Cloud- and communicative actuators

Content

General

Versions Information

- This manual relates to the following listed products with a production
  - VLM24A-LP1
  - VLR24A-LP1

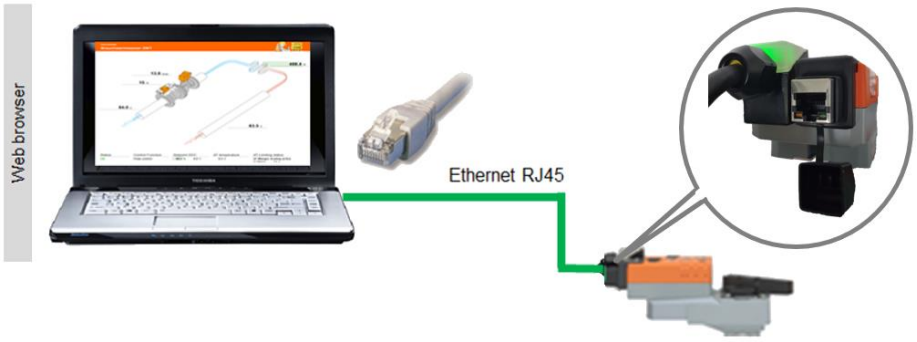
Requirements

- For a direct-access a PC with an installed web browser and a network cable (RJ45) is needed.
- The following web browsers are supported
- Microsoft Internet Explorer
- Mozilla Firefox
- Safari on Platform iOS
- Standard web browser on platform Android
  - Gingerbread
  - Honeycomb
  - Ice Cream Sandwich
  - Jelly Bean
- To display the trend views in the web browser, the "Adobe Flash Player" has to be installed. Download of the newest version: www.adobe.com/de/products/flashplayer/
- The current version of Java has to be installed. Download: http://www.java.com/de/download/.

Access to the actuator

Connection

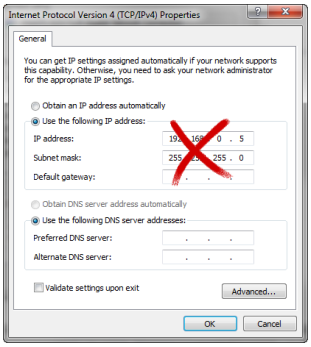
- Connect the PC/Laptop to the actuator with the RJ45 cable

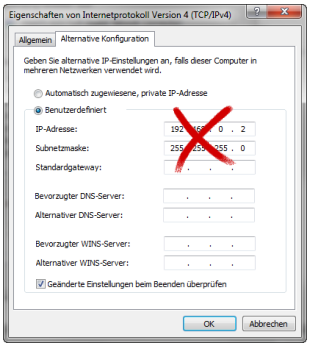


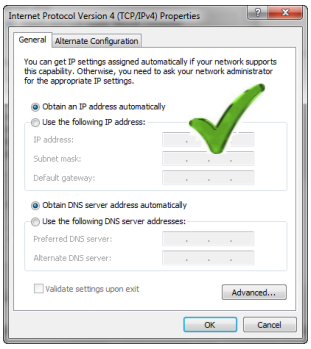
Note: The Actuator must be supplied with voltage.

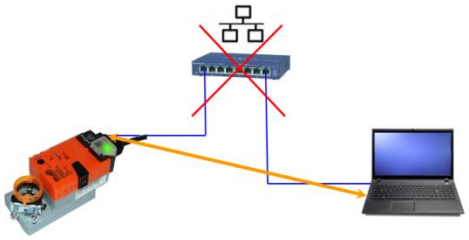
Access to the actuator by means of a "Peer to Peer" connection

- Easy access to the actuator possible.
- The IP address has not to be known.
- The following conditions have to be considered:
  - Direct connection actuator – PC. This access method cannot be used in a network with other devices.
  - No static IP address is configured
  - No alternative IP address is configured
  - DHCP mode is set









