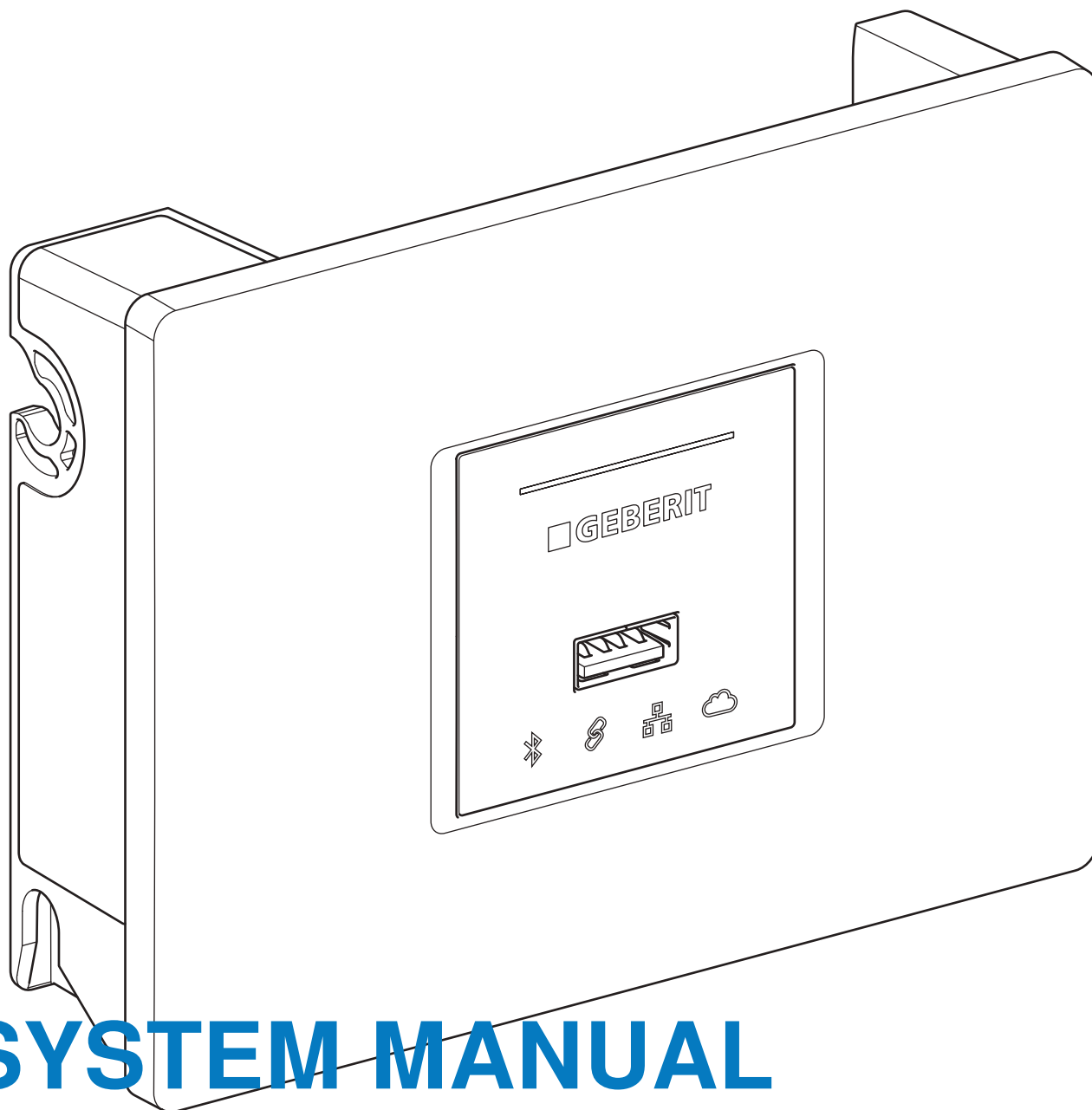




SYSTEM MANUAL

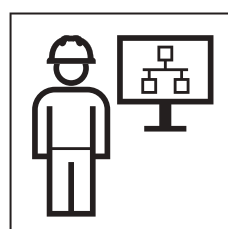
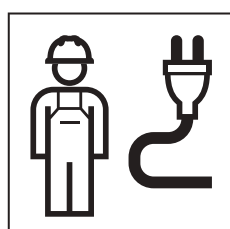
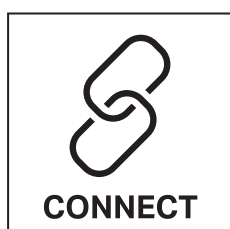


Table of contents

1	About this document	6
1.1	Purpose.....	6
1.2	Related documents	6
1.3	Marketing and sales contact person	6
1.4	Change history	7
2	Safety	8
2.1	Target group.....	8
2.2	Safety notes	8
2.3	Data protection.....	8
2.4	Availability	8
2.5	Qualified persons involved.....	9
3	System overview	11
3.1	Topology overview	11
3.2	Components overview.....	12
3.3	Applications.....	14
3.3.1	Drinking water hygiene.....	14
3.3.2	Facility management.....	17
4	System components	18
4.1	Geberit Gateway	18
4.1.1	Intended use	18
4.1.2	Safety notes	18
4.1.3	Structure.....	19
4.1.4	Technical data.....	20
4.1.5	Simplified EU declaration of conformity	20
4.1.6	Wired interfaces	20
4.1.7	Wireless interfaces.....	21
4.1.8	LED display	21
4.1.9	Installation.....	23
4.2	Geberit bus converter for urinals and washbasin taps	26
4.2.1	Technical data.....	26
4.2.2	LED display.....	26
4.3	Geberit bus converter with integrated power supply unit	27
4.3.1	Technical data.....	27
4.3.2	LED display.....	27
4.4	Geberit bus cable (GEBUS cable)	28
4.5	Terminal block for Geberit Gateway.....	29
4.6	Geberit Connect end devices.....	30
4.6.1	Connection of end devices via GEBUS	32
4.6.2	Connection of the end devices via Bluetooth®	33
4.7	Geberit Control app.....	34
4.7.1	Scope of function	35
4.7.2	Protocols	36

5	Planning	41
5.1	General planning rules	41
5.2	Planning rules for connection via GEBUS	42
5.3	Additional planning rules for connection via Bluetooth®	45
5.4	Zone division	46
5.5	Connection of the end devices to Geberit Gateway	48
5.5.1	Connection of Geberit types 80 / 185 / 186 and Geberit Bambini washbasin taps	48
5.5.2	Connection of Geberit Piave and Brenta washbasin taps	49
5.5.3	Connection of Geberit urinal flush controls with electronic flush actuation, with types 01 / 10 / 20 / 40 / 50 cover plate	50
5.5.4	Connection of Geberit Preda, Selva and Tamina urinals, with integrated flush control	51
5.5.5	Connection of Geberit WC flush controls with electronic flush actuation	52
5.5.6	Connection of the Geberit HS50 hygiene flush units	54
5.5.7	Connection of the Geberit HS30 and HS50 hygiene flush units in the concealed cistern with Geberit bus converter	55
5.5.8	Connection of Geberit HS50 hygiene flush units in the concealed cistern with external power supply unit	56
5.5.9	Connection of Geberit temperature and volumetric flow rate sensors for GEBUS	57
5.6	Geberit Hygiene System (GHS)	58
5.6.1	Geberit Connect end devices and sensors for GHS	58
5.6.2	Single operation and connected operation	60
5.6.3	Operation modes	61
5.6.4	Flushing programmes for GHS	62
5.6.5	Positioning the sensors	73
5.6.6	Application examples for GHS	76
5.7	Connection to building automation systems	80
5.8	Connection to Geberit Cloud	82
5.9	Network settings	83
5.10	Practical example 1: Connection of the end devices via Geberit Bus (GEBUS)	84
5.10.1	Required components for connectivity	85
5.10.2	EDE file for building automation	85
5.11	Practical example 2: Connection of the end devices via Bluetooth®, battery operation	86
5.11.1	Required components for connectivity	87
5.12	Practical example 3: Connection of the end devices via Bluetooth®, retrofitting	88
5.12.1	Required components for retrofitting	89
5.12.2	General procedure for retrofitting with Geberit Connect	89
6	Commissioning	91
6.1	Commissioning procedure	91
6.2	Checking requirements	92
6.3	Connecting Geberit Control app to Geberit Gateway	93
6.4	Assigning end devices connected via GEBUS	95
6.5	Assigning end devices connected via Bluetooth	99
6.6	Configure LAN/WLAN	102
6.7	Configuring BACnet/IP	103
6.8	Making settings for Geberit Connect end devices	105
6.9	Recording flushing programmes for Geberit Hygiene System (GHS)	107
6.10	Creating and transferring the commissioning report	110
6.11	Finalising commissioning	111

7	Use.....	112
7.1	Operating and configuring end devices	112
7.1.1	Centralised operation.....	112
7.1.2	Local operation.....	114
7.1.3	Functions per zone.....	116
7.2	Setting the operation mode for the Geberit Hygiene System (GHS)	117
7.3	Managing zones and end devices	118
7.3.1	Adding end devices.....	118
7.3.2	Managing zones and removing end devices.....	118
7.4	Replacing end device.....	120
7.5	Displaying and evaluating logs	122
7.6	Updating firmware	123
7.6.1	Firmware update with USB stick	123
7.6.2	Firmware update with Geberit cloud services	124
7.6.3	LED sequence during firmware update of the Geberit Gateway.....	124
7.7	Troubleshooting	125
7.8	Deactivating the Bluetooth® connection	128
7.9	Decommissioning the Geberit Connect system	129
8	Disposal	130
8.1	Constituents	130
8.2	Disposal of waste electrical and electronic equipment	130
9	Appendix.....	131
9.1	List of abbreviations	131
9.2	Checklists.....	132
9.2.1	Planning	132
9.2.2	Installation	133
9.2.3	Commissioning.....	134
9.3	Electrical diagram (GEBUS, network, LAN).....	135
9.4	Geberit Gateway BACnet certificate	136
9.5	BACnet objects	137
9.6	EDE file for practical example 1	149

1 About this document

1.1 Purpose

This system manual describes the connectivity between all Geberit Connect-enabled devices. It contains all the information required for the purposes of planning, installation, commissioning and operation.

1.2 Related documents

This system manual contains comprehensive information on connectivity of Geberit Connect-enabled end devices.

The following product-specific instructions are not included. These are available either as a product supplement or in the online product catalogue.

- Installation instructions for the end devices and system components
- Operating and maintenance instructions for the end devices

The product range can be viewed in the online catalogues of the relevant sales companies.

1.3 Marketing and sales contact person

For competent advice on Geberit Connect, please contact the relevant Geberit sales company.

1.4 Change history

Date	Changed by	Type of change	Versions
01/07/2023	J. Vollenweider	Newly created	This document: 00 Geberit Gateway firmware: 02 Geberit Control app: 1.4
20/11/2023	J. Vollenweider	Geberit Gateway: • WLAN support Geberit Control app: • Notifications by email • Service request • Extended malfunction diagnosis • Extended log functions • Centralised and local access to end devices • Simplified firmware update via Geberit Cloud	This document: 01 Geberit Gateway firmware: 03 Geberit Control app: 1.5
01/05/2024	J. Vollenweider	Geberit Connect end devices: • Geberit temperature and volumetric flow rate sensors for GEBUS Geberit Control app and Geberit Gateway: • Flushing programmes for Geberit Hygiene System (GHS) • Support for the Geberit temperature and volumetric flow rate sensors for GEBUS	This document: 02 Geberit Gateway firmware: 05 Geberit Control app: 1.6
01/12/2024	J. Vollenweider	Geberit Control app and Geberit Gateway: • Extension of the flushing programmes for Geberit hygiene system (GHS) • Extension of the protocols This document: • Checklist and electrical diagram in the appendix	This document: 03 Geberit Gateway firmware: 06 Geberit Control app: 1.8

2 Safety

2.1 Target group

This system manual is intended for professionals who are entrusted with the connectivity of Geberit Connect end devices. These are, for example:

- Plumbers with experience in the field of building automation or with appropriate training provided by Geberit
- Qualified electricians
- Building computer technician
- Technical building equipment planners
- Network technicians
- Facility managers
- Systems integrators

A qualified professional is a person who, due to their specialist education, training and/or experience, is qualified to recognise risks and avoid hazards that may arise when planning, installing and using the products.

2.2 Safety notes

When using Geberit Connect devices, the following safety instructions must be observed:

- The laying and connection of cables may only be carried out by trained electricians.
- Disconnect the power supply before connecting the cables.
- Protect the place of installation from moisture.
- Only carry out the installation within the defined protective areas in the bathroom and take the appropriate safety measures.
- Only use original spare parts when making repairs.
- Do not modify the product or add any additional modules.

The safety instructions enclosed with the devices must also be observed.

2.3 Data protection

All information on data protection when using Geberit mobile apps and IoT services is contained in the Conditions of Use and the Privacy Policy of the Geberit Control app. The Conditions of Use must be accepted during installation of the Geberit Control app.

2.4 Availability

Geberit ensures the functionality of the Geberit Connect devices over their entire service life. Functionality is ensured by the availability of spare parts and by firmware updates.

The spare parts availability for Geberit Connect devices is based on the General Terms and Conditions of the respective Geberit sales company. The spare parts availability is usually 10 years from the last year of production.

2.5 Qualified persons involved

Planning, installation and commissioning of a Geberit Connect system may only be carried out by qualified persons. Typically, the following qualified persons are involved:

Task	Qualified person	Additional information
Planning		
Determining the placement of Geberit Connect end devices.	Plumber, electrician, Geberit qualified person	→ See "Planning", page 41.
Determining the placement of the Geberit Gateway.	Building automation specialist, qualified electrician, Geberit qualified person	
Determining cable routing.	Qualified electrician, Geberit qualified person	
Defining functionality in the building automation system.	Building automation specialist, building IT technician, systems integrator	→ See "Connection to building automation systems", page 80. → See "BACnet objects", page 137.
Defining functionality of the Geberit Hygiene System (GHS) for maintaining drinking water hygiene.	Sanitary engineer	→ See "Geberit Hygiene System (GHS)", page 58.
Installation		
Mounting end devices and Geberit bus converters.	Plumber	→ See the installation instructions for the specific end devices and Geberit bus converters.
Mounting Geberit Gateway.	Qualified electrician	→ See the installation manual for the Geberit Gateway.
Pulling in the Geberit bus cable (GEBUS cable).	Qualified electrician	→ See "Geberit bus cable (GEBUS cable)", page 28.
Routing the mains cable (230 V AC) to Geberit Connect end devices and Geberit Gateway.	Qualified electrician	→ See the installation instructions for the specific end devices and Geberit bus converters. → See the installation manual for the Geberit Gateway.
Routing LAN cable to Geberit Gateway.	Qualified electrician	—
Commissioning		
Assigning end devices via the GEBUS or Bluetooth® to the Geberit Gateway.	Geberit qualified person, plumber	→ See "Commissioning", page 91.
Making settings for the end devices.	Geberit qualified person, plumber	
Configuring LAN/WLAN and BACnet/IP.	Geberit qualified person, building automation technician, building computer technician, systems integrator	
Configuring Geberit Hygiene System (GHS).	Geberit qualified person, plumber	

Task	Qualified person	Additional information
Operation		
Reading out and processing logs.	Building operator	→ See "Use", page 112.
Maintaining end devices.	Building operator, plumber	

2 / 2

3 System overview

3.1 Topology overview

Geberit Connect end devices such as washbasin taps, urinal flush controls, WC flush controls or hygiene flush units are connected via a Geberit bus cable (GEBUS cable) to a Geberit Gateway. Alternatively, the end devices can also be connected via Bluetooth® Low Energy (BLE)¹⁾. Mixed operation (GEBUS/Bluetooth®) is also possible. A maximum of 30 end devices can be connected to one Geberit Gateway, of which a maximum of 10 end devices can be connected via Bluetooth®. The Geberit Gateway monitors and controls the connected end devices.

A Geberit Connect system consists of a Geberit Gateway and the assigned Geberit Connect end devices.

A Geberit Gateway is integrated into higher-level systems such as building automation systems via LAN. Currently, the BACnet/IP²⁾ network protocol is supported. The Geberit Cloud Services can be used via LAN or WLAN.

The Geberit Control app is available for controlling and monitoring the end devices via the Geberit Gateway. The Geberit Control app communicates with the Geberit Gateway by Bluetooth®.

- 1) The Bluetooth® brand and its logos are the property of Bluetooth SIG, Inc. and are used under licence by Geberit.
- 2) BACnet is a trademark of the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE). BACnet certificates for Geberit products are available at:
<https://www.bacnetinternational.net/btl/search.php>.

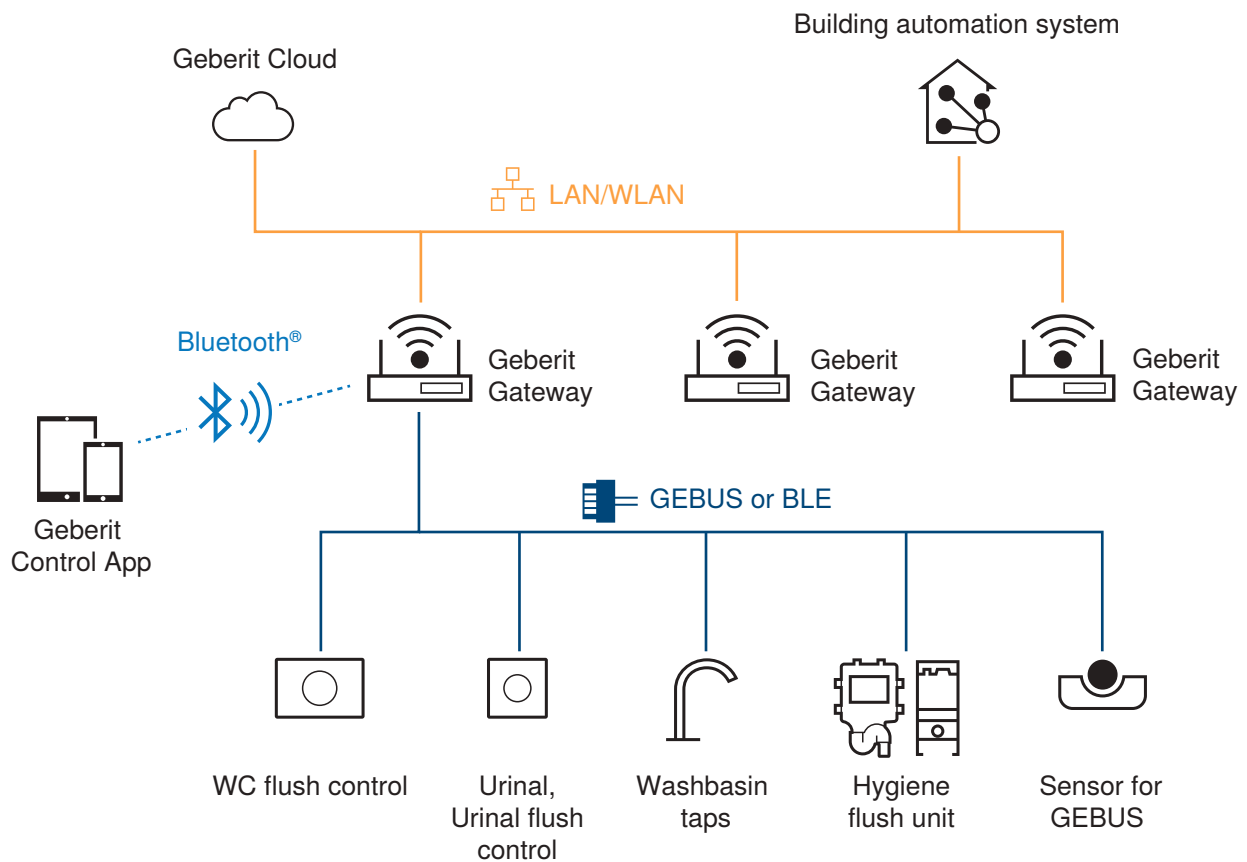
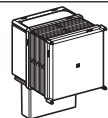
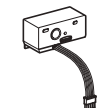
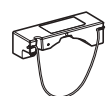
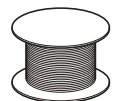
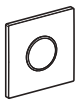
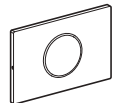
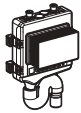


Figure 1: Geberit Connect topology

3.2 Components overview

The following components are available for Geberit Connect:

Category	Component		Description
Network components		Geberit Gateway	→ See "Geberit Gateway", page 18.
		Geberit installation box for Gateway	→ See "Geberit Gateway", "Installation", page 23.
		Geberit bus converter for urinals, concealed urinal flush controls and washbasin taps	→ See "Geberit bus converter", page 26.
		Geberit bus converter with integrated power supply unit, for WC flush controls and hygiene flush units in concealed cisterns	→ See "Geberit bus converter with power supply unit", page 27.
		Geberit bus cable (GEBUS cable)	→ See "Geberit bus cable (GEBUS cable)", page 28.
		Terminal block for Geberit Gateway	→ See "Terminal block for Geberit Gateway", page 29.
		Geberit set of cables for GEBUS interface, for Geberit HS50 hygiene flush unit	→ See "Connection of the Geberit HS50 hygiene flush units", page 54.
Geberit Connect end devices ¹⁾		Geberit types 80 / 185 / 186 and Geberit Bambini washbasin taps (networkable from 2025)	→ See "Geberit Connect end devices", page 30.
		Geberit Piave and Brenta washbasin taps	
		Geberit urinal flush controls with electronic flush actuation, with types 01 / 10 / 20 / 40 / 50 cover plate	
		Geberit Preda, Selva and Tamina urinals with integrated flush control	
		• Geberit WC flush controls with electronic flush actuation • Geberit HS05 hygiene flush unit	

Category	Component		Description
Geberit Connect end devices ¹⁾		Geberit HS30 and HS50 hygiene flush units	→ See "Geberit Connect end devices", page 30.
		Geberit HS30 and HS50 hygiene flush units in concealed cisterns	
		GEBUS sensors: • Geberit temperature and volumetric flow rate sensors for GEBUS • Geberit temperature sensors for GEBUS	
Software		Geberit Control app	→ See "Geberit Control app", page 34.

¹⁾ Geberit Connect-enabled end devices are marked with the Geberit Connect logo on the specification plate.



CONNECT

2 / 2

3.3 Applications

The following chapters describe various applications for the connectivity of Geberit Connect end devices.

3.3.1 Drinking water hygiene

Drinking water is obtained from various sources and contains micro-organisms as well as nutrients and minerals. The quality of drinking water is strictly monitored by the water supplier to ensure that it is of high quality. Responsibility for drinking water quality in buildings, however, lies with the operator. Harmful micro-organisms can multiply if the water in the pipes stagnates or heats up. Stagnation and lukewarm water provide good conditions for the growth of bacteria such as legionella. The proliferation of legionella increases as the water temperature rises.

To avoid stagnation and unacceptable water temperatures, the requirements for drinking water hygiene must be taken into account when designing a piping system.

→ All information on the design of piping systems can be found in the competence brochures and planning and installation guides provided by the relevant Geberit sales company.

To ensure drinking water hygiene, the drinking water in the supply pipes must be replaced regularly and a cold water temperature of 25 °C should not be exceeded. Water replacement is usually guaranteed with regular use of the extraction points. Controlling automatic water replacement is recommended if regular use cannot be guaranteed (for example, due to holiday absences or reutilisations). Country-specific requirements must also be met.

The Geberit Hygiene System (GHS) includes all the necessary components to optimally fulfil these requirements. → Brochures on the GHS are also available from the relevant Geberit sales company.

The following examples show various applications of the GHS to ensure automatic water replacement:

Example 1: Water replacement with Geberit urinal

The urinal at the end of the cold-water pipe ensures water replacement. Urinal flush control interval flush is activated with the Geberit Control app. A flush is triggered after a defined interval has elapsed.

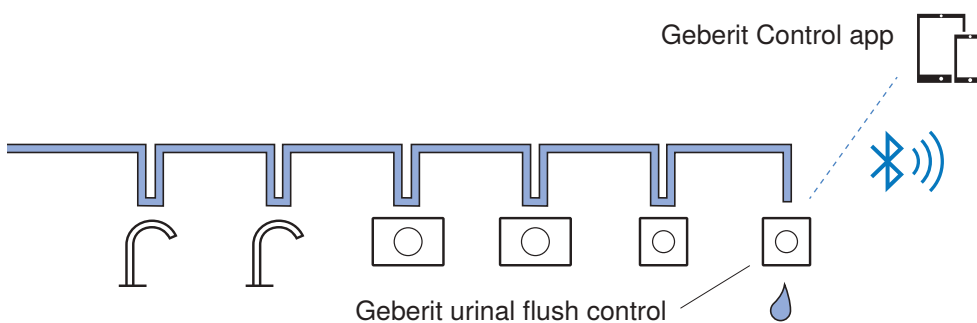


Figure 2: Example 1: Water replacement with Geberit urinal

Another sanitary appliance at the end of the cold-water pipe can also be used instead of the urinal.

Example 2: Water replacement with connected Geberit HS50 hygiene flush unit and GEBUS sensors

The Geberit HS50 hygiene flush unit in concealed cistern and GEBUS sensors are connected to the Geberit Gateway by the Geberit bus (GEBUS).

Water replacement is guaranteed by the Geberit HS50 hygiene flush unit in the concealed cistern at the end of the cold and hot-water pipes. A Geberit temperature and volumetric flow rate sensor for GEBUS (T/V sensor) records the cold water pipe water volume flushed by the sanitary appliances at specific intervals. After the interval has elapsed, the remaining water volume is flushed through by the HS50 hygiene flush unit.

The following flushing programmes run in Geberit Gateway:

- Cold water, difference flush with GEBUS sensor: A flush is triggered after an interval has elapsed. It depends on the flush volume that has already been flushed through use.
- Hot water, interval flush: A flush is triggered after a defined interval has elapsed, regardless of the use of the sanitary appliances.

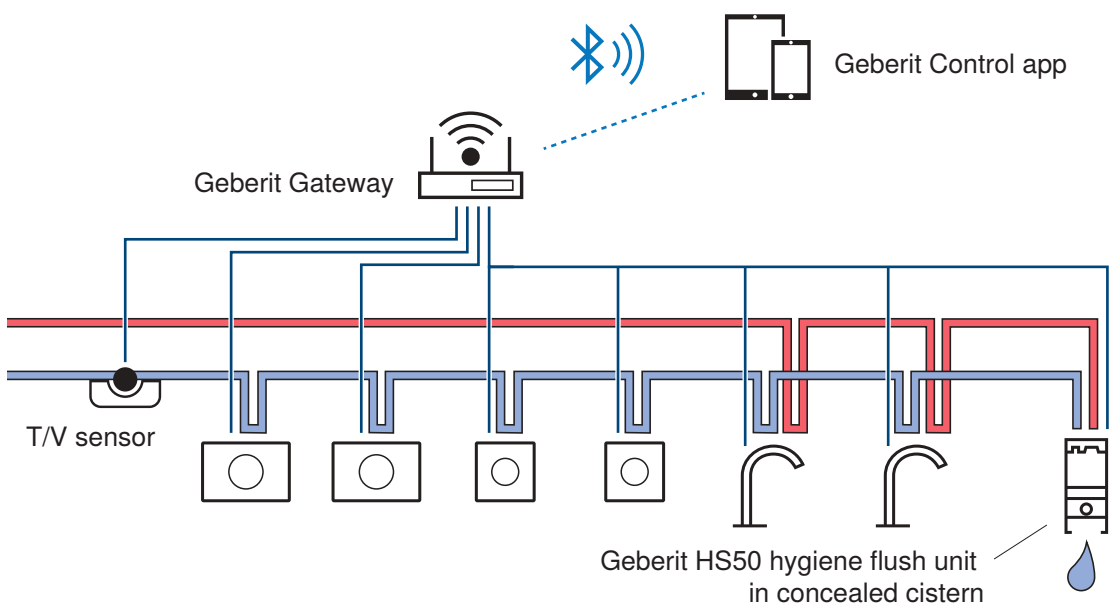


Figure 3: Example 2: Water replacement with connected end devices and GEBUS sensors

Instead of a volumetric flow rate sensor, the water volume flushed can also be recorded centrally in the Geberit Gateway based on the use of the end devices.

Another Geberit Connect end device at the end of the cold water pipe can also be used to flush the cold water pipe.

A total of 60 flushing programmes per Geberit can be entered Gateway. The flushing programmes can be used with all Geberit Connect end devices that are compatible with GHS. For example, a urinal can also be used for temperature-based flushes.

For more examples → see "Application examples for GHS", page 76.

Recording all flushing processes

All flushing processes on the end devices connected to the Geberit Gateway can be accessed in the Geberit Control app. This means that compliance with drinking water hygiene can be verified at any time.

Recording temperatures and volumetric flow rates

The Geberit temperature and volumetric flow rate sensors for GEBUS can be used to monitor temperatures and volumetric flow rates in the Geberit Connect system. A sensor log can be accessed in the Geberit Control app.

Flexible flushing programmes with building automation

All end devices and GEBUS sensors can be integrated into a building automation system with the Geberit Gateway and BACnet/IP. This gives the user full flexibility to specify flushing programmes for specific buildings.

Further information on drinking water hygiene can be found in the corresponding publications of the Geberit sales companies.

3.3.2 Facility management

Users of public or semi-public sanitary facilities expect cleanliness and proper functioning of the sanitary appliances. The operator wants to implement these requirements as cost-effectively and efficiently as possible.

Geberit Connect provides the necessary data and functions for this, such as:

- Activating cleaning mode for all Geberit Connect end devices in a zone
 - Save time during cleaning
- Record the number of uses
 - Save money with needs-based cleaning intervals in the sanitary room
 - Save money with needs-based maintenance intervals of the specific end devices
- Central malfunction indication
 - Shorter downtimes in the event of malfunctions
- Firmware updates for Geberit Gateway and end devices
 - Ensuring functionality and safety

Data points for integration into a building automation system are available for Geberit Gateway and all end devices. → See "Connection to building automation systems", page 80. The evaluation of data must be programmed on the building automation system side.

The Geberit Control app is suitable for on-site access to Geberit Connect end devices.

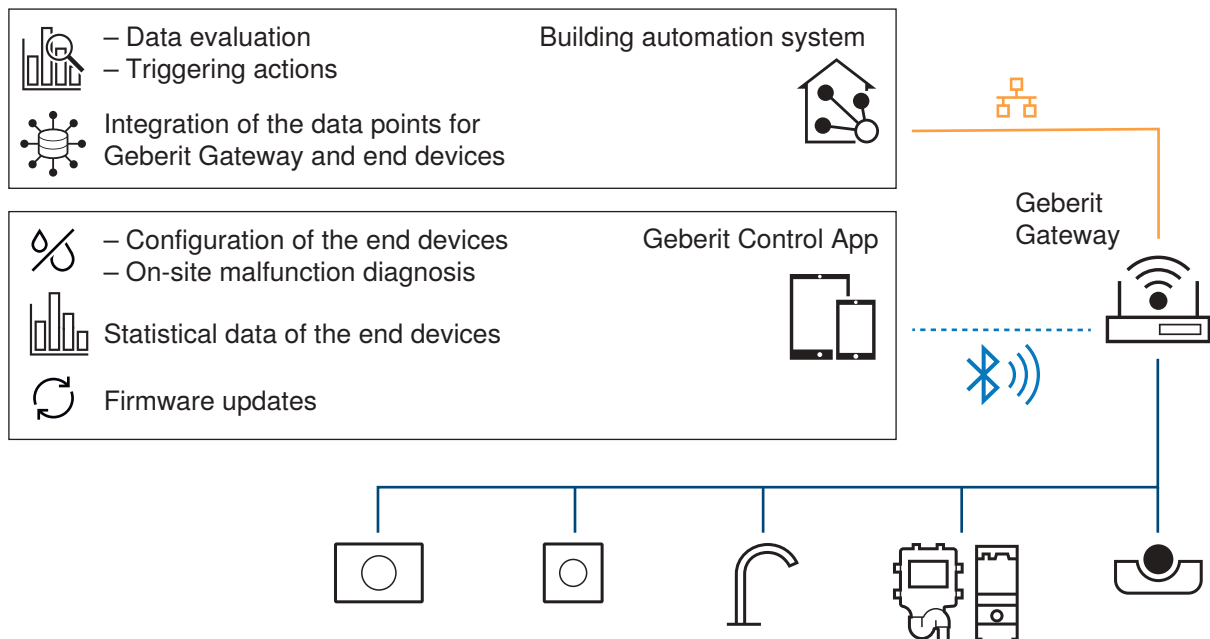


Figure 4: Example of data and functions for facility management

4 System components

4.1 Geberit Gateway



4.1.1 Intended use

The Geberit Gateway is intended for connectivity of Geberit Connect end devices and integrating them into higher-level systems.

4.1.2 Safety notes

When using the Geberit Gateway, the following safety instructions must be observed:



DANGER **Electric shock**

Incorrect installation can lead to death or serious injuries.

- ▶ Only trained electrically skilled persons are permitted to set up the electrical connection.
 - ▶ Disconnect the power supply before connecting the cables.
 - ▶ Only carry out the installation within the defined protective areas and take the appropriate safety measures.
-
- Only install in a concealed housing (installation box) or in an electrical distribution cabinet with a lockable door.
 - The place of installation must be protected from moisture.
 - Do not route the electrical connection via switched elements such as key switches, timers or hotel card switches.
 - Only use the power supply of the Geberit bus cable (24 V) to supply the connected Geberit Connect end devices.
 - Have contact protection dismantled by a qualified electrician only.
 - Only operate the pairing button when contact protection is fitted.
 - Ensure access to the Geberit Gateway for all types of mounting.
 - Route the GEBUS cable in a conduit pipe.
 - Only use original spare parts when making repairs.
 - Do not modify the product or carry out additional installations.

4.1.3 Structure

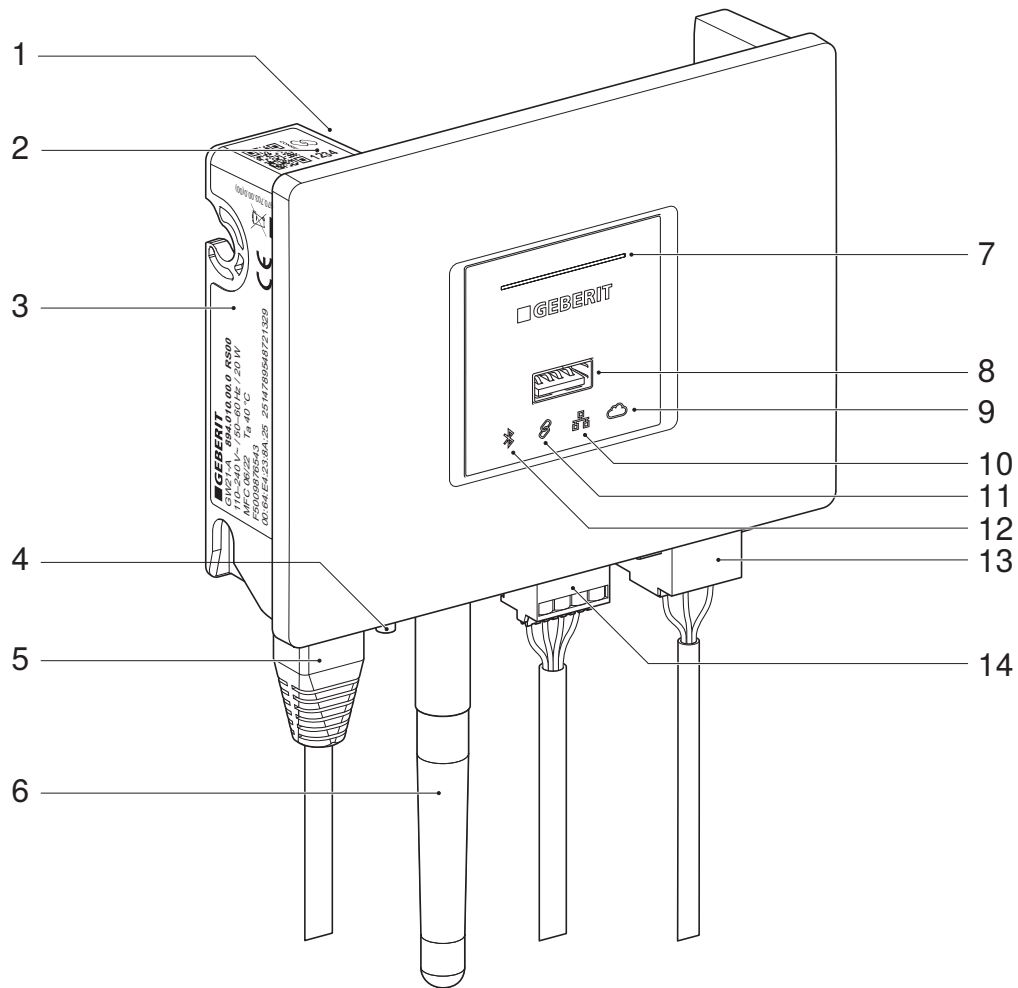


Figure 5: Geberit Gateway

1	USB port, rear	8	USB port, front
2	Pairing secret	9	Cloud LED
3	Specification plate	10	LAN/WLAN LED
4	Pairing button	11	Connect LED
5	LAN connection (Ethernet)	12	Bluetooth® LED
6	Antenna for Bluetooth® and WLAN	13	Mains connection (110–240 V AC)
7	Mains connection LED	14	Connection for Geberit bus (GEBUS)

4.1.4 Technical data

Nominal voltage	110–240 V AC
Mains frequency	50–60 Hz
Power consumption	25 W
Protection class	I
Degree of protection	IPX4 (mounted in concealed housing)
Ambient temperature	0–40 °C
Relative humidity	< 100 %
Power reserve of the real-time clock	Typically 72 h
Width	12 cm
Height	9.2 cm
Depth	4.3 cm

4.1.5 Simplified EU declaration of conformity

Geberit International AG hereby declares that the Geberit Gateway radio equipment type is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: <https://doc.geberit.com/971243000.pdf>

4.1.6 Wired interfaces

The Geberit Gateway has the following wired interfaces:

Interface	Properties	
Geberit bus (GEBUS)	Use	To integrate the Geberit Connect end devices
	Interface type	RS485 with proprietary protocol
	Voltage level	24 V DC
	Output power	Max. 15 W
	Connection	4-pole plug
	Specification	→ See "Geberit bus cable (GEBUS cable)", page 28.
LAN	Use	For connection with Geberit cloud services and building automation system
	Standards	Fast Ethernet, 100BASE-T, Gigabit Ethernet
	Transmission rate	1,000 Mbit/s
	Connection	1x RJ45
	Recommendation for connection cable	At least Cat 5
USB port, front	Use	For firmware update and diagnosis
	Connection	1x USB 2.0 type A, max. 100 mA
USB port, rear	Use	For future extensions
	Connection	1x USB 2.0 type A, max. 100 mA

4.1.7 Wireless interfaces

The Geberit Gateway has the following wireless interfaces:

Interface	Characteristic	
Bluetooth®	Use	To communicate with the Geberit Control app
	Wireless technology	Bluetooth® Low Energy
	Frequency range	2400–2483.5 MHz
	Maximum output power	10 dBm
WLAN	Use	For wireless connection to Geberit Cloud Services
	Wireless technology	Wi-Fi
	Frequency range	2.4 GHz and 5 GHz (channels for Europe region)
	Maximum output power	20 dBm

4.1.8 LED display



The behaviour of the LEDs is shown in this document as follows:

		LED dark			LED flashes
		LED lit			LED flashes alternately

The Geberit Gateway has the following LED indicators:

LED	Status	Description
Electrical connection		No mains voltage
		Start-up process or firmware update active
		Geberit Gateway ready for operation
Bluetooth® (connection to Geberit Control app)		Bluetooth® deactivated
		Bluetooth® active, no connection to the Geberit Control app
		Pairing via Bluetooth® active
		Connected to the Geberit Control app
		New firmware version available for Geberit Gateway, start firmware update via Geberit Control app
		Geberit Gateway not configured
		Localisation of the Geberit Gateway, for example via BACnet

LED	Status	Description
Connect (connection of the end devices via GEBUS or Bluetooth®)		End devices assigned via GEBUS or Bluetooth®, no error
		Connectivity of the end devices via GEBUS is started
		Firmware update active for one or more end devices
		One or more end devices have more recent firmware than the Geberit Gateway
		New, unassigned end device detected
		• Short circuit or overload on GEBUS • One or more end devices not reachable • Firmware update for end device failed
LAN/WLAN		LAN/WLAN deactivated
		LAN/WLAN connection active, no error
		Configured WLAN connection cannot be established
		Invalid network configuration • DHCP configured, but no server reachable • Manually configured, but IP addresses are missing
Cloud (for Geberit Cloud Services)		Cloud connection deactivated
		Connection to the cloud server established, no error
		Connection is established
		Cloud version is not supported
		Error when establishing a connection

2 / 2

4.1.9 Installation

The Geberit Gateway can be mounted in a concealed installation box or in a control cabinet. For surface mounting, a control cabinet must be used to ensure contact protection.

