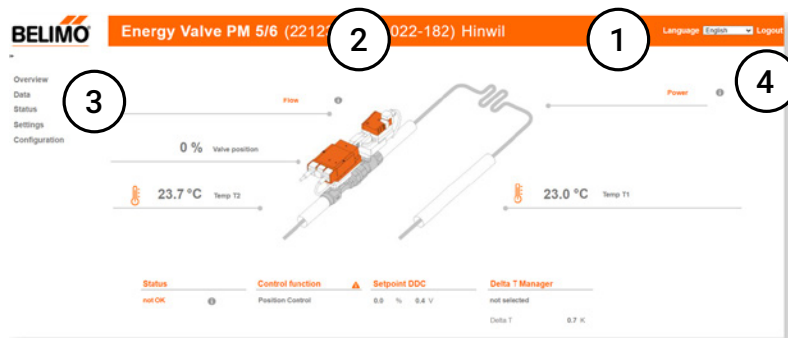
*change IP Settings*



# User interface

## General

After completing the commissioning, you will be redirected to the web server overview page. This is where you can view all of the data points and access all of the settings.



### 1 Language setting

This is where you can set the language of the user interface.

### 2 Device name

The device name entered in the settings is displayed here.

### 3 Navigation menu

Allows you to navigate through the different areas to access information and configure settings.

### 4 Log Out

Logs the current user out of the web server.

## Language setting

The language used is automatically selected in accordance with the PC settings. If the computer is set to a language that is not available, English will be selected automatically.

You can also select the display language via the drop-down menu.

Available languages:

German	Polish
English	Portuguese
French	Hungarian
Finnish	Russian
Croatian	Swedish
Italian	Serbian
Japanese	Slovak
Korean	Slovenian
Macedonian	Spanish
Norwegian	Chinese (Mandarin)
Dutch	

## Overview

This page shows the most important actual values of the device. You get an overview of the actual values here and can see the status of the device.

Fault messages can be viewed directly here.

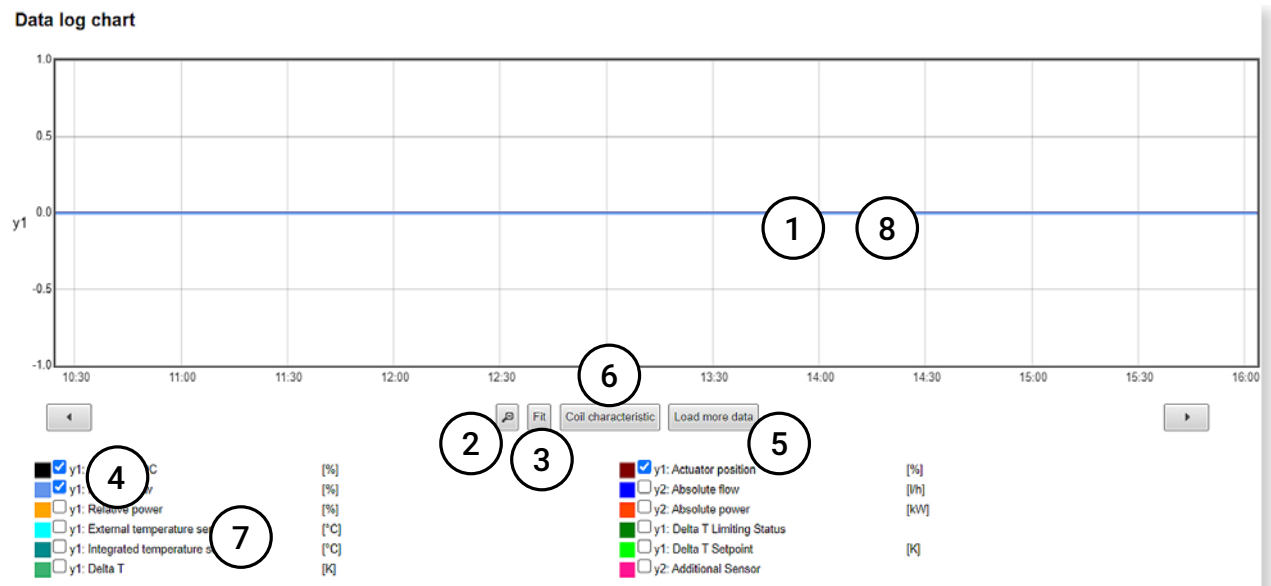


# Data

## Live trend and KPI

The visualisation of the system data provides a simple and quick overview of the system. The values displayed can be specifically selected.