- Open Internet Explorer and enter the following address: **http://belimo.local:8080**

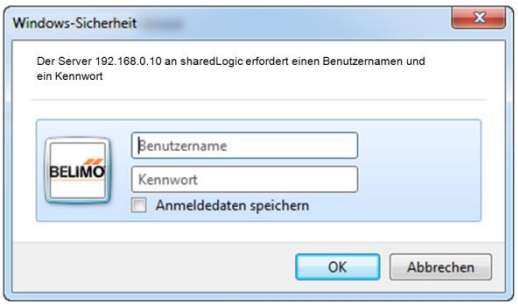
Access to the Actuator by means of the IP address

- As an alternative to the "Peer to Peer" connection an access by using the IP address is also possible.
- This type of connection can be used in a network with several devices.
- In case of several Actuators in the network different IP addresses must be assigned first.
- 192.168.0.10 is the IP address assigned at the time of delivery
- Open Internet Explorer and enter the following address: **http://192.168.0.10:8080**

Note

It might be necessary to clear the browser's cache to ensure correct display of the web server

User name and password



- Access to the Actuator is password-protected
- 3 users have different reading and writing access

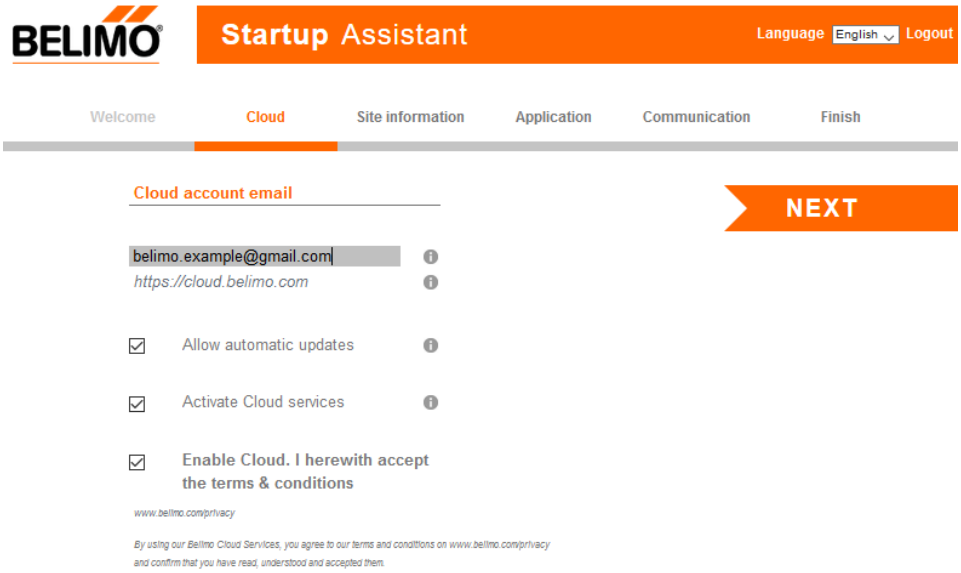
User name: / Password:	guest / guest	maintenance / Belimo	admin [1]
Overview	R	R	R
Live Trend&KPI	R / W	R / W	R / W
Data logging	R[2]	R[2]	R / W
Health state	R	R / W	R / W
Version Information	-	R	R
Application	R[3]	R[3]	R / W
Date & Time	-	R	R / W
Users	R	R / W	R / W
IP	-	R	R / W
BACnet/MP/Modbus	R	R	R / W
Cloud Settings	-	-	R / W
Maintenance	-	-	R / W

Legende:
R = Read access
W = Write access
- = Page is not displayed
1) = Please contact your Belimo Representative
2) = Download csv-files possible
3) = Units writable