Access to the Geberit Gateway must be ensured for all types of mounting.

Concealed installation in an installation box

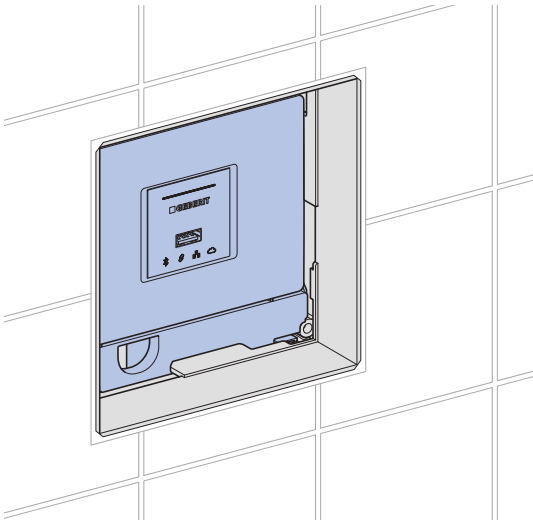


Figure 6: Mounting in installation box

The installation box is intended for concealed installation in solid or drywall construction. The installation box can be mounted on Geberit Duofix or Geberit GIS mounting plates or on a Geberit Duofix element for washbasins.

The following cover plates are available to cover the service opening of the installation box:

- Geberit cover plate for concealed function box, art. no. 116.425.11.1
- Geberit flush-mounted cover plate for concealed function box, art. no. 116.421.00.1

Installation rules:

- When mounting in the installation box, the protection cover must always be mounted so that contact protection is fixed below the Geberit Gateway.
- The installation box is not suitable for surface mounting.

→ See [971.375.00.0](#) (installation box) and [971.356.00.0](#) (Geberit Gateway) installation manuals.

Mounting in the control cabinet

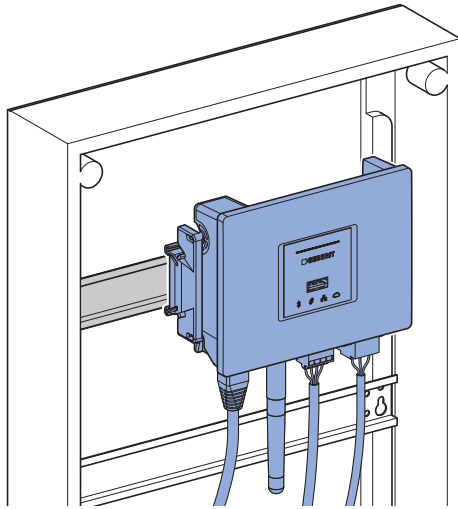


Figure 7: Mounting in the control cabinet

The Geberit Gateway can be mounted in standard control cabinets on 35 mm DIN top-hat rails. Plastic control cabinets are preferable so that communication via Bluetooth® and WLAN is not impaired.

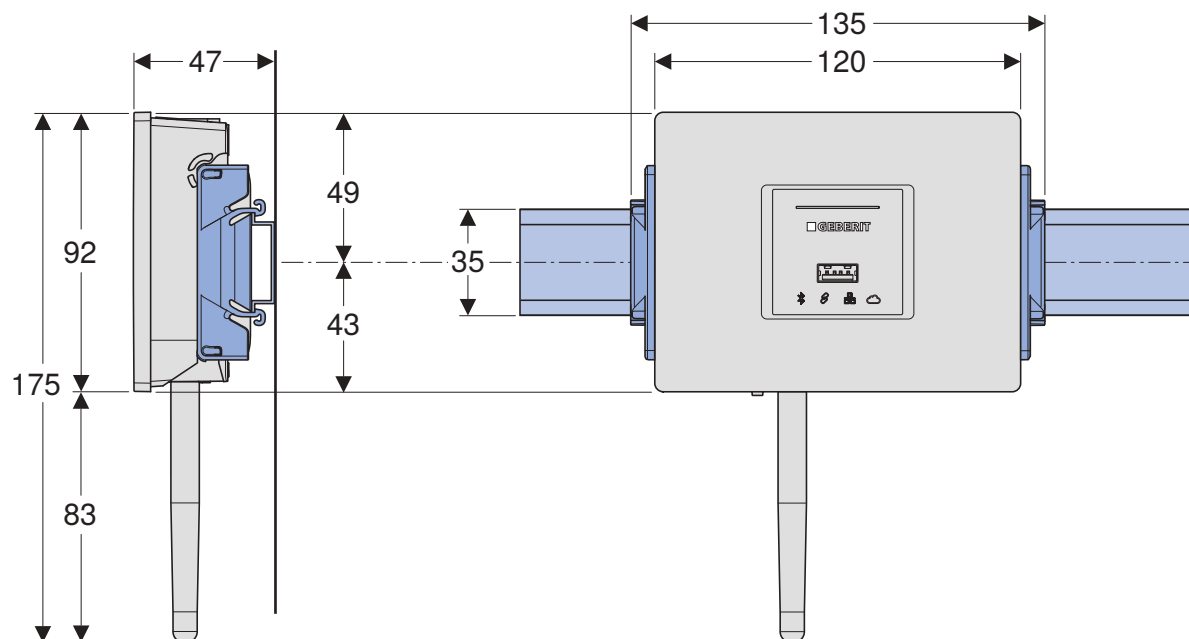


Figure 8: Dimensions for mounting on DIN top-hat rails

→ See [971.356.00.0](#) (Geberit Gateway) installation manual.



DANGER **Electric shock**

- Provide a cover in the control cabinet to protect against contact with the 230 V AC plug.

A sufficiently large opening for the LEDs must be provided in the cover of the control cabinet. If the entire Geberit Gateway is to be visible, an opening with a width of 8 pitch units must be provided.

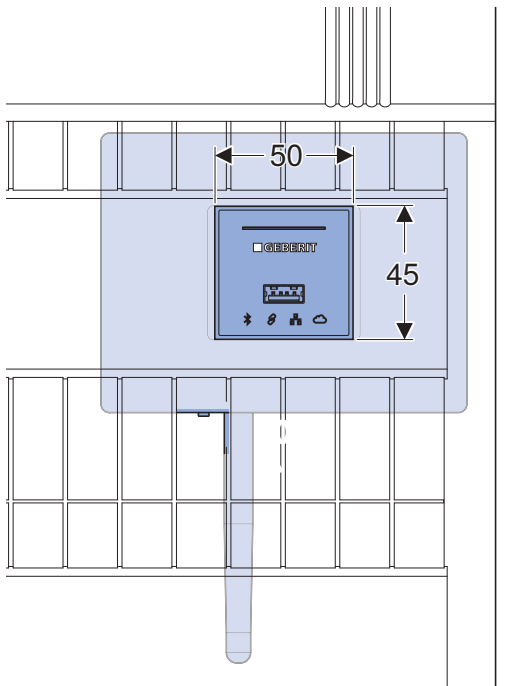


Figure 9: Minimum size of the openings in the control cabinet cover

The terminal block, art. no. 116.492.00.1, is available for connecting the GEBUS cable of the Geberit end devices to the Geberit Gateway. The terminal block can be plugged onto the top-hat rail.

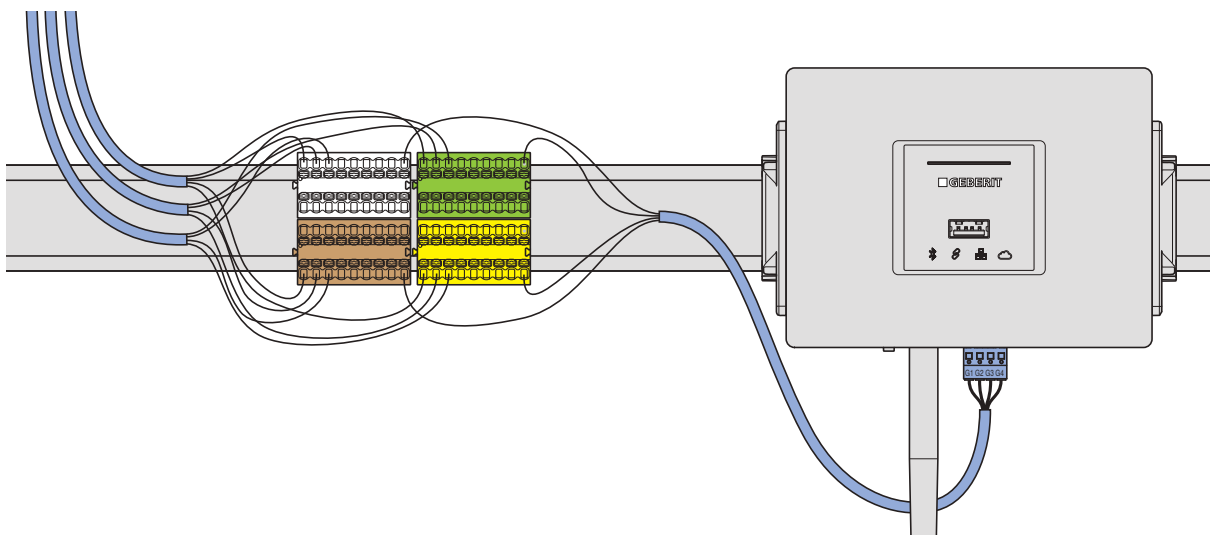


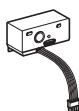
Figure 10: Terminal block for connecting the GEBUS cable

ATTENTION

Malfunctions due to live lines

- Do not run 230 V AC cables in parallel under the Geberit Gateway in the control cabinet.

4.2 Geberit bus converter for urinals and washbasin taps



Geberit bus converters are used to connect the following Geberit Connect end devices to the Geberit bus (GEBUS):

- Geberit Piave and Brenta washbasin taps (Geberit bus converter, art. no. 116.371.00.1)
- Geberit urinal flush controls with electronic flush actuation, with type 01 / 10 / 20 / 40 / 50 cover plate (Geberit bus converter, art. no. 116.371.00.1)
- Geberit Preda, Selva and Tamina urinals, with integrated flush control (Geberit bus converter, art. no. 116.370.00.1)

Geberit bus converters are available as accessories and are mounted in the function box of the Geberit Connect end device instead of the power supply unit. → See [970.195.00.0](#) and [970.196.00.0](#) installation manuals. The power supply of the Geberit bus converter and the end device is provided via the GEBUS cable.

ATTENTION

Malfunctions in end devices with Geberit bus converters

For end devices with Geberit bus converters, the control unit and the Geberit bus converter are linked together. Replacing Geberit bus converters between end devices leads to malfunctions.

- Do not replace Geberit bus converters between end devices.

4.2.1 Technical data

Operating voltage	24 V DC, via GEBUS
Output voltage	4.5 V DC
Protection class	III
Degree of protection	IPX4
Ambient temperature	5–40 °C

4.2.2 LED display

Status	Description
	No power supply via GEBUS
	Normal operation, no error
	Addressing via GEBUS pending ► If the LED does not change to green approx. 60 seconds after power-on, check the GEBUS cable.
	• Voltage at GEBUS too low, end device is not powered • GEBUS cable incorrectly connected
	Localisation of the end device, for example via BACnet

4.3 Geberit bus converter with integrated power supply unit



Geberit bus converter, art. no. 116.097.00.1, is used to connect the following Geberit Connect end devices to the Geberit bus (GEBUS):

- Geberit WC flush controls with electronic flush actuation
- Geberit HS05 hygiene flush unit
- Geberit HS30 and HS50 hygiene flush units in concealed cisterns

Geberit bus converter is available as an accessory and is mounted in the installation element. → See [971.628.00.0](#) installation manual. Geberit bus converter contains an integrated power supply unit for supplying power to the Geberit Connect end device in the installation element.



Geberit bus converter must be connected to the red plug on the Geberit Connect end device. Geberit bus converter is not compatible with older end devices without a red plug.

ATTENTION

Malfunctions in end devices with Geberit bus converters

For end devices with Geberit bus converters, the control unit and the Geberit bus converter are linked together. Replacing Geberit bus converters between end devices leads to malfunctions.

- Do not replace Geberit bus converters between end devices.

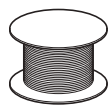
4.3.1 Technical data

Nominal voltage	90–260 V AC
Mains frequency	50–60 Hz
Output voltage	12 V DC
Output power	12 W
Degree of protection	IPX4
Ambient temperature	5–40 °C

4.3.2 LED display

Status	Description
	No mains voltage
	Normal operation, no error
	Addressing via GEBUS pending ► If the LED does not change to green approx. 60 seconds after power-on, check the GEBUS cable.
	• Voltage at GEBUS too low, end device is not powered • GEBUS cable incorrectly connected
	Localisation of the end device, for example via BACnet

4.4 Geberit bus cable (GEBUS cable)



The GEBUS cable can be obtained from Geberit or procured on site.

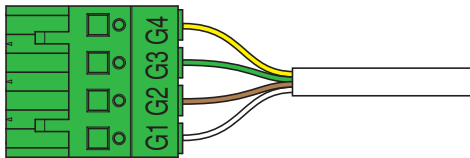
The GEBUS cable is available from Geberit under art. no. 116.493.00.1 (length 100 metres) and 116.493.00.5 (length 500 metres).

The following specifications must be observed for on-site procurement:

Cores	
Number	4
Design	Stranded wire, twisted in pairs, without shielding
Cross-section	≥ 22 AWG (0.35 mm²)
Conductor resistance per core	≤ 58 Ω/km
Colours	Pair 1 (G1/G2): white/brown Pair 2 (G3/G4): green/yellow
Core material	Copper
Material insulation	PE
Jacketing	
Design	LSZH, flame retardant, halogen-free

In addition, the country-specific regulations and the requirements of the installation situation must be observed.

GEBUS plug assignment



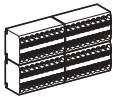
G1	VBUS (24 V DC)	white	
G2	GND	brown	
G3	RS485 A (D-)	green	
G4	RS485 B (D+)	yellow	

i It is recommended to use a cable with these wire colours (GEBUS cable or on-site cable with identical wire colours). The wire colours are matched to the colours of the terminal block in the Geberit installation box and thus simplify troubleshooting.

Cabling

To ensure that the GEBUS cable is sufficiently protected, it must be laid in a conduit pipe.

4.5 Terminal block for Geberit Gateway



The terminal block serves as a node for connecting the GEBUS cables of the individual Geberit Connect end devices to the Geberit Gateway.

The terminal block is included in the Geberit installation box, art. no. 116.491.00.1. For mounting in the control cabinet, the terminal block is also available as an accessory with art. no. 116.492.00.1.

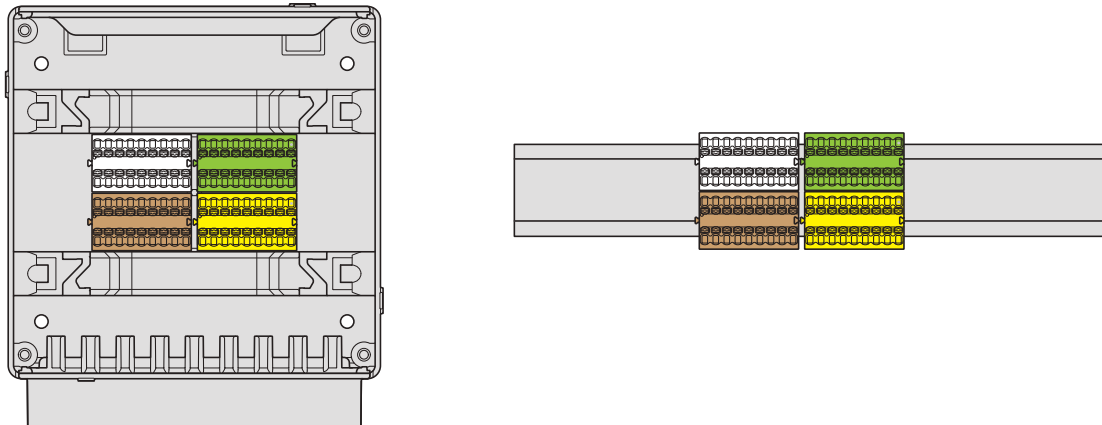


Figure 11: Terminal block in the installation box (left) and mounted on a top-hat rail for control cabinet installation (right)

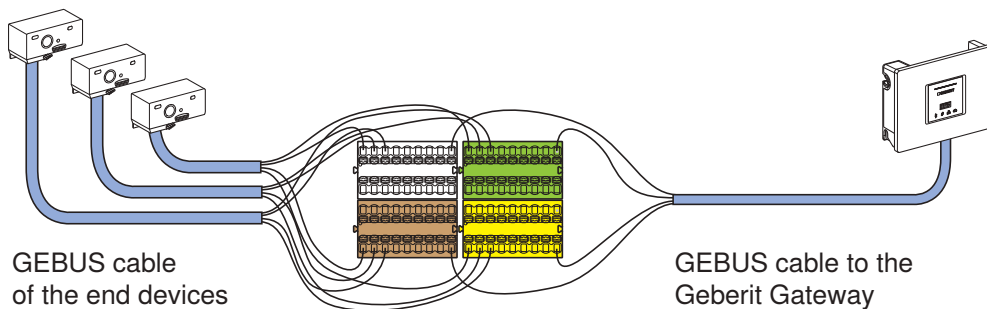
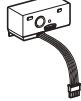
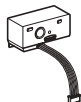
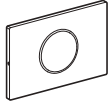
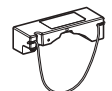
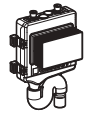
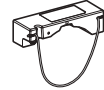
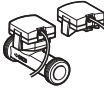


Figure 12: Example for the connection of 3 Geberit Connect end devices with the Geberit Gateway

4.6 Geberit Connect end devices

The following Geberit Connect end devices can be used with Geberit Connect. Depending on the end device, the connection to the Geberit Gateway is established via GEBUS (directly or via Geberit bus converter) or via Bluetooth®.

End device ¹⁾		Compatible with Geberit Control app, Connection to Geberit Gateway via Bluetooth®	Connection to Geberit Gateway via GEBUS	Power supply
	Geberit types 80 / 185 / 186 and Geberit Bambini washbasin taps (networkable from 2025)	✓	Not possible	Mains, battery or generator
	Geberit urinal flush controls with electronic flush actuation, with types 01 / 10 / 20 / 40 / 50 cover plate	✓	 With Geberit bus converter for concealed urinal flush controls and washbasin taps, art. no. 116.371.00.1	24 V DC from GEBUS to Geberit bus converter Battery (connection via Bluetooth® only)
	Geberit Piave and Brenta washbasin taps	✓		
	Geberit Preda, Selva and Tamina urinals with integrated flush control	✓	 With Geberit bus converter for Preda, Selva and Tamina urinals, art. no. 116.370.00.1	24 V DC from GEBUS to Geberit bus converter Battery (connection via Bluetooth® only)
	Geberit WC flush controls with electronic flush actuation, Geberit HS05 hygiene flush units	✓	 With Geberit bus converter with integrated power supply unit, art. no. 116.097.00.1	230 V AC to power supply unit in the Geberit bus converter Battery (connection via Bluetooth® only)
	Geberit HS30 hygiene flush units	✓	Not possible	230 V AC to power supply unit
	Geberit HS50 hygiene flush units	✓	Direct, with cable for GEBUS interface, art. no. 616.238.00.1	

End device ¹⁾		Compatible with Geberit Control app, Connection to Geberit Gateway via Bluetooth®	Connection to Geberit Gateway via GEBUS	Power supply
	Geberit HS50 hygiene flush units in concealed cisterns	✓	Direct, with cable for GEBUS interface, art. no. 616.238.00.1	230 V AC to power supply unit
	Geberit HS30 and HS50 hygiene flush units in concealed cisterns	✓	 With Geberit bus converter with integrated power supply unit, art. no. 116.097.00.1	230 V AC to power supply unit in the Geberit bus converter
	GEBUS sensors: • Geberit temperature and volumetric flow rate sensors for GEBUS • Geberit temperature sensors for GEBUS	Not possible ²⁾	Direct, with GEBUS cable on the sensor (length 1 m)	24 V DC from GEBUS

2 / 2

1) Geberit Connect-enabled end devices are marked with the Geberit Connect logo on the specification plate.



2) Access with Geberit Control app possible via GEBUS and Geberit Gateway

4.6.1 Connection of end devices via GEBUS

The following diagram shows the connection of Geberit Connect end devices to the Geberit Gateway via GEBUS. Power is supplied either through the GEBUS (24 V DC) or a separate power supply unit.

Mixed operation is possible with end devices connected via GEBUS and end devices connected via Bluetooth®.

For details → see "Connection of the end devices to Geberit Gateway", page 48.

For details on wiring → see "Electrical diagram (GEBUS, network, LAN)", page 135.

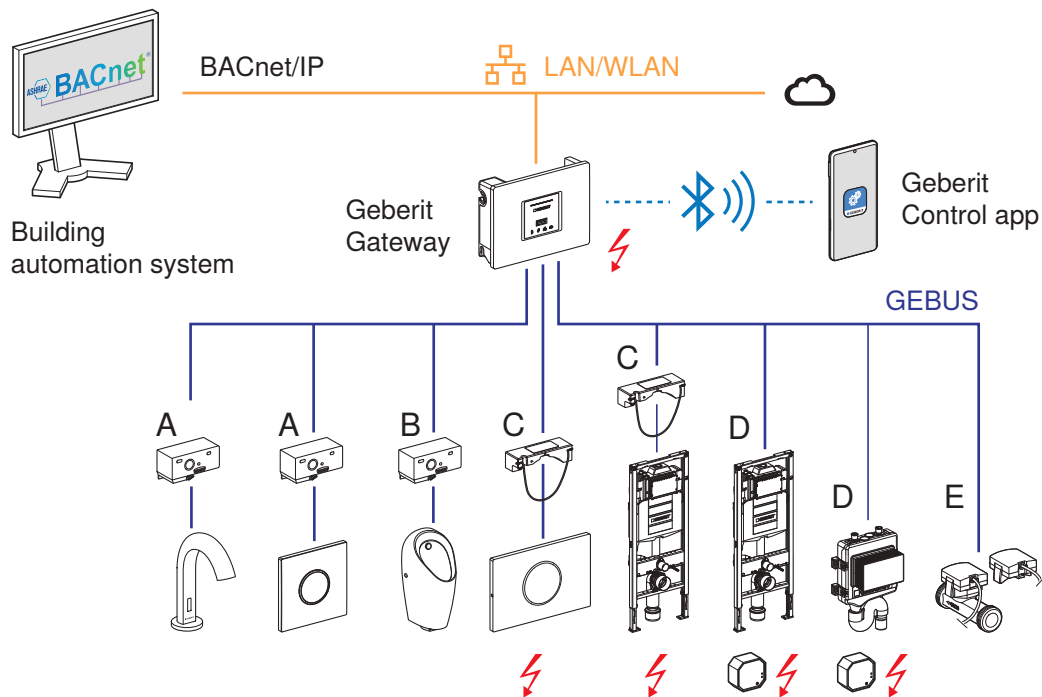


Figure 13: Connection of Geberit Connect end devices via GEBUS



Power supply with 230 V AC mains voltage (not via GEBUS cable)

- A Geberit bus converter for concealed urinal flush controls and washbasin taps, power supply via GEBUS cable
- B Geberit bus converter for Geberit Preda, Selva and Tamina urinals, power supply via GEBUS cable
- C Geberit bus converter with integrated power supply unit, separate power supply required
- D Only communication via GEBUS cable, separate power supply unit required
- E Communication and power supply via GEBUS cable

4.6.2 Connection of the end devices via Bluetooth®

The following diagram shows the connection of Geberit Connect end devices to the Geberit Gateway via Bluetooth®. Power is supplied by mains adapter, battery or generator.

Mixed operation is possible with end devices connected via GEBUS and end devices connected via Bluetooth®.

For details → see "Connection of the end devices to Geberit Gateway", page 48.

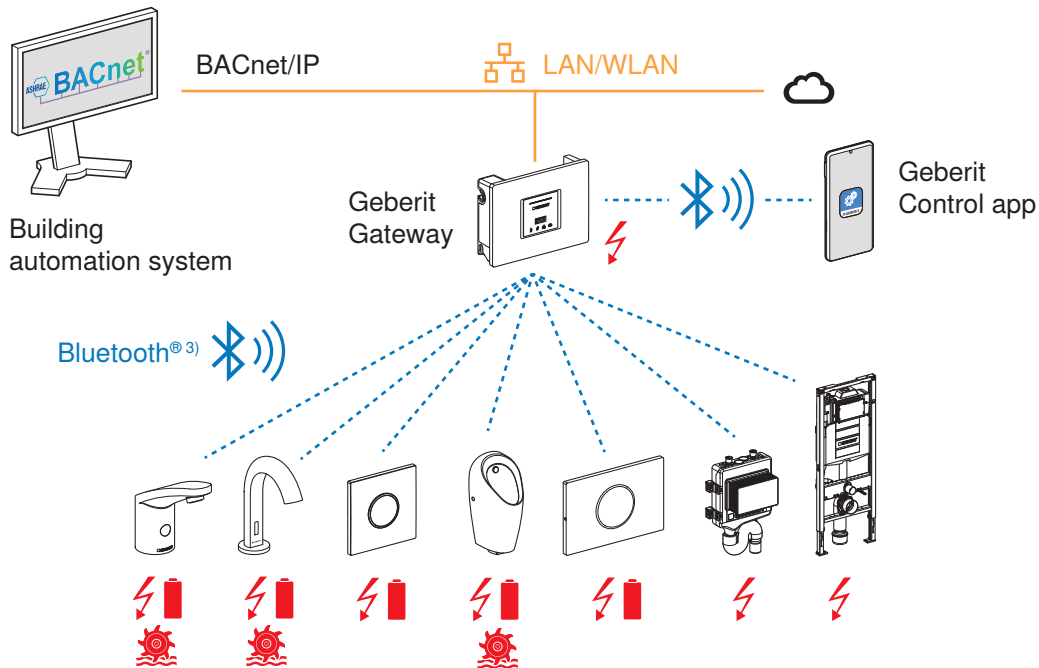


Figure 14: Connection of Geberit Connect end devices via Bluetooth®

-  Power supply with 230 V AC mains voltage
-  Power supply with battery
-  Power supply with generator

4.7 Geberit Control app



The Geberit Control app is used to configure and operate devices in the Geberit Connect system. The connection to the units is established via Bluetooth®. The Geberit Control app is available free of charge for Android and iOS devices in the respective app stores.

iOS



[App Store](#)

Android



[Google Play](#)

Access to the app

The Geberit Control app can be downloaded directly from the respective app store. The QR code on each Geberit Connect device also leads to the Geberit Control app.



Figure 15: Example: Specification plate and sticker on Geberit Gateway, URL in the QR code = <https://gbrt.io/dsvF500>

The QR code leads to a landing page with the following content:

- Links to the app stores for downloading the Geberit Control app
- Link to the respective product page in the online product catalogue with product data and instructions

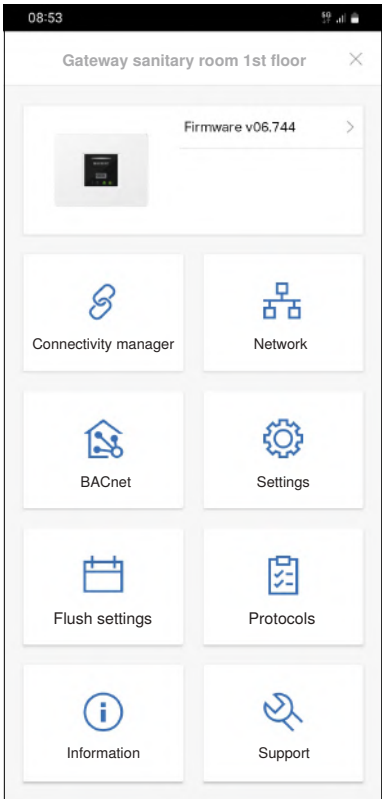
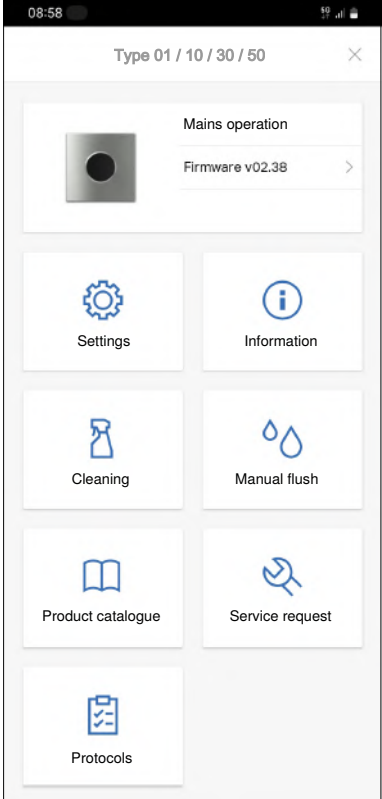
Geberit ID

A personal Geberit ID is required to access the Geberit Gateway. This can be created directly in the Geberit Control app.

If the notification function is activated in the Geberit Control app, faults and warnings are reported by email to the email address stored in the Geberit ID.

For security reasons, the Geberit ID must be confirmed monthly in the Geberit Control app.

4.7.1 Scope of function

Geberit Gateway	Geberit Connect end devices
Home page of the Geberit gateway 	Example: Home page of a Geberit urinal flush control 
Functions: • Central access to all connected end devices • Configuring the Geberit Connect system (networking the end devices) • Making settings on the Geberit Gateway • Configuring the flushing programmes of the Geberit hygiene system (GHS) • Making network settings • Configuring connection to building automation system • Retrieving logs and statistics from the Geberit Connect system • Displaying faults and warnings in the Geberit Connect system • Triggering a service request	Functions: • Making settings • Activating functions such as cleaning mode or test flushes • Calling up logs and statistics • Displaying faults and warnings

4.7.2 Protocols

The Geberit Gateway and the assigned end devices provide various logs. These can be displayed and downloaded in the Geberit Control app via the Geberit gateway or via the Geberit Connect end devices under [Logs] .