On this page you can view and evaluate the recorded data. Selected data can be visualised in the live trend view.



### 1 Visualisation of the system data

The saved data from the last 8 days is automatically loaded in this view.

### 2 Zoom out

This function makes it possible to expand the period being viewed.

### 3 Adaptation

Clicking this button resets the visualisation.

### 4 Arrow navigation

These arrows allow you to navigate along the timeline.

### 5 Load more data

This function loads all data stored in the product.

### 6 Heat exchanger characteristic curve

Displays the determined characteristic curve of the heat exchanger. This allows delta T values to be determined (only for Energy Valve).

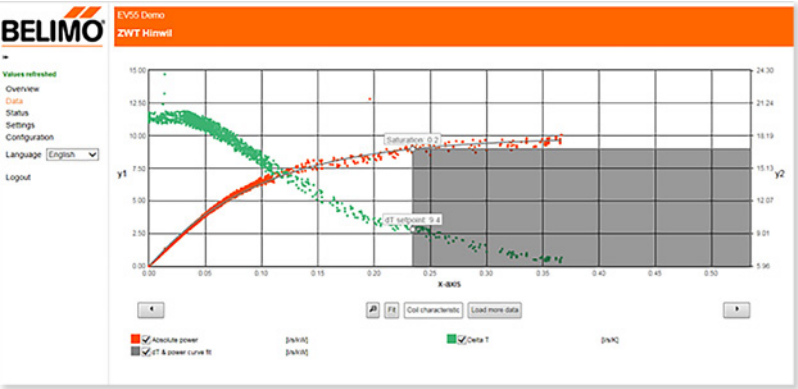
### 7 Displayed data

By selecting or deselecting the check boxes, you can selectively show or hide values.

### 8 Zoom function

The zoom function can be used to limit the period being viewed. Click and drag to zoom in on the selected area.

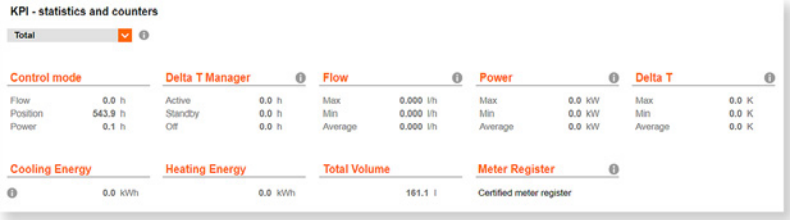
The figure below shows an example of a determined heat exchanger characteristic curve for the Energy Valve. The orange data points represent the performance curve of the heat exchanger. The green data points represent the corresponding differential temperature curve. The ideal values for the delta T manager are determined.



The KPI statistics show the performance of the device since commissioning or during a specific month. You can select the month via the drop-down menu.

The following KPIs are displayed

- Control mode
- Delta T manager
- Flow rate
- Power
- Delta T
- Cooling energy
- Heating energy
- Total flow
- Meter reading



**Control mode (only Energy Valve)**

Shows how many hours the Energy Valve has been operated in total in the different control modes of flow rate, position and power control.

**Delta T manager (only for Energy Valve)**

Shows how many hours the delta T manager was active, switched off or in standby mode. The time during which there is no flow requirement is not included in the statistics.

**Flow**

Shows the maximum, minimum and average flow rate values. The time during which there is no flow requirement is not included in the statistics.

**Power**

Shows the maximum, minimum and average power. The time during which there is no flow requirement is not included in the statistics. Delta T: Shows the maximum, minimum and average differential temperature. The time during which there is no flow requirement is not included in the statistics.