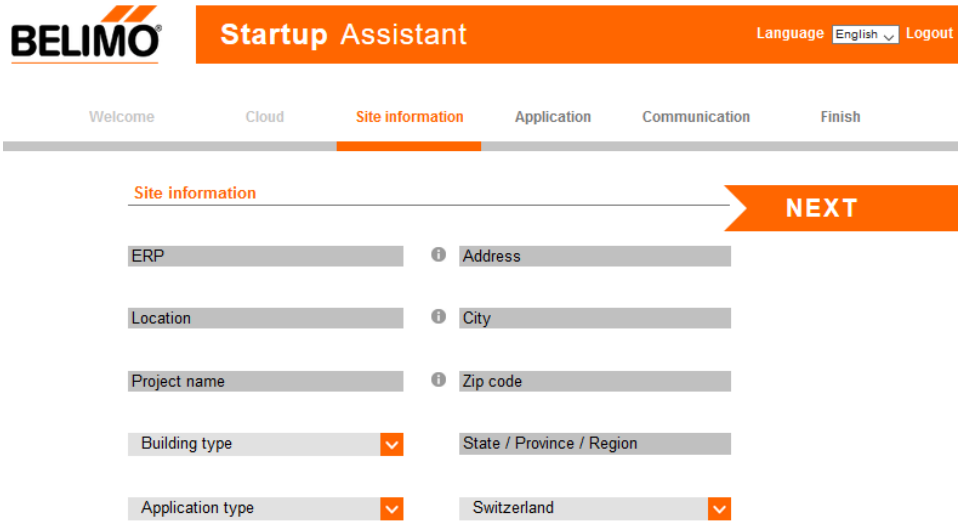
Web server

Startup Assistant

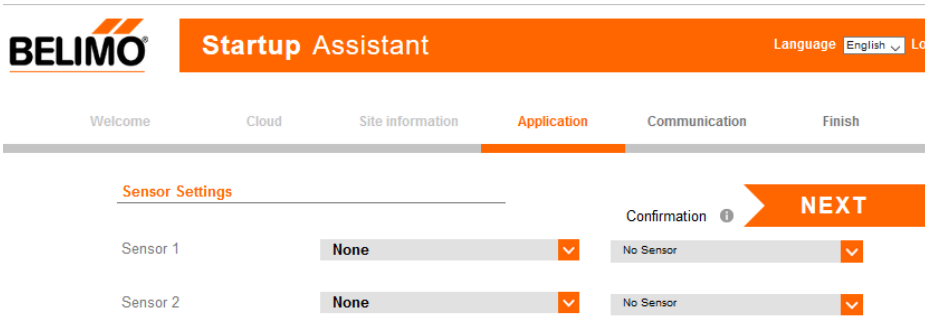
- The startup assistant is opened right after the start. The Startup-Assistant helps to do the main settings of the Belimo Actuator™ right at the beginning. The following steps appear:



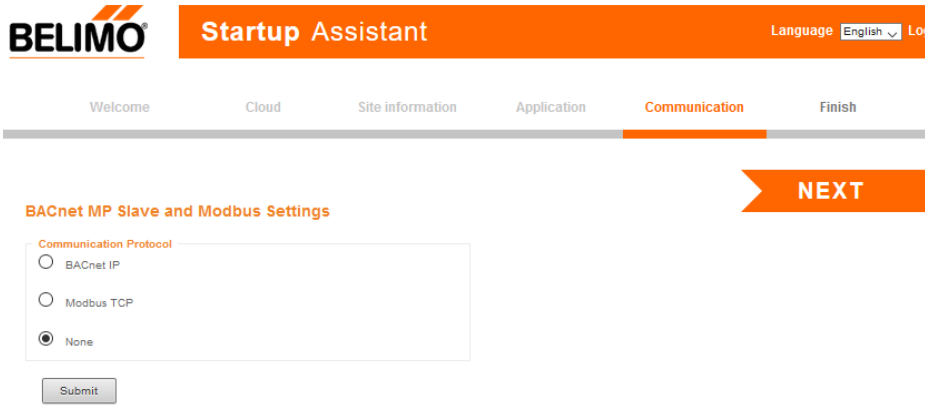
- First step: In order to use the cloud you need to register at the Belimo Cloud. The e-mail address that was used for the registration acts as the ID and linkes the actuator to the cloud account. Furthermore you are able to allow automatic updates and activate the cloud services. You have to accept the terms & conditions
  For further details see: www.belimo.com/privacy



- Second step: The details for the actuator can be filled in here, e.g. location of the installation, application details or the building address



- Third step: If you use sensors all settings have to be entered here.