Logs of the Geberit gateway

• Collective log/uses

- Remit: Usage and flush activations of all assigned end devices
- Application: for logging the frequency of use (can be used to determine the cleaning intervals in the sanitary room)
- File format: Export as CSV or PDF
- Example:

	A	B	C	D	E	F	G	H	I
1	Name:	Gateway Test Geberit							
2	Artikelnummer:	116.490.00.1							
3	Firmware-Version:	6.744							
4	Seriennummer:	F5000000459							
5	Protokoll erstellt am:	26.07.2024 / 14:45							
6									
7	Benutzungen								
8	Zeitraum	08.07.2024 - 26.07.2024							
9	Datum	Lokale Zeit	UTC	Zone	Typ	Position	Endgerät	Seriennummer	Auslösung
10	26.07.2024	13:31	11:31	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina	FE055907051	FE055907051	Spülung
11	26.07.2024	13:09	11:09	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina	FE055907051	FE055907051	Vorspülung
12	25.07.2024	08:11	06:11	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282	Benutzung
13	25.07.2024	08:11	06:11	WC Herren	Geberit Waschtischarmaturen	1 Piave / Brenta (Standardarmatur)	FD0E6804805	FD0E6804805	Benutzung
14	25.07.2024	06:59	04:59	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina	FE055907051	FE055907051	Fernausslösung
15	08.07.2024	12:52	10:52	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795	Neustart
16	08.07.2024	12:52	10:52	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795	Neustart
17	08.07.2024	12:44	10:44	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795	Fernausslösung

• Collective log/events

- Remit: Events of all assigned end devices such as errors, restarts or configuration changes
- Application: to trace the behaviour of the system
- File format: Export as CSV or PDF
- Example:

	A	B	C	D	E	F	G	H	I	J	K
3	Firmware-Version:	6.744									
4	Seriennummer:	F5000000459									
5	Protokoll erstellt am:	29.07.2024 / 16:03									
6											
7	Ereignisse										
8	Zeitraum	16.07.2024 - 29.07.2024									
9	Datum	Lokale Zeit	UTC	Zone	Typ	Position	Endgerät	Seriennummer	Schweregegr	Ursache	Beschreibung
10	29.07.2024	16:03	14:03	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Info	Magnetventil	Behoben: Nicht verbunden
11	29.07.2024	16:03	14:03	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795	Info	Stromquelle erkannt	
12	29.07.2024	16:03	14:03	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Fehler	Spülmodus Intervall	Spülung wurde nicht ausgeführt.
13	29.07.2024	16:02	14:02	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795	Info	Neustart durch System	
14	29.07.2024	16:02	14:02	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Fehler	Magnetventil	Nicht verbunden
15	29.07.2024	16:02	14:02	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Fehler	Spülmodus Intervall	Spülung wurde nicht ausgeführt.
16	29.07.2024	15:19	13:19	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Info	Datum/Uhrzeit synchronisiert (UTC)	
17	29.07.2024	14:56	12:56	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina (GRO)	FE055907051	FE055907051	Warnung	Fernausslösung (durch Geberit Gateway,	Spülung wurde nicht ausgeführt.
18	29.07.2024	14:27	12:27	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Fehler	Spülmodus Intervall	Spülung wurde nicht ausgeführt.
19	29.07.2024	08:56	06:56	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina (GRO)	FE055907051	FE055907051	Warnung	Fernausslösung (durch Geberit Gateway,	Spülung wurde nicht ausgeführt.
20	29.07.2024	08:56	06:56	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310	Fehler	Spülmodus Intervall	Spülung wurde nicht ausgeführt.
21	16.07.2024	08:21	06:21	WC Herren	Geberit Urinalsteuerungen	2 Konverter	FB000001668	FB000001668	Info	Datum/Uhrzeit synchronisiert (UTC)	
22	16.07.2024	08:21	06:21	WC Herren	Geberit Urinalsteuerungen	2 Konverter	FB000001668	FB000001668	Warnung	Spannungsabfall am GEBUS	
23	16.07.2024	08:20	06:20	WC Herren	Geberit Waschtischarmaturen	1 Piave / Brenta (Standardarmatur)	FD0E6804805	FD0E6804805	Info	Datum/Uhrzeit synchronisiert (UTC)	
24	16.07.2024	08:20	06:20	WC Herren	Geberit Waschtischarmaturen	1 Piave / Brenta (Standardarmatur)	FD0E6804805	FD0E6804805	Fehler	Stromversorgung	Unterspannung
25	16.07.2024	08:19	06:19	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282	Info	Neustart durch System	
26	16.07.2024	08:19	06:19	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282	Info	Stromquelle erkannt	

• Collective log/measured values

- Remit: Valve openings, sensor values and water consumption of all assigned end devices
- Application: to log water consumption and temperatures
- File format: Export as CSV or PDF
- Example:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Name:	Gateway Test Geberit										
2	Artikelnummer:	116.490.00.1										
3	Firmware-Version:	6.756										
4	Seriennummer:	F5000000459										
5	Protokoll erstellt am:	01.10.2024 / 15:29										
6												
7	Markierte											
8	Zeitraum	19.09.2024 - 01.10.2024										
9	Datum	Lokale Zeit	UTC	Zone	Gerätfamilie	Position	Endgerät	Seriennummer	Ventil	Temperatur [°C]	Volumen [l]	Max. Volumenstrom [l/min]
10	01.10.2024	15:23:30	13:23:30	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310		1,25,0	5946	10
11	01.10.2024	15:23:22	13:23:22	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282		0,0	23	0
12	01.10.2024	15:23:16	13:23:16	WC Herren	Geberit Urinalsteuerungen	1 Preda / Selva / Tamina (GRO)	FE055907051	FE055907051		0,0	42	0
13	01.10.2024	15:23:08	13:23:08	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795		0,0	110	0
14	01.10.2024	15:14:38	13:14:38	WC Herren	Geberit WC-Steuerungen	1 Sigma10 (Sigma 12, Netz)	F9000014795	F9000014795		0,0	78	0
15	01.10.2024	15:14:30	13:14:30	WC Herren	Geberit Urinalsteuerungen	1 Piave / Brenta / Tamina (GRO)	FE055907051	FE055907051		0,0	41	0
16	01.10.2024	15:14:38	13:14:38	WC Herren	Geberit Waschtischarmaturen	1 Piave / Brenta (Standardarmatur)	FD0E6804805	FD0E6804805		0,0	0	0
17	01.10.2024	15:14:38	13:14:38	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282		0,0	21	0
18	01.10.2024	15:14:38	13:14:38	Technikraum	GEBUS Sensoren	1 T/V-Sensor DN10	F6010000208	F6010000208		22,4	0	0
19	01.10.2024	15:14:38	13:14:38	Technikraum	GEBUS Sensoren	2 T-Sensor d36-d50	F6020000113	F6020000113		24,0	0	0
20	01.10.2024	15:14:38	13:14:38	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310		1,25,8	5929	10
21	01.10.2024	15:14:38	13:14:38	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310		2,0,0	0	0
22	01.10.2024	14:49:27	12:49:27	WC Herren	Geberit Urinalsteuerungen	2 Typ 01 / 10 / 30 / 50	FE000077282	FE000077282		0,0	21	0
23	01.10.2024	14:36:10	12:36:10	Technikraum	Geberit Hygienespülungen	1 H550	F7010001310	F7010001310		1,26,0	5929	0

• Collective log/hygiene flush units

- Remit: Flushing of all assigned Geberit HS30 and HS50 hygiene flush unit, triggered by flushing programmes in individual operation¹⁾
- Application: for the obligation to prove that drinking water hygiene is ensured
- File format: Export as CSV or PDF
- Example:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name:	Gateway Test Geberit											
2	Artikelnummer:	116.490.00.1											
3	Firmware-Version:	6.744											
4	Seriennummer:	F5000000459											
5	Protokoll erstellt am:	26.07.2024 / 14:48											
6													
7	Hygienespülungen												
8	Zeitraum	20.07.2024 - 26.07.2024											
9	Datum	Lokale Zeit	UTC	Zone	Typ	Position	Endgerät	Seriennummer	Spülmodus	Volumen (l)	Starttemperatur (°C)	Stopptemperatur (°C)	Spülzeit (s)
10	26.07.2024	07:00	05:00	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülmodus Intervall V1	10000	27.8	27.8	19
11	25.07.2024	16:57	14:57	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülung via GEBUS V1	10000	29.6	29.6	103
12	25.07.2024	03:58	01:58	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülung via GEBUS V1	10000	28.2	28.2	103
13	24.07.2024	02:57	00:57	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülung via GEBUS V1	10000	28.1	28.1	103
14	23.07.2024	02:57	00:57	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülung via GEBUS V1	10000	27.3	27.3	103
15	22.07.2024	15:40	13:40	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Magnetventiltest V1	10000	28	27.9	5
16	22.07.2024	15:36	13:36	Technikraum	Geberit Hygienespülungen	1	HS50	F7010001310	Spülmodus Temperatur V1	10000	27.8	27.9	145

• Flushing protocol GHS

- Flushes triggered by flushing programmes of the Geberit hygiene system (GHS) in networked operation¹⁾
- Application: for the obligation to prove that drinking water hygiene is ensured
- File format: Display in Geberit Control app and export as CSV or PDF
- Example:

09:59

12.03.2024

Flush log



Day

Week

Month

Year

<

12.03.2024

>

Flush stop

Flush volume reached

Time

12.03.2024 14:46:24

Zone

WC gentlemen

End device

Sigma10 (Sigma 12, mains-operated)

Position

1

Flush mode

Interval

Flushing programme

1

Flush volume (l)

9

Flush time (s)

19

Flush start

Start condition reached

Time

12.03.2024 14:46:00

Zone

WC gentlemen

End device

Sigma10 (Sigma 12, mains-operated)

Position

1

Flush mode

Interval

Flushing programme

1

Flush volume (l)

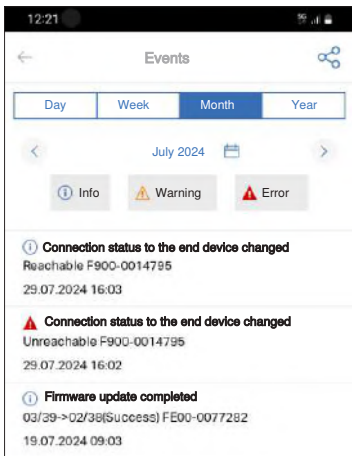
9

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name:	Gateway Test Geberit											
2	Artikelnummer:	116.490.00.1											
3	Firmware-Version:	6.744											
4	Seriennummer:	F5000000459											
5	Protokoll erstellt am:	30.07.2024 / 09:55											
6													
7	Spülprotokoll GHS												
8	Zeitraum	29.07.2024 - 04.08.2024 (Woche 31)											
9	Datum	Lokale Zeit	UTC	Zone	Endgerät	Position	Spülmodus	Spülprogramm	Ereignis	Ursache	Volumen (l)	Temperatur (°C)	Spülzeit (s)
10	30.07.2024	09:00:08	07:00:08	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestoppt	VolumeNotReached	0		231
11	30.07.2024	08:56:03	06:56:03	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestartet	Startbedingung erreicht	7		
12	30.07.2024	08:56:01	06:56:01	Technikraum	HS50 (V1)	1	Intervall	4	Spülung unterlassen	Spülmenge überschritten			
13	30.07.2024	07:00:07	05:00:07	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestoppt	VolumeNotReached	0		231
14	30.07.2024	06:56:02	04:56:02	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestartet	Startbedingung erreicht	7		
15	30.07.2024	05:57:14	03:57:14	Technikraum	HS50 (V1)	1	Intervall	4	Spülung gestoppt	Zeitüberschreitung			
16	30.07.2024	05:56:00	03:56:00	Technikraum	HS50 (V1)	1	Intervall	4	Spülung gestartet	Startbedingung erreicht	17		
17	30.07.2024	05:00:08	03:00:08	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestoppt	VolumeNotReached	0		231
18	30.07.2024	04:56:03	02:56:03	WC Herren	Preda / Selva / Tamina	1	Differenz mit GEBUS-Sensor	3	Spülung gestartet	Startbedingung erreicht	7		
19	29.07.2024	10:56:04	08:56:04	Technikraum	HS50 (V1)	1	Temperatur	5	Spülung unterlassen	Spülmenge überschritten		26.5	
20	29.07.2024	10:56:00	08:56:00	Technikraum	HS50 (V1)	1	Intervall	4	Spülung unterlassen	Spülmenge überschritten			
21	29.07.2024	09:56:01	07:56:01	Technikraum	HS50 (V1)	1	Intervall	4	Spülung unterlassen	Spülmenge überschritten			
22	29.07.2024	09:02:01	07:02:01	Technikraum	HS50 (V1)	1	Temperatur	5	Spülung unterlassen	24h Blockierung der Temperaturspülung		25.9	

1) → See "Single operation and connected operation", page 60.

• Events

- Remit: Events of the Geberit gateway such as errors, restarts or configuration changes
- Application: to trace the behaviour of the system
- File format: Display in Geberit Control app and export as CSV or PDF
- Example:



• Commissioning report

- Remit: Configuration of the Geberit Connect system after commissioning
- Application: handover to the building operator
- File format: Export as PDF
- Example:

Inbetriebnahmeprotokoll

GEBERIT

Geräteinformation

NameGateway SB VOLJU

Artikelnummer116.490.00.1

Firmware-Version06.744

SeriennummerF5000000459

StatusKeine Fehler und/oder Warnungen vorhanden

Einstellungen

Passwort(Passwort manuell eingeben)

Datum und Uhrzeit26.07.2024 14:51:16

Geberit Cloud ServicesAus

IP-ZuweisungAus

IP-ZuweisungAus

NTP-Server0.pool.ntp.org

Vernetzte Endgeräte

ZonePositionGerätetypSeriennummerGerätstatus

PEDS Simulation-Geberit GatewayF5000000459Fehler

WC Herren1Sigma10 (Sigma 12, Netz)F9000014795OK

WC Herren1KonverterF8010000102OK

WC Herren1Preda / Selva / Tamina (GRO)FE055907051OK

WC Herren1KonverterF8000000833OK

WC Herren2Typ 01 / 10 / 30 / 50FE000077282OK

WC Herren2KonverterF8000001668OK

WC Herren1Piave / Brenta (Standardatur)FD0E6804805OK

WC Herren1KonverterF8000001142OK

Technikraum1T/V-Sensor DN10F6010000209OK

Technikraum2T-Sensor d16-d50F6020000113OK

Technikraum1HS50F7010001310OK

Geberit Hygienesystem

BetriebsmodusFreigabezeit

1(Aktiv)WC Herren01:00 - 23:00

2(Inaktiv)Technikraum-

Spülprogramme

NrGerätetypSeriennummerBetriebsmodusSpülmodusStarttemperaturStopptemperaturMaximale SpülmengeSensor

1Sigma10 (Sigma 12, Netz)F90000147951Temperatur32 °C30 °C30 lF6020000113

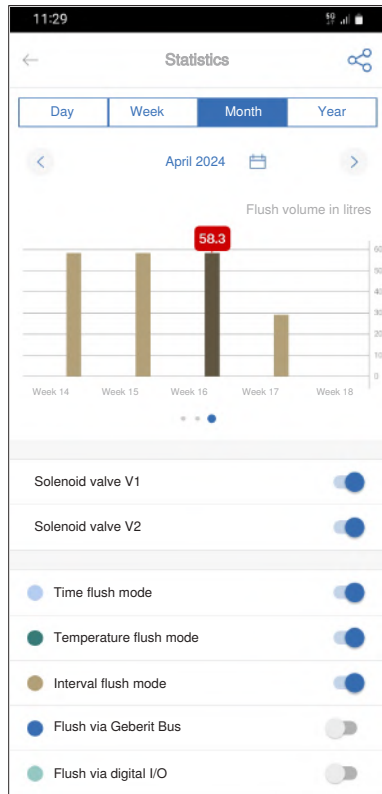
NrGerätetypSeriennummerBetriebsmodusSpülmodusStarttemperaturStopptemperaturMaximale SpülmengeSensor

2Piave / Brenta (Standardatur)FD0E68048051Temperatur30 °C27 °C10 lF6020000113

Logs of the individual end devices

• Statistics

- Remit: Uses and flush activations in individual operation¹⁾
- Application: for the obligation to prove that drinking water hygiene is ensured or to log the frequency of use
- File format: Display in Geberit Control app and export as CSV or PDF
- Example:



• Events

- Remit: Events on the end device such as errors, restarts or configuration changes
- Application: to trace the behaviour of the system
- File format: Display in Geberit Control app and export as CSV or PDF
- Example: → see "Logs of the Geberit gateway"

• Commissioning report

- Remit: Configuration of the end device after commissioning
- Application: handover to the building operator
- File format: Export as PDF
- Example: → see "Logs of the Geberit gateway"

• Sensor log

- Remit: Water consumption and temperatures of GEBUS sensors
- Application: to log water consumption and temperatures or for the obligation to prove that drinking water hygiene is ensured
- File format: Display in Geberit Control app and export as CSV or PDF
- Example:

The image is a screenshot of a mobile application interface titled "Sensor log". At the top left, the time "13:56" is displayed. At the top right, there are icons for signal strength, battery level, and a Wi-Fi connection. Below the title bar, there is a back arrow on the left and a share icon on the right. The main content area features four tabs: "Day" (which is highlighted in blue), "Week", "Month", and "Year". Below the tabs, a date selector shows "30.07.2024" with a calendar icon to its right. Navigation arrows are present on either side of the date. The data is presented in a list of five entries, each showing a timestamp, the measurement "Temperature (°C)", and the corresponding value. The values are 28.7, 27.7, 26.7, 25.7, and 26.7 respectively. The interface uses a clean, modern design with a white background and blue accents.

13:56

Sensor log

Day

Week

Month

Year

30.07.2024

30.07.2024 13:34

Temperature (°C)

28.7

30.07.2024 09:24

Temperature (°C)

27.7

30.07.2024 08:24

Temperature (°C)

26.7

30.07.2024 07:37

Temperature (°C)

25.7

30.07.2024 06:33

Temperature (°C)

26.7

1) → See "Single operation and connected operation", page 60.

Logging of measured values

Temperatures and water consumption are logged in the collective log/measured values and sensor logs. A maximum of 25 million measured values are stored in the logs. A log entry is created according to the following criteria:

- Temperatures and water volume detected every 15 seconds
- Log entry when the temperature changes by ± 1 °C, resolution 0.1 °C
- Log entry when the water volume changes by +1 litre:
 - Accumulated water volume, resolution 1 litre
 - Maximum volume flow since the last measured value, resolution 0.01 l/min

5 Planning

5.1 General planning rules

Geberit Connect end devices such as washbasin taps, urinal flush controls or WC flush controls are connected to a Geberit bus cable (GEBUS cable) or alternatively via Bluetooth® with a Geberit Gateway. Mixed operation is possible with end devices connected via GEBUS and end devices connected via Bluetooth®.

The following example shows the connection of different end devices via GEBUS (star, row and tree topology) and via Bluetooth®.

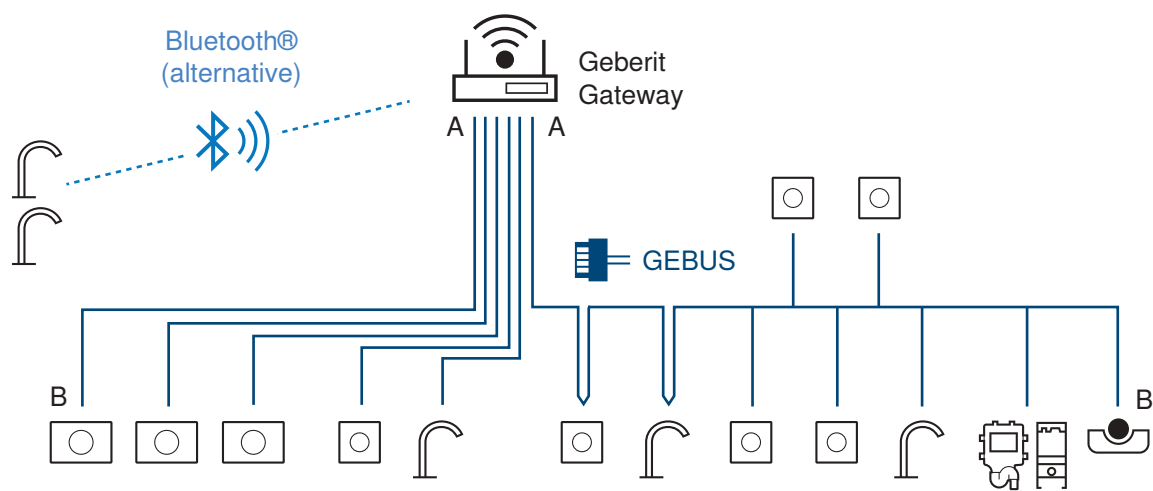


Figure 16: Example for connection of the end devices

Criteria for the choice of connection:

Connection via GEBUS	Connection via Bluetooth®
Maximum 30 end devices per Geberit Gateway ¹⁾	Maximum 10 end devices per Geberit Gateway ¹⁾
Prefer connection via GEBUS: • Better stability • Automatic addressing at the Geberit Gateway	Connection via Bluetooth® as an alternative for: • Retrofitting existing sanitary facilities • For Geberit Connect end devices with battery operation
Data update rate ²⁾ : • Every 5 seconds	Data update rate ²⁾ : • Mains operation: 1x per minute • Battery operation: 1x per hour

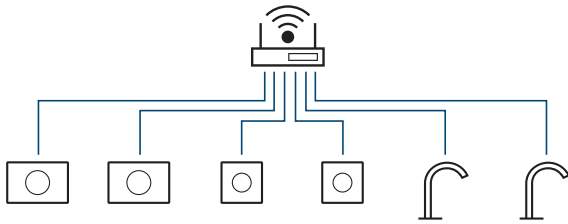
1) Total of 30 end devices, for example 25 end devices via GEBUS and 5 end devices via Bluetooth®

2) Update rate for statistical data such as water consumption. Warnings and faults as well as commands to the end device are transmitted without delay.

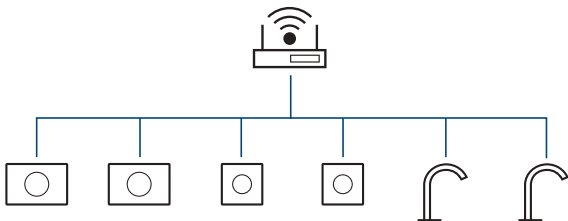
5.2 Planning rules for connection via GEBUS

Topology

- Star topology



- Advantages: simple cabling, simple fault diagnosis, high reliability (in the event of a cable break, only one end device cannot be reached)
 - Disadvantages: larger quantities of cable, more connection terminals required in installation box
- Row or tree topology



- Advantages: smaller cable quantities, easy expandability, fewer connection terminals required in installation box
- Disadvantages: lower reliability (several end devices cannot be reached in the event of a cable break)



Recommendation: Connect WC flush controls with star topology.

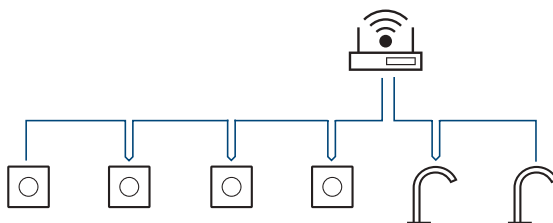
With the Geberit Duofix elements for WC, there is not enough space in the Power & Connect box for looping through the GEBUS cable and the mains cable.

However, a connection with series or tree topology is possible if only the GEBUS cable is looped through. The mains cable must then be looped through in an outlet mounting box behind the Geberit Duofix element.



Recommendation: Use mixed topology for urinals, urinal flush controls and washbasin taps.

Loop through the GEBUS cable in the room with the same end device types and route it in a star configuration to the Geberit Gateway.



Accessories required

- Determine required accessories, such as Geberit bus converter. → See "Connection of the end devices to Geberit Gateway", page 48.

Failure safety

- Fewer end devices per Geberit Gateway increases failure safety.
- Star topologies increase failure safety.

GEBUS cables

- Observe specifications for GEBUS cables. → See "Geberit bus cable (GEBUS cable)", page 28.
- For details on wiring → see "Electrical diagram (GEBUS, network, LAN)", page 135.
- Maximum cable length between Geberit Gateway and the most distant end device (route A-B in figure on previous page): 100 metres
- Do **not** connect several Geberit Gateways to each other via GEBUS. Only one Geberit Gateway is permitted per Geberit Connect system.
- Rules for routing the GEBUS cable:
 - Do not route parallel to 230 V AC supply lines.
 - Always route in a conduit pipe.
 - Do not route in the same conduit pipe as 230 V AC supply lines.
 - Do not run 230 V AC supply lines above or below Geberit Gateway in the control cabinet.
 - Insulate open strand ends during the construction phase so that they do not touch each other.
 - Label the GEBUS cable once laid.
 - Only electrically skilled persons are allowed to route the GEBUS cable.
 - Comply with country-specific regulations for electrical installations.

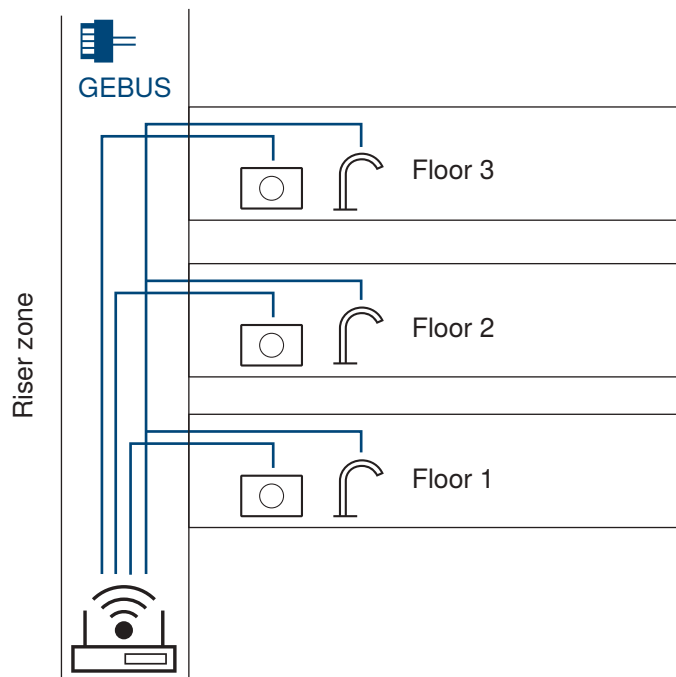


To avoid incorrect wiring of the GEBUS cable, we recommend carrying out the following test immediately after connecting the GEBUS cable:

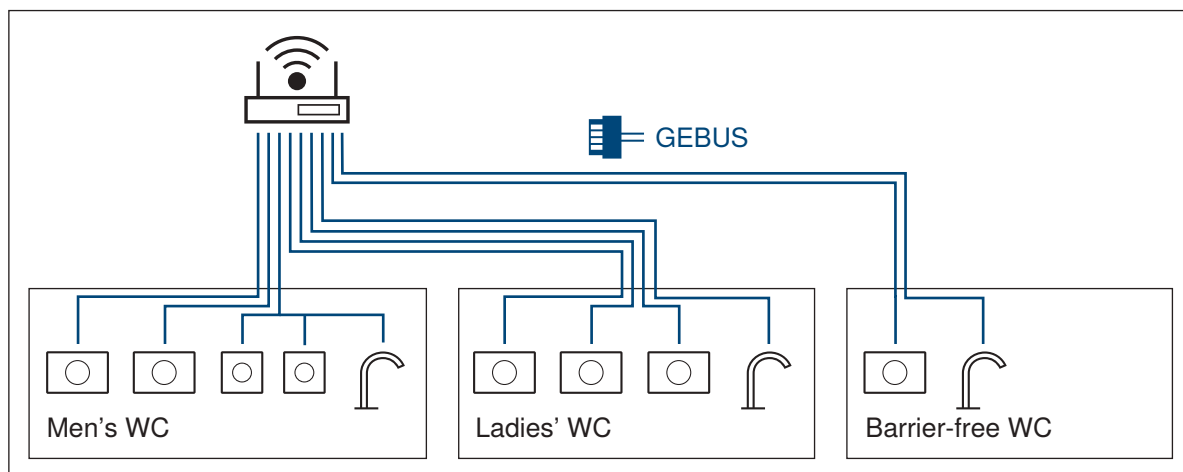
- 1** Switch on the power supply at the Geberit Gateway.
- 2** Switch on the power supply to end devices that are not powered via GEBUS.
- 3** Check the LEDs:
 - ✓ Geberit Gateway: LEDs indicate the current status.
 - ✓ End devices with LED (e.g. on the Geberit bus converter): LED lights up green.

Geberit Gateway

- Maximum 30 end devices per Geberit Gateway when connected via GEBUS
- 18 connection terminals in installation box for Geberit Gateway, including 1 for the connection to the Geberit Gateway
- Recommendations for placement of the Geberit Gateway:
 - Single family houses: 1 Geberit Gateway in the technical room
 - Building with fewer end devices: 1 Geberit Gateway per riser zone

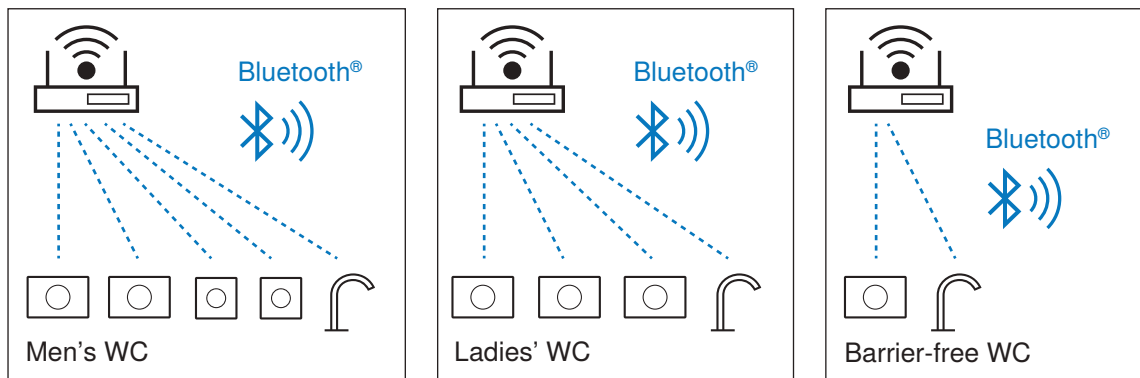


- Public sanitary facilities: 1 Geberit Gateway per sanitary facility with men's and women's WC and possibly other rooms



5.3 Additional planning rules for connection via Bluetooth®

- Note the range of the Bluetooth® signal: approx. 10-30 metres depending on the surroundings and building structures such as walls and ceilings
- Maximum 10 end devices per Geberit Gateway when connected via Bluetooth®
- Install the Geberit Gateway in a plastic control cabinet so that communication via Bluetooth® is not affected.
- Check the range of the Bluetooth® signal before final installation of the Geberit Gateway.
- Recommendations for placement of the Geberit Gateway:
 - Place the Geberit Gateway in the same room as the end devices
 - 1 Geberit Gateway per room



5.4 Zone division

During commissioning, each Geberit Connect end device is assigned to a zone. It is recommended that zone division be determined at the planning stage. The zone division is independent of the topology and the type of connection (GEBUS, Bluetooth®).

Application of the zones:

- Unique identification of an end device in the Geberit Control app and in the building automation system (for example for localising error messages)
- Triggering of central functions for all end devices in the same zone (for example, to activate cleaning mode)

Recommendations for zone division:

- One zone per sanitary room
- One zone per flat in an apartment building
- One zone for the Geberit Gateway, if this is housed in its own room (for example in the basement or in a riser zone)
- Assign sensors and end devices to the same zone if they are used for automatic water replacement (drinking water hygiene) and are connected to the same supply pipe.

Example: Zone division in a WC suite

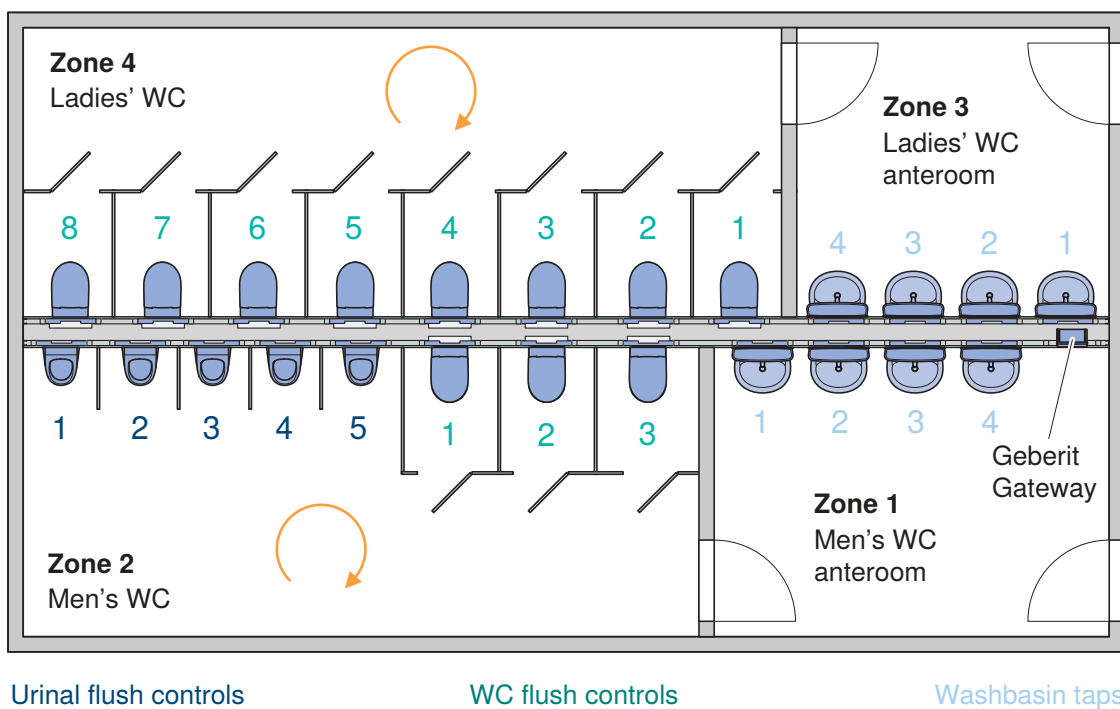


Figure 17: Recommended zone division

General recommendations:

- Set zone with Geberit Gateway as zone 1.
- Number end devices clockwise per zone, separate numbering per end device type.
- Assign meaningful names for Geberit Gateway and zones (for example "Gateway for first floor, men's WC").

Example: Visualisation of zone 2 in the example above in the Geberit Control app

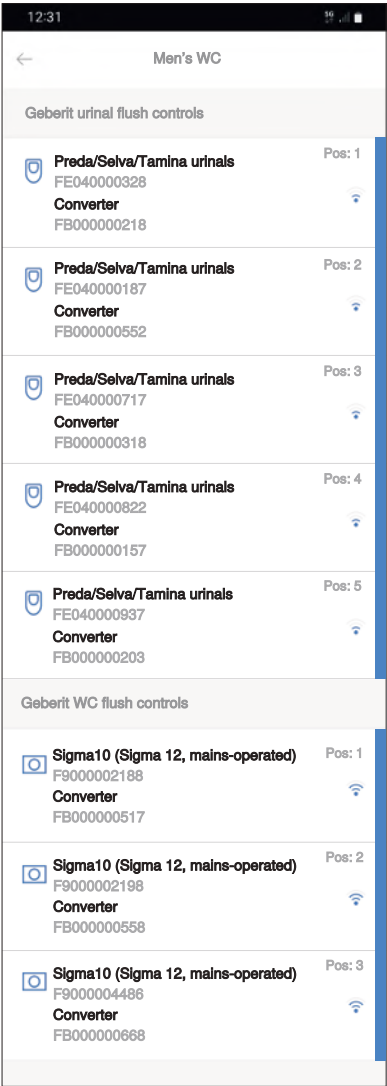


Figure 18: Visualisation of a zone in the Geberit Control app

5.5 Connection of the end devices to Geberit Gateway

5.5.1 Connection of Geberit types 80 / 185 / 186 and Geberit Bambini washbasin taps



Connection to Geberit Gateway	GEBUS	Not possible
	Bluetooth®	From 2025
Power supply	Mains, battery or generator	
Compatible with Geberit Control app	Yes	
Accessories required	No accessories required	
Installation Manual	→ See the online catalogue of the Geberit sales company: Washbasin tap: https://gbrt.io/dscFD00	
Connection principle		

5.5.2 Connection of Geberit Piave and Brenta washbasin taps



Connection to Geberit Gateway	GEBUS	• With Geberit bus cable via Geberit bus converter • Connection of the GEBUS cable via plug with terminals
	Bluetooth®	Yes
Power supply	24 V DC via GEBUS cable	
Compatible with Geberit Control app	Yes	
Accessories required	• Geberit bus converter for concealed urinal flush controls and washbasin taps, art. no. 116.371.00.1 – Geberit bus converter is used instead of the mains power supply unit or the battery compartment. – Plug for GEBUS cable included in the scope of delivery • GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m)	
Installation manuals	→ See the online catalogue of the Geberit sales company: Washbasin taps: https://gbrt.io/dscFD0E Geberit bus converter: https://gbrt.io/dscFB00	
Connection principle		
Position of the supply lines		

Optionally, washbasin taps with battery or generator operation can also be used. The connection to the Geberit Gateway is then only possible via Bluetooth®.

5.5.3 Connection of Geberit urinal flush controls with electronic flush actuation, with types 01 / 10 / 20 / 40 / 50 cover plate



Connection to Geberit Gateway	GEBUS	• With Geberit bus cable via Geberit bus converter • Connection of the GEBUS cable via plug with terminals
	Bluetooth®	Yes
Power supply	24 V DC via GEBUS cable	
Compatible with Geberit Control app	Yes	
Accessories required	• Geberit bus converter for concealed urinal flush controls and washbasin taps, art. no. 116.371.00.1 – Geberit bus converter is used instead of the mains power supply unit or the battery compartment. – Plug for GEBUS cable included in the scope of delivery • GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m)	
Installation Manual	→ See the online catalogue of the Geberit sales company: Urinal flush control: https://gbrt.io/dscFE00 Geberit bus converter: https://gbrt.io/dscFB00	
Connection principle		
Position of the supply lines		

Optionally, urinal flush controls with battery operation can also be used. The connection to the Geberit Gateway is then only possible via Bluetooth®.

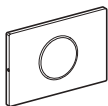
5.5.4 Connection of Geberit Preda, Selva and Tamina urinals, with integrated flush control



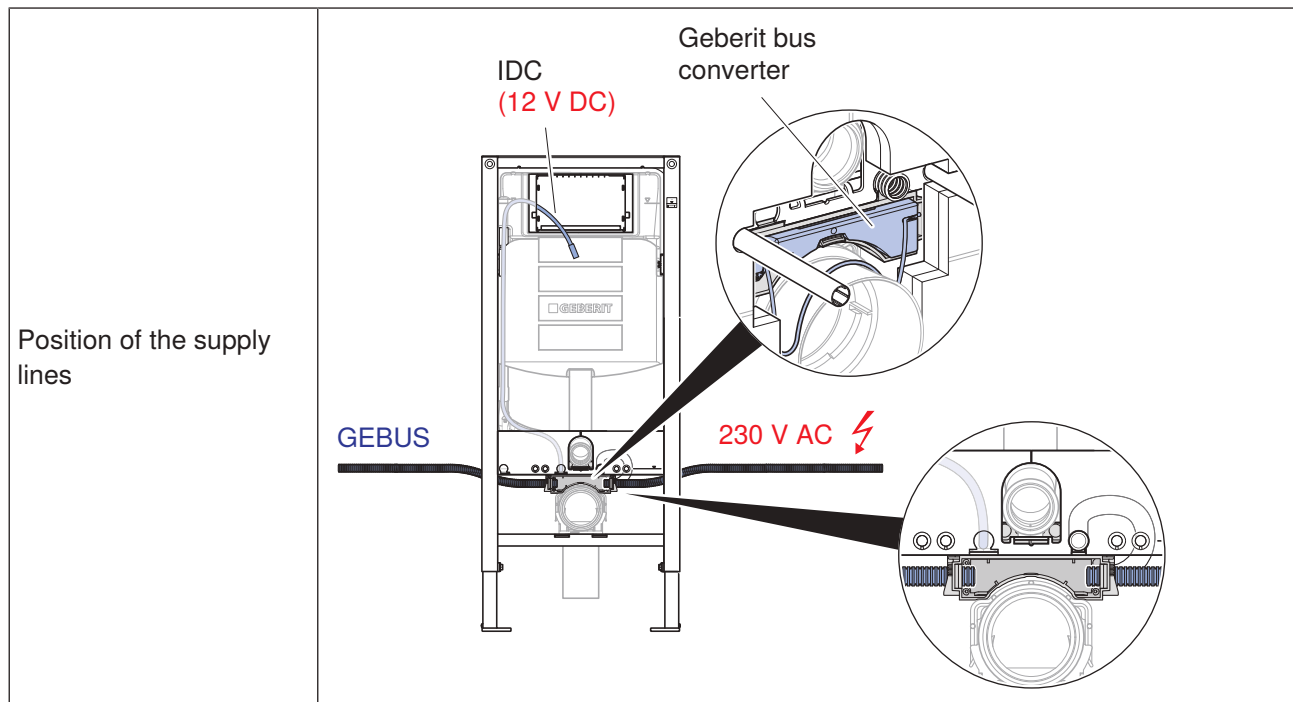
Connection to Geberit Gateway	GEBUS	• With Geberit bus cable via Geberit bus converter • Connection of the GEBUS cable via plug with terminals
	Bluetooth®	Yes
Power supply	24 V DC via GEBUS cable	
Compatible with Geberit Control app	Yes	
Accessories required	• Geberit bus converter for Preda, Selva and Tamina urinals, art. no. 116.370.00.1 – Geberit bus converter is used instead of the mains power supply unit or the battery compartment – Plug for GEBUS cable included in the scope of delivery • GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m)	
Installation Manual	→ See the online catalogue of the Geberit sales company: Urinals: https://gbrt.io/dscFE04 Geberit bus converter: https://gbrt.io/dscFB00	
Connection principle		
Position of the supply lines		

Optionally, urinals with battery or generator operation can also be used. The connection to the Geberit Gateway is then only possible via Bluetooth®.