**Cooling energy**

The total measured cooling energy is displayed here. If you have selected a month via the drop-down menu, two values will be displayed. The top value represents the cumulative energy flow between the time of commissioning and the end of the selected month. The bottom value represents the energy flow during the selected month.

**Heating energy**

The total measured heating energy is displayed here. If you have selected a month via the drop-down menu, two values will be displayed. The top value represents the cumulative energy flow between the time of commissioning and the end of the selected month. The bottom value represents the energy flow during the selected month.

**Flow total**

The total measured flow volume is displayed here. If you have selected a month via the drop-down menu, two values will be displayed. The top value represents the cumulative volume flow between the time of commissioning and the end of the selected month. The bottom value represents the volume flow during the selected month.

**Meter reading**

Displays the certified meter reading and the service life meter reading. The certified meter reading is the same value that is shown on the display of the device. This value is used for accounting purposes. The service life meter reading starts at the time the device is commissioned and is never reset.



## Data logging

On this page you can choose to download the data in the short-term memory (31 days uncompressed) or long-term memory (13 months compressed). You can also delete all of the data.

**Filetype**

☐ Short Term Storage (31 days uncompressed)

☐ Long Term Storage (13 month compressed)

**Filename**

Download

Erase Data Log

# Status

## Health state

The current status of the device is displayed here. The fluid, flow rate, power, sensor and actuator parameters are checked.



All of the fault messages since commissioning are displayed in the "Chronicle" section. In addition, the time elapsed since the last occurrence of the respective error can be seen.

Click on "Show details" to display additional information.

## Error messages

Category	Error message	Proposed solution
Fluid	Glycol determined	– Test the glycol concentration
	Freeze warning	– Water temperature is low – Test the glycol concentration
Flow	Reverse flow	– Check whether the valve is installed in-line with the direction of flow
	Flow not reached	– Check whether the pump pressure is adequate – Check the pump fittings – Check the flushing bypass – Check the $V'_{\max}$ setting
	Flow rate with closed valve	– Check whether the actuator is mounted correctly according to the valve position
	The current flow rate exceeds the nominal flow rate.	– Set the control mode on flow control and $V'_{\max}$ to the designed flow rate
Power	Power not realised	– Check the supply temperature – Check whether the secondary side is in operation – Check the $P'_{\max}$ setting
Sensor	External temperature sensor (T1) error	– Check the wire connection
	Integrated temperature sensor (T2) error	– Check the wire connection
	Flow measurement error	– Check whether the system is filled with water and that there is no air present
	No communication to the sensor	– Check whether the logic module and sensor module are mounted correctly – Restart the device (power off/power on).
Actuator	Actuator cannot move.	– Check whether the rotation is 90°.
	Gear train disengaged	– Gear disengagement push-button on the actuator is disengaged
	No communication to the actuator	– Check the cabling to the actuator – If PoE is used, check whether PoE is activated

## Version information

You can view all the version information for your device here.

### Hardware

- Type code
- Serial number
- Sensor module serial number
- Actuator serial number
- OC module material number
- Platform

### Software

- Operating system version
- Basic software version
- Communication module firmware version
- Active boot slot
- Flow sensor firmware version

### Application module

- Model name
- Model file name
- Model version

# Settings

## Application

This is where you can configure all the settings for the application. The settings are divided into three sections:

Belimo Energy Valve

1/2" | DN 15

Vnom1499.976 l/hPnom90 kW

Startup AssistantCommissioning Report

Settings ImportSettings Export

1

Override

None

None

2

Configuration

Units

Temperature°C

Flowl/h

PowerkW

EnergykWh

Application

MediumWater

Installation positionSupply

Actuator sync positionSync at 0%

Analog feedback

FeedbackRelative position

RangeUser defined range

Voltage minimum0.50 V

Voltage maximum10.00 V

Control settings

Control modePower Control

Setpoint sourceAnalog

Control signal range0.5-10V

Invert signalnot inverted

Maximum and limitation

Vmax782.439 l/h

Range374.884 - 1499.976

Vmin782.439 l/h

Range37.489 - 782.439

Pmax0.5 kW

Range0.0 - 80.0

Delta T Manager

dT Limiting functionOff

3

- 1. General settings
- 2. Override
- 3. Parametrisation

## General settings

Belimo Energy Valve

1/2" | DN 15

Vnom1499.976 l/hPnom90 kW

Startup AssistantCommissioning Report

Settings ImportSettings Export

### Commissioning assistant

You can restart the commissioning assistant here once again to receive assistance for parametrising the device.