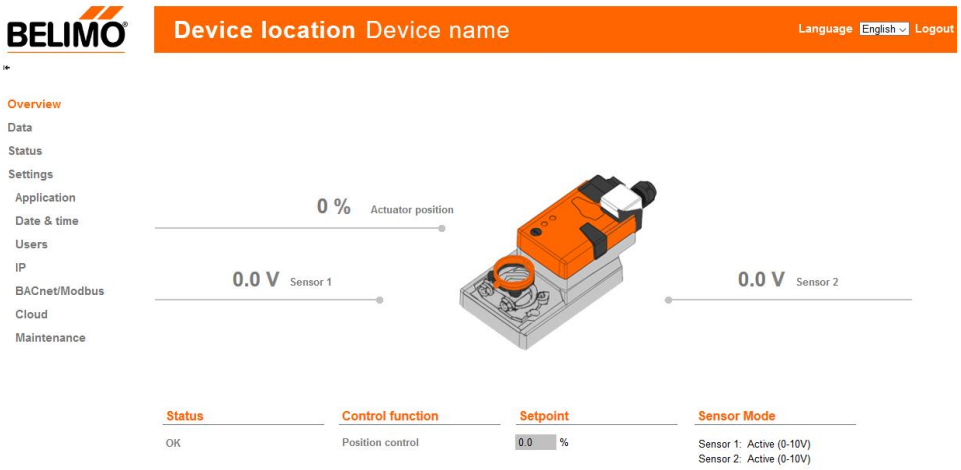
Step Four: Setting the respective bus protocols

Language selection

- Available languages
  - English

Overview

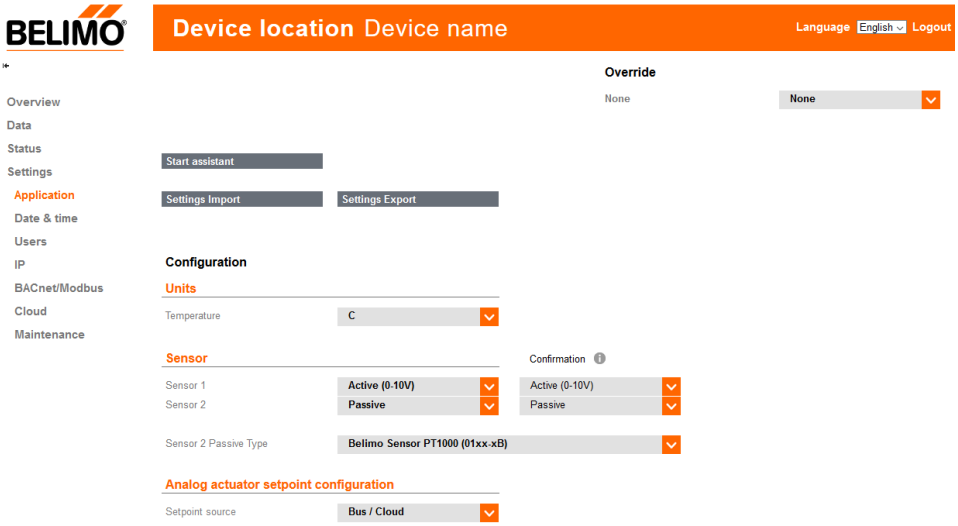
- In addition to the most important values of the actuator, this page shows the following additional values:
  - Status
  - Control function
  - Setpoint
  - Sensor settings



Settings - Application All settings can be made on this page

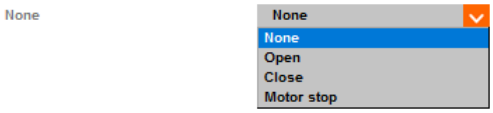
Note

The various setting options are explained in detail below.