5.5.5 Connection of Geberit WC flush controls with electronic flush actuation



Connection to Geberit Gateway	GEBUS	• With Geberit bus cable via Geberit bus converter with integrated power supply unit • Connection of the GEBUS cable via plug with terminals
	Bluetooth®	Yes
Power supply	230 V AC to integrated power supply unit in the Geberit bus converter	
Compatible with Geberit Control app	Yes	
Accessories required	• GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m) Installation element with Power & Connect box • Geberit bus converter with integrated power supply unit, for Power & Connect Box, art. no. 116.097.00.1 (Plug for GEBUS cable included in scope of delivery) Installation element without Power & Connect Box: • Geberit Power & Connect Box and GEBUS converter set with integrated power supply unit, art. no. 116.099.00.1 (Plug for GEBUS cable included in scope of delivery)	
Installation Manual	→ See the online catalogue of the Geberit sales company: WC flush control with Sigma10 actuator plate: https://gbrt.io/dscF900 WC flush control with Sigma80 actuator plate: https://gbrt.io/dscF906 WC flush control for external push button, for Sigma 12 cm https://gbrt.io/dscF90C WC flush control for external push button, for Omega 12 cm https://gbrt.io/dscF904 WC flush control for RF-controlled button: https://gbrt.io/dscF90E HS05 hygiene flush unit: https://gbrt.io/dscF905 Geberit bus converter: https://gbrt.io/dscFB01	
Connection principle		



2 / 2

Optionally, WC flush controls with battery operation can also be used. The connection to the Geberit Gateway is then only possible via Bluetooth®.

5.5.6 Connection of the Geberit HS50 hygiene flush units



Connection to Geberit Gateway	GEBUS	- With Geberit bus cable to flush-mounting box (included in the Geberit cable set for the GEBUS interface) - From flush-mounting box with cable for GEBUS interface to control unit of the hygiene flush unit
	Bluetooth®	Yes
Power supply	230 V AC to external power supply unit (included in scope of delivery)	
Compatible with Geberit Control app	Yes	
Accessories required	- Geberit bus cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m) - Geberit set of cables for GEBUS interface, art. no. 616.238.00.1 or art. no. 246.238.00.1	
Installation Manual	→ See the online catalogue of the Geberit sales company: Geberit HS50 hygiene flush unit: https://gbrt.io/dscF701	
Connection principle		
Position of the supply lines		

The Geberit HS30 hygiene flush unit does not have a GEBUS connection. Connection to the Geberit Gateway is only possible via Bluetooth®.

5.5.7 Connection of the Geberit HS30 and HS50 hygiene flush units in the concealed cistern with Geberit bus converter



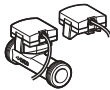
Connection to Geberit Gateway	GEBUS	• With Geberit bus cable via Geberit bus converter • Connection of the GEBUS cable via plug with terminals
	Bluetooth®	Yes
Power supply	230 V AC to integrated power supply unit in the Geberit bus converter	
Compatible with Geberit Control app	Yes	
Accessories required	• Geberit bus converter with integrated power supply unit, for Power & Connect Box, art. no. 116.097.00.1 – Geberit bus converter is installed in the element for wall-hung WC – Plug for GEBUS cable included in the scope of delivery • GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m)	
Installation Manual	→ See the online catalogue of the Geberit sales company: Geberit HS50 hygiene flush unit: https://gbrt.io/dscF703 Geberit HS30 hygiene flush unit: https://gbrt.io/dscF702 Geberit bus converter: https://gbrt.io/dscFB01	
Connection principle		
Position of the supply lines		

5.5.8 Connection of Geberit HS50 hygiene flush units in the concealed cistern with external power supply unit



Connection to Geberit Gateway	GEBUS	- With Geberit bus cable to flush-mounting box (included in the Geberit cable set for the GEBUS interface) - From flush-mounting box with cable for GEBUS interface to control unit of the hygiene flush unit
	Bluetooth®	Yes
Power supply	230 V AC to external power supply unit → see "Accessories required".	
Compatible with Geberit Control app	Yes	
Accessories required	- External power supply unit: - Variant 1: Geberit installation set with power supply unit for WC flush controls with electronic flush actuation, 12 V, art. no. 115.861.00.6 - Variant 2: 230 V/12 V/50 Hz power supply unit set with combination outlet mounting box, art. no. 115.336.00.1 - GEBUS cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m) - Geberit set of cables for GEBUS interface, art. no. 616.238.00.1 or art. no. 246.238.00.1	
Installation Manual	→ See the online catalogue of the Geberit sales company: Geberit HS50 hygiene flush unit: https://gbrt.io/dscF703	
Connection principle		
Position of the supply lines		

5.5.9 Connection of Geberit temperature and volumetric flow rate sensors for GEBUS



Connection to Geberit Gateway	GEBUS	• With Geberit bus cable to flush-mounting box (on-site) • From flush-mounting box with sensor connection cable (length 1 m)
	Bluetooth®	Not possible
Power supply		24 V DC via GEBUS cable
Compatible with Geberit Control app		Yes, only via GEBUS and Geberit Gateway
Accessories required		• Geberit bus cable, art. no. 116.493.00.1 (100 m) or art. no. 116.493.00.5 (500 m) • Flush-mounting box and terminals (on-site)
Installation Manual		→ See the online catalogue of the Geberit sales company: Temperature sensor: https://gbrt.io/dscF602 Temperature and volumetric flow rate sensor: https://gbrt.io/dscF601
Connection principle		
Position of the supply lines		

5.6 Geberit Hygiene System (GHS)

This chapter describes the planning of a Geberit Hygiene System (GHS) → see "Drinking water hygiene", page 14. In the GHS, Geberit Connect end devices and sensors, which are connected via a Geberit Gateway, are used to maintain the regular, automatic replacement of drinking water in a building.

The following points must be taken into account when planning a GHS:

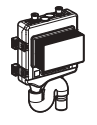
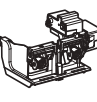
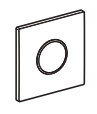
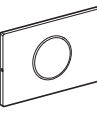
- Drinking water hygiene requirements for determining suitable flushing programmes
- Position and types of end devices and sensors used for automatic water replacement
- Water volume of the pipes to be flushed in the sanitary room or storey

5.6.1 Geberit Connect end devices and sensors for GHS

The following tables show the end devices and sensors that are suitable for automatic water replacement. The maximum water volume that can be flushed per flush is specified for each end device. In connected operation, only end devices that are assigned to the Geberit Gateway via GEBUS can be used.

In connected operation, no more than the maximum water volume can be flushed within 8 hours. This can occur if several flushing programmes are active at the same time.

End devices

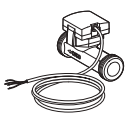
Geberit Connect end device			Max. water volume per flush [l]		Flush performance [l/min]
			Cold water	Hot water	
		Geberit HS30 and HS50 hygiene flush unit ¹⁾	600 (1x every 24 h)	100 (1x every 12 h)	10
		Geberit HS30 and HS50 hygiene flush unit in concealed cistern ¹⁾	40 (1x every 24 h)	40 (1x every 12 h)	4
		Geberit HS05 hygiene flush unit	40	—	10 ²⁾
		Geberit urinal flush controls with electronic flush actuation, with types 01 / 10 / 20 / 40 / 50 cover plate	40	—	14 ³⁾
		Geberit Preda, Selva and Tamina urinals with integrated flush control	40	—	14 ³⁾
		Geberit WC flush controls with electronic flush actuation	40	—	10 ²⁾

Geberit Connect end device			Max. water volume per flush [l]		Flush performance [l/min]
			Cold water	Hot water	
		Geberit Piave and Brenta washbasin taps ⁵⁾	40	—	5 ⁴⁾

2 / 2

- 1) In connected operation, the internal temperature and volumetric flow rate sensors of HS50 hygiene flush units and HS50 hygiene flush units in concealed cisterns are not supported.
- 2) Basic setting at 3 bar, depending on the fill valve in the cistern
- 3) Basic setting, depending on the flow limiter
- 4) Basic setting, depending on the tap aerator
- 5) Only washbasin taps without mixers that are connected to the cold-water pipe are suitable for automatic water replacement.

Sensors

Sensor	Connection	Measuring range
	With GEBUS cable to Geberit Gateway	Medium temperature • 0–70 °C
	With GEBUS cable to Geberit Gateway	Medium temperature • 0–70 °C Volumetric flow rate • DN10: 2–32 l/min • DN15: 3.5–50 l/min • DN20: 5–85 l/min • DN25: 9–150 l/min

Geberit sensors for GEBUS can be used to control flushing programmes (e.g. for start and stop temperature) and to record and log temperatures and volumetric flow rates in the Geberit Connect system.

The following logs are available for download in the Geberit Control app for logging measured values:

- For each individual sensor: [Sensor log] for the respective sensor
- For all end devices on the Geberit gateway: [Collective log/measured values] at the gateway

A maximum of 25 million measured values are stored in the logs. A log entry is created according to the following criteria:

- Temperatures and water volume detected every 15 seconds
- Log entry when the temperature changes by ± 1 °C, resolution 0.1 °C
- Log entry when the water volume changes by ± 1 litre:
 - Accumulated water volume, resolution 1 litre
 - Maximum volume flow since the last measured value, resolution 0.01 l/min

→ See also "Protocols", page 36.



Sensor logs are not available for analogue sensors that are connected directly to a Geberit HS50 hygiene flush unit or a Geberit HS50 hygiene flush unit in concealed cistern.

The technical data, installation and possible installation positions of the sensors are described in the "Temperature and volumetric flow rate sensors for GEBUS", [971.378.00.0](#), technical data sheet.

5.6.2 Single operation and connected operation

The flushing programmes run either on the Geberit Connect end device (single operation) or in the Geberit Gateway (connected operation).

Single operation

In single operation, the flushing programmes are set directly on the end device using the Geberit Control app. The end device does not necessarily have to be connected with a Geberit Gateway.

Properties of single operation:

- Flushing programmes are executed automatically on the end device.
- Only interval flushes are possible for WC flush controls, urinals, urinal flush controls and washbasin taps. An interval flush is activated at the factory.
- Temperature and volumetric flow rate sensors for GEBUS can only be used for logging, not for flushing programmes.
- Analogue temperature sensors for cold water can be used with HS50 hygiene flush units and HS50 hygiene flush units in concealed cisterns.

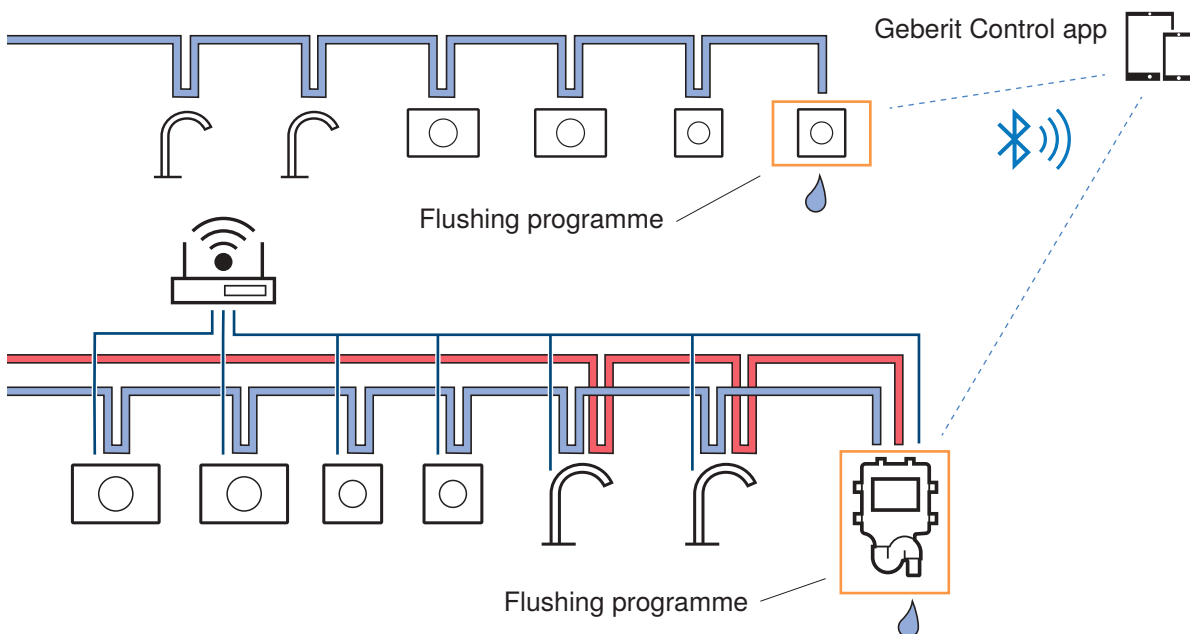


Figure 19: Example: Urinal flush control and HS50 hygiene flush unit with flushing programmes in single operation

Connected operation

In connected operation, all flushing programmes run in the Geberit Gateway. All end devices and sensors must be assigned to the Geberit Gateway for this.

Properties of connected operation:

- The flushing programmes are executed in the Geberit Gateway.
- Flushing programmes can be used for all suitable end devices.
- Temperature and volumetric flow rate sensors for GEBUS can be used with all suitable end devices.

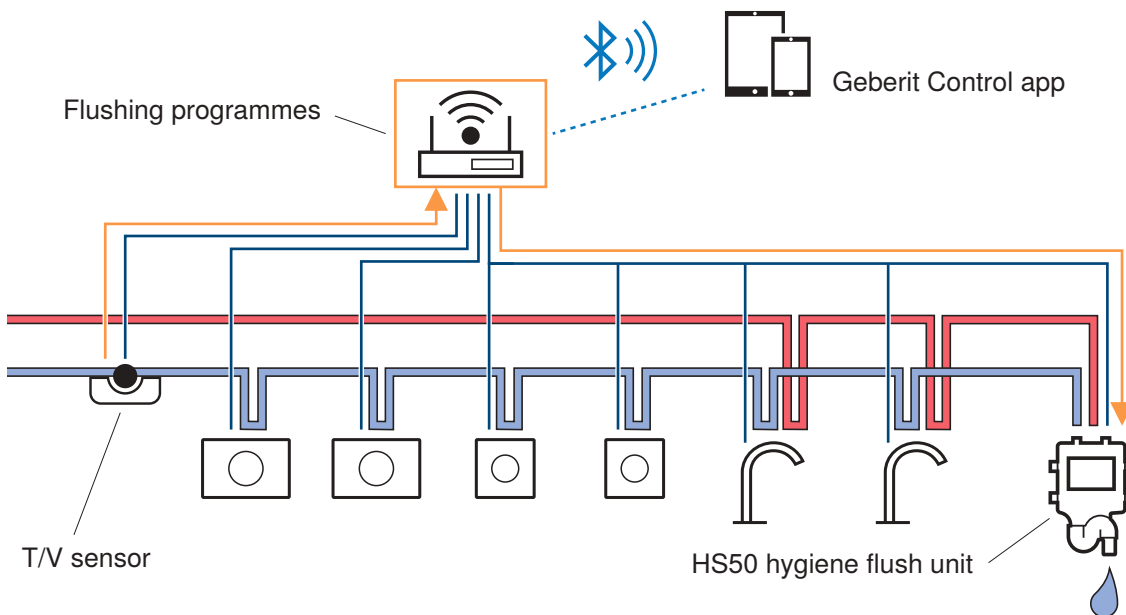


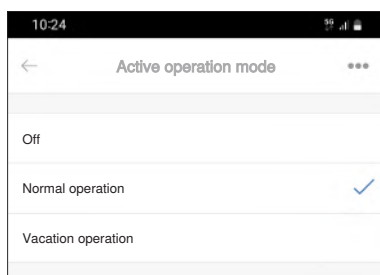
Figure 20: Example: Geberit Gateway with flushing programmes in connected operation. The volumetric flow rate sensor (T/V sensor) records the amount of water flushed for the flushing programmes in the Gateway. The flushing programmes control the HS50 hygiene flush unit.

5.6.3 Operation modes

Various flushing programmes can be assigned to an operation mode. In a school, for example, one operation mode with flushing programmes can be defined for normal operation and another with flushing programmes for vacation operation.

In single operation, only two operation modes are available for HS30 and HS50 hygiene flush units and HS30 and HS50 hygiene flush units in concealed cisterns.

In connected operation, two operation modes and [off] are available for all suitable Geberit Connect end devices. Each flushing programme can be assigned to one or both operation modes. The active operation mode is set with the Geberit Control app or by the building automation system. The active operation mode applies to all zones and their end devices.



→ See also "Example 1: Different operation modes", page 76.

5.6.4 Flushing programmes for GHS

A flushing programme automatically controls the functions of Geberit Connect end devices for water replacement in drinking water installations.

In connected operation, each flushing programme is assigned to an end device. In single operation, a flushing programme is set for each end device. → See also "Single operation and connected operation", page 60.

In connected operation, a maximum of 60 flushing programmes can be entered per Geberit Gateway, regardless of the end devices. The flushing programmes all run simultaneously, unless a higher-level condition blocks or delays flush actuation, for example:

- Flush outside the enable time
- Flush already running
- Temperature flush mode is possible once every 24 hours

Blocked or delayed flushes are logged and executed as soon as possible.



Notes on flushing programmes in connected operation:

- The factory-set flushing programmes on the end devices (interval flushes) are not deactivated when flushing programmes are set in connected operation. To avoid undesired flushing processes and increased water consumption, the local flushing programmes on the end devices must be deactivated.

ATTENTION

High water consumption due to undesired flushing processes

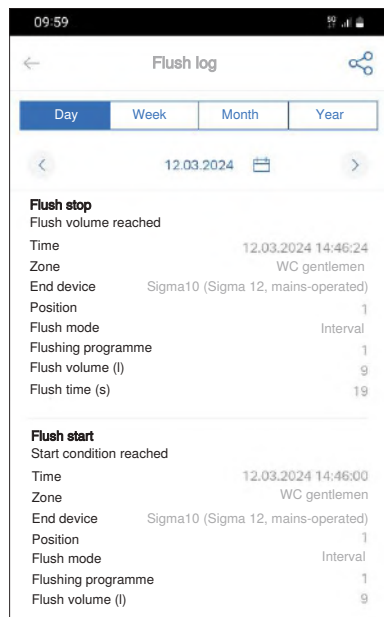
- ▶ In connected operation, deactivate all local flushing programmes in the end devices, such as interval flushing.

- If the Geberit Gateway fails, the flushing programmes are no longer executed in connected operation. The local flushing programmes also remain deactivated.
- If changes are made to the Geberit Connect system (zones, end devices), the flushing programmes in connected operation must be re-entered or checked.
- Flushing programmes in connected operation are numbered consecutively when they are recorded. When a flushing programme is deleted, the number is reassigned.

Flush log

In connected operation, the flush log records all events in connection with automatic flush actuations on the Geberit Gateway. The flush log can be accessed in the Geberit Control app on the respective Geberit Gateway under [Logs]. The following values are shown:

- Status (start, stop, error)
- Time
- End device
- Flush mode
- Flushing programme
- Flushed volume, temperature



In single operation, flushes are displayed under Statistics in the Geberit Control app for each end device. Flushes in connected operation are not displayed on the end device.

Enable time

To prevent the flushes from being triggered at undesired times (for example during the night in a hotel room), an enable time can be defined. Outside of the enable time, no flushes are actuated. A suppressed flush is actuated at the start of the next enable time.

The enable time applies to [Interval with usage detection] and [Temperature] flush modes. These do not have fixed flushing times.

In connected operation, the enable time applies to all end devices in the same zone. In single operation, the enable time is set in the properties of the end device.

Logging a flushing programme in connected operation

Flushing programmes in connected operation are recorded in the Geberit Control app on the Geberit Gateway under [Flush settings].

General parameters for all flushing programmes:

- Active operation mode → see "Operation modes", page 61
- Zone with end device on which the flushing programme is to be executed
- Enable time for this zone → see "Flushing programmes for GHS", page 63

Parameters per flushing programme:

- End device on which the flushing programme is to be executed
- Operation mode in which this flushing programme is active
- Flush mode with flushing parameters → see next 5 chapters

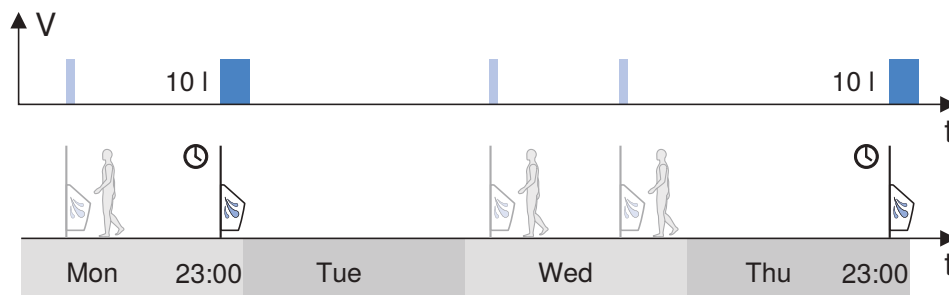
The screenshot shows the 'Flushing programme' settings screen in the Geberit Control app. The screen is titled 'Flushing programme' and has a back arrow in the top left corner. The settings are as follows:

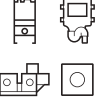
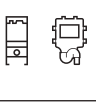
- End device:** Sigma10 (Sigma 12, mains-operated) F9000014795
- Operation mode:** Normal operation >
- Flush mode:** Interval >
- Start time:** 07:00 >
- Flush interval:** 72 h. Below this is a slider and a note: 'The start time is only relevant if a multiple of 24 hours is set as the flush interval.'
- Flush volume:** 12 l. Below this is a slider.
- Done:** A blue button at the bottom.

→ See also "Recording flushing programmes for Geberit Hygiene System (GHS)", page 107.

Parameters for flush mode [time]

A flush is triggered at a defined time on a weekday. Flush volume, time and day of the week can be selected (e.g. 10 l every Monday and Thursday at 11:00 p.m.).



Parameter	Connected operation		Single operation ¹⁾	
	Value	For end devices	Value	For end devices
[Weekdays] Weekdays on which flushes are actuated	[Mon-Sun]		[Mon-Sun]	
[Start time] Flush actuation time	[00:00–23:59]		[00:00–23:59]	
[Flush volume] ²⁾ Water volume of a flush	Cold water: [3–600 l] Hot water: [3–100 l]		Cold water: [3–600 l] Hot water: [3–100 l]	
	[3–40 l]		[3–40 l]	
	[3–40 l]		–	–
	[8–40 l]		–	–
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]		[V1, V2]	

- 1) In single operation, two flushing programmes with different weekdays, start times and flush volumes can be entered per solenoid valve.
- 2) The flush volumes apply to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.



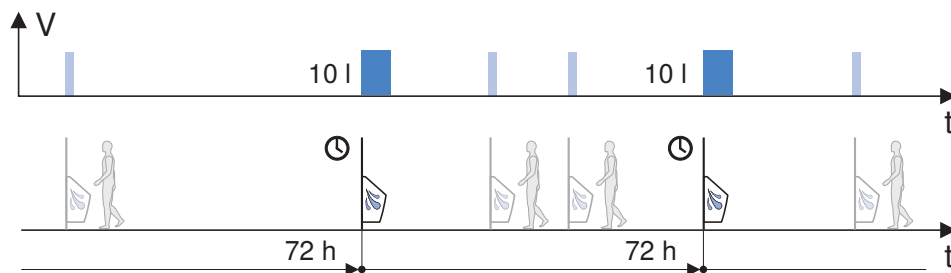
Geberit HS30 and HS50 hygiene flush units



Geberit HS30 and HS50 hygiene flush units in concealed cisterns

Parameters for flush mode [interval]

A flush is triggered after a defined interval has elapsed. The flush volume, start time and interval can be selected (e.g. 10 l every 72 h).



Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Flush interval] Flush actuation interval	[1–744 h]		[1–744 h]	
			[24, 48, 72, 168, 336, 744 h]	
	[1–744 h]	 	[1–168 h]	 
[Start time] ¹⁾ Start time of the interval	[00:00–23:59]	  	[00:00–23:59]	 
[Flush volume] ²⁾ Water volume of a flush	Cold water: [3–600 l] Hot water: [3–100 l]		Cold water: [3–600 l] Hot water: [3–100 l]	
	[3–40 l]		[3–40 l]	
	[3–40 l]		[0.2–46.7 l]	
	[8–40 l]	 	[3–30.4 l]	 
	[3–40 l]		[0.1–16.7 l]	
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]	 	[V1, V2]	 

- 1) If the [flush interval] is a multiple of 24 hours, a [start time] for the interval must be specified. In all other cases, the interval starts when the flushing programme is saved. When the Geberit Gateway is restarted, the intervals are also restarted.
- 2) The flush volumes apply to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.



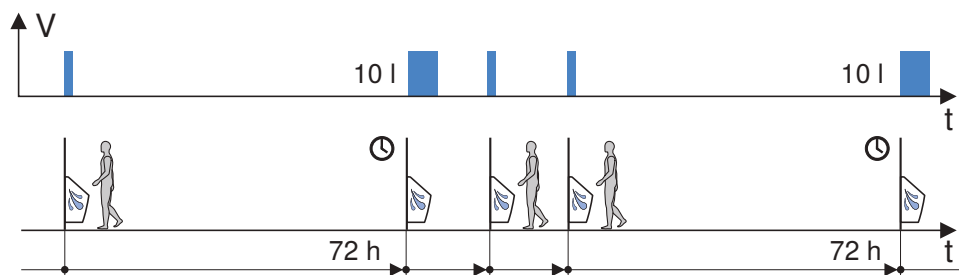
Geberit HS30 and HS50 hygiene flush units



Geberit HS30 and HS50 hygiene flush units in concealed cisterns

Parameters for flush mode [interval with usage detection]

A flush is triggered after a defined interval has elapsed, the interval being reset each time the end device is used. The flush volume and interval can be selected (e.g. 10 l every 72 h).



An enable time applies for this flush mode. → See "Flushing programmes for GHS", page 63.

Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Flush interval] Flush actuation interval	[1–744 h]		[24, 48, 72, 168, 336, 744 h]	
	[1–744 h]		[1–168 h]	
[Flush volume] ¹⁾ Water volume of a flush	Cold water: [3–600 l] Hot water: [3–100 l]		–	–
	[3–40 l]		[3–40 l]	
	[3–40 l]		[0.2–46.7 l]	
	[8–40 l]		[3–30.4 l]	
	[3–40 l]		[0.1–16.7 l]	
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]		[V1, V2]	

- 1) The flush volumes apply to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.



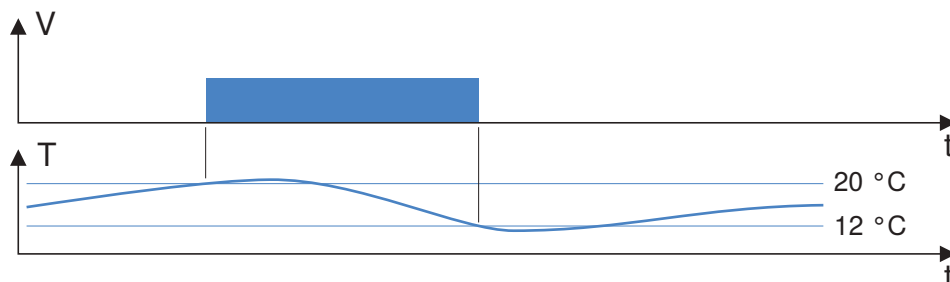
Geberit HS50 hygiene flush units



Geberit HS30 and HS50 hygiene flush units in concealed cisterns

Parameters for flush mode [temperature]

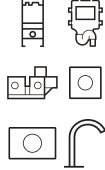
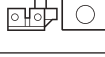
A flush is triggered when a start temperature is reached and ends when a stop temperature is reached. Start/stop temperature and maximum flush volume can be selected. To comply with the cold water temperature limit, the start temperature (e.g. 20 °C) must be set higher than the stop temperature (e.g. 12 °C).



In connected operation, each end device must be assigned a Geberit temperature sensor for GEBUS. Flushing is only triggered once every 24 hours for the temperature.

In single operation, [temperature] flush mode is only available for Geberit HS50 hygiene flush units and Geberit HS50 hygiene flush units in concealed cisterns. An analogue temperature sensor is connected directly to the hygiene flush unit to record the temperature.

One enable time per zone applies for this flush mode. → See "Flushing programmes for GHS", page 63.

Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Start temperature] ¹⁾ Temperature at which the flush is actuated	Cold water: any, higher than stop temperature		Cold water: [15–30 °C]	
	Hot water: any, lower than stop temperature		–	–
[Stop temperature] ¹⁾ Temperature at which the flush stops	Cold water: any, lower than start temperature		Cold water: [10–25 °C]	
	Hot water: any, higher than start temperature		–	–
[Routine flush interval] ²⁾ Period of time between two flush actuations, if there is no actuation based on the start temperature	–	–	[24, 48, 72, 168, 336, 744 h]	
[Max. flush volume] ³⁾ Maximum water volume if the stop temperature has not been reached	Cold water: [3–600 l] Hot water: [3–40 l]		Cold water: [3–600 l]	
	[3–40 l]		[3–40 l]	
	[3–40 l]		–	–
	[8–40 l]		–	–

Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]	 	[V1, V2]	 
[Sensor] Sensor that detects the temperature for the flushing programme	[Zone] [Sensor]	     	—	—

2 / 2

- 1) The start temperature must be set higher than the stop temperature for cold water. For hot water, the start temperature must be set lower than the stop temperature.
- 2) No routine flush interval is defined in connected operation. To ensure that flushing takes place regularly, even if the start temperature is not reached, an additional flushing programme with [Interval] flush mode can be entered.
- 3) The flush volumes apply to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.

 Geberit HS50 hygiene flush units

 Geberit HS50 hygiene flush units in concealed cisterns (also HS30 hygiene flush units in concealed cisterns in connected operation)

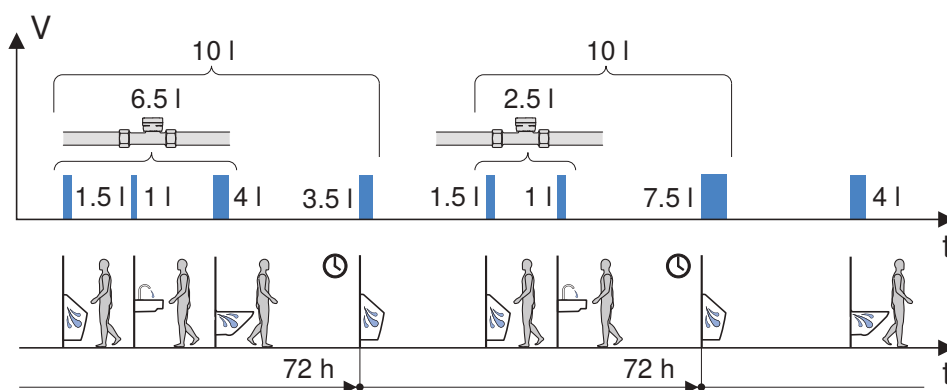
Parameters for flush mode [difference with GEBUS sensor]

A flush is triggered after a defined interval has elapsed. The volume of water used to flush the end devices is recorded by a volumetric flow sensor and deducted from the defined target consumption. In this way, water consumption can be optimised. The nominal volume and interval can be selected (e.g. 10 l every 72 h).

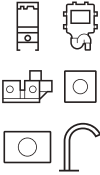
A Geberit temperature and volumetric flow sensor for GEBUS is used to record the water volume of the flushes in the defined time interval. The sensor is positioned in the pipework upstream of the end devices. This records the volume of water flushed from all end devices in the sanitary room. The flushing programme is recorded at the last end device in the pipework. In the following diagram, this is a urinal that flushes every 72 hours.

→ See also "Examples for positioning volumetric flow rate sensors", page 75.

If the sensor is positioned at the start of the pipework and the entire target volume is flushed via the first end devices in the sanitary room, the rest of the pipework is not flushed after the interval has elapsed. Additional interval flushing is therefore recommended.



Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Flush interval] Flush actuation interval	[1–744 h]		–	–
[Start time] ¹⁾ Start time of the interval	[00:00–23:59]		–	–
[Target volume] ²⁾ Water volume to be flushed within the interval	Cold water: [3–600 l] Hot water: [3–100 l]		–	–
	[3–40 l]		–	–
	[8–40 l]		–	–
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]		–	–

Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Sensor] For detection of the water volume with the Geberit temperature and volumetric flow rate sensor for GEBUS	Zone and volumetric flow rate sensor		—	—

2 / 2

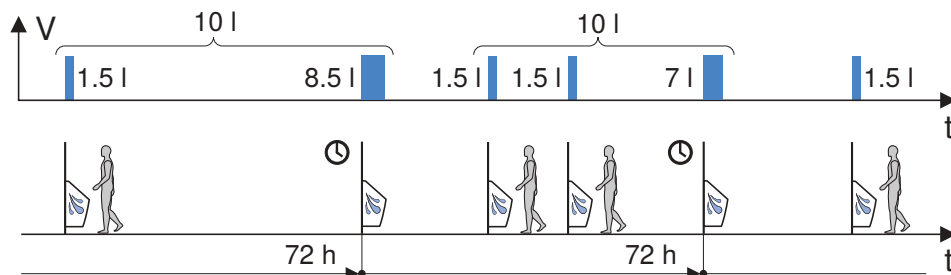
- 1) If the [flush interval] is a multiple of 24 hours, a [start time] for the interval must be specified. In all other cases, the interval starts when the flushing programme is saved. When the Geberit Gateway is restarted, the intervals are also restarted.
- 2) The target volume applies to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.

-  Geberit HS50 hygiene flush units
-  Geberit HS30 and HS50 hygiene flush units in concealed cisterns

Parameters for flush mode [difference]

A flush is triggered after a defined interval has elapsed. The water volume of the flushes is taken into account and deducted from the nominal consumption defined. In this way, water consumption can be optimised. The nominal volume and interval can be selected (e.g. 10 l every 72 h).

The water volume of the flushes in the defined time interval is recorded via the number of uses of the end device (approximate water volume).



Parameter	Connected operation		Single operation	
	Value	For end devices	Value	For end devices
[Flush interval] Flush actuation interval	[1–744 h]		–	–
	[1–744 h]		[1–168 h]	
[Start time] ¹⁾ Start time of the interval	[00:00–23:59]		–	–
[Target volume] ²⁾ Water volume to be flushed within the interval	Cold water: [3–600 l] Hot water: [3–100 l]		–	–
	[3–40 l]		–	–
	[3–40 l]		[0.2–46.7 l]	
	[8–40 l]		[3–30.4 l]	
	[3–40 l]		[0.1–16.7 l]	
[Solenoid valve] Solenoid valve used for flushing	[V1, V2]		–	–

- 1) If the [flush interval] is a multiple of 24 hours, a [start time] for the interval must be specified. In all other cases, the interval starts when the flushing programme is saved. When the Geberit Gateway is restarted, the intervals are also restarted.
- 2) The target volume applies to the factory settings of the end devices. If flow limiters or tap aerators are replaced, the volumetric flow rate must be adjusted in the Geberit Control app.



Geberit HS50 hygiene flush units



Geberit HS30 and HS50 hygiene flush units in concealed cisterns

5.6.5 Positioning the sensors

Geberit temperature sensors for GEBUS and Geberit temperature and volumetric flow rate sensors for GEBUS can be installed anywhere in the pipe system, regardless of the position of the end devices.

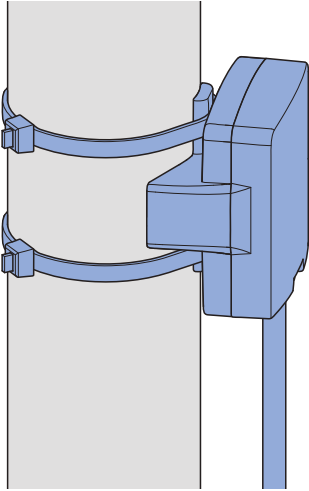
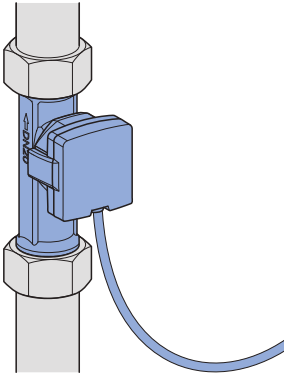
If there are several sensors in a building, clearly label the position of the sensors in the hydraulic scheme. This makes it easier to identify the sensors when creating flushing programmes.

The technical data, installation and possible installation positions of the sensors are described in the “Temperature and volumetric flow rate sensors for GEBUS”, [971.378.00.0](#), technical data sheet.

→ See also "Example 2: Use of temperature and volumetric flow rate sensors", page 78.

Examples for positioning temperature sensors

The Geberit temperature sensor for GEBUS and the Geberit temperature and volumetric flow rate sensor for GEBUS are available for detecting the water temperature in [Temperature] flush mode.

	Geberit temperature sensor for GEBUS	Geberit temperature and volumetric flow rate sensor for GEBUS
Installation		
	On the pipeline with cable ties	In the pipeline
Application	• Temperature measurement	• Temperature measurement • Volumetric flow rate measurement

The following example shows a multi-storey building. Each storey has a sanitary room with one Geberit Gateway each. The temperature sensors are used to monitor and log the cold water temperature.