### Commissioning report

Allows for the commissioning report to be viewed and downloaded in PDF format. The commissioning report presents all of the settings and basic data for the device in a clear and structured way.

### Settings import

Clicking on this button takes you to the maintenance menu where you can import a pre-parametrisation in XML format.

### Settings export

Clicking on this button takes you to the maintenance menu where you can export a pre-parametrisation in XML format.

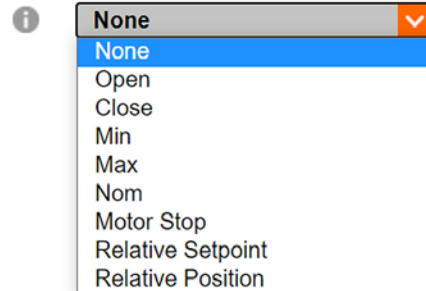
## Application – Override

### Override

The override function allows you to override all control signals and force one of the following functions:

#### Override

None



**Open:** Valve is opened.

**Close:** Valve is closed.

**Min:** The set minimum volumetric flow/position/power (depending on the set control mode) is controlled.

**Max:** The set maximum volumetric flow/position/power (depending on the set control mode) is controlled <sup>1)</sup>.

**Nom:** The set nominal volumetric flow/position/power (depending on the set control mode) is controlled.

**Motor stop:** The actuator remains at its current position.

**Relative setpoint:** The set relative setpoint for volumetric flow/position/power (depending on the set control mode) is controlled.

**Relative position:** The set relative position, independent of the set control mode, is approached.

**Note:** The override is reset automatically after 2 hours.

**Simulated operation:** Can be used when neither a control signal nor any other sensor data is available, e.g. for presentation purposes.

<sup>1)</sup> Since  $V'_{nom}/P'_{nom}$  can be higher than the maximum required (set)  $V'_{max}/P'_{max}$  of the installation, achieving the nominal values is dependent on the output of the pump.

Application – Configuration

**Units**  
This is where you can define the displayed units for temperature, flow rate, power and energy.

Configuration

Units

Temperature	°C	▼
Flow	l/h	▼
Power	kW	▼
Energy	kWh	▼

Temperature	Flow	Power	Energy
°C (*)	m³/h	W	J
°F	m³/s	kW (*)	kWh (*)
K	l/min (*)	BTU/hr	MWh
	l/h	kBTU/h	kBTU
	gpm	Ton	TonH
	cfm		MJ
			GJ

(\*) = Factory preset

### Application

This is where you can set the fluid and the installation position. For MID-certified devices, it is no longer possible to make changes after activation.

### Application

Medium	Water
Installation position	Supply
Actuator sync position	<span>i</span> Sync at 0% <span>▼</span>

### Fluid

Selection of the fluid used:

- Water
- Propylene glycol
- Ethylene glycol
- Antifrogen L
- Antifrogen N
- DowCal 200
- DowCal 100

### Glycol override

This selection is displayed only if you have selected glycol as the fluid. You can enter the percentage concentration of the glycol here. The glycol display function is overridden by the input value. Glycol compensation is still carried out with the measured value.

### Installation position

The correct settings are important for allocating the consumed energy as cooling or heating energy:

- Valve in supply pipe
- Valve in return pipe

### Actuator sync position

The actuator synchronises its position after the gear disengagement push-button has been pressed. Select "Sync at 0%" to enable synchronisation when the valve is closed. Select "Sync at 100%" so that the actuator synchronises when the valve is open.

**Note:**

These settings determine the analogue feedback signal U5.

**Analogue feedback**

You can select which parameter is output as a feedback signal U5 here.