Settings Override

- The current control signal can be overridden with the help of the Override function



- The following options are available
  - **Auto:** No manual override
  - **Open:** Actuator is opened completely
  - **Close:** Actuator is closed
  - **Motor stop:** The actuator remains at its current position
- The override function deactivates automatically after 2 hours. The time remaining before deactivation is displayed

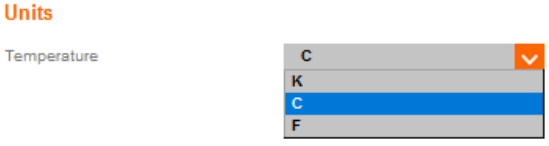
Settings Units

- Setting of the value units

Temperature

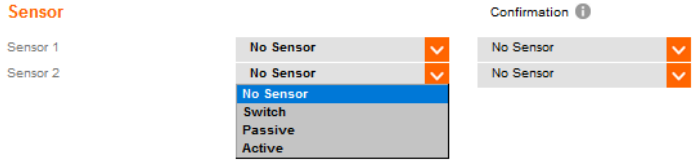
- ◦ °C [1)]
- ◦ °F
- ◦ K

[1)] = presetting ex-works



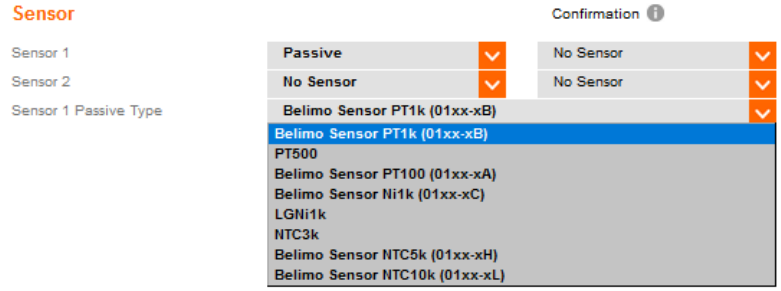
Settings Sensors

- Both Sensorinputs have to be defined. There are the possibilities to connect either a passive or active sensor or a switch contact.



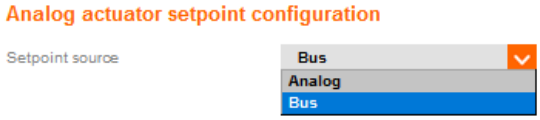
> **Important**
>
> **Sensor settings always have to be confirmed**

- Passive sensors have to be further specified. Belimo sensors will be displayed with the temperature unit. All other will be displayed on the webserver as values in ohm.



Setting Setpoint Source

- The actuator can be controlled by either analog signal or bus/cloud. This setting only refers to the setpoint.



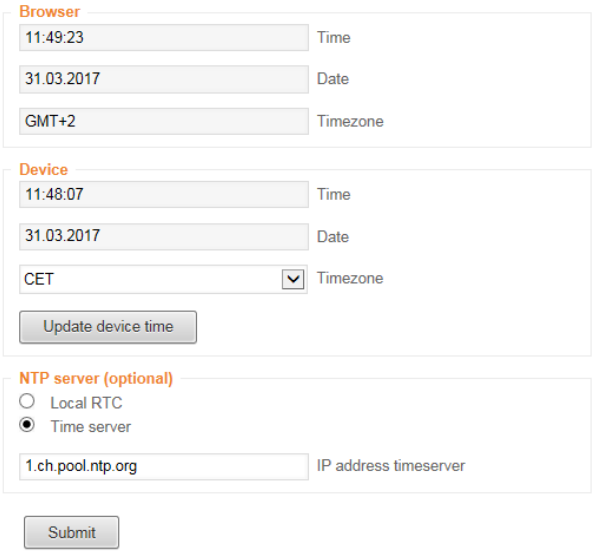
- Control signal range
  - **0.5 – 10 VDC**
  - **2 – 10 VDC**
- Invert control signal
  - **no:** no inversion → 0V = actuator closed / 10V = actuator open
  - **yes**: inversion → 10V = actuator closed / 0V = actuator open