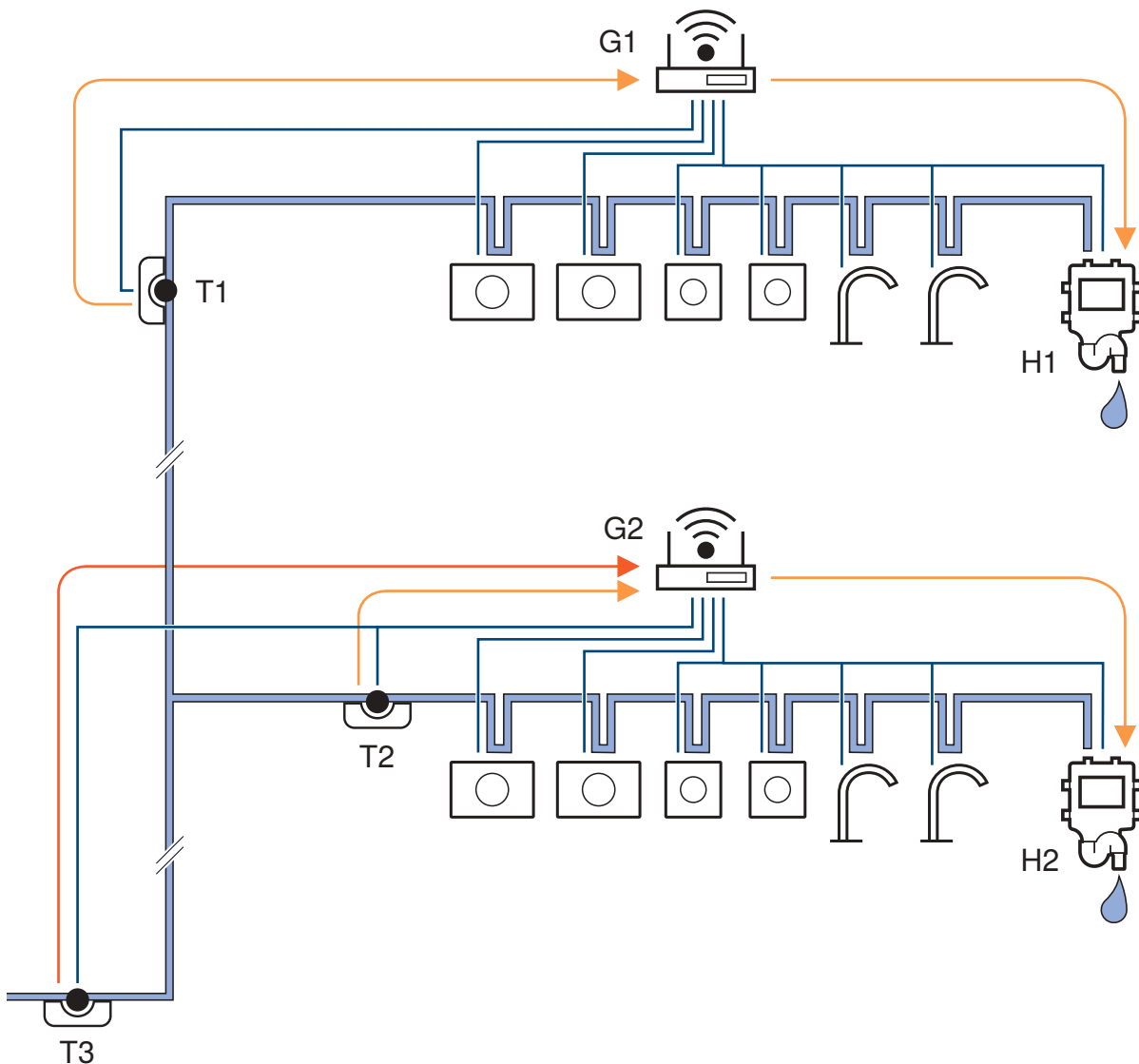


Figure 21: Examples for positioning temperature sensors

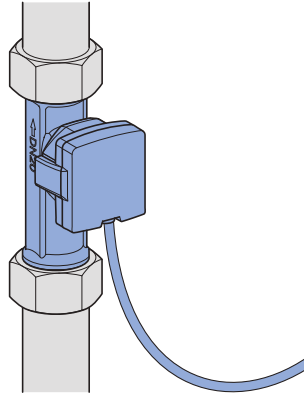
- Temperature sensor T1: This sensor detects the water temperature at the top end of the riser pipe, where the highest thermal load occurs. In the Geberit Gateway G1, a flushing programme runs in [Temperature] flush mode. If the water in the riser pipe becomes too hot, the riser pipe and the floor pipe are flushed by the Geberit hygiene flush unit H1 until the water cools down sufficiently.
- Temperature sensor T2: This sensor detects the water temperature in the floor pipe. In the Geberit Gateway G2, a flushing programme runs in [Temperature] flush mode. If the water in the floor pipe becomes too hot, the floor pipe is flushed by the Geberit hygiene flush unit H2 until the water cools down sufficiently.
- Temperature sensor T3: This sensor detects the water temperature as it enters the building. The water temperature is logged in the Geberit Gateway G2 and can be evaluated using the sensor log.

Another suitable end device can also be used for water replacement instead of the Geberit hygiene flush unit. It is recommended to assign sensors and end devices to the same zone (e.g. T1 and H1 to the same zone).

Examples for positioning volumetric flow rate sensors

The Geberit temperature and volumetric flow rate sensor for GEBUS is available to detect the flow rate and the flushed amount of water in the [Difference with GEBUS sensor] flush mode.

The sensor is installed directly in the pipeline and can be used in any position. As deposits can pose a danger in horizontal pipelines, it is recommended that the sensor be mounted on the upper side of the pipe.



The following example shows a storey with a sanitary room. The volumetric flow rate sensor is used to monitor and record the volume of water flushed.

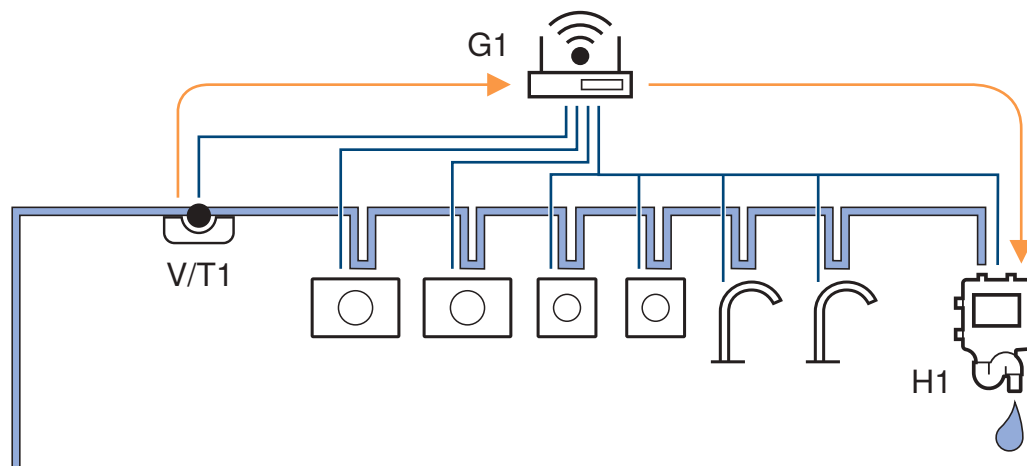


Figure 22: Example of positioning of volumetric flow rate sensors

Another suitable end device can also be used for water replacement instead of the Geberit hygiene flush unit. It is recommended to assign sensors and end devices to the same zone (e.g. V/T1 and H1 in the same zone).

5.6.6 Application examples for GHS

Example 1: Different operation modes

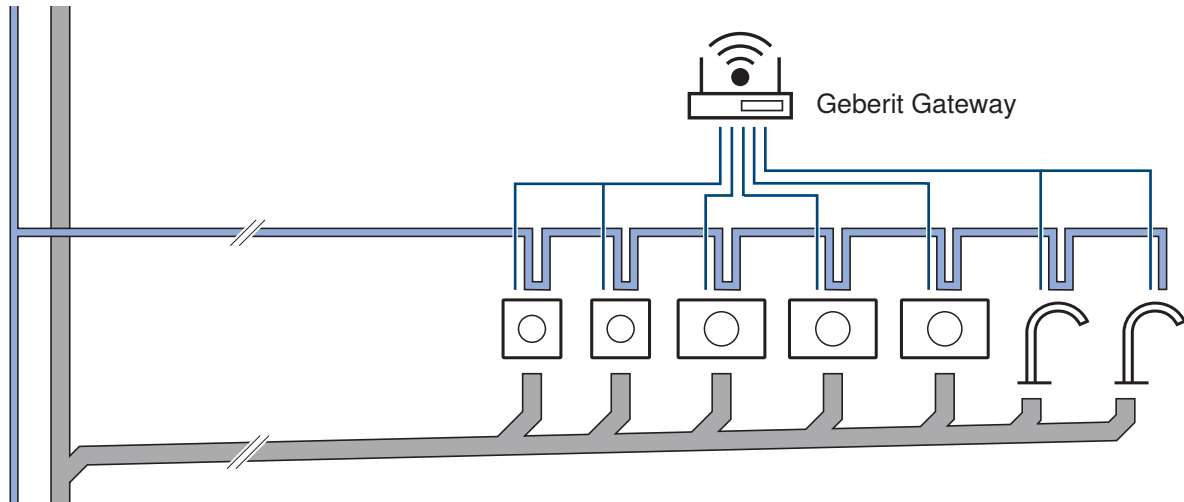


Figure 23: Example 1: Sanitary room with long drinking water and discharge pipes

Initial situation:

- Sanitary room in an outbuilding of a hospital with long drinking water and discharge pipes
- High use fluctuations (outbuilding is only used as a ward temporarily)
- High requirements for drinking water hygiene
- High requirements for the operational safety of building drainage

Possible solution:

- 2 operation modes: "Operation with occupancy" and "Operation without occupancy"
- Operation mode 1 "Operation with occupancy", outbuilding is in use:

Application	Every weekday, all extraction points are flushed once simultaneously with a high volume of water to clean the discharge pipes. Daily flushing of all extraction points also ensures water replacement in the drinking water pipe.	
Flushing programme 1	Geberit Connect end devices	1 flushing programme per end device in the sanitary room
	Flush mode	Time
	Weekdays	Mon-Sun
	Start time	07:00
	Flush volume	6 l

- Operation mode 2 "Operation without occupancy", outbuilding is not used:

Application	Once a week, all extraction points are flushed simultaneously with a high volume of water to clean the discharge pipes. If the building is unused, water replacement in the drinking water pipe is ensured by flushing the pipes every 2 days.	
Flushing programme 1	Geberit Connect end devices	1 flushing programme per end device in the sanitary room
	Flush mode	Time
	Weekdays	Mon
	Start time	07:00
	Flush volume	6 l
Flushing programme 2	Geberit Connect end devices	1 flushing programme per end device in the sanitary room
	Flush mode	Interval
	Flush interval	72 h
	Start time	08:00
	Flush volume	3 l

Advantages:

- Water replacement in the drinking water pipe is ensured every 72 hours.
- Simultaneous flushing of all end devices creates a turbulent flow. This leads to a cleaning effect in the pipes.
- The high amount of water in flushing programme 1 leads to a thorough flushing out of the discharge pipe.

Example 2: Use of temperature and volumetric flow rate sensors

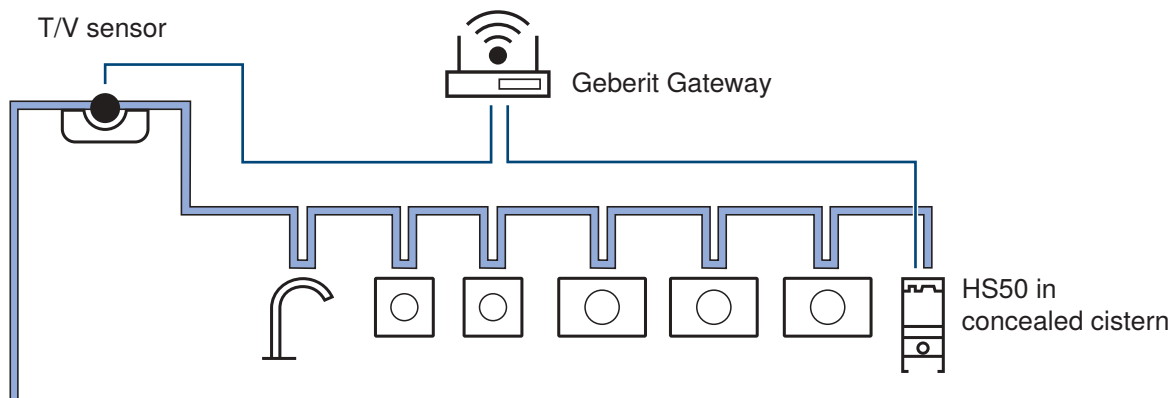


Figure 24: Example 2: Sanitary room with temperature and volumetric flow rate sensor

Initial situation:

- Sanitary room on the top floor of a hospital
- Elevated temperatures behind the wall and in the duct
- High use fluctuations
- High requirements for drinking water hygiene
- Water consumption as low as possible

Possible solution:

- Flushing programme with "Temperature" flush mode:

Application	At the warmest point, the temperature is recorded with a Geberit temperature and volumetric flow rate sensor for GEBUS (T/V sensor). If the water temperature exceeds 25 °C, the Geberit HS50 hygiene flush unit in concealed cistern will flush until the temperature is back within the permissible range.	
Flushing programme 1	Geberit Connect end device	HS50 hygiene flush unit in concealed cistern
	Flush mode	Temperature
	Start temperature	25 °C
	Stop temperature	18 °C
	Maximum flush volume	10 l
	Sensor	T/V sensor

- Flushing programme with "Difference" flush mode:

Application	10 litres are flushed every 72 hours to ensure water replacement in the drinking water pipe. The Geberit temperature and volumetric flow rate sensor for GEBUS (T/V sensor) records the amount of water flushed so that only the difference is flushed after the 72 hours have elapsed.	
Flushing programme 2	Geberit Connect end device	HS50 hygiene flush unit in concealed cistern
	Flush mode	Difference
	Flush interval	72 h
	Start time	07:00
	Flush volume	10 l
	Sensor	T/V sensor

Advantages:

- Water replacement in the drinking water pipe is ensured every 72 hours.
- The upper temperature limit of 25 °C is not exceeded.
- Difference flush does not waste any water and takes fluctuations in use into account.
- Not all end devices need to be connected.
- The water consumption of the sanitary room can be logged.

5.7 Connection to building automation systems

The Geberit gateway can be integrated into a building automation system via LAN. For the time being, the BACnet/IP network protocol is supported.

The connection to the building automation system is made via a standard LAN cable (minimum Cat 5). The LAN cable is connected to the Geberit Gateway via an RJ45 plug.



The appropriate building automation technicians must be consulted for planning the cable connection to the building automation system. → See also "Wired interfaces", page 20.

ATTENTION

Data security risk

If the BACnet function is activated on the Geberit Gateway, the corresponding IP port is opened. This can be a potential data security risk.

- The Geberit Gateway must be protected by a firewall. → See "Connection to Geberit Cloud", page 82.

The IP port for BACnet is defined in the BACnet settings. → See "Configuring BACnet/IP", page 103.

Data points

The data points of all Geberit Connect end devices connected to a Geberit Gateway are made available as BACnet objects in EDE format (Engineering Data Exchange). The EDE file can be downloaded in the Geberit Control app under [BACnet].

A list of all BACnet objects can be found in the appendix. → See "BACnet objects", page 137.

An example of an EDE file can also be seen in the appendix. → See "EDE file for practical example 1", page 149.

Examples of data points:

- Request information for several grouped end devices:
 - Number of uses
 - Number of flushes (automatic or manual)
 - Number of interval flushes
 - Number of partial or full flushes (WC flush controls)
 - Calculated water consumption
- Request information for individual end devices:
 - Battery capacity
 - Water temperature (temperature sensor)
 - Volumetric flow rate (volumetric flow rate sensor)
 - Serial number
 - Status
 - Error messages
- Actuate functions for individual end devices:
 - Actuate flush
 - Actuate flushing for partial or full flush volume (WC flush controls)
 - Activate cleaning mode
 - Switch solenoid valve on/off
 - Switch Bluetooth® connection on/off

All actions (requesting information and actuating functions) must be programmed in the customer's building automation system.

Examples of actions:

- Periodic query of the number of uses to determine the cleaning intervals for the sanitary room
- Periodic query of water consumption to determine the amount of water used in the building
- Query of error messages to call on a service technician
- Actuation of interval flushes for hygiene function
- Periodic query of the water temperature to actuate flushing for hygiene function

Water consumption with hygiene function

When flushing is actuated by the building automation system, water consumption must be taken into account. To avoid excessive water consumption, the building automation system must ensure that the following conditions are met:

- For interval flushes for the hygiene function, select the flush volume so that only the volume of the pipe to be flushed is flushed.
- For temperature-dependent flushing for the hygiene function, limit the flush time.

The following must also be observed for the Geberit HS30 and HS50 hygiene flush units in the concealed cistern:



If hot water is connected to solenoid valve V2 in Geberit HS30 and HS50 hygiene flush units in the concealed cistern, solenoid valve V1 is always opened at the same time as solenoid valve V2. This happens irrespective of the activation of solenoid valve V1. This keeps the water temperature in the cistern low.

ATTENTION

Damage to the concealed cistern due to hot water

Prolonged flushing with hot water can damage the concealed cistern. The building automation system must ensure that the following conditions are met:

- ▶ Maximum flush volume per day and solenoid valve: 40 litres
- ▶ Minimum flush interval: 12 hours

Flush programmes for hygiene flushes



When controlling the Geberit HS30 or HS50 hygiene flush unit through the Geberit Gateway, a building automation system or a PLC, the local flushing programmes in the hygiene flush units must be switched off. Flushing processes that are otherwise undesired can be actuated or cancelled because the hygiene flush unit processes all flush actuations equally.

5.8 Connection to Geberit Cloud

The Geberit Cloud Services can be used for service functions, firmware updates and notifications.

To use the Geberit Cloud Services, the Geberit Gateway is connected via LAN or WLAN to a router with an internet connection. The connection to the router is established via a standard LAN cable with RJ45 plug or wirelessly via WLAN.

Geberit cloud server

The Geberit Cloud Services are operated on Microsoft Azure¹⁾ servers.

Data Protection

When using the Geberit cloud services, the privacy policy and the conditions of use in the Geberit Control app must be observed.

Local firewall settings

If the Geberit Gateway is operated behind a firewall, it must be ensured that the Geberit Gateway can reach the Geberit cloud server.

If a local firewall restricts outgoing connections to the Geberit cloud servers, an exception must be defined for Microsoft Azure services.

Further information: <https://learn.microsoft.com/en-us/azure/virtual-network/service-tags-overview#service-tags-on-premises>

Rule 1:

- Source:
 - Network/Device(s)
- Destination:
 - *.azure-devices.net
 - ext-fqdn-global.azure-devices-provisioning.net
 - ext-fqdn-wildcard-firmwarev1.services.geberit.com
- Ports:
 - t-443-HTTPS
 - t-8080

Rule 2:

- Source:
 - Network/Device(s)
- Destination:
 - Internet Services „Azure“

1) Microsoft Azure is a brand of the Microsoft Corporation.

5.9 Network settings

If the Geberit gateway is integrated into a building automation system or the Geberit cloud services are used, the network settings must be known. The network settings must be agreed with the building automation engineer, the building IT specialist or the system integrator.

LAN settings

For building automation and Geberit cloud services (wired). The IP addresses can either be obtained automatically via a DHCP server or entered manually.

- IP assignment: automatic (DHCP) or manual
- If IP assignment is manual
 - IPv4 address
 - Subnet mask
 - Standard gateway
 - Preferred DNS server
 - Alternative DNS server

WLAN settings

For Geberit cloud services (wireless). The IP addresses can either be obtained automatically via a DHCP server or entered manually. WLAN connections can only be established with networks of the security type "WPA2 Personal". To avoid interference, a WLAN network in the 5 GHz frequency band is recommended.

- SSID
- Password
- IP assignment: automatic (DHCP) or manual
- If IP assignment is manual
 - IPv4 address
 - Subnet mask
 - Standard gateway
 - Preferred DNS server
 - Alternative DNS server

NTP servers

A local NTP server (Network Time Protocol) is used, for example, in isolated BACnet installations. Such BACnet installations are used, for example, in LANs that are used exclusively for building automation.

5.10 Practical example 1: Connection of the end devices via Geberit Bus (GEBUS)

The example shows a WC suite for men and women in a sports stadium. All Geberit Connect end devices such as WC flush controls, urinal flush controls and washbasin taps are connected via GEBUS to the Geberit Gateway.

Geberit Connect end devices:

- 11 Geberit WC flush controls with electronic flush actuation, mains operation, Sigma10 actuator plate
- 5 Geberit urinal flush controls with electronic flush actuation, mains operation, type 10 cover plate
- 8 Geberit Piave washbasin taps, deck-mounted, mains operation, for concealed function box

The Geberit Gateway is installed in an installation box in the anteroom of the men's WC. The GEBUS cables of the WC flush controls are routed in a star configuration to the installation box with 11 corrugated pipes¹⁾. The GEBUS cables of the urinal flush controls and washbasin taps are looped through and lead to the installation box with 3 corrugated pipes.

- 1) With electrical connection boxes behind the installation elements for WC, looped-through GEBUS cabling is also possible.

The WC flush controls each require a 230 V AC electrical connection. The urinal flush controls and washbasin taps are fed via the GEBUS cable.

The end devices are divided into 4 zones, corresponding to the 4 rooms. → See "Zone division", page 46.

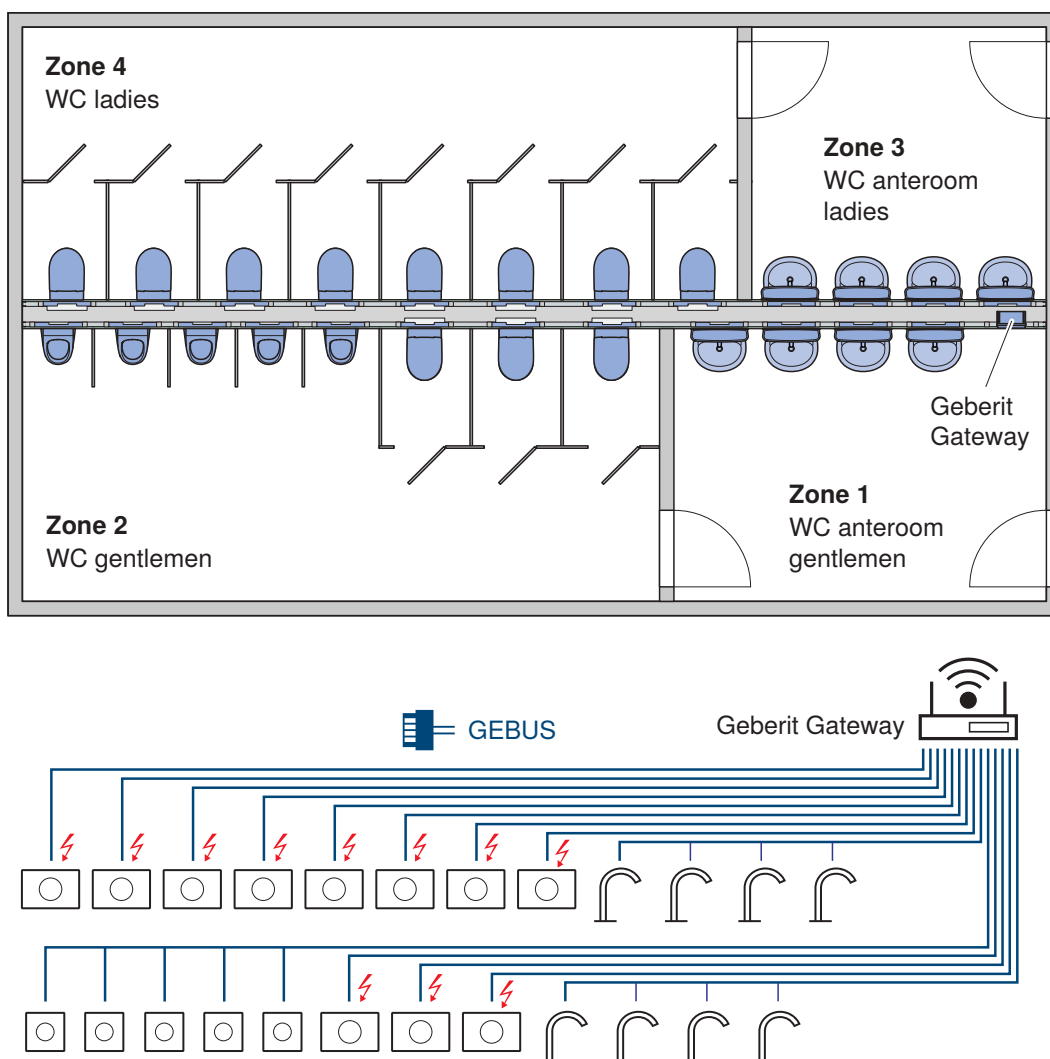


Figure 25: Practical example 1: Connection via GEBUS

5.10.1 Required components for connectivity

The following components are required for connectivity of Geberit Connect end devices. These components are required in addition to the standard installation without connectivity.

Number	Component	Article number
11	Geberit bus converter with integrated power supply unit, for Power & Connect Box, or	116.097.00.1
	Geberit set of Power & Connect box and GEBUS converter with integrated power supply unit, for element for wall-hung WC (if element for wall-hung WC does not contain Power & Connect box)	116.099.00.1
13	Geberit bus converter for concealed urinal flush controls and washbasin taps with a function box	116.371.00.1
1	Geberit Gateway	116.490.00.1
1	Geberit installation box for Gateway	116.491.00.1
1	Geberit cover plate	116.425.11.1 or 116.421.00.1
2	Geberit bus cable, length 100 m	116.493.00.1
	Electrical installation material on-site	

The following graph shows a cost comparison between the standard installation without connectivity and the installation with connectivity for this practical example. Additional connectivity with Geberit Connect is very cost-effective.

Initial situation: The building is in the installation phase.

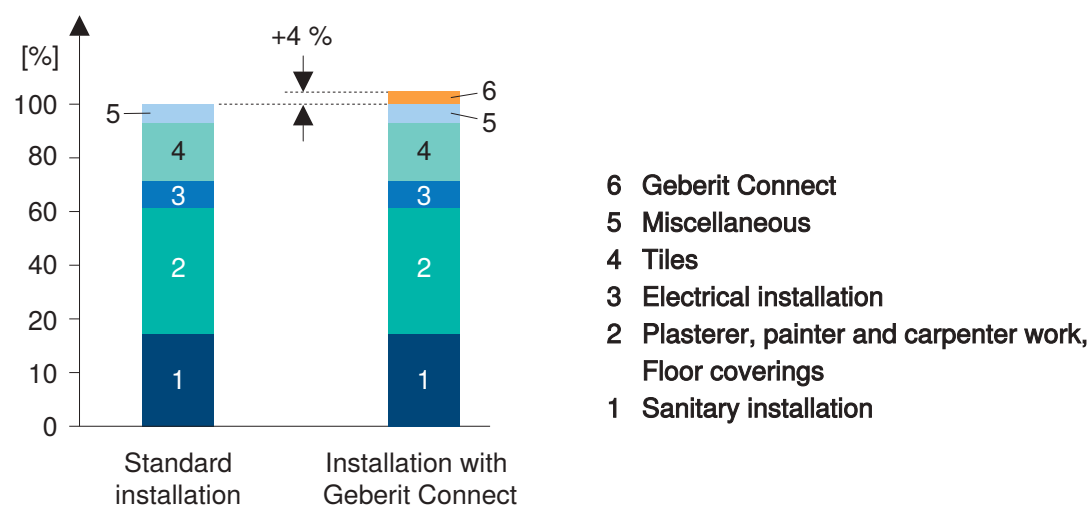


Figure 26: Practical example 1: Cost comparison with and without Geberit Connect

5.10.2 EDE file for building automation

An EDE file (Engineering Data Exchange) is required for integration into a building automation system via BACnet/IP. The EDE file contains all BACnet objects of the Geberit Gateway and the assigned end devices, grouped by zones. The EDE file is generated after commissioning and can be downloaded in CSV format via the Geberit Control app and the Geberit Gateway.

The EDE file of this practical example can be seen in the appendix. → See "EDE file for practical example 1", page 149.

5.11 Practical example 2: Connection of the end devices via Bluetooth®, battery operation

The example shows a men's WC in an office or administration building. No mains cables are laid to the individual sanitary appliances. Therefore, Geberit Connect end devices with battery operation are used. To avoid having to pull in additional cables for the GEBUS, connection to the Geberit Gateway is established via Bluetooth®.

Installed Geberit Connect end devices:

- 4 Geberit WC flush controls with electronic flush actuation, battery operation, Sigma10 actuator plate
- 4 Geberit urinal flush controls with electronic flush actuation, battery operation, type 10 cover plate
- 2 Geberit Piave washbasin taps, deck-mounted, battery operation, for concealed function box

The Geberit Gateway is installed in a plastic control cabinet in the anteroom of the men's WC. The Geberit Gateway must be located in the same room as the end devices to ensure the Bluetooth® connection to the Geberit Gateway.

The end devices are all in the same zone. → See "Zone division", page 46.

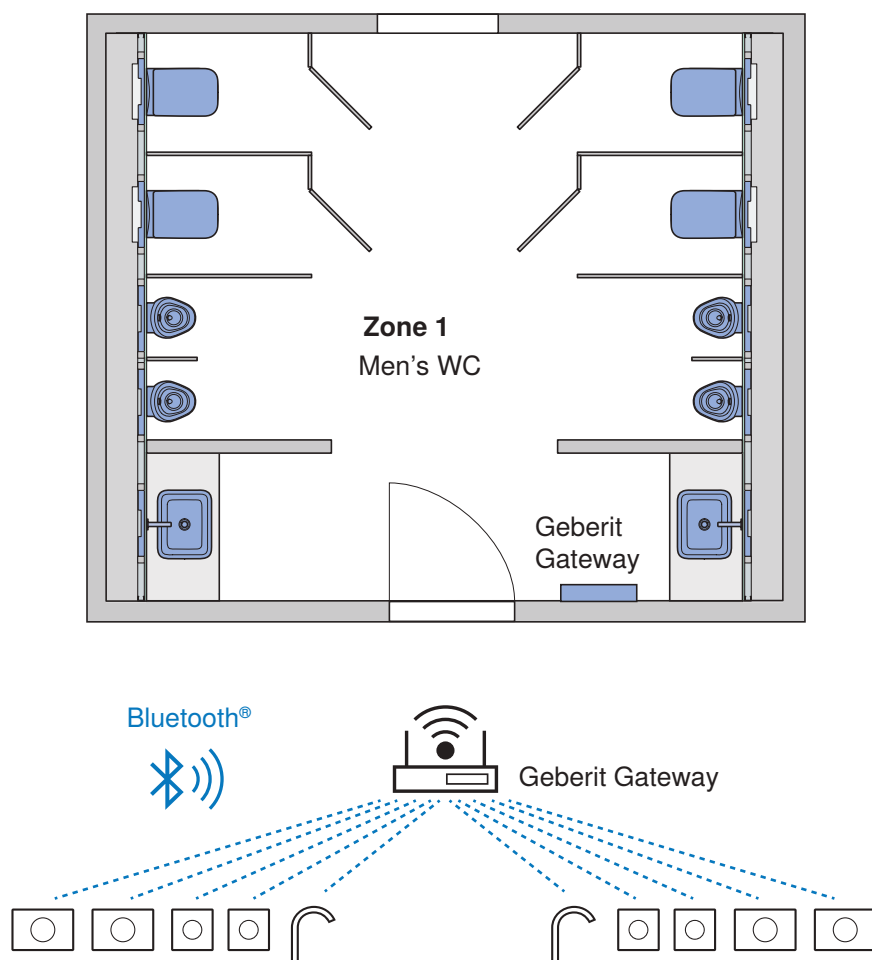


Figure 27: Practical example 2: Connection via Bluetooth®

5.11.1 Required components for connectivity

The following components are required for the subsequent connectivity of the Geberit Connect end devices:

Number	Component	Article number
1	Geberit Gateway	116.490.00.1
	Plastic control cabinet on-site	
	Electrical installation material on-site	

The following graph shows a cost comparison between the standard installation without connectivity and the installation with connectivity for this practical example. Additional connectivity with Geberit Connect is very cost-effective.

Initial situation: The existing sanitary room is being renovated and fitted with new sanitary appliances.

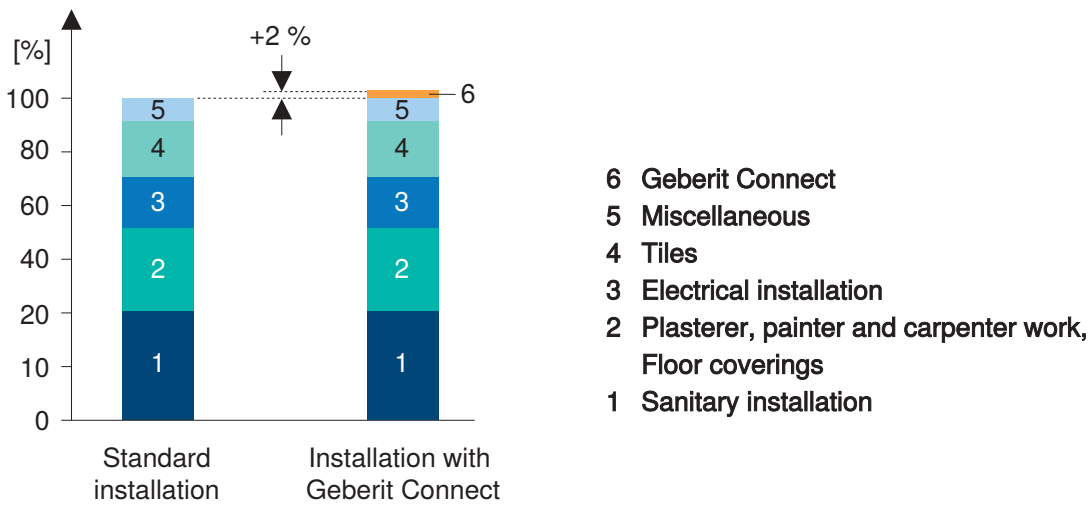


Figure 28: Practical example 2: Cost comparison with and without Geberit Connect

5.12 Practical example 3: Connection of the end devices via Bluetooth®, retrofitting

The example shows a men's WC in an office or administration building. The individual sanitary appliances were installed before 2022 and are therefore not compatible with Geberit Connect. The sanitary appliances are to be retrofitted with Geberit Connect so that they can be connected. To avoid having to pull in additional cables for the GEBUS, connection to the Geberit Gateway is established via Bluetooth®.

Installed sanitary appliances (without Geberit Connect):

- 4 Geberit WC flush controls with electronic flush actuation, mains operation, Sigma10 actuator plate
- 4 Geberit urinal flush controls with electronic flush actuation, mains operation, type 10 cover plate
- 2 Geberit Piave washbasin taps, deck-mounted, mains operation, for concealed function box

For retrofitting with Geberit Connect, only the control unit of each sanitary appliance needs to be replaced. Suitable spare parts are available for this purpose. → See table "Required components for retrofitting", page 89.

The Geberit Gateway is installed in a plastic control cabinet in the anteroom of the men's WC. The Geberit Gateway must be located in the same room as the end devices to ensure the Bluetooth® connection to the Geberit Gateway.

The end devices are all in the same zone. → See "Zone division", page 46.

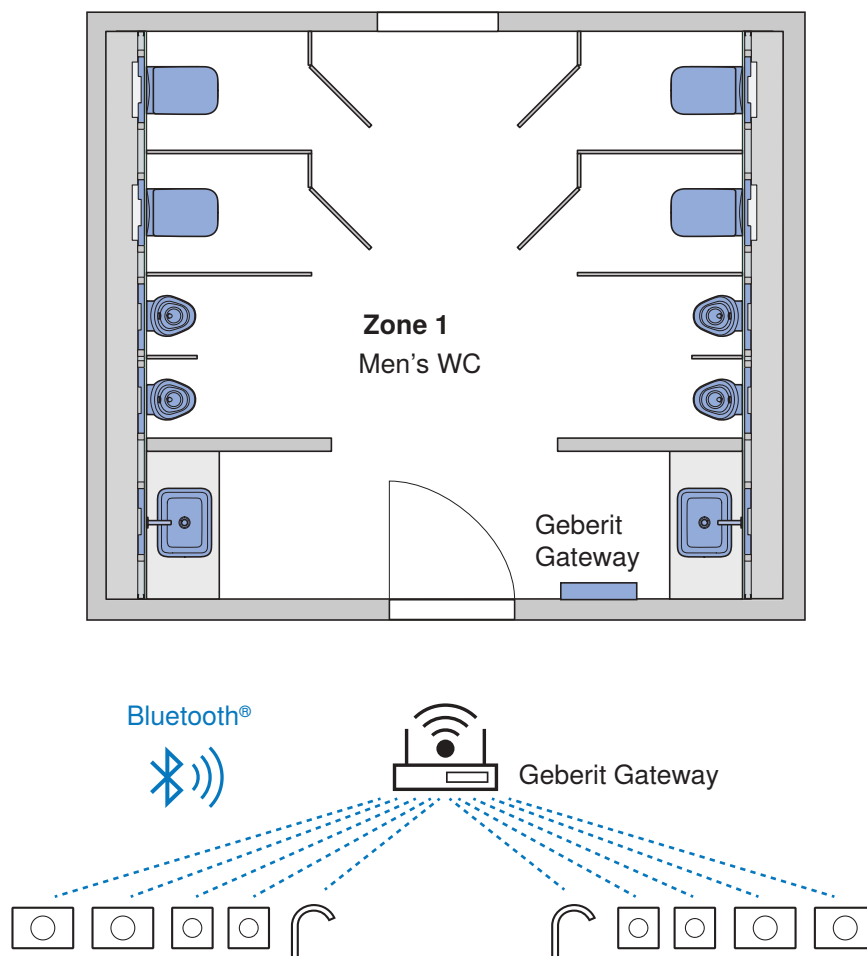


Figure 29: Practical example 3: Connection via Bluetooth®

5.12.1 Required components for retrofitting

The following components are required for retrofitting to Geberit Connect end devices:

Number	Component	Article number
4	Geberit electronics module for WC flush control, automatic, 3-4.1 V	241.476.00.1
4	Geberit sensor electronics for urinal flush controls	241.941.00.1
2	Geberit flush controls for Piave and Brenta washbasin taps	243.689.00.1
1	Geberit Gateway	116.490.00.1
	Plastic control cabinet on-site	
	Electrical installation material on-site	

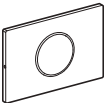
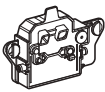
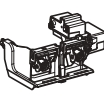
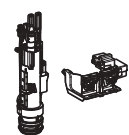
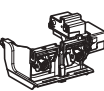
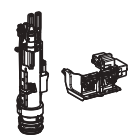
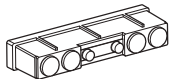
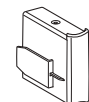
5.12.2 General procedure for retrofitting with Geberit Connect

The following procedure is recommended for retrofitting existing sanitary appliances with Geberit Connect:

- 1** Check existing sanitary appliances for compatibility with Geberit Connect. The Geberit Connect logo is visible on the specification plate of compatible sanitary appliances.