The units correspond to the settings in the "Units" area. The following parameters can be output:

- Relative position: Opening angle [°] valve
- Relative flow rate: Current quantity of water
- Relative power: Current consumer power output
- Supply temperature in the set unit
- Return temperature in the set unit
- Delta T: Differential temperature, supply and return

Depending on which parameter you select as the output signal, you must define the maximum and/or minimum value of the output parameter.

**Analog feedback**

Feedback	Relative position	▼
Range	User defined range	▼
Voltage minimum	0.50 V	
Voltage maximum	10.00 V	

You can select one of the following signals as the output range:

- 0...10 V
- 0.5...10 V
- 2...10 V
- You can manually enter the minimum and maximum voltage of the output signal here



### Control settings

Parametrisation of the positioning signal Y.

Control settings	
Control mode	Power Control ▼
Setpoint source	Analog ▼
Control signal range	0.5-10V ▼
Invert signal	not inverted ▼

#### Control mode

You can select the desired control mode here.

- Position control: In this setting, the valve operates as a pressure-dependent valve such as a conventional characterised control valve
- Flow control: Operation as a pressure-independent valve similar to an electronic pressure-independent characterised control valve
- Power control: The positioning signal directly requests a particular power output at the heat exchanger. The valve operates independently of temperature and differential pressure

#### Setpoint source

You can select either a bus or an analogue signal as the signal source here.

#### Positioning signal range

You can select the operating range of the positioning signal here. The ranges 5...10 V, 2...10 V or a user-defined range are available.

#### Signal inversion

The signal can be inverted if desired.

**Maximum and limit**

When the control mode is set to flow rate or power control, you can configure the Maximum and Limit settings.

**Maximum and limitation**

V <sub>max</sub>	<b>702.439 l/h</b>
Range	374.994 - 1499.976
V <sub>min</sub>	<b>702.439 l/h</b>
Range	37.499 - 702.439
P <sub>max</sub>	<b>0.5 kW</b>
Range	0.5 - 90.0

**V'<sub>max</sub>**

Maximum flow rate as absolute value in the selected unit.

**V'<sub>min</sub>**

Minimum flow rate as absolute value in the selected unit. You can enter a V'<sub>min</sub> here to ensure a minimum flow rate with a requirement of 0%. This minimum flow becomes effective at a minimum requirement of the positioning signal. Depending on the analogue setting, this is 0 V, 0.5 V, 2 V or via bus 0%.

**Note:**

The definitions of the values V'<sub>nom</sub> and V'<sub>max</sub> are provided in the annex to this document.

**P'<sub>max</sub>**

Maximum power as absolute value in the selected unit. Set this value based on the design data of the consumer. The value can only be defined if power control is set as control mode.

**Delta-T manager**

Activation or deactivation of the delta T manager. This function can be used to prevent the volumetric flow from increasing when the supply/return temperature falls below a set differential temperature. In this case, the valve will not be opened further, even if the positioning signal increases.

**Delta T Manager**

dT Limiting function

Off

Off

On

On-Scaling

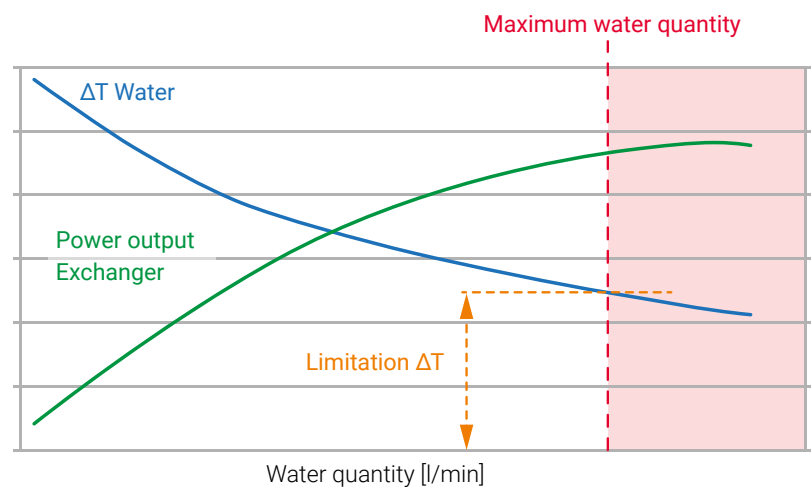
**dT limit function:**

- Off: Deactivates the delta T manager
- On: Activates the delta T manager
- On with scaling: Extended delta T limiting is switched on