Setting - Import/Export

- Import and Export the settings

Settings - Date & Time

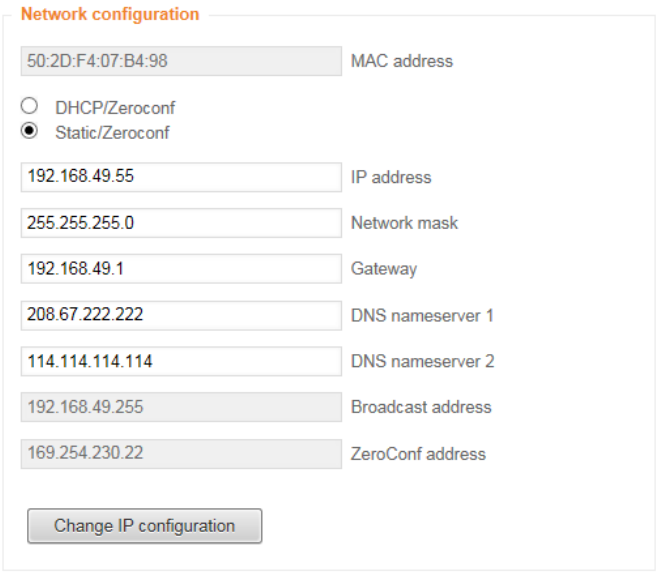
- Possible settings: Date, Time and Time Zone



- Local Client: Date and time of the connected PC
- Remote Node: Date and time which is set on the Actuator
- Synchronize Time: Clicking on "Synchronize Time" causes the Date and Time settings of the attached PC (Local Client) to be adopted on the Actuator (Remote Node).
- NTP Server: As an option, time and date can be obtained from a Time Server.
- When using several Actuator it is possible to define one Actuator as the Time-Master. For this purpose the IP address of the Time-Master must be entered at all other Actuators.

Settings - IP

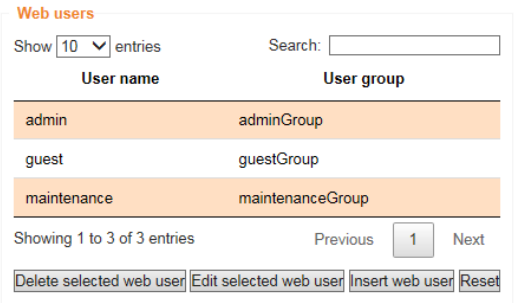
- IP settings
- This settings are to be set on the basis of the instruction of the network administrator



- **Static IP/Zeroconf:** With this setting, the possibility is given to assign a pre-defined IP-address to the Actuator, as well to assign the subnet mask and gateway to it. This method can be used, if the network administrator is managing the network addresses without a DHCP server.
- **DHCP/Zeroconf:** With this setting it is possible, to assign automatically an IP-address to the Actuator. If a DHCP Server is available in the network, the Actuator is able to receive an IP-address from it.
  If there is no DHCP Server in the network, the Actuator is able, via Zeroconfig, to calculate an IP-address based on the ZeroConfig specification.