- 2** If the sanitary appliances are not compatible, replace the flush control and other components if necessary. → See "Required components for retrofitting", page 89 table.
 ✓ The sanitary appliances have now been converted to Geberit Connect end devices.
- 3** Commission Geberit Connect end devices and check function.
- 4** Install Geberit Gateway in a plastic control cabinet and place the control cabinet provisionally. Establish temporary power supply.
 If the Bluetooth® connection is insufficient and not all end devices can be assigned, the control cabinet can simply be relocated.
- 5** Assign Geberit Connect end devices to the Geberit Gateway. → See "Assigning end devices connected via Bluetooth", page 99.
- 6** Permanently mount the control cabinet with Geberit Gateway.

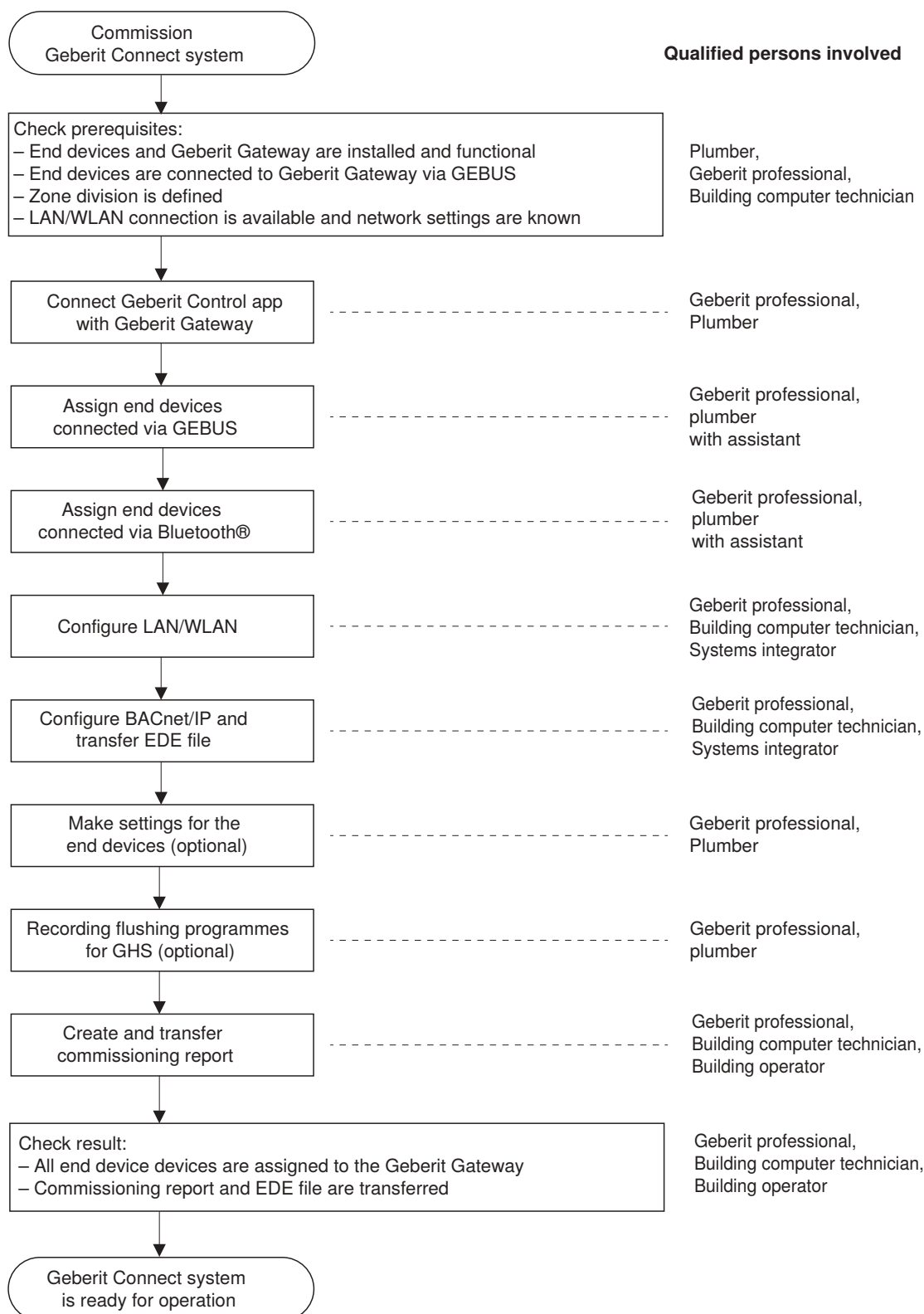
Required components for retrofitting sanitary appliances with Geberit Connect

Sanitary appliances without Geberit Connect logo on the specification plate		Required components for retrofitting	
Geberit WC flush controls with electronic flush actuation, with Sigma10 actuator plate		Geberit electronic module for WC flush control, automatic, 3-4.1 V, art. no. 241.476.00.1	
Geberit WC flush controls with electronic flush actuation, with Sigma80 actuator plate		- Geberit WC flush control with electronic flush actuation, mains operation, with Sigma80 actuator plate, art. no. 116.090.xx.6 - Geberit installation set with power supply unit, for WC flush controls with electronic flush actuation, 12 V, art. no. 115.861.00.6 - Geberit type 212 flush valve, complete, art. no. 244.820.00.1	
Geberit WC flush controls with electronic flush actuation, for external push button or IR button		Geberit lifting device and control unit, for push button, 3-4.1 V, art. no. 245.545.00.6	
Geberit WC flush controls with electronic flush actuation, for RF-controlled buttons		Geberit lifting device and control unit, for RF-controlled buttons, 3-4.1 V, art. no. 245.549.00.6	
Geberit Preda, Selva and Tamina urinals with integrated flush control		Geberit control electronics for integrated urinal flush control, art. no. 243.324.00.1	
Geberit urinal flush control with electronic flush actuation, concealed installation		Geberit sensor electronics for urinal flush control, art. no. 241.941.00.1	
Geberit Piave and Brenta washbasin taps		Geberit control for Piave and Brenta washbasin taps art. no. 243.689.00.1	
Geberit type 80 washbasin taps		Geberit electronics module for type 80 washbasin taps, art. no. 245.469.00.1	
Geberit type 185/186 washbasin taps		Geberit electronic module for type 185/186 washbasin taps, art. no. 242.251.00.1	

6 Commissioning

6.1 Commissioning procedure

A Geberit Connect system can be commissioned in the following steps. The individual steps are described in detail in the next chapter. If there are several Geberit Gateways in the building, commission each Geberit Gateway separately.



6.2 Checking requirements

i The commissioning of a Geberit Connect system may only be carried out by qualified persons. → See "Qualified persons involved", page 9.

The following prerequisites must be met:

- Geberit Connect end devices are installed and functional.
- Geberit Gateway is installed and ready for operation.
- Geberit Connect end devices and Geberit Gateway are connected with the GEBUS cable (when connected via GEBUS).
- Zone division is available. → See "Zone division", page 46.
- LAN/WLAN connection is available and network settings are known (when connected to building automation system or Geberit Cloud).
- BACnet/IP parameters are known (when connected to building automation system).
- Power supply is switched on.

When the power supply is applied, the Geberit Gateway and the Geberit Connect end devices start up as follows:

Geberit Gateway	Electrical connection LED	All other LEDs	
Start-up process (1-2 minutes)			Bootloader OK
			Operating system OK
			Cloud connection OK
			Applications OK
Geberit Gateway is ready for operation		Current status → see "LED display", page 21.	

Geberit bus converter, Geberit HS50 hygiene flush unit	LED
End device is automatically addressed at GEBUS.	
End device is addressed at GEBUS.	
Voltage on the GEBUS too low (only Geberit bus converter) ► Check wiring.	

Geberit temperature and volumetric flow rate sensors	LED
End device is automatically addressed at GEBUS.	
End device is addressed at GEBUS.	

When all LEDs of the end devices with LEDs (e.g. on the Geberit bus converter) light up green, the Geberit Connect system is ready for commissioning.

If the LEDs of the end devices do not light up green, check the wiring of the GEBUS cable.

6.3 Connecting Geberit Control app to Geberit Gateway

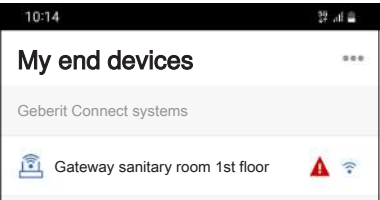


Status

In the lists under [New End Devices] and [My End Devices], in the Connectivity Manager and in the zone visualisation, the status of each end device is displayed as follows:

	Use	Indicates that usage has been detected on the end device.
	Signal strength	Indicates the strength of the Bluetooth® signal.
	Warning	Indicates that there is a warning on the end device. → See "Troubleshooting", page 125.
	Malfunction or error	Indicates that there is a fault or error on the end device. → See "Troubleshooting", page 125.

Example:



Connect Geberit Control app with Geberit Gateway:

- 1

Approach Geberit Gateway.
- 2

Open the Geberit Control app.
- 3

Log in with Geberit ID.
- 4

Select the Geberit Gateway under [New end devices] and start pairing. Follow the instructions in the Geberit Control app.

Pairing can be achieved either by pressing the pairing button or by entering the pairing secret. → See "Structure", page 19.

✓ Pairing is started.

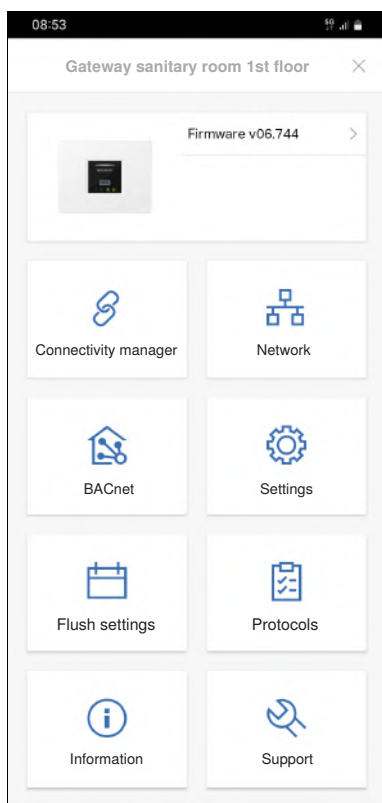
✓ LED on the Geberit Gateway:
- 5

Assign password¹⁾.

6 Assign name for Geberit Gateway or for Geberit Connect system and connect.

✓ Pairing is completed.

✓ LED on the Geberit Gateway: 



7 Activate Cloud Services under [Settings] Geberit Cloud Services. The Geberit Cloud Services can be used for service functions, firmware updates and notifications.

8 If a new firmware version is available, perform a firmware update. → See "Updating firmware", page 123.

A new firmware version is indicated with an orange warning sign.



- 1) Password: It is recommended to write down the password of the Geberit Gateway. If the password has been forgotten, the pairing secret of the Geberit Gateway must be entered to reset the password. The password of the Geberit Gateway also protects all assigned end devices from unauthorised access. To access an end device, a connection to the Geberit Gateway must first be established.

6.4 Assigning end devices connected via GEBUS

2 people are required for this activity. The first person must always be near the Geberit Gateway so that the Bluetooth® connection to the Geberit Control app is guaranteed. The second person goes from end device to end device to actuate uses.

It is recommended to use hand-held radios or similar for communication between the two people. That way, the smartphone with the Geberit Control app can be used exclusively for commissioning.

While the end devices are being assigned, they must not be used by other people. It is recommended to close the sanitary rooms for use.



If end devices are connected in a Geberit Connect system via GEBUS and via Bluetooth®, always assign the end devices with GEBUS connection first.

1

1. person: Select Geberit Connect system or Geberit Gateway under [My End Devices].

2

Select [Centralised Operation].

✓ Connection to the gateway is established.

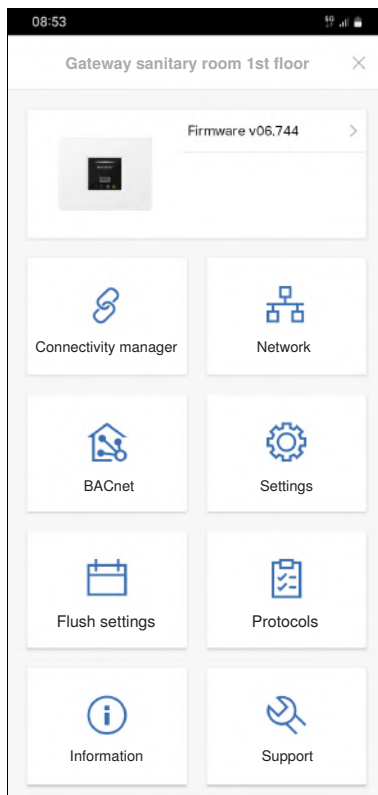
3

Activate [Notifications] if desired.

4

Select Geberit Gateway.

✓ The home page of the Geberit Gateway is displayed:



5

Open [connectivity manager].

✓ A list of all end devices detected on the GEBUS is displayed.

6

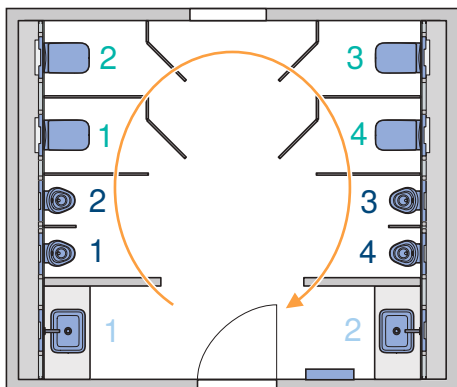
Check whether all end devices are listed.

7

2. person: Approach first end device.



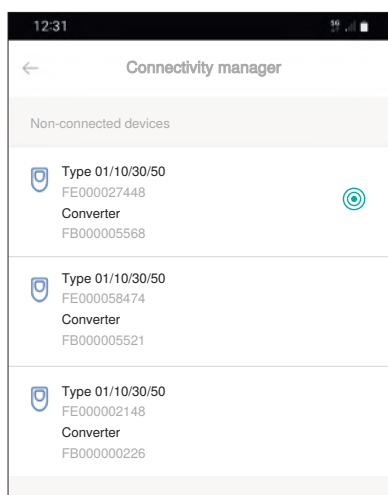
It is recommended to assign the end devices within a sanitary room in a clockwise direction. The order of assignment results in the order of the end devices in the corresponding zone.



8

Actuate use at the end device so that the end device can be identified in the list. Depending on the end device, use is actuated differently. → See “Actuate use” below.

- ✓ Use of the end device is indicated by a green circle symbol.



If the usage is not displayed in the Geberit Control app, the end device can also be identified via the serial number on the specification plate.

9

Select the corresponding end device from the list.

10

Create new zone or select and confirm existing zone.

It is recommended to create a separate zone for each sanitary room.

- ✓ End device is assigned to the corresponding zone in the Geberit Gateway.

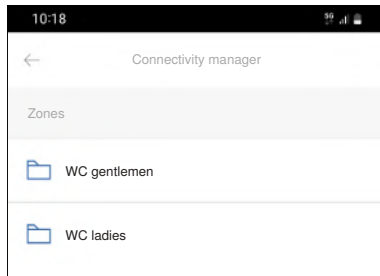


When assigning the end device, a check is performed as to whether a new firmware version is available. If yes, the firmware update is started, which may take a few minutes.

11 Repeat steps 7-10 for all end devices.

Result

- ✓ The list in the [connectivity manager] no longer contains any un-connected end devices.



- ✓ LED on the Geberit Gateway: 

After the end devices have been assigned, they are connected with the Geberit Gateway.

Actuate use

- Piave and Brenta washbasin taps: Hold your hand in front of the IR sensor.
- Urinal flush controls with type 01 / 10 / 20 / 40 / 50 cover plate: Hold your hand in front of the IR sensor.
- Preda, Selva and Tamina urinals: Hold your hand in front of the IR sensor.
- WC flush controls with Sigma10 or Sigma80 actuator plate or with IR button: Hold your hand in front of the IR sensor.
- HS05 hygiene flush units: Switch the mains voltage off and on again.
- HS50 hygiene flush units: Press the <Test> button.
- HS30/HS50 hygiene flush units in concealed cisterns: Press the <Test> button or trigger a manual flush.
- Temperature and volumetric flow rate sensors for GEBUS: Actuate water flow via sensor. A change in the volumetric flow rate indicates use.¹⁾
- Temperature sensors for GEBUS: Actuate water flow via sensor. A change in the water temperature indicates use.¹⁾

1) Do not cool down temperature sensors with cold spray. Cold spray can damage the sensor.

Adjust zones

The zones can be adjusted as follows:



Via [Adjust Pos.]:

- Sequence of end devices within a zone

Via the 3-dot menu ...:

- Zone designation
- Assignment of the end devices to a zone

If a zone no longer contains any end devices, it is automatically deleted.

6.5 Assigning end devices connected via Bluetooth

While the end devices are being assigned, they must not be used by other people. It is recommended to close the sanitary rooms for use.



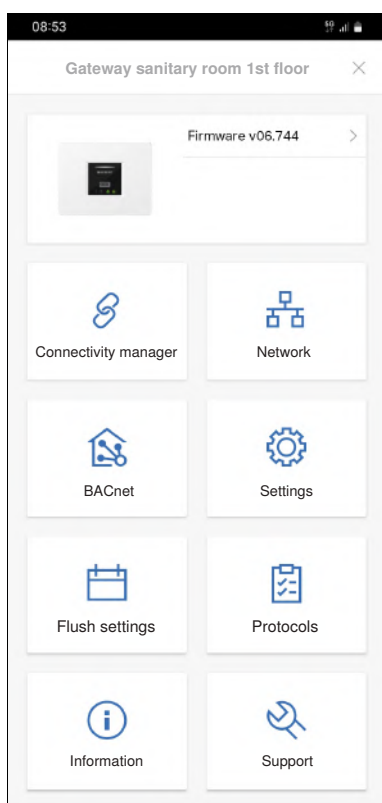
If end devices are connected in a Geberit Connect system via GEBUS and via Bluetooth®, always assign the end devices with GEBUS connection first.

1 Select Geberit Connect system or Geberit Gateway under [My End Devices].

2 Select [Centralised Operation].
✓ Connection to the gateway is established.

3 Activate [Notifications] if desired.

4 Select Geberit Gateway.
✓ The home page of the Geberit Gateway is displayed:



5 Open [connectivity manager].

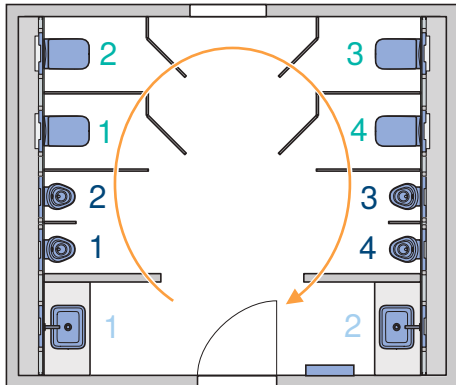
6 Open [radio connection].
✓ A list of all end devices connected via Bluetooth® is displayed.

7 Check whether all end devices connected via Bluetooth® are listed.

8 Approach first end device.



It is recommended to assign the end devices within a sanitary room in a clockwise direction. The order of assignment results in the order of the end devices in the corresponding zone.


9

Select the end device in the list.
If necessary, identify the end device using the serial number on the specification plate.

10

Pair with the end device according to the instructions in the Geberit Control app.
Depending on the end device, use must be triggered via the IR sensor or a button must be pressed.



If the end device has already been assigned to a Geberit Gateway, it is password-protected. The pairing secret must therefore be entered for a new assignment.

11

Create new zone or select and confirm existing zone.
It is recommended to create a separate zone for each sanitary room. All end devices connected via Bluetooth® should be in the same sanitary room.
✓ End device is assigned to the corresponding zone in the Geberit Gateway.



When assigning the end device, a check is performed as to whether a new firmware version is available. If yes, the firmware update is started, which may take a few minutes.

12

Repeat steps 8-11 for all end devices.

Result

✓ The list under [Radio Connection] no longer contains any un-connected end devices.

After the end devices have been assigned, they are connected with the Geberit Gateway.

Adjust zones

The zones can be adjusted as follows:



Via [Adjust Pos.]:

- Sequence of end devices within a zone

Via the 3-dot menu ...:

- Zone designation
- Assignment of the end devices to a zone

If a zone no longer contains any end devices, it is automatically deleted.

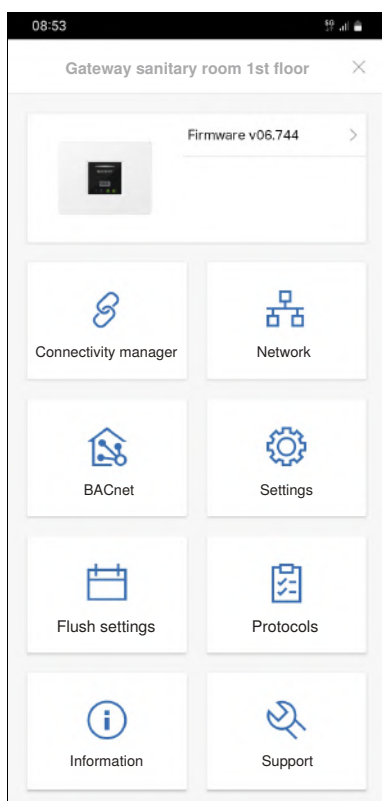
6.6 Configure LAN/WLAN

The network settings must be known. These must be agreed with the building automation engineer, the building IT specialist or the system integrator. The information required for configuration can be found under "Network settings", page 83.

1 Select Geberit Connect system or Geberit Gateway under [My End Devices].

2 Select [Centralised Operation].
✓ Connection to the gateway is established.

3 Select Geberit Gateway.
✓ The home page of the Geberit Gateway is displayed:



4 Open [network].

5 Adapt settings for LAN or WLAN.

 If the wired network connection is not required, set [IP Assignment] to [Off].

6.7 Configuring BACnet/IP

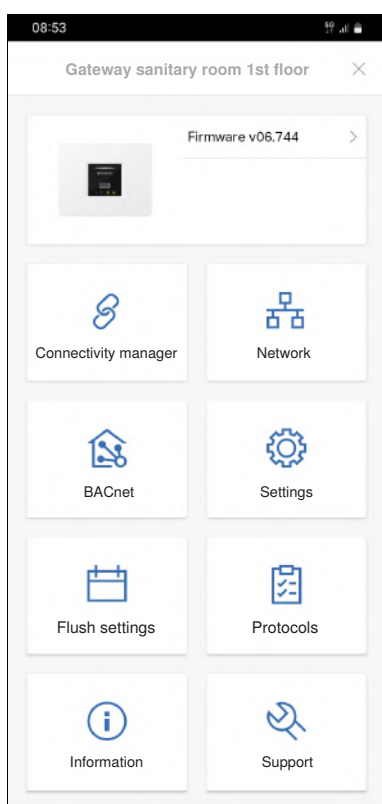
The BACnet/IP parameters must be known. These must be agreed with the building automation engineer, building computer technician or systems integrator.

An EDE file with all BACnet objects is automatically created for integration into a building automation system. The BACnet objects can be edited (e.g. names of zones and end devices). The EDE file can be exported to a USB stick and imported again for editing.

1 Select Geberit Connect system or Geberit Gateway under [My End Devices].

2 Select [Centralised Operation].
 ✓ Connection to the gateway is established.

3 Select Geberit Gateway.
 ✓ The home page of the Geberit Gateway is displayed:



4 Open [BACnet].

5 Adjust configuration.

6 [Edit BACnet objects] if required.

7 [Export EDE file].

8 Share EDE file with the building computer technician, building automation technician or systems integrator.

ATTENTION**Data security risk**

If the BACnet function is activated on the Geberit Gateway, the IP port that is defined under [BACnet] is opened. This can be a potential data security risk.

- The Geberit Gateway must be protected by a firewall.

6.8 Making settings for Geberit Connect end devices

Custom settings can be made for each end device if required:

- Assign names
- Activate functions such as interval flush
- Set parameters such as flushing time or detection time

Activating functions such as interval flush or setting flush times must be done for each end device separately.

You can choose between centralised and local operation to access an end device. With centralised operation, all assigned end devices can be accessed via the Geberit Gateway. Local operation involves accessing the end device directly. → See also "Operating and configuring end devices", page 112.

Centralised operation is selected in the following instructions.

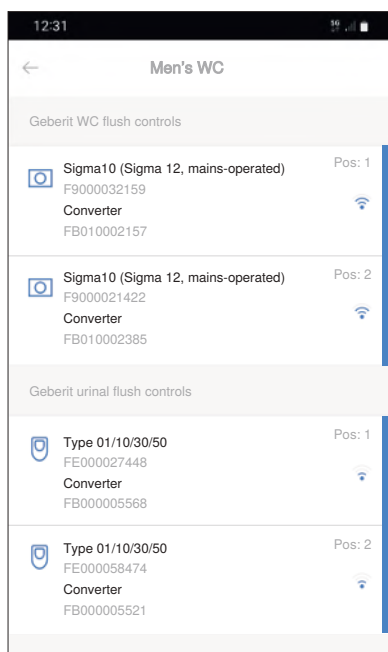
Prerequisite

- The Geberit Gateway is within range of the smartphone.

1 Select Geberit Connect system or Geberit Gateway under [My End Devices].

2 Select [Centralised Operation].
✓ Connection to the gateway is established.

3 Select the zone with the desired end device.
✓ A list with the end devices in the corresponding zone is displayed.



4 Select end device.¹⁾
✓ Connection is established with end device.

5 Under [Settings], change the name and make the desired settings.

6 Carry out a function test (e.g. actuate flush via IR sensor).

7 Repeat steps 4-6 for all end devices.

- 1) A use can be actuated to identify the end device in the list. A green circle symbol is displayed on the end device.

6.9 Recording flushing programmes for Geberit Hygiene System (GHS)

If end devices are to be used for automatic water replacement in the Geberit Connect system, the corresponding flushing programmes can be defined centrally in the Geberit Gateway. → See "Geberit Hygiene System (GHS)", page 58.



Notes on flushing programmes in connected operation:

- The factory-set flushing programmes on the end devices (interval flushes) are not deactivated when flushing programmes are set in connected operation. To avoid undesired flushing processes and increased water consumption, the local flushing programmes on the end devices must be deactivated.

ATTENTION

High water consumption due to undesired flushing processes

- ▶ In connected operation, deactivate all local flushing programmes in the end devices, such as interval flushing.
- If the Geberit Gateway fails, the flushing programmes are no longer executed in connected operation. The local flushing programmes also remain deactivated.
- If changes are made to the Geberit Connect system (zones, end devices), the flushing programmes in connected operation must be re-entered or checked.
- Flushing programmes in connected operation are numbered consecutively when they are recorded. When a flushing programme is deleted, the number is reassigned.

Prerequisite

- The Geberit Gateway is within range of the smartphone.
- For HS50 hygiene flush units and HS30/HS50 hygiene flush units in concealed cisterns, the solenoid valves are configured for cold and hot water.

1

Select Geberit Connect system or Geberit Gateway under [My End Devices].

2

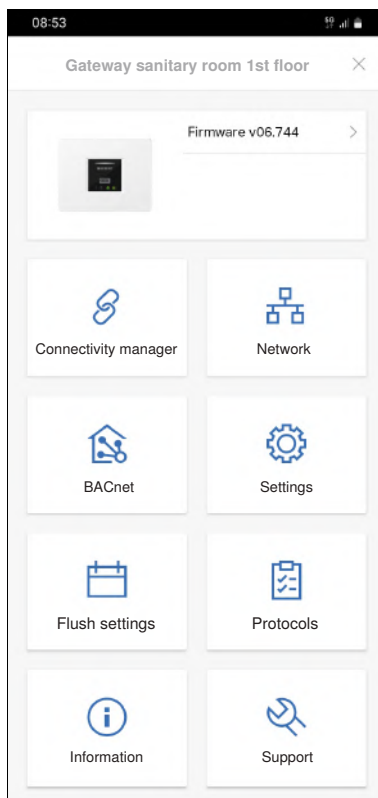
Select [Centralised Operation].

- ✓ Connection to the gateway is established.

3

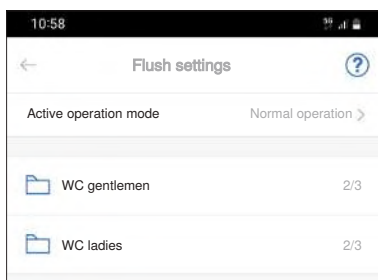
Select Geberit Gateway.

- ✓ The home page of the Geberit Gateway is displayed:

**4**

Select [flush settings].

- ✓ The number of logged flushing programmes is displayed for each zone (example: (3/5) = total of 5 flushing programmes, 3 of which are executed in the active operation mode).

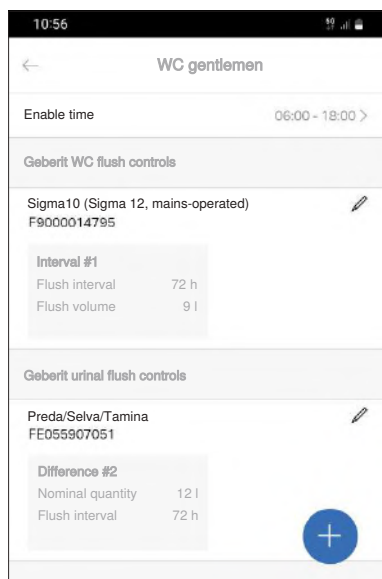
**5**

Set active [operation mode].

6

Select the zone with the desired end device.

- ✓ The flushing programmes already logged are displayed and sorted by end device type.

**7**

If necessary, enter [Enable time]. → See "Flushing programmes for GHS", page 63.

8

Enter a new flushing programme with [+] or
 ✎ change an existing flushing programme.

9

Select the end device and enter the parameters of the flushing programme. → See "Flushing programmes for GHS", page 62.

10

Enter more flushing programmes. Several flushing programmes can be entered for each end device, a total of 60 for each Geberit Gateway.

The end device can be identified in the list by actuating a use. A water flow can be triggered by the sensor with GEBUS sensors. A change in the volumetric flow rate or temperature indicates use. The current measured value can also be checked in the Geberit Control app for the respective sensor under [Logs] or displayed in the sensor log.

6.10 Creating and transferring the commissioning report

All settings during commissioning, zone configuration and all flushing programmes are saved in a commissioning report. This report is handed over to the building operator after commissioning.

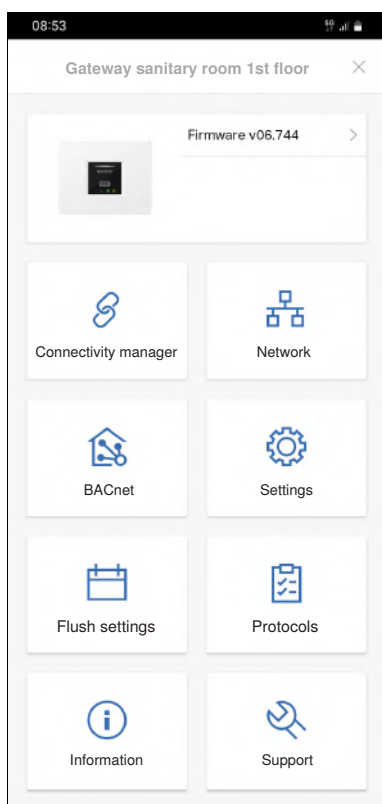
The Geberit Gateway also provides other reports. → See "Protocols", page 36.

The commissioning report is created as follows:

1 Select Geberit Connect system or Geberit Gateway under [My End Devices].

2 Select [Centralised Operation].
✓ Connection to the gateway is established.

3 Select Geberit Gateway.
✓ The home page of the Geberit Gateway is displayed:



4 Open [logs].

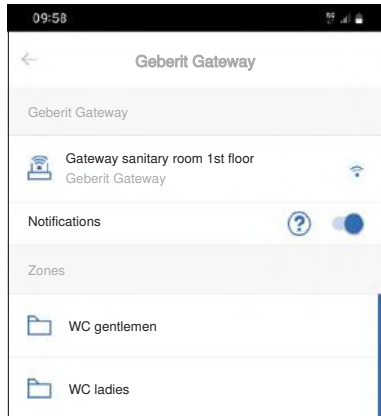
5 Select and export the [commissioning report].

6 Share the commissioning report with the relevant persons.

6.11 Finalising commissioning

Check the commissioning result:

- All end devices are assigned to the Geberit Gateway. Only zones are listed under [My End Devices] in the Geberit Connect system. No un-connected end devices are visible.



- All active LEDs on the Geberit Gateway light up green.
- The LEDs on all end devices with LEDs (e.g. on the Geberit bus converter) light up green.
- Commissioning report has been transferred to the building operator.
- The EDE file is transferred to the building automation technician.
- All authorised people have access to the Geberit Control app or have a Geberit ID.
- All authorised people have access to the Geberit Gateway and the assigned end devices.
- All end devices are configured.

If errors occur, the status of the Geberit Gateway can be determined from the LEDs. → See "LED display", page 21.

7 Use

7.1 Operating and configuring end devices

An end device in a Geberit Connect system can be accessed using the Geberit Control app. You can choose between centralised and local operation.

7.1.1 Centralised operation

With centralised operation, all end devices are accessed from the Geberit Gateway. The Geberit Control app connects itself to the Geberit Gateway.

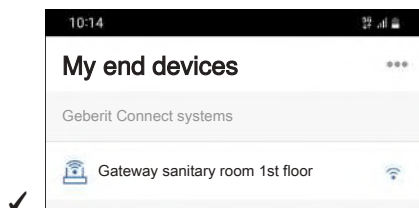
Application:

- To commission a Geberit Connect system
- For centralised operation of the end devices from one location
- To manage the zones

Access:

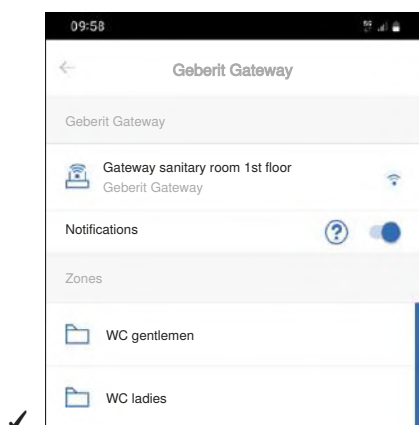
1 Approach Geberit Gateway.

2 Select Geberit Connect system or Geberit Gateway under [My End Devices].



3 Select [Centralised Operation].

- ✓ Bluetooth® connection to the Geberit Gateway is established.
- ✓ All zones in the Geberit Connect system are displayed. → See also "Functions per zone", page 116.

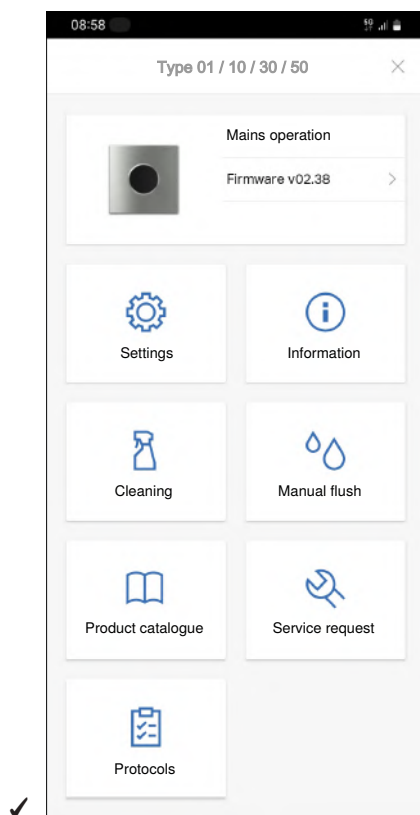


4 Select the zone with the desired end device.

5

Select the desired end device.

- ✓ Connection to the end device is established (via Geberit Gateway and GEBUS or Bluetooth® to the end device).