### Delta T limit value

No increase in volumetric flow if this setting value is not reached. In the "On with scaling" mode, this value is dynamic. This value can be read from the heat exchanger characteristic curve determined. (Register KPI and trends → heat exchanger characteristic curve).

dT flow rate saturation value: Corresponding flow rate when delta T is reached.



In operation, the limitation only monitors the differential temperature at a flow value  $\geq 30\%$  of  $V'_{\max}$ .

- In the range below  $30\% V'_{\max}$ , excessively low differential temperatures are not corrected by the valve
- This operational behaviour ensures that the system restarts properly after a standstill period

**CAUTION:** This does not apply in the "On with scaling" mode.

## Site information

You can enter all of the information about the location of the device here. This can be especially helpful if you are managing multiple devices.

## Date and time

You can define these settings in Date and Time.

**Browser**

14:19:33 Time

12.10.2021 Date

GMT+2 Timezone

**Device**

14:19:32 Time

12.10.2021 Date

GMT Timezone

Update Device Time

**NTP Server (optional)**

Timeserver Override ⓘ

Last Used Timeserver

Submit

### Browser

Date and time of the PC browser connected to the device.

### Device

Date and time set on the device.

### Update device time

Clicking on "Update device time" transfers the date and time setting of the connected PC to the device.

### NTP Server

If desired, the date and time can be applied from a time server. If multiple devices are being used, it is also possible to define one device as the time master. To do this, enter the IP address of the time master for all other devices.

## User administration

You can create new users via this control panel.

**Web Users**

The following local users can sign in to the local website of this device:

Show  entries      Search:

Username	Role
admin	adminGroup
guest	guestGroup
maintenance	maintenanceGroup

Showing 1 to 3 of 3 entries      Previous  Next

☐ [Device owners](#) can sign in to the local website with their Belimo ID

☐ Enable privileged users

**Add:** Adds a new user.

**Edit:** Edits the user currently selected.

**Delete:** Deletes the user currently selected.

**Reset:** Resets all user settings to the factory settings.

There are three standard users included in the factory settings: admin, guest and maintenance.

These three users have different read and write permissions. The table below gives an overview of all the permissions.

User name: Password:	guest guest	maintenance belimo	admin tlnsg <sup>1)</sup>
Overview	L	L	L
Live trend and KPI	L/S	L/S	L/S
Data recording	L	L	L/S
System status	L	L/S	L/S
Version information	L	L	L
Application	L <sup>2)</sup>	L <sup>2)</sup>	L
User	L	L/S	L/S
IP setting	–	L	L/S
BACnet/MP/Modbus	L	L	L/S
Cloud setting	–	–	L/S
Date and time	–	L	L/S
Maintenance	–	–	L/S

### Legend

L	=	Read access
S	=	Write access
–	=	Page is not displayed.
<sup>1)</sup>	=	Please change the admin password during the first start-up.
<sup>2)</sup>	=	Units can be written.

## BACnet/MP/Modbus

You can set the selection of the desired communication protocol here. Once a protocol is selected, you can configure all the relevant settings according to the specifications of the on-site devices.

- BACnet IP
- BACnet MS/TP
- MP-Bus
- Modbus TCP
- Modbus RTU
- None (only conventional control)

## IP

This is where you can configure all of the IP settings according to the specifications of the person responsible for the network.

### Note:

The settings do not change for direct access with the laptop.