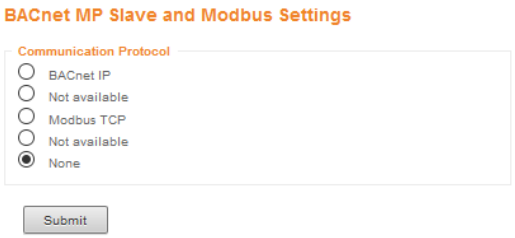
Settings - User

- Settings for the user management
  - Users can be added, modified, or deleted..
  - Under "Edit selected web user" the respective password can be changed
  - Note: Only users with a lower or equivalent authorization can be edited



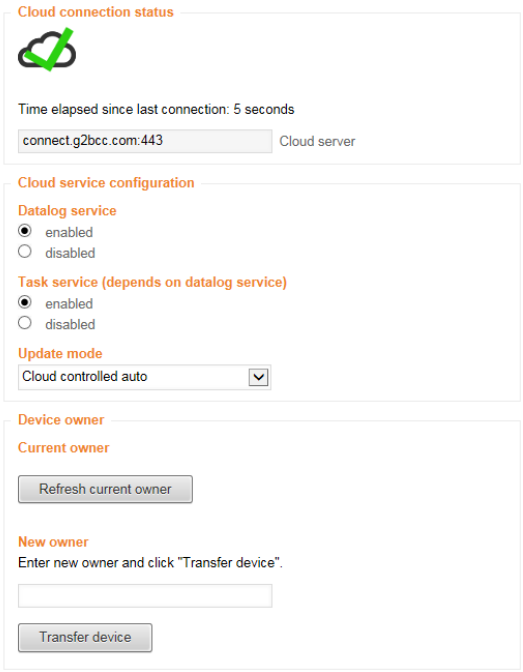
Settings – BACnet/Modbus

- Selection of the communication protocol
  - BACnet IP
  - Modbus TCP
  - None
- Perform all relevant settings in accordance with the specifications of the onsite equipment.



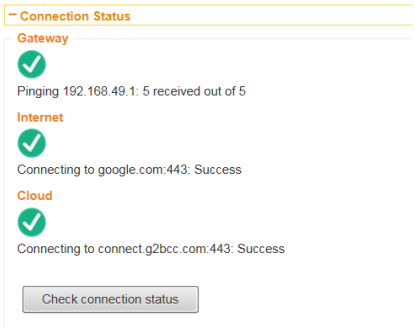
Settings – Cloud

- Settings for the Belimo Cloud access



Cloud connection status: It is shown here whether the connection to the Belimo Cloud is established or not.

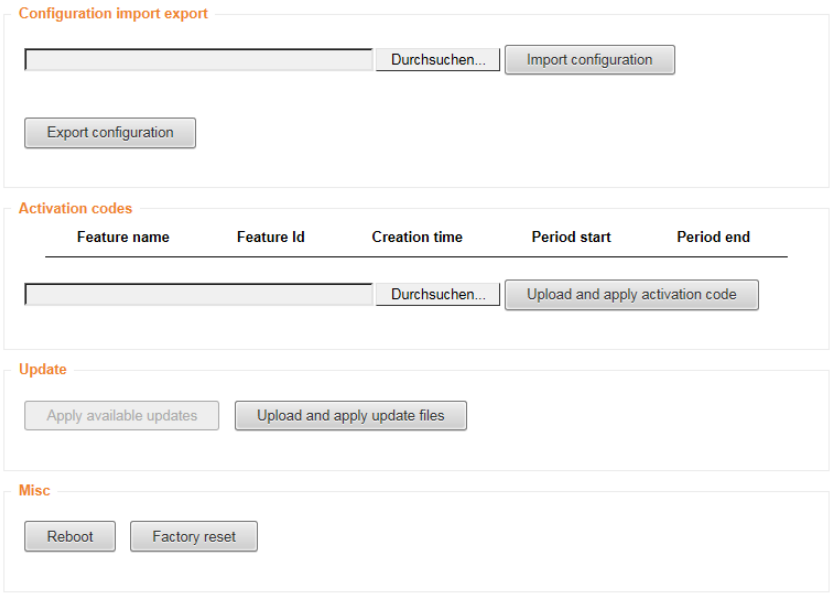
Update mode:
Disabled: No updates
Device controlled: Updates are displayed on the web server, not an installation
Cloud controlled manual: Updates are displayed on Belimo Cloud, no installation
Cloud controlled auto: Updates are installed automatically