Connection to the end device:

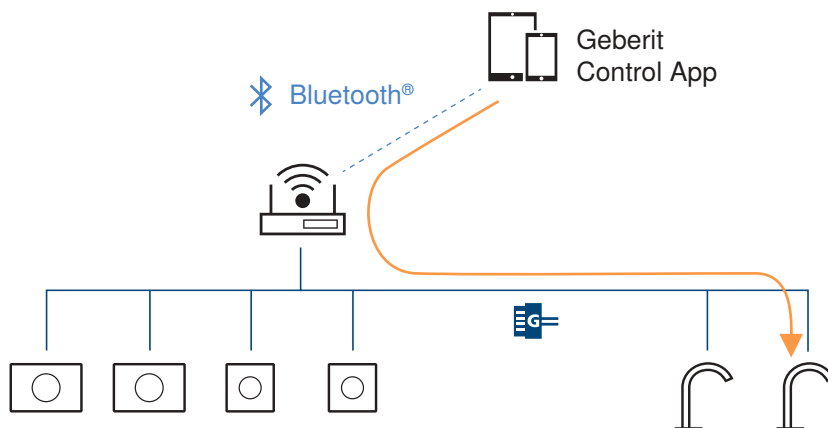


Figure 30: Example: Centralised operation of a washbasin tap

The following functions are available per end device:

- Activate cleaning mode
- Actuate flush
- Change settings
- Activate or deactivate functions
- Read out statistics

Certain functions, such as activating cleaning mode, can be carried out simultaneously for all end devices in a zone. → See also "Functions per zone", page 116.

7.1.2 Local operation

For local operation, the Geberit Control app is used to access an end device directly.

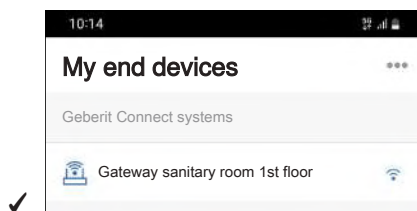
Application:

- For operating an end device regardless of the location of the Geberit Gateway
- For executing functions directly on the end device

Access:

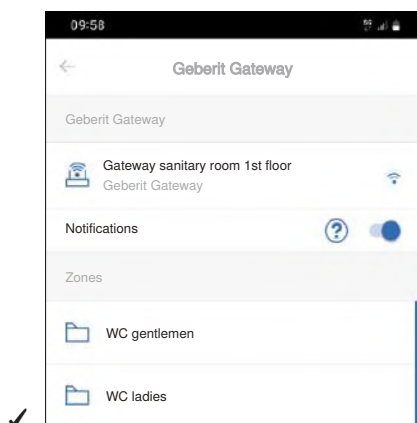
1 Approach the required end device.

2 Select Geberit Connect system or Geberit Gateway under [My End Devices].



3 Select [Local Operation].

- ✓ All zones in the Geberit Connect system are displayed. → See also "Functions per zone", page 116.

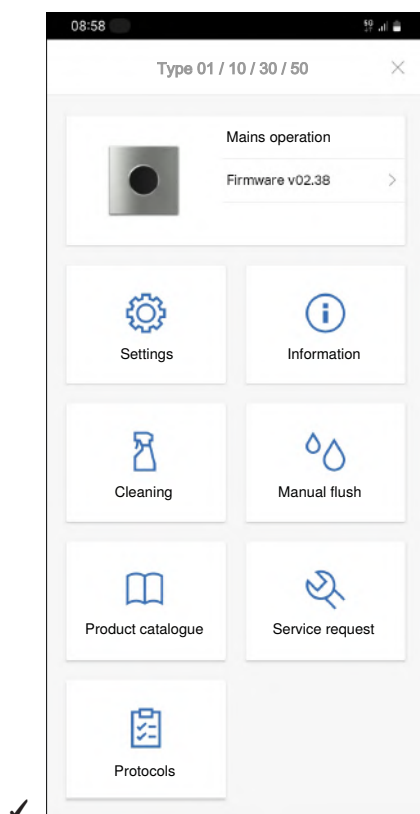


4 Select the zone with the desired end device.

5

Select the desired end device (note the signal strength).

✓ Bluetooth® connection is established with the end device.



Connection to the end device:

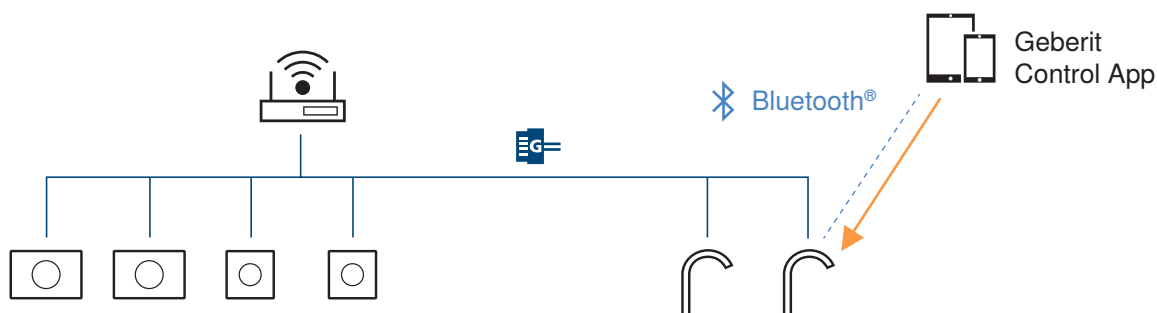


Figure 31: Example: Local operation of a washbasin tap

The following functions are available per end device:

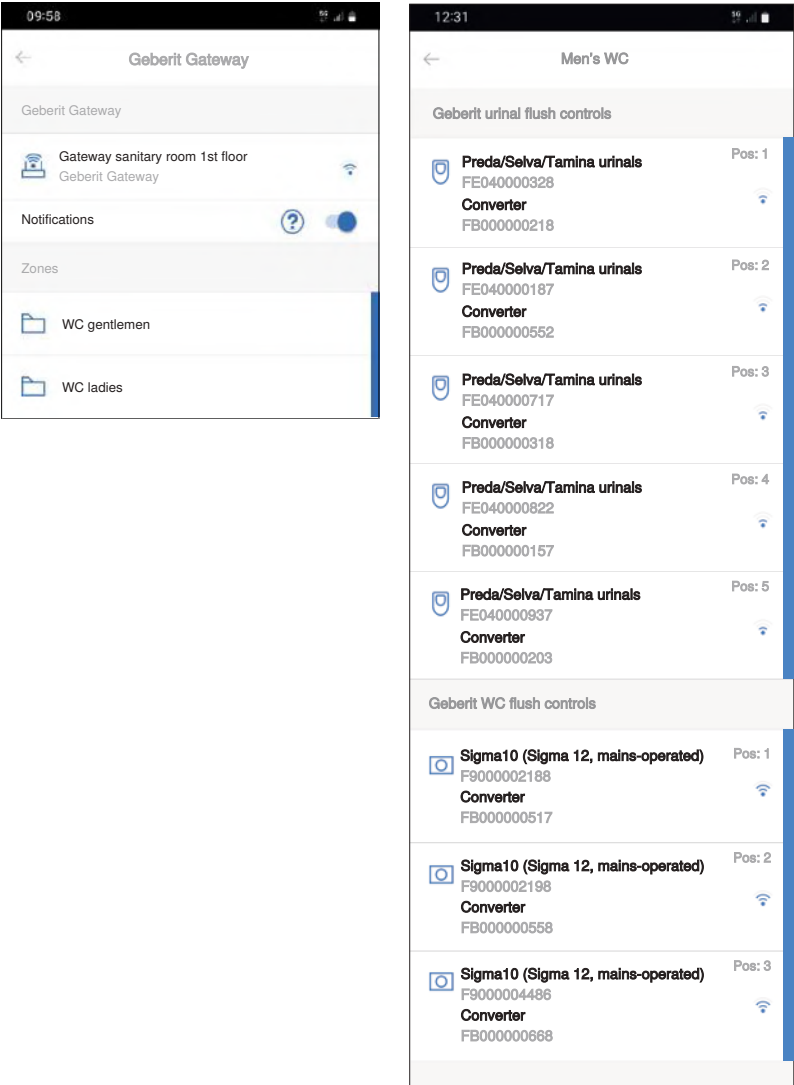
- Activate cleaning mode
- Actuate flush
- Change settings
- Activate or deactivate functions
- Read out statistics

Certain functions, such as activating cleaning mode, can be carried out simultaneously for all end devices in a zone. → See also "Functions per zone", page 116.

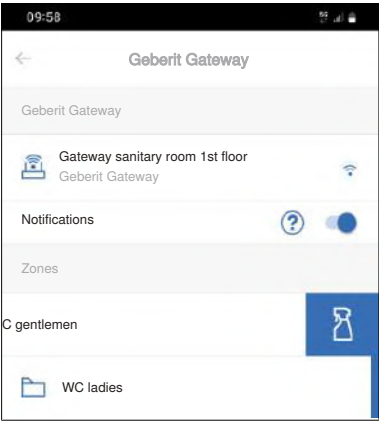
7.1.3 Functions per zone

Certain functions, such as activating cleaning mode, can be carried out simultaneously for all end devices in a zone. If such a function is available, the zone on the right contains a blue bar.

The same functions are also available for the end devices after opening the zone.



By sliding the zone to the left, the functions, such as activating cleaning mode, appear.



7.2 Setting the operation mode for the Geberit Hygiene System (GHS)

The operation mode determines which flushing programmes run in the GHS. In a school, for example, one operation mode with flushing programmes can be defined for normal operation and another with flushing programmes for vacation operation. The active operation mode applies to all zones and the Geberit Connect end devices they contain. If the operation mode is set to [Off], a flushing programme is not executed.

The active operation mode is set in the Geberit Control app or through the building automation system.

Prerequisite

- The Geberit Gateway is within range of the smartphone.

-
- 1** Select Geberit Connect system or Geberit Gateway under [My End Devices].
 - 2** Select [Centralised Operation].
 - ✓ Connection to the gateway is established.
 - 3** Select Geberit Gateway.
 - ✓ The home page of the Geberit Gateway is displayed.
 - 4** Select [flush settings].
 - 5** Set active [operation mode].

7.3 Managing zones and end devices

In a Geberit Connect system, end devices can also be added or removed or the zones customised during operation.



When customising the zones or after adding or removing end devices, the flushing programmes in connected operation must be entered again.

7.3.1 Adding end devices

To add a new end device, follow the same procedure as for commissioning:

- End devices connected via GEBUS: → See "Assigning end devices connected via GEBUS", page 95.
- End devices connected via Bluetooth®: → See "Assigning end devices connected via Bluetooth", page 99.

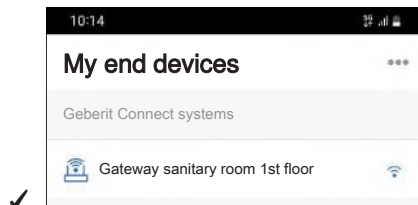
7.3.2 Managing zones and removing end devices

1

Approach Geberit Gateway.

2

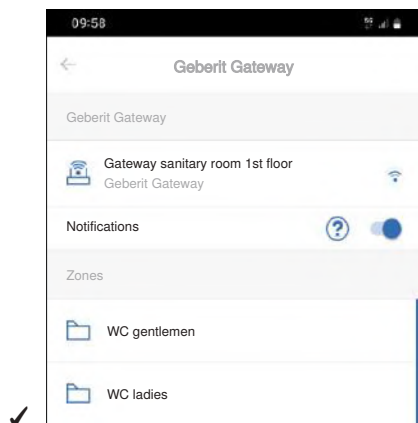
Select Geberit Connect system or Geberit Gateway under [My End Devices].



3

Select [Centralised Operation].

- ✓ Bluetooth® connection to the Geberit Gateway is established.



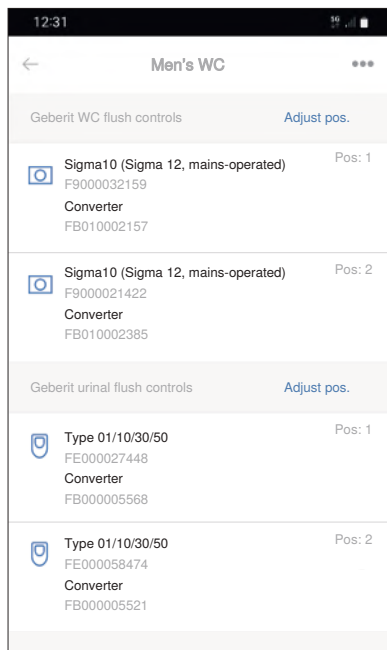
4

Select Geberit Gateway.

5

Open [connectivity manager].

6 Select the desired zone.



Manage zones

7 Use [Adjust Pos.] to adjust the position of an end device within a zone.

8 Via the 3-dot menu ... Adapt the designation of the zone or the assignment of the end devices to a zone.

Remove end device

9 Via the 3-dot menu ... Select end device and [Remove]. ✓ End device is no longer assigned to the Geberit Gateway.

10 Demount the end device.

7.4 Replacing end device

If a Geberit Connect end device needs to be replaced, the following procedure applies:

End device with connection via GEBUS

This procedure applies to all end devices including GEBUS sensors that are connected directly or via a Geberit bus converter.

- 1** Ensure that the Connect LED on the Geberit Gateway lights up green.
 - 2** Remove the defective end device or defective Geberit bus converter.
 - 3** Mount and connect a new end device or new Geberit bus converter.
 - 4** Wait at least 1 minute.
 - ✓ When the GEBUS cable is connected, the new end device is automatically assigned to the Geberit Gateway.
 - ✓ The settings are applied.
 - 5** Ensure that the Geberit Connect LED on the Geberit Gateway lights up green again.
-  If an end device cannot be automatically assigned, the Geberit Connect LED on the Geberit Gateway lights up red.
- 1** Manually assign the end device in the [connectivity manager] of the Geberit Control app. → See "Assigning end devices connected via GEBUS", page 95.

Notes:

- Do not interrupt the power supply to the Geberit Gateway.
- Replace only one end device or one Geberit bus converter at a time.
- Geberit Connect end devices with Geberit bus converters:
For end devices with Geberit bus converters, the control unit and the Geberit bus converter are linked together. Replacing Geberit bus converters between end devices may result in the end devices being assigned to the wrong zone afterwards. It is recommended not to replace Geberit bus converters between the end devices.
- Geberit HS30 and HS50 hygiene flush units (in concealed cisterns):
The settings are **not** applied when a hygiene flush unit is replaced. All settings, including flush programmes, can be reset using the Geberit Control app.
- All other end devices:
When replacing an end device, the flushing programmes in connected operation are retained. Nevertheless, it is advisable to check the flushing programmes.

End device with connection via Bluetooth®

-
- 2** Remove the defective end device or defective Geberit bus converter.

 - 3** Install new end device or new Geberit bus converter.

 - 4** Select Geberit Connect system or Geberit Gateway under [My End Devices].

 - 5** Select [Centralised Operation].
✓ Connection to the Geberit Gateway is established.

 - 6** Select Geberit Gateway.

 - 7** Open [connectivity manager].

 - 8** Open zone with faulty end device.

 - 9** Select the faulty end device via the 3-dot menu and [Remove].
✓ Faulty end device is no longer assigned to the Geberit Gateway.

 - 10** Assign new end device to the Geberit Gateway. → See "Assigning end devices connected via Bluetooth", page 99.

 - 11** Configure new end device. The settings are **not** applied.

7.5 Displaying and evaluating logs

Various logs from the Geberit Gateway and the assigned Geberit Connect end devices can be retrieved via the Geberit Control app. The logs contain the data for the entire Geberit Connect system or for individual end devices. The logs can be exported and shared for further evaluation.

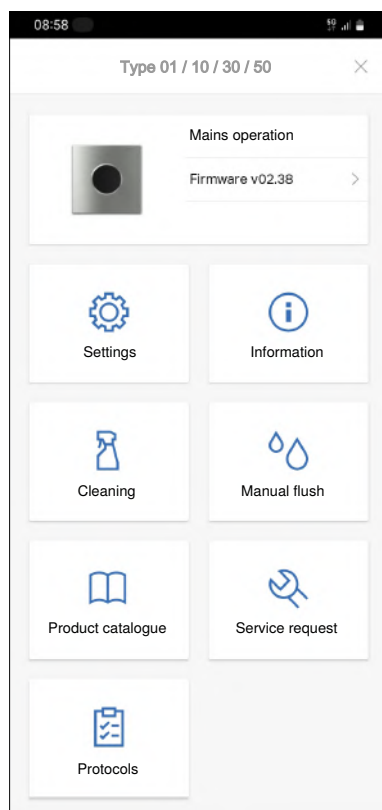
The following logs are available:

- Uses and flushes
- Measured values
- Events
- Sensor values
- Commissioning report

The flush logs and the sensor logs can be used to verify compliance with drinking water hygiene.

→ For details, see "Protocols", page 36.

The logs can be called up in the Geberit gateway and at the end devices under [Logs]:



7.6 Updating firmware

If a firmware update is available for a Geberit Connect end device or the Geberit Gateway, this is displayed in the Geberit Control app by an orange warning sign.

Firmware for the Geberit Gateway is updated either through Geberit Cloud Services or using a USB flash drive.

The firmware file of the Geberit Gateway also contains firmware updates for end devices. After the firmware update of the Geberit Gateway, firmware updates are also automatically carried out on the assigned end devices, if necessary. For individual end devices, the firmware update can also be carried out directly in the Geberit Control app.

7.6.1 Firmware update with USB stick

If a firmware update is available, the corresponding firmware file can be downloaded via a download link and transferred to the Geberit Gateway using a USB flash drive.

A user manual for the current firmware version is available at [972.341.00.0](https://www.geberit.com/972.341.00.0) or in the online product catalogue on the Geberit Gateway. The user manual contains instructions with a download link for the firmware file and the release notes for the corresponding firmware version.

Prerequisite

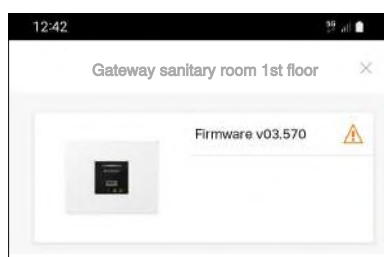
- The user manual for the firmware update is available.
- A standard USB flash drive with FAT32 file system is available.

1 Use the download link in the user manual to download the firmware file (approx. 100 MB).

2 Copy the firmware file (*.GSI) to the root directory of the USB flash drive. Only 1 firmware file is allowed to be located in the root directory.

3 Insert the USB flash drive into the front side of the Geberit Gateway.

4 Connect the Geberit Control app to Geberit Gateway.
 ✓ The new firmware version is displayed with a warning sign.



5 Open [firmware] and start firmware update.
 ✓ The progress of the firmware update is indicated by the LEDs on the Geberit Gateway. → See "LED sequence during firmware update of the Geberit Gateway", page 124.
 ✓ The connection to the Geberit Control app is interrupted during the firmware update.

Only unplug the USB flash drive once the white mains connection LED on the Geberit Gateway is no longer flashing.

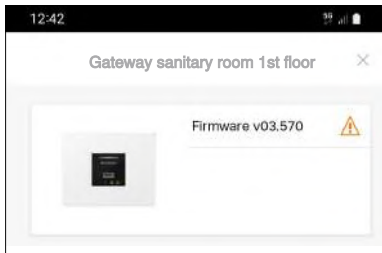
If problems occur during the firmware update, disconnect the power supply to the Geberit Gateway for approx. 10 seconds.

7.6.2 Firmware update with Geberit cloud services

Prerequisite

- The Geberit Gateway is connected to the Internet via a router (LED ).
- The Geberit Cloud Services are activated (LED ).

- 1** Connect the Geberit Control app to Geberit Gateway.
- ✓ The new firmware version is displayed with a warning sign.



- 2** Open [firmware] and start firmware update.
- ✓ The firmware file is downloaded and the firmware update starts.
 - ✓ The progress of the firmware update is indicated by the LEDs on the Geberit Gateway. → See "LED sequence during firmware update of the Geberit Gateway", page 124.
 - ✓ The connection to the Geberit Control app is interrupted during the firmware update.

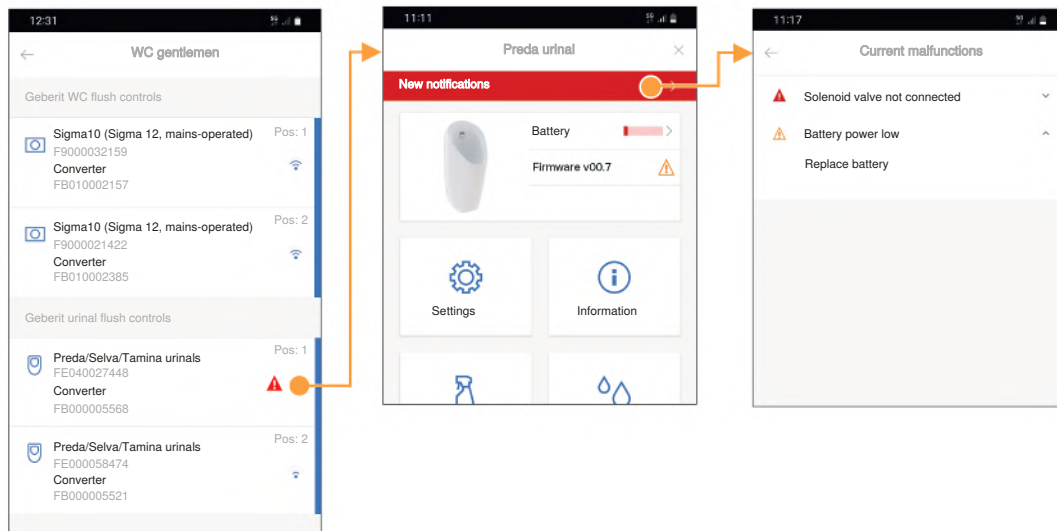
7.6.3 LED sequence during firmware update of the Geberit Gateway

Phase	Electrical connection LED	All other LEDs	
Firmware update active			Applications are being terminated
			Firmware file is being checked
			Firmware file is being installed
			Installation is completed
Geberit Gateway ready for operation		Current status → see "LED display", page 21.	
Firmware update failed			Firmware file check failed

7.7 Troubleshooting

If faults occur in the Geberit Connect system, it is recommended that you carry out the following steps as malfunction diagnosis.

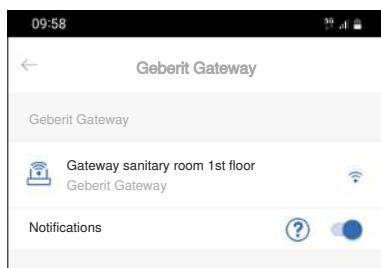
- 1 Test the function of the end devices. If necessary, rectify the fault using the maintenance manual for the end device.
- 2 Check whether warnings or faults are displayed in the Geberit Control app.
 - ✓ In the Geberit Control app, faults are displayed with warning signs (orange = warning, red = fault or error). Tapping the warning sign takes you to the corresponding warning or malfunction message. Expanding the message displays instructions on how to rectify it.



- ✓ If errors occur in the flushing programmes of the Geberit Hygiene System (GHS), these are reported with a warning sign and a general error under [Current errors]. Details of the errors are displayed on the Geberit Gateway under [Flush settings] and in the [flush log].



Errors and warnings in the Geberit Connect system are also reported by email if Geberit Cloud Services and notifications are activated.



- 3 Check the LED display on the Geberit Gateway → see "LED display", page 21.
- 4 Check LED display on end devices or Geberit bus converters → see "LED display", page 26.
- 5 In the Geberit Control app, check whether newer firmware versions are available.
- 6 Malfunction diagnosis according to table "Troubleshooting", page 127.
- 7 If the fault diagnosis in the Geberit Control app is unsuccessful, send a [service request] under [Support] or contact a Geberit specialist.

Service request

A service request generates an email to the customer service department of the respective Geberit sales company with the following content:

- Sender
- Data of the end device
- Error description
- Appendix with event log and commissioning report

The error description must be entered manually, the remaining elements are generated automatically.

Troubleshooting instructions

Malfunction	Cause	Remedy
End device does not flush.	Power supply missing	▶ Check LED on Geberit bus converter → see "LED display", page 26 (for end devices with Geberit bus converter). ▶ Check power supply. ▶ Check GEBUS cable (for power supply via GEBUS).
	Pipe pressure too low	▶ Test pipe pressure (0.5–10 bar).
	End device is in cleaning mode	▶ End cleaning mode using the Geberit Control app.
	End device defective (flush control, solenoid valve, IR sensor)	▶ In the Geberit Control app, check whether warnings or faults are displayed. ▶ Repair the end device → see the maintenance instructions of the end device. ▶ Replace end device → see "Replacing end device", page 120.
End device flushes continuously.	End device defective (flush control, solenoid valve, IR sensor)	▶ In the Geberit Control app, check whether warnings or faults are displayed. ▶ Repair the end device → see the maintenance instructions of the end device. ▶ Replace end device → see "Replacing end device", page 120.
	Interval flush programme is running	▶ Check settings or flush settings.
End device flushes at the wrong time.	User detection faulty (IR sensor dirty, detection range incorrectly set)	▶ Check end device → see maintenance instructions of the end device.
	Flush settings incorrect	▶ Check [Settings] of the end device in the Geberit Control app. ▶ [Check the flush settings] of the Geberit Hygiene System (GHS) in the Geberit Gateway.
End device is not accessible via Bluetooth® in the Geberit Control app.	End device is assigned to a Geberit Gateway	▶ Connect the Geberit Control app to Geberit Gateway and select the end device.
	End device is not compatible with Geberit Connect	▶ Check the specification plate. Geberit Connect sign must be present. ▶ Replace end device or converter.
End device is not accessible in the connectivity manager of the Geberit Control app.	Communication via GEBUS incorrect	▶ Check LED on Geberit bus converter → see "LED display", page 26 (for end devices with Geberit bus converter). ▶ Check GEBUS cable.
	No connection between end device and Geberit bus converter	▶ Check the cable between the end device and the Geberit bus converter.

Malfunction	Cause	Remedy
Geberit Gateway is not accessible via Bluetooth®.	Distance to Geberit Gateway too great	► Move closer to Geberit Gateway.
	Software error	► Check LED display at Geberit Gateway → see "LED display", page 21. ► Restart the Geberit Gateway under [Settings] in the Geberit Control app.
	Geberit Gateway defective	► Contact a Geberit professional.
Geberit Gateway is not accessible via LAN/WLAN or BACnet.	Cable connection faulty	► Check LED display at Geberit Gateway → see "LED display", page 21. ► Check LAN cable. ► Check the LEDs on the LAN cable female socket at the bottom of the Geberit Gateway (LEDs flash during data traffic)
	Configuration faulty	► Check Geberit Control app network and BACnet settings.
	Software error	► Restart the Geberit Gateway under [Settings] in the Geberit Control app.
	No internet connection to Geberit Cloud Services	► Check LED display at Geberit Gateway → see "LED display", page 21. ► Check router. ► Check network settings for LAN/WLAN with the Geberit Control app.
	Geberit Gateway defective	► Contact a Geberit professional.

2 / 2

Recommended procedure for testing the GEBUS cable:

- Disconnect the GEBUS plug from the Geberit Gateway.
- Check all 4 cores of the GEBUS cable against one another for short circuits at the plug.
- Check whether voltage is present at the plug. There must be no voltage present. If it is, there might be another Geberit Gateway connected to the GEBUS.
- Row or tree topology:
 - Disconnect all stacks and reconnect stacks individually.
 - Check which end devices are recognisable in the Connectivity Manager.

7.8 Deactivating the Bluetooth® connection

In buildings with increased safety requirements, such as military facilities, power stations or banks, the building operator may request that the Bluetooth® connection be deactivated. This ensures that the end device cannot be manipulated and no data can be read out.

To deactivate and reactivate the Bluetooth® connection of Geberit Connect end devices permanently, a Geberit sales company must be consulted.

7.9 Decommissioning the Geberit Connect system

If a Geberit Connect system has to be decommissioned, the following procedure applies:

- 1** Use the Geberit Control app to connect to the Geberit Gateway.
- 2** Open [connectivity manager].
- 3** Select zone.
- 4** Select all end devices on the 3-dot menu and [Remove].
- 5** Repeat steps 3 and 4 for all zones.
 - ✓ The assignment of all end devices to the Geberit Gateway is revoked.
- 6** Open [Settings].
- 7** [Reset end device].
 - ✓ The Geberit Gateway is reset to factory settings.

If the Geberit Connect system has to be restarted, disconnect the power supply to the Geberit Gateway and all end devices for at least 1 minute.

8 Disposal

8.1 Constituents

This product meets the requirements of Directive 2011/65/EU (RoHS) (restriction of the use of certain hazardous substances in electrical and electronic equipment).

8.2 Disposal of waste electrical and electronic equipment



The symbol of the crossed-out wheeled bin means that waste electrical and electronic equipment (WEEE) must be disposed of separately and not with other non-recyclable waste. End users are legally obliged to return old equipment to public waste disposal authorities, distributors, or Geberit for proper disposal. Many distributors of electrical and electronic equipment are obliged to take back WEEE free of charge. Contact the responsible sales or service company to return the WEEE to Geberit.

Used batteries and accumulators that are not enclosed within the old equipment, as well as lamps that can be removed from the old equipment in a non-destructive manner, must be separated from the old equipment before being handed over to a disposal point.

If personal data is stored on the old equipment, end users themselves are responsible for deleting it before handing it over to a disposal point.

9 Appendix

9.1 List of abbreviations

Abbreviation	Description
BACnet	Network protocol for interoperable and cross-trade communication in building automation, which is standardised as ISO 16484-5.
BACnet/IP	BACnet, which is based on the Internet Protocol
BLE	Bluetooth® Low Energy Technology of the Bluetooth® Special Interest Group, which is characterised by low energy consumption
DHCP	Dynamic Host Configuration Protocol Protocol for integrating clients into a network without manual configuration of the network interface
EDE	Engineering Data Exchange Listing of BACnet objects in a file
BA	building automation
GEBUS	Geberit bus Geberit specific bus with physical interface RS485, supply voltage 24 V DC and automatic addressing of the end devices
GHS	Geberit Hygiene System Multi-stage, modular system to ensure the regular, automatic replacement of drinking water in a building
IDC	Inter Device Connection Geberit specific interface with I ² C communication and supply voltage of 12 V DC
LAN	Local Area Network Computer network that covers a building or a group of buildings in its extension.
PLC	Programmable logic controller
USB	Universal Serial Bus Serial data transmission system for connecting a computer to external devices
WLAN	Wireless Local Area Network Wireless computer network for interconnecting electronic devices within a restricted area (e.g. a building or a floor).

9.2 Checklists

9.2.1 Planning

Start of the planning phase

Building data

- ☐ Floor plan is available
- ☐ Sanitary plan (draft) is available
- ☐ Electrical plan (draft) is available

Application area of the Geberit Connect system

- | | | |
|------------------------|------------------------------|-----------------------------|
| Drinking water hygiene | ☐ Yes | ☐ No |
| Facility management | ☐ Yes | ☐ No |
| Building automation | ☐ Yes | ☐ No |
| Centralised access | ☐ Yes | ☐ No |

During the planning phase

Network:

If connected via GEBUS:

- How is the GEBUS cable laid in the room?
 - How important is reliability (star or series topology)?
 - How many distribution boxes are required?
 - Are empty pipes required?
- Are there end devices that require a 230 V AC mains voltage, or is the power supply via GEBUS sufficient?

If connected via Bluetooth®:

- Is the maximum distance between the end devices and the Geberit gateway observed (visual distance, max. 10 m)?
- How are the end devices powered (mains, battery, generator)?

If wired network (for building automation):

- Are network connections for LAN cables provided near the Geberit gateway?
- Are the network connections connected to the building automation system?
- If WLAN is required: Is WLAN available in the room with the Geberit gateway?

If Geberit cloud services:

- Is Internet access guaranteed via LAN or WLAN?

If used for drinking water hygiene:

- Which flushing mode is required (time, interval, temperature, difference)?
- Which Geberit Connect end devices are used for flushing?
- Are temperature or volumetric flow sensors required?
- Which logs are required (flushing log, usage log, etc.) and how often are they called up?

If used in facility management:

- What measurements are required (e.g. number of times the washbasin taps are used)?
- Should all Geberit Connect end devices be networked or are individual end devices and sensors sufficient?

If used in building automation:

- Which functions are required in the building automation system?
- Which BACnet objects are required?

If application area has centralised access:

- Is the Geberit gateway easily accessible for technical staff?

Completion of the planning phase

Material lists:

- ☐ Material list of all Geberit Connect components is created.
 - ☐ Material list for accessories for the Geberit Connect end devices is created (GEBUS cable, Geberit bus converter, Geberit Power & Connect Box etc.).
 - ☐ Material list for Geberit gateway including installation material (shell box, terminal block) has been created.

Plans:

- ☐ Sanitary plan is supplemented with Geberit Connect end devices and sensors.
- ☐ Electrical plan is supplemented with required mains connections and GEBUS cables.
- ☐ Zoning is created, possibly as part of the plumbing or electrical plan.
- ☐ Network plan is supplemented with LAN connection for the Geberit gateway.

If used in building automation:

- ☐ List with the BACnet objects to be integrated is created.

If used for drinking water hygiene:

- ☐ Hygiene concept with flushing programmes and their parameters (flushing modes, times, flush volumes, etc.) is created and documented.

Kick-off meeting:

- ☐ A kick-off meeting was held with people from the various trades.
- ☐ People from the various trades are familiar with the structure of the Geberit Connect system and have received the relevant documentation for the installation.
- ☐ People from the various trades are informed about which tests need to be carried out after installation.
- ☐ People from the various trades are informed about what work needs to be completed before commissioning.

9.2.2 Installation

The installation is coordinated and carried out by people from the various trades (electrician, plumber, Geberit specialist). They received the information about the necessary steps during the kick-off meeting.

During the installation phase

If connected via GEBUS:

- ☐ The GEBUS cabling is laid and connected by a qualified electrician.
 - ☐ Test: Geberit gateway and Geberit Connect end devices are connected and switched on. LEDs on all Geberit bus converters, hygiene flush units and GEBUS sensors light up green.
- ☐ The plumber has connected the end devices and sensors to the pipework system.
- ☐ Final assembly of the end devices after checking the GEBUS cabling and the mains connections is completed.
 - ☐ Test: End devices work in the factory setting and are visible in the Geberit Control app.

If connected via Bluetooth®:

- ☐ Connection of the terminal devices to the pipework system is carried out by the plumber.
- ☐ Final assembly of the end devices is complete. No specific steps required for Geberit Connect .
- ☐ Recommendation: Note the pairing secret and serial number of the end devices.
 - ☐ Test: End devices work in the factory setting and are visible in the Geberit Control app.

If wired network (for building automation):

- ☐ LAN cable of the Geberit gateway is connected to the network junction box.

Completion of the installation phase

Test:

- ☐ End devices and sensors function in the factory setting.
- ☐ LEDs on all Geberit bus converters, hygiene flush units and GEBUS sensors light up green.
- ☐ LEDs on the Geberit gateway: Mains connection LED lights up white, status LEDs light up or flash green.
- ☐ LAN cable of the Geberit gateway is connected to the network junction box.
- ☐ Network interface on the Geberit gateway has been tested and approved using IT tools.
- ☐ Serial numbers of the GEBUS sensors are entered in the zone plan, electrical plan or sanitary plan.
- Recommendation: Enter the serial numbers of the end devices in the zone plan, electrical plan or sanitary plan.

9.2.3 Commissioning

Start of the commissioning phase

- ☐ All points from the table "Completion of the installation phase" have been fulfilled.
- ☐ All participants have installed the latest version of the Geberit Control app on their smartphone and were able to log in with their personal Geberit ID.

If used for drinking water hygiene:

- ☐ Hygiene concept with wash programmes and their parameters (wash modes, times, wash volumes, etc.) is available.

If used in building automation:

- ☐ List of the BACnet objects to be integrated is available.

During the commissioning phase

Carry out commissioning according to the "Commissioning", page 91 chapter.

Completion of the commissioning phase

- ☐ All end devices and sensors are assigned to the Geberit gateway with the networking manager and function perfectly.
- ☐ No red LED flashes or lights up on the Geberit gateway.

If Geberit cloud services:

- ☐ Geberit gateway is connected to the Internet via LAN or WLAN.

If used in building automation:

- ☐ BACnet interface is activated and has been configured together with the building automation engineer.
- ☐ Access to BACnet objects is possible, for example with YABE.
- ☐ EDE file has been transferred to the building automation engineer.

If used for drinking water hygiene:

Flushing programmes in single operation:

- ☐ Flushing programmes are programmed in the individual end devices (documented in the commissioning logs of the end devices).

Flushing programmes in networked operation:

- ☐ Flushing programmes are programmed in the Geberit gateway (documented in the commissioning log of the Geberit gateway).

- ☐ Washing programmes in single operation mode are deactivated in individual end devices.

- ☐ Commissioning log is created and handed over..
- ☐ Operator has access to the Geberit gateway via the Geberit Control app.
- ☐ Operator has received instruction on his Geberit Connect system.
- ☐ Operator is familiar with the Geberit Connect quick guide and the system manual.