**Network Configuration**

50:2d:f4:0f:de:ff	MAC Address
80	HTTP Port
443	HTTPS Port
<input type="radio"/> DHCP/Zeroconf <input checked="" type="radio"/> Static/Zeroconf	
192.168.0.10	IP Address
255.255.255.0	Network Mask
	Gateway
	DNS Nameserver 1
	DNS Nameserver 2
192.168.0.255	Broadcast Address
169.254.1.1	ZeroConf Address
<input type="button" value="Change IP Configuration"/>	

### DHCP/Zeroconf

With this setting, the IP address is either automatically assigned to the device or determined by the device.


- If a DHCP server is present, the device is automatically assigned the IP address by the server
- If there is no DHCP server, the device is able to calculate the IP address based on the Zeroconf specification in the "Zeroconf" setting

### Static/Zeroconf

This setting allows the device to be assigned an IP address determined by the network administrator. It is normally used in networks without a DHCP server.

## Cloud

This is where you can configure all the settings for the Belimo Cloud.

**Cloud Connection Status**  
  
Green if last connection attempt was successful.  

connect.g2bcc.com:443

 Belimo Cloud Server

**Device Owner**  
**Current Owner**  

Refresh Current Owner

  
**New Owner**  
Enter new owner and click Transfer Device.  
  

Transfer Device


**+ Cloud Service Configuration**

**+ Additional Information**

**+ Connection Status**

### Cloud connection status

Uses colour to show the connection status of the cloud. If the symbol is green, the connection to the cloud has been established. Red means that no connection could be established.

**Cloud Connection Status**  
  
Green if last connection attempt was successful.  

connect.g2bcc.com:443

 Belimo Cloud Server

### Device owner

This is where you can configure the settings for the device owner.

Device Owner

Current Owner

Refresh Current Owner

New Owner

Enter new owner and click Transfer Device.

Transfer Device

### Current owner

This is typically the name of the user who configured the Belimo Cloud settings and matches the email address provided during the initial installation. Clicking on "Update current owner" retrieves this information again from the Cloud.

### New owner

Used when transferring from a current owner (or no owner) to a new owner. To do this, click on the "Transfer device" button after entering a new owner.

### Cloud service settings

This is where you can configure the settings for Updates, Datalog and Task Mode.

Cloud Service Configuration

Datalog and Task Mode

Datalog and Task Fast (PubNub)

Update Mode

Cloud Controlled Auto

Log Levels

Java Log

Warn

Events

System

Syslog

Warning

### Datalog and Task Mode

Enables data transfer between the device and the Belimo Cloud.

- Deactivated: No data transfer
- Only Datalog: Only data is stored in the cloud. Settings from the cloud are not adopted by the device
- Datalog and Task Flow (Polling): The device checks at intervals whether settings are to be transferred from the cloud
- Datalog and Task Fast (PubNub): If settings are changed in the cloud, the device is informed that new settings are to be adopted from the cloud. These are then automatically adopted



### Update mode

Enables updating of the software through the Belimo Cloud.

- Deactivated: No updates
- Device-controlled: Updates are displayed on the web server, no installation
- Cloud-controlled, manual: Updates are displayed on the Belimo Cloud, no installation
- Cloud-controlled, automatic: Updates are installed automatically

### Additional information

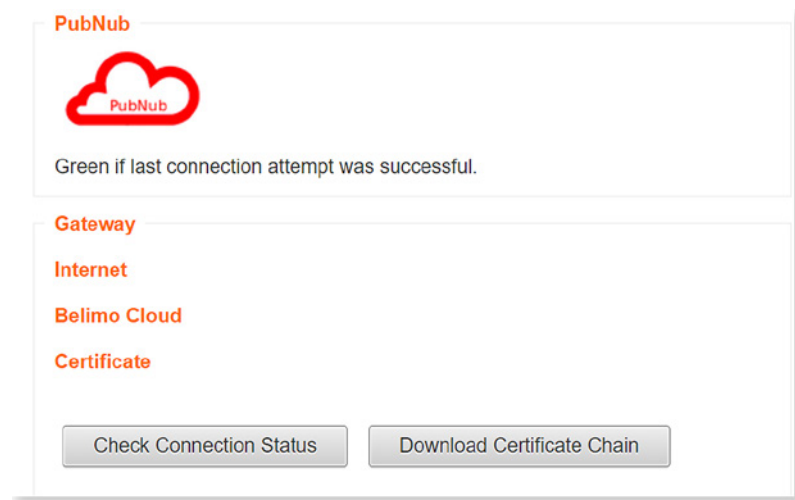
This is where you can access a variety of information about the device and sub-devices.