The following three steps are performed:

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

Settings - Maintenance



Configuration Import Export

- The settings which are selected during commissioning can be saved here as a file on the computer (Export configuration)
- If a larger number of Belimo Actuator™ need to be installed with the same settings, these settings can be exported once to be imported and applied to the other actuator (Browse / Import Configuration). Only be used with the same nominal size.

Update

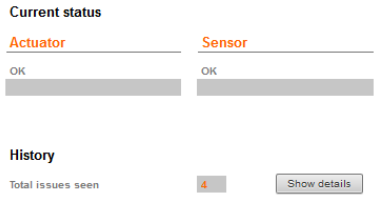
- It is possible to upload a software update directly and apply it on the Belimo Actuator™

Misc

- Reboot: After pressing this field, the device restarts. The previously made settings will be maintained
- Factory reset: The device can be reset to the factory default settings. The steps are as follows: 1. Press the "Factory reset" button and confirm with "ok". Press the gear disengagement button on the actuator. After that the actuator starts to set all settings back to default condition. All stored data will be lost.

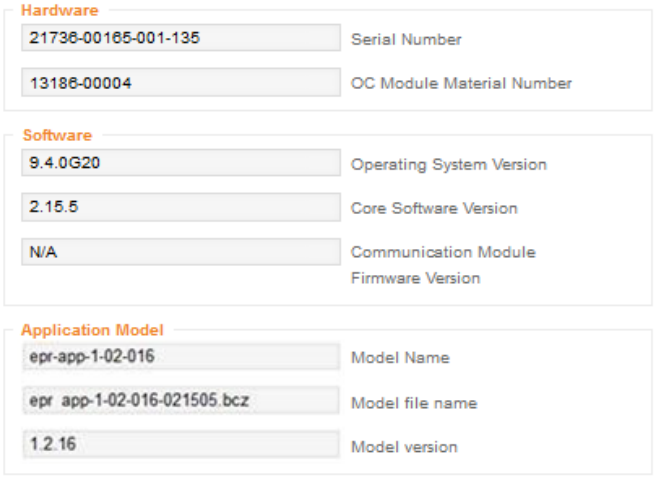
Status – Health state

- Displays the current error messages and the error history
- Current status messages are displayed
- The error history can be reset with the appropriate authorization



Status - Versions Information

- Display of the current software and hardware version

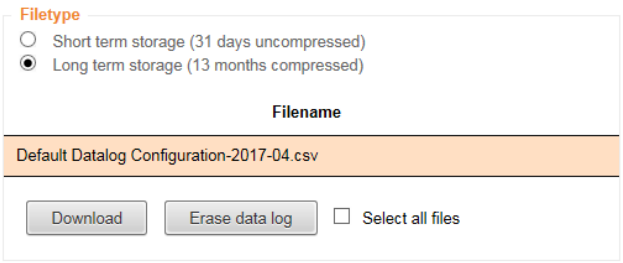


Note

Please communicate the information on this page to your local Belimo representative in the event of malfunction.

Data - Data logging

- Download of the csv files stored in the Actuator



Deleted data cannot be restored!

- Short Term Storage: One file is available per day for the last 31 days. A measurement series is stored every 30 seconds.
- Long Term Storage: One file is available per month for the last 13 months. A measurement series is stored every 2 hours.
- The files on the actuator can be deleted by users with the respective authorisation.

Data – Live Trend & KPI

- The LiveTrend function visualizes the system values.
- The displayed values can be selected in the lower area
- The zooming function can be used to limit the time period