9.3 Electrical diagram (GEBUS, network, LAN)

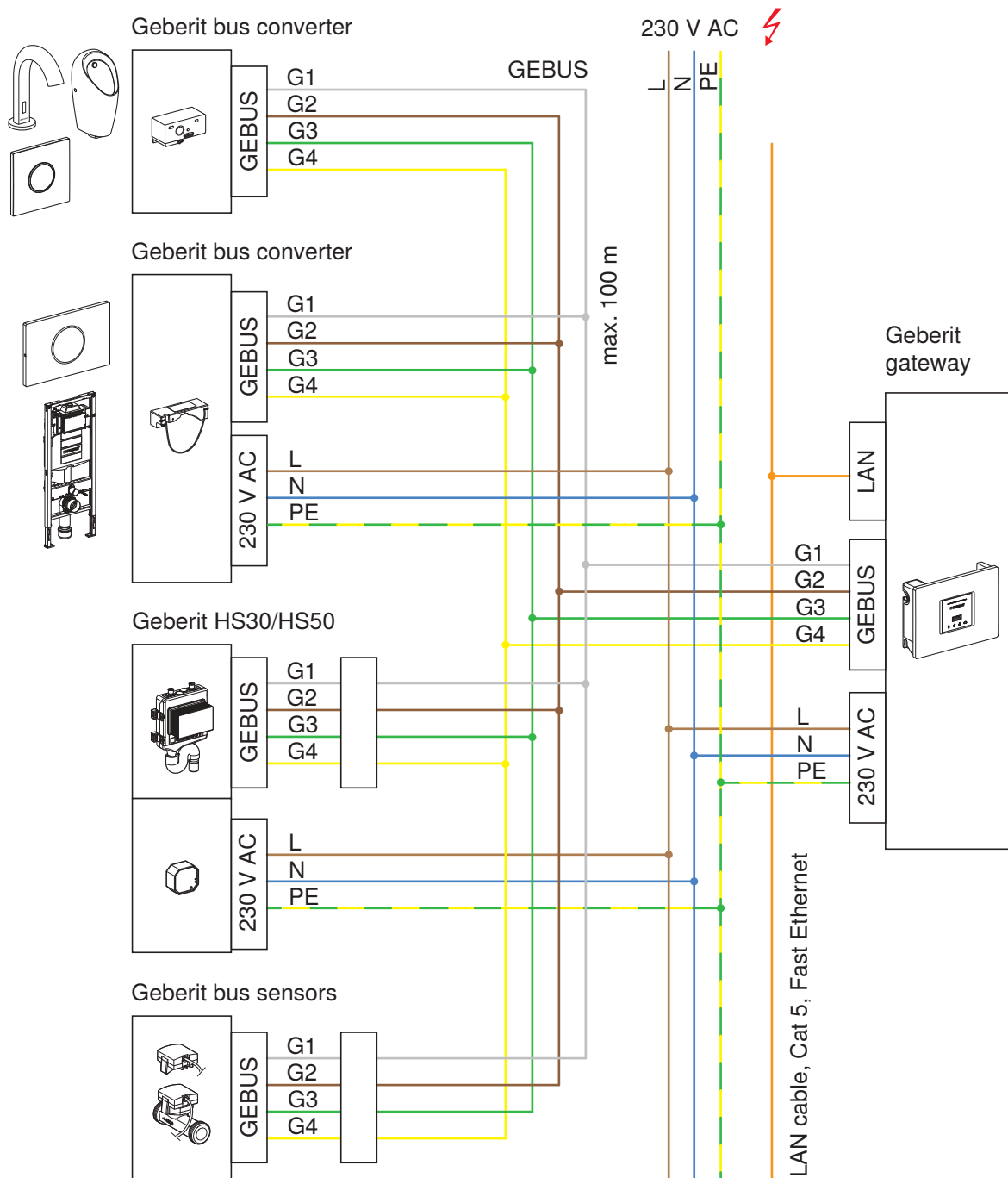
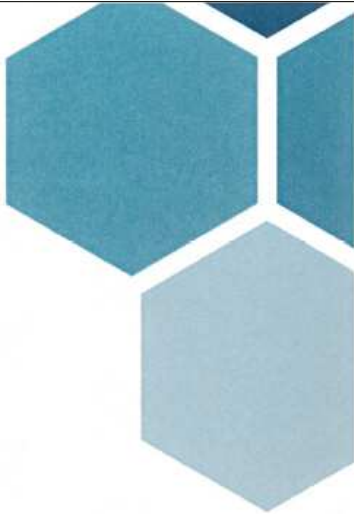


Figure 32: Electrical diagram for GEBUS and mains connection

9.4 Geberit Gateway BACnet certificate

BACnet CONFORMANCE CERTIFICATE







No. BTL-30984

WSPCert attests the conformance of the following BACnet implementation to the BACnet standard ISO 16484-5 protocol revision 1.19. The attested conformance refers to the BACnet Interoperability Building Blocks (BIBBs) listed on the BTL Listing bearing the above-mentioned BTL-number.

The BACnet implementation has fulfilled the requirements according to the test standard ISO 16484-6, the BTL Test Plan 20.0 and the BTL Testing Policies, see Test Report number 22.1300.001.008 of iHomeLab.

Product name (B-GW)
Geberit Gateway
Model(s) F500
Firmware version
Firmware Revision 0.9
Application Software 00.414
Vendor
Geberit International AG
Schachenstrasse 77
8645 Jona, Switzerland

This certificate is valid until **31-Mar-2028**.

17-Feb-2023

Date of Initial Certification



Dipl.-Ing. G. Weinmann
Head of Certification Body

Issued on behalf of BACnet International
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Certification by WSPCert Dr.-Ing. Frank Bitter
Kapuzinerweg 7, 70374 Stuttgart, Germany



9.5 BACnet objects

The BACnet objects offered depend on the range of functions of the respective end devices. The objects are created dynamically when an end device is assigned to the Geberit gateway. The Geberit gateway provides an EDE file with all BACnet objects of the assigned end devices.

The BACnet objects can be edited (e.g. names of zones and end devices). The EDE file can be exported from the Geberit Control app to a USB stick and imported again for editing.

Object instance

For each BACnet object, the Object Instance is created dynamically in accordance with the following rules.

The Object Instance for end devices is composed of the following values:

- Zone
 - Maximum 20 zones
 - 01: Zone 1
 - 02: Zone 2
 - ...
 - 19: Zone 19
- End device type
 - Maximum 15 end devices
 - 00: Collective group (all end devices in the same zone)
 - 01: WC
 - 02: Urinal
 - 03: Washbasin tap
 - 04: Sensor
 - 05: Hygiene flush unit
 - 06-14: RFU¹⁾
- End device position
 - Maximum 31 end device positions
 - 00: Collective group (all end devices of the same type in the same zone)
 - 01: Position 1
 - 02: Position 2
 - ...
 - 30: Position 30
- Object number
 - Maximum 400 objects per end device
 - 000-099: Information (read, static)
 - 100-199: Status (read, dynamic)
 - 200-299: Control (read and write)
 - 300-399: RFU¹⁾

Object Instance for Geberit Gateway:

- Object Instance
 - Area: 0 000 000-0 000 399
 - (Zone for Geberit Gateway = 0)
 - (End device type = 0)
 - (End device position = 0)
 - (Object number = 000-399)

1) RFU: reserved for future use (reserved for future use)

The Object Instance is calculated from these values as follows (→ see also example under “Collective groups”):

- Object Instance =
Object number + (end device position • 400) + (end device type • 400 • 31) + (zone • 400 • 31 • 15)

The individual values are extracted from the Object Instance as follows:

- Object number = Object Instance mod 400
- End device position = $|(Object\ Instance\ mod\ (400 \cdot 31))| : 400|$
- End device type = $|(Object\ Instance\ mod\ (400 \cdot 31 \cdot 15))| : (400 \cdot 31)|$
- Zone = $|Object\ Instance : (400 \cdot 31 \cdot 15)|$

Collective groups

Some BACnet objects can also be used for collective groups, such as water consumption. This way, the water consumption for an entire zone, only for the urinals in a zone or only for a single urinal can be queried. The following BACnet objects of the “Structured View” type are available to represent the different collection groups:

- Collective group for each zone and for the Geberit Gateway
- Collective group for each type of end device per zone (urinal, WC, washbasin tap, etc.)
- For each individual end device

Example of a structure with collective groups (simplified, only with "WaterUsage" object):

Description	Z o n e	T y p e	P o s t	N o o	Object Instance
> Gateway	00	00	00	000	000000
- Gateway.DeviceSerial	00	00	00	001	000001
..					
> Zone.1.AllDevices	01	00	00	000	186000
- Zone.1.AllDevices.WaterUsage	01	00	00	170	186170
..					
> Zone.1.AllToilets	01	01	00	000	198400
- Zone.1.AllToilets.WaterUsage	01	01	00	170	198570
..					
> Zone.1.Toilet.1	01	01	01	000	198800
- Zone.1.Toilet.1.DeviceSerial	01	01	01	001	198801
- Zone.1.Toilet.1.WaterUsage	01	01	01	170	198970
..					
> Zone.1.Toilet.2	01	01	02	000	199200
- Zone.1.Toilet.2.WaterUsage	01	01	02	170	199370
..					
> Zone.1.Toilet.3	01	01	03	000	199600
- Zone.1.Toilet.3.WaterUsage	01	01	03	170	199770
..					
> Zone.1.AllUrinals	01	02	00	000	210800
- Zone.1.AllUrinals.WaterUsage	01	02	00	170	210970
..					
> Zone.1.Urinal.1	01	02	01	000	211200
- Zone.1.Urinal.1.WaterUsage	01	02	01	170	211370
..					
> Zone.1.AllWashbasins	01	03	00	000	223200
- Zone.1.AllWashbasins.WaterUsage	01	03	00	170	223370
..					
> Zone.1.Washbasin.1	01	03	01	000	223600
- Zone.1.Washbasin.1.WaterUsage	01	03	01	170	223770
..					
> Zone.2.AllDevices	02	00	00	000	372000
- Zone.2.AllDevices.WaterUsage	02	00	00	170	372170
..					
> Zone.2.AllToilets	02	01	00	000	384400
- Zone.2.AllToilets.WaterUsage	02	01	00	170	384570
..					
> Zone.2.Toilet.1	02	01	01	000	384800
- Zone.2.Toilet.1.DeviceSerial	02	01	01	001	384801
- Zone.2.Toilet.1.WaterUsage	02	01	01	170	384970
..					

Figure 33: Example for collective groups

→ See also "EDE file for practical example 1", page 149.

BACnet objects only for Geberit Gateway

Object Name	Description	Object Type	Object Instance	R/W
DeviceObject	Various pieces of information about the Geberit Gateway. Device instance is defined in the Geberit app. Factory setting: Serial number	Device	Device instance defined in Geberit app	R
BACstac-NPO-1	Network Port Object (NPO) according to BACnet specification. The LAN interface is described by an NPO. The password for the commands corresponds to the password of the Geberit Gateway.	Network Port	1 or 4194303 for active NPO	R/W
Gateway	Collective group for Geberit Gateway	Structured View	0000000	R

BACnet objects for Geberit Gateway and end devices

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Zone n [Group] [Device]	Collective group for end devices	Structured View	000	R	✓	–	✓	✓	✓	✓	✓
Information											
Device Serial	Serial number of the end device or the Geberit Gateway. Example: FC03-1234567-0E7CDEF8	Character String Value	001	R	–	✓	✓	✓	✓	✓	✓
ZoneName	Designation of the zone to which the end device or the Geberit Gateway is assigned.	Character String Value	002	R	–	✓	✓	✓	✓	✓	✓
Status											
Connection Status	Status of connectivity with the end device. Also affects the “Out_Of_Service Property” of the affected end device objects. Processing: If the end device or at least 1 end device in a collective group is not accessible, trigger an alarm and start diagnostics on site with Geberit Control app.	Multi-state Value • Normal • Unreachable COV	101	R	✓	–	✓	✓	✓	✓	✓

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Generic Info	Geberit Gateway displays information. Corresponds to the status display in the Geberit Control app. Processing: If information is displayed on the Geberit Gateway, trigger an alarm and read out the information on site with the Geberit Control app.	Binary Value COV	102	R	✓	✓	–	–	–	–	–
Generic Warning	End device or Geberit Gateway displays a warning. Corresponds to the status display in the Geberit Control app. Processing: If a warning is displayed on the end device or at least 1 end device in a collective group, trigger the alarm and read out the warning on site with Geberit Control app.	Binary Value COV	103	R	✓	✓	✓	✓	✓	✓	✓
Generic Error	End device or Geberit Gateway displays a fault or error. Corresponds to the status display in the Geberit Control app. Processing: If a fault is indicated on the end device or at least 1 end device in a collective group, trigger the alarm and read out the fault on site with the Geberit Control app.	Binary Value COV	104	R	✓	✓	✓	✓	✓	✓	✓
Generic Fatal Error	End device indicates a fatal fault or fatal error. Corresponds to the status display in the Geberit Control app. Processing: If a fatal fault is indicated on the end device or at least 1 end device in a collective group, trigger the alarm and read out the fault on site with Geberit Control app.	Binary Value COV	105	R	✓	–	–	–	–	–	✓

2 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
LowBattery	Battery of the end device almost empty. If the battery is completely empty and the end device fails, the "ConnectionStatus" is set to "Unreachable". For end devices with mains operation or power supply via GEBUS, "False" is always displayed.	Binary Value COV	106	R	✓	–	✓	✓	✓	–	–
Usage Active	End device is being used. Corresponds to the status display in the Geberit Control app. Set when the end device is in use, e.g. hand in front of the IR sensor. Set on the Geberit Gateway when the pairing button is pressed. Application: for usage display or utilisation analysis.	Binary Value COV	107	R	✓	✓	✓	✓	✓	✓	✓
ValveOpen	Solenoid valve of the end device open. Solenoid valve V1 open during hygiene flushes.	Binary Value COV	108	R	✓	–	✓	✓	✓	–	✓
Valve2 Open	Solenoid valve V2 of a hygiene flush unit is open.	Binary Value COV	109	R	✓	–	–	–	–	–	✓
Level Sensor	Backpressure sensor of a hygiene flush unit reports backpressure.	Binary Value COV	110	R	✓	–	–	–	–	–	✓

3 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
GHS Status	Status of the Geberit Hygiene System (GHS) across all active flushing programmes Use: for alerts and status monitoring	Multi-state Value • Off (no flushing programme active) • Active (at least 1 flushing programme is active in the current operation mode) • Blocked (at least 1 flushing programme is blocked, e.g. temperature flush mode) • Delayed (at least 1 flushing programme is waiting for the enable time) • Draining (at least 1 flushing programme is flushing) • Error (at least 1 flushing programme cannot be executed, e.g. solenoid valve cannot be reached) COV	111	R	–	✓	–	–	–	–	–
Usage Count	Number of uses of the end device. Cumulative value since installation or after resetting to factory settings. All uses actuated by people are recorded, e.g. by the IR sensor.	Positive Integer Value [No Unit] COV (Increment: 1)	140	R	✓	–	✓	✓	✓	–	–

4 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
FlushCount	Number of flushes of the end device. Cumulative value since installation or after resetting to factory settings. All solenoid valve openings and lifter actuations are recorded. Application: for determining maintenance or cleaning intervals.	Positive Integer Value [No Unit] COV (Increment: 1)	141	R	✓	–	✓	✓	✓	–	✓
Flush2 Count	Number of flushes of a hygiene flush unit with solenoid valve V2. Cumulative value since installation or after resetting to factory settings. All solenoid valve openings are detected. Application: for determining maintenance or cleaning intervals.	Positive Integer Value [No Unit] COV (Increment: 1)	142	R	✓	–	–	–	–	–	✓
Automatic FlushCount	Number of automatic flushes of a WC. Cumulative value since installation or after resetting to factory settings. All automatic lifter actuations are recorded.	Positive Integer Value [No Unit] COV (Increment: 1)	143	R	✓	–	–	✓	–	–	–
Manual FlushCount	Number of manual flushes of a WC. Cumulative value since installation or after resetting to factory settings. All manual lifter actuations are recorded.	Positive Integer Value [No Unit] COV (Increment: 1)	144	R	✓	–	–	✓	–	–	–
Full FlushCount	Number of full flushes of a WC. Cumulative value since installation or after resetting to factory settings. All lifter actuations of the full flush are recorded.	Positive Integer Value [No Unit] COV (Increment: 1)	145	R	✓	–	–	✓	–	–	–
Partial FlushCount	Number of partial flushes of a WC. Cumulative value since installation or after resetting to factory settings. All lifter actuations of the partial flush are recorded.	Positive Integer Value [No Unit] COV (Increment: 1)	146	R	✓	–	–	✓	–	–	–

5 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Hygiene FlushCount	Number of flushes of an end device actuated by device-internal flushing programmes. Cumulative value since installation or after resetting to factory settings. All interval, time and temperature flushes are recorded. Application: for monitoring drinking water hygiene.	Positive Integer Value [No Unit] COV (Increment: 1)	147	R	✓	–	✓	✓	✓	–	✓
Hygiene Flush Count2	Number of flushes of a hygiene flush unit with solenoid valve V2, actuated by internal flush programmes. Cumulative value since installation or after resetting to factory settings. All interval, time and temperature flushes are recorded. Application: for monitoring drinking water hygiene.	Positive Integer Value [No Unit] COV (Increment: 1)	148	R	✓	–	–	–	–	–	✓
Water Usage	Water consumption of the end device. Cumulative value since installation or after resetting to factory settings. For stack V1 hygiene flush units. Application for collective groups: for recording water consumption per zone or room. Application for end devices: for monitoring drinking water hygiene.	Positive Integer Value [l] (litres) COV (Increment: 1 l)	170	R	✓	–	✓	✓	✓	–	✓
Water Usage2	Water consumption of stack V2 of a hygiene flush unit. Cumulative value since installation or after resetting to factory settings. Application: for monitoring drinking water hygiene.	Positive Integer Value [l] (Liters) COV (Increment: 1 l)	171	R	✓	–	–	–	–	–	✓
Water Temperature	Current water temperature. For stack V1 hygiene flush units.	Positive Integer Value [°C] COV (Increment: 1 °C)	172	R	–	–	–	–	–	✓	✓

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Water Temperature2	Current water temperature of stack V2 of a hygiene flush unit.	Positive Integer Value [°C] COV (Increment: 1 °C)	173	R	–	–	–	–	–	–	✓
WaterFlow	Current flow rate. For stack V1 hygiene flush units.	Positive Integer Value [ml/s] COV (Increment: 1 ml/s)	174	R	–	–	–	–	–	✓	✓
Water Flow2	Current flow rate of stack V2 of a hygiene flush unit.	Positive Integer Value [ml/s] COV Increment: 1 ml/s)	175	R	–	–	–	–	–	–	✓
Control											
Locate	Locates an end device or a Geberit Gateway. On = LED on the end device flashes red/green (Bluetooth® LED at Geberit Gateway).	Multi-state Value • Unknown • On • Off	201	W	–	✓	✓	✓	✓	✓	✓
Disable Radio	End device: Deactivates the Bluetooth® interface. If the Bluetooth® interface is deactivated, the end device can only be accessed via GEBUS. Not possible for end devices that are assigned via Bluetooth® to the Geberit Gateway.	Multi-state Value • False • True • Indeterminate (only for collective groups) COV	202	R/W	✓	✓	✓	✓	✓	–	✓
	Geberit Gateway: Deactivates all radio interfaces. If the radio interfaces are deactivated, the Geberit Gateway can only be accessed via LAN.										

7 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Drain Volume	Opens the solenoid valve of the end device until the specified water volume is reached. For stack V1 hygiene flush units. Minimum and maximum water volumes are defined per end device. The solenoid valve can be closed prematurely by sending a new command with the water volume = 0 l. If the command cannot be executed, an entry is created in the event log in the end device. Read the value: 1 = Valve open 0 = Valve closed For hygiene flushes, it is recommended to switch the local flush programmes off in the Geberit Control app. Flushing processes that are otherwise undesired can be actuated because the hygiene flush unit processes all flush actuations equally. Application: for drinking water hygiene.	Positive Integer Value [l] (Liters)	203	R/W	–	–	✓	✓	✓	–	✓
Drain Volume2	Opens solenoid valve V2 of a hygiene flush unit until the specified water volume is reached. Further details as above.	Positive Integer Value [l] (Liters)	204	R/W	–	–	–	–	–	–	✓
Flush	Actuates a flushing process on the end device. For WCs, a full flush is actuated; for urinals, a flush with the FlushTime.	Binary Value	205	W	–	–	–	✓	✓	–	–
FlushTime	Determines the flush time for urinal flushes. If, in the case of collective groups, the values of the individual end devices are different, 4294967295 ($2^{32}-1$) is output.	Positive Integer Value [s] (Seconds)	206	R/W	✓	–	–	–	✓	–	–

8 / 9

Object Name	Description	Object Type [Unit]	Object Number	R/W	Group	GW	WT	WC	UR	SE	HS
Cleaning	Activates and deactivates cleaning mode. Cleaning mode switches off again automatically. Application: Use the key switch to activate the cleaning mode for all end devices in the room.	Multi-state Value • Inactive • Active • Indeterminate (only for collective groups) COV	207	R/W	✓	–	✓	✓	✓	–	–
GHSOperating Mode	Sets the active operation mode for the Geberit Hygiene System (GHS).	Multi-state Value • Off • Mode 1 • Mode 2 COV	208	R/W	–	✓	–	–	–	–	–

9 / 9

R	Read
W	Write
R/W	Read/Write
COV	Value is sent automatically in case of changes (change of value)
Group ✓	Object can be used in collective groups
GW ✓	Object applies to Geberit Gateway
WT ✓	Object applies to washbasin taps
WC ✓	Object applies to WC flush controls
UR ✓	Object applies to urinals and urinal flush controls
SE ✓	Object applies to GEBUS sensors
HS ✓	Object applies to hygiene flush units and hygiene flush units in concealed cisterns

9.6 EDE file for practical example 1

PROJECT_NAME: Sample EDE file for reference installation.
VERSION_OF_REFERENCEFILE: 27
TIMESTAMP_OF_LAST_CHANGE: 30.03.2023 12:47
AUTHOR_OF_LAST_CHANGE: John Smith
VERSION_OF_LAYOUT: 2.3

#mandatory	mandator	mandatory	mandatory	mandatory	optional
# keyname	device obj.-instance	object-name	object-type	object-instance	description
Device:1601395	1234	WC Vorraum Herren	8	1234	BACnet Interface of Geberit products to be connected to a Building Management System
StructuredView:0	1234	Gateway	29	0	Gateway
CharStringValue:1	1234	Gateway.DeviceSerial	40	1	Serial number of the gateway
NetworkPort:1	1234	BACstac-NPO-1	56	1	
CharStringValue:2	1234	Gateway.ZoneName	40	2	Name of the zone/room the gateway is assigned to
BinaryValue:102	1234	Gateway.GenericInfo	5	102	The gateway has an info
BinaryValue:103	1234	Gateway.GenericWarning	5	103	The gateway has a warning
BinaryValue:104	1234	Gateway.GenericError	5	104	The gateway has an error
BinaryValue:107	1234	Gateway.UsageActive	5	107	Pairing button on gateway is currently pressed
MultiStateValue:201	1234	Gateway.Locate	19	201	Used to locate the gateway (writable)
MultiStateValue:202	1234	Gateway.DisableRadio	19	202	Used to switch on and off the radio interfaces in gateway (writable)
StructuredView:186000	1234	Zone.1.AllDevices	29	186000	Collection group for all devices
CharStringValue:186002	1234	Zone.1.AllDevices.ZoneName	40	186002	Name of the zone/room the device is assigned to
MultiStateValue:186101	1234	Zone.1.AllDevices.ConnectionStatus	19	186101	State of the connection between gateway and device (Collection group)
BinaryValue:186103	1234	Zone.1.AllDevices.GenericWarning	5	186103	The device has a warning (Collection group)
BinaryValue:186104	1234	Zone.1.AllDevices.GenericError	5	186104	The device has an error (Collection group)
BinaryValue:186106	1234	Zone.1.AllDevices.LowBattery	5	186106	Battery in the device is low (Collection group)
BinaryValue:186107	1234	Zone.1.AllDevices.UsageActive	5	186107	Device is currently in use (Collection group)
BinaryValue:186108	1234	Zone.1.AllDevices.ValveOpen	5	186108	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:186140	1234	Zone.1.AllDevices.UsageCount	48	186140	Counts the usages of the device (Collection group)
PositiveIntegerValue:186141	1234	Zone.1.AllDevices.FlushCount	48	186141	Counts the flushes of the device (Collection group)
PositiveIntegerValue:186147	1234	Zone.1.AllDevices.HygieneFlushCount	48	186147	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:186170	1234	Zone.1.AllDevices.WaterUsage	48	186170	Indicates the water usage of the device (Collection group)
MultiStateValue:186207	1234	Zone.1.AllDevices.Cleaning	19	186207	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:223200	1234	Zone.1.AllWashbasins	29	223200	Collection group for all washbasins
CharStringValue:223202	1234	Zone.1.AllWashbasins.ZoneName	40	223202	Name of the zone/room the device is assigned to
MultiStateValue:223301	1234	Zone.1.AllWashbasins.ConnectionStatus	19	223301	State of the connection between gateway and device (Collection group)
BinaryValue:223303	1234	Zone.1.AllWashbasins.GenericWarning	5	223303	The device has a warning (Collection group)
BinaryValue:223304	1234	Zone.1.AllWashbasins.GenericError	5	223304	The device has an error (Collection group)
BinaryValue:223306	1234	Zone.1.AllWashbasins.LowBattery	5	223306	Battery in the device is low (Collection group)
BinaryValue:223307	1234	Zone.1.AllWashbasins.UsageActive	5	223307	Device is currently in use (Collection group)
BinaryValue:223308	1234	Zone.1.AllWashbasins.ValveOpen	5	223308	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:223340	1234	Zone.1.AllWashbasins.UsageCount	48	223340	Counts the usages of the device (Collection group)
PositiveIntegerValue:223341	1234	Zone.1.AllWashbasins.FlushCount	48	223341	Counts the flushes of the device (Collection group)
PositiveIntegerValue:223347	1234	Zone.1.AllWashbasins.HygieneFlushCount	48	223347	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:223370	1234	Zone.1.AllWashbasins.WaterUsage	48	223370	Indicates the water usage of the device (Collection group)
MultiStateValue:223407	1234	Zone.1.AllWashbasins.Cleaning	19	223407	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:223600	1234	Zone.1.Washbasin.1	29	223600	Lavatory Tap IFP
CharStringValue:223601	1234	Zone.1.Washbasin.1.DeviceSerial	40	223601	Serial number of the device
CharStringValue:223602	1234	Zone.1.Washbasin.1.ZoneName	40	223602	Name of the zone/room the device is assigned to
MultiStateValue:223701	1234	Zone.1.Washbasin.1.ConnectionStatus	19	223701	State of the connection between gateway and device
BinaryValue:223703	1234	Zone.1.Washbasin.1.GenericWarning	5	223703	The device has a warning
BinaryValue:223704	1234	Zone.1.Washbasin.1.GenericError	5	223704	The device has an error
BinaryValue:223706	1234	Zone.1.Washbasin.1.LowBattery	5	223706	Battery in the device is low
BinaryValue:223707	1234	Zone.1.Washbasin.1.UsageActive	5	223707	Device is currently in use
BinaryValue:223708	1234	Zone.1.Washbasin.1.ValveOpen	5	223708	Valve in the device is currently opened
PositiveIntegerValue:223740	1234	Zone.1.Washbasin.1.UsageCount	48	223740	Counts the usages of the device
PositiveIntegerValue:223741	1234	Zone.1.Washbasin.1.FlushCount	48	223741	Counts the flushes of the device
PositiveIntegerValue:223747	1234	Zone.1.Washbasin.1.HygieneFlushCount	48	223747	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:223770	1234	Zone.1.Washbasin.1.WaterUsage	48	223770	Indicates the water usage of the device
MultiStateValue:223801	1234	Zone.1.Washbasin.1.Locate	19	223801	Used to locate the device (writable)
PositiveIntegerValue:223803	1234	Zone.1.Washbasin.1.DrainVolume	48	223803	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:223807	1234	Zone.1.Washbasin.1.Cleaning	19	223807	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:224000	1234	Zone.1.Washbasin.2	29	224000	Lavatory Tap IFP
CharStringValue:224001	1234	Zone.1.Washbasin.2.DeviceSerial	40	224001	Serial number of the device
CharStringValue:224002	1234	Zone.1.Washbasin.2.ZoneName	40	224002	Name of the zone/room the device is assigned to
MultiStateValue:224101	1234	Zone.1.Washbasin.2.ConnectionStatus	19	224101	State of the connection between gateway and device
BinaryValue:224103	1234	Zone.1.Washbasin.2.GenericWarning	5	224103	The device has a warning
BinaryValue:224104	1234	Zone.1.Washbasin.2.GenericError	5	224104	The device has an error
BinaryValue:224106	1234	Zone.1.Washbasin.2.LowBattery	5	224106	Battery in the device is low
BinaryValue:224107	1234	Zone.1.Washbasin.2.UsageActive	5	224107	Device is currently in use
BinaryValue:224108	1234	Zone.1.Washbasin.2.ValveOpen	5	224108	Valve in the device is currently opened
PositiveIntegerValue:224140	1234	Zone.1.Washbasin.2.UsageCount	48	224140	Counts the usages of the device
PositiveIntegerValue:224141	1234	Zone.1.Washbasin.2.FlushCount	48	224141	Counts the flushes of the device
PositiveIntegerValue:224147	1234	Zone.1.Washbasin.2.HygieneFlushCount	48	224147	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:224170	1234	Zone.1.Washbasin.2.WaterUsage	48	224170	Indicates the water usage of the device
MultiStateValue:224201	1234	Zone.1.Washbasin.2.Locate	19	224201	Used to locate the device (writable)
PositiveIntegerValue:224203	1234	Zone.1.Washbasin.2.DrainVolume	48	224203	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:224207	1234	Zone.1.Washbasin.2.Cleaning	19	224207	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:224400	1234	Zone.1.Washbasin.3	29	224400	Lavatory Tap IFP
CharStringValue:224401	1234	Zone.1.Washbasin.3.DeviceSerial	40	224401	Serial number of the device
CharStringValue:224402	1234	Zone.1.Washbasin.3.ZoneName	40	224402	Name of the zone/room the device is assigned to
MultiStateValue:224501	1234	Zone.1.Washbasin.3.ConnectionStatus	19	224501	State of the connection between gateway and device
BinaryValue:224503	1234	Zone.1.Washbasin.3.GenericWarning	5	224503	The device has a warning
BinaryValue:224504	1234	Zone.1.Washbasin.3.GenericError	5	224504	The device has an error
BinaryValue:224506	1234	Zone.1.Washbasin.3.LowBattery	5	224506	Battery in the device is low
BinaryValue:224507	1234	Zone.1.Washbasin.3.UsageActive	5	224507	Device is currently in use
BinaryValue:224508	1234	Zone.1.Washbasin.3.ValveOpen	5	224508	Valve in the device is currently opened
PositiveIntegerValue:224540	1234	Zone.1.Washbasin.3.UsageCount	48	224540	Counts the usages of the device
PositiveIntegerValue:224541	1234	Zone.1.Washbasin.3.FlushCount	48	224541	Counts the flushes of the device
PositiveIntegerValue:224547	1234	Zone.1.Washbasin.3.HygieneFlushCount	48	224547	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:224570	1234	Zone.1.Washbasin.3.WaterUsage	48	224570	Indicates the water usage of the device
MultiStateValue:224601	1234	Zone.1.Washbasin.3.Locate	19	224601	Used to locate the device (writable)
PositiveIntegerValue:224603	1234	Zone.1.Washbasin.3.DrainVolume	48	224603	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:224607	1234	Zone.1.Washbasin.3.Cleaning	19	224607	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:224800	1234	Zone.1.Washbasin.4	29	224800	Lavatory Tap IFP
CharStringValue:224801	1234	Zone.1.Washbasin.4.DeviceSerial	40	224801	Serial number of the device
CharStringValue:224802	1234	Zone.1.Washbasin.4.ZoneName	40	224802	Name of the zone/room the device is assigned to
MultiStateValue:224901	1234	Zone.1.Washbasin.4.ConnectionStatus	19	224901	State of the connection between gateway and device
BinaryValue:224903	1234	Zone.1.Washbasin.4.GenericWarning	5	224903	The device has a warning
BinaryValue:224904	1234	Zone.1.Washbasin.4.GenericError	5	224904	The device has an error
BinaryValue:224906	1234	Zone.1.Washbasin.4.LowBattery	5	224906	Battery in the device is low
BinaryValue:224907	1234	Zone.1.Washbasin.4.UsageActive	5	224907	Device is currently in use
BinaryValue:224908	1234	Zone.1.Washbasin.4.ValveOpen	5	224908	Valve in the device is currently opened
PositiveIntegerValue:224940	1234	Zone.1.Washbasin.4.UsageCount	48	224940	Counts the usages of the device

PositveIntegerValue:224941	1234	Zone.1.Washbasin.4.FlushCount	48	224941	Counts the flushes of the device
PositveIntegerValue:224947	1234	Zone.1.Washbasin.4.HygieneFlushCount	48	224947	Counts the flushes based on local hygiene programs of the device
PositveIntegerValue:224970	1234	Zone.1.Washbasin.4.WaterUsage	48	224970	Indicates the water usage of the device
MultiStateValue:225001	1234	Zone.1.Washbasin.4.Locate	19	225001	Used to locate the device (writable)
PositveIntegerValue:225003	1234	Zone.1.Washbasin.4.DrainVolume	48	225003	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:225007	1234	Zone.1.Washbasin.4.Cleaning	19	225007	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:372000	1234	Zone.2.AllDevices	29	372000	Collection group for all devices
CharStringValue:372002	1234	Zone.2.AllDevices.ZoneName	40	372002	Name of the zone/room the device is assigned to
MultiStateValue:372101	1234	Zone.2.AllDevices.ConnectionStatus	19	372101	State of the connection between gateway and device (Collection group)
BinaryValue:372103	1234	Zone.2.AllDevices.GenericWarning	5	372103	The device has a warning (Collection group)
BinaryValue:372104	1234	Zone.2.AllDevices.GenericError	5	372104	The device has an error (Collection group)
BinaryValue:372106	1234	Zone.2.AllDevices.LowBattery	5	372106	Battery in the device is low (Collection group)
BinaryValue:372107	1234	Zone.2.AllDevices.UsageActive	5	372107	Device is currently in use (Collection group)
BinaryValue:372108	1234	Zone.2.AllDevices.ValveOpen	5	372108	Valve in the device is currently opened (Collection group)
PositveIntegerValue:372140	1234	Zone.2.AllDevices.UsageCount	48	372140	Counts the usages of the device (Collection group)
PositveIntegerValue:372141	1234	Zone.2.AllDevices.FlushCount	48	372141	Counts the flushes of the device (Collection group)
PositveIntegerValue:372143	1234	Zone.2.AllDevices.AutomaticFlushCount	48	372143	Counts the automatic flushes of the device (Collection group)
PositveIntegerValue:372144	1234	Zone.2.AllDevices.ManualFlushCount	48	372144	Counts the manual flushes of the device (Collection group)
PositveIntegerValue:372145	1234	Zone.2.AllDevices.FullFlushCount	48	372145	Counts the full flushes of the device (Collection group)
PositveIntegerValue:372146	1234	Zone.2.AllDevices.PartialFlushCount	48	372146	Counts the partial flushes of the device (Collection group)
PositveIntegerValue:372147	1234	Zone.2.AllDevices.HygieneFlushCount	48	372147	Counts the flushes based on local hygiene programs of the device (Collection group)
PositveIntegerValue:372170	1234	Zone.2.AllDevices.WaterUsage	48	372170	Indicates the water usage of the device (Collection group)
PositveIntegerValue:372206	1234	Zone.2.AllDevices.FlushTime	48	372206	Used to adjust the flush time for an urinal (writable) (Collection group)
MultiStateValue:372207	1234	Zone.2.AllDevices.Cleaning	19	372207	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:384400	1234	Zone.2.AllToilets	29	384400	Collection group for all toilets
CharStringValue:384402	1234	Zone.2.AllToilets.ZoneName	40	384402	Name of the zone/room the device is assigned to
MultiStateValue:384501	1234	Zone.2.AllToilets.ConnectionStatus	19	384501	State of the connection between gateway and device (Collection group)
BinaryValue:384503	1234	Zone.2.AllToilets.GenericWarning	5	384503	The device has a warning (Collection group)
BinaryValue:384504	1234	Zone.2.AllToilets.GenericError	5	384504	The device has an error (Collection group)
BinaryValue:384506	1234	Zone.2.AllToilets.LowBattery	5	384506	Battery in the device is low (Collection group)
BinaryValue:384507	1234	Zone.2.AllToilets.UsageActive	5	384507	Device is currently in use (Collection group)
BinaryValue:384508	1234	Zone.2.AllToilets.ValveOpen	5	384508	Valve in the device is currently opened (Collection group)
PositveIntegerValue:384540	1234	Zone.2.AllToilets.UsageCount	48	384540	Counts the usages of the device (Collection group)
PositveIntegerValue:384541	1234	Zone.2.AllToilets.FlushCount	48	384541	Counts the flushes of the device (Collection group)
PositveIntegerValue:384543	1234	Zone.2.AllToilets.AutomaticFlushCount	48	384543	Counts the automatic flushes of the device (Collection group)
PositveIntegerValue:384544	1234	Zone.2.AllToilets.ManualFlushCount	48	384544	Counts the manual flushes of the device (Collection group)
PositveIntegerValue:384545	1234	Zone.2.AllToilets.FullFlushCount	48	384545	Counts the full flushes of the device (Collection group)
PositveIntegerValue:384546	1234	Zone.2.AllToilets.PartialFlushCount	48	384546	Counts the partial flushes of the device (Collection group)
PositveIntegerValue:384547	1234	Zone.2.AllToilets.HygieneFlushCount	48	384547	Counts the flushes based on local hygiene programs of the device (Collection group)
PositveIntegerValue:384570	1234	Zone.2.AllToilets