### Connection status

Performs a routine that helps troubleshoot the connection to the Belimo Cloud.

Clicking on "Check connection status" performs the following three steps:

- Check of the connection to the next gateway
- Check of the connection to the Internet
- Check of the connection to the Belimo Cloud



### PubNub

Shows the connection status to the PubNub service. Green means that the last connection attempt was successful. Red means that there is no connection.

## Maintenance

The screenshot displays a web interface for device maintenance settings, organized into five distinct sections:

- Configuration Import Export:** Contains a file selection area with a "No selected file" label and a "Choose file..." button, followed by an "Import Configuration" button. Below this is an "Export Configuration" button.
- Activation Codes:** Features a "Feature Name" label and a text input field. Below the input is another "No selected file" label with a "Choose file..." button, and an "Upload And Apply Activation Code" button.
- Software Update:** Includes two buttons: "Apply Available Updates" and "Upload And Apply Update Files".
- Configure encrypted connection to webservice:** This section has two columns, "Keystore" and "Truststore". The "Keystore" column shows a red "X" icon, while the "Truststore" column shows a green checkmark icon. Below these columns are two buttons: "Configure Certificates" and "Download Certificate".
- Misc:** Contains three buttons: "Reboot", "Factory Reset", and "Reboot from Factory".

### Settings import/export

The settings you selected during the commissioning can be saved here as a file on the computer (export settings).

If a large number of devices with the same nominal diameter and the same settings need to be installed, you can export these settings once and then import and apply them on another valve (browse/import settings).

### Software update

It is possible to upload a software update and to execute it directly.

### Configure encrypted connection to the web server

Enables the SSL certificate to be created in order to establish an HTTPS connection.

### Other/misc.

**Restart:** When this field is clicked, the device restarts. The previously configured settings remain unchanged.

**Factory reset:** You can reset the device back to the factory settings. The steps are as follows: 1. Press the "Factory settings" field and confirm the message by pressing "OK". 2. Connect the device to the Belimo Assistant App. The device will then start to reset all of the settings back to the delivery condition. All stored data will be lost.

# Belimo Energy Valve™ annex

## Definitions

**$V'_{\text{nom}}$**

$V'_{\text{nom}}$  is the maximum possible flow rate through the valve unit.  $V'_{\text{nom}}$  corresponds to the catalogue value and is the flow rate set at the time of delivery.

**$V'_{\text{max}}$**

$V'_{\text{max}}$  is the set maximum flow rate at the highest positioning signal, e.g. 10 V/100%.

**$P'_{\text{nom}}$**

$P'_{\text{nom}}$  is the maximum controllable power output  $Q'_{\text{nom}}$  at the heat exchanger.

**$P'_{\text{max}}$**

$P'_{\text{max}}$  is the set maximum power output  $Q'_{\text{max}}$  at the heat exchanger (with power control operating mode) with the largest positioning signal, e.g. 10 V/100%.

# All inclusive.

Belimo as a global market leader develops innovative solutions for the controlling of heating, ventilation and air-conditioning systems. Actuators, valves and sensors represent our core business.

Always focusing on customer added value, we deliver more than only products. We offer you the complete product range for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a five-year warranty. Our worldwide representatives in over 80 countries guarantee short delivery times and comprehensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo devices have a big impact on comfort, energy efficiency, safety, installation and maintenance.

In short: Small devices, big impact.



5-year warranty



On site around the globe



Complete product range



Tested quality



Short delivery times



Comprehensive support



## **BELIMO Automation AG**

Brunnenbachstrasse 1, 8340 Hinwil, Switzerland  
+41 43 843 61 11, [info@belimo.ch](mailto:info@belimo.ch), [www.belimo.com](http://www.belimo.com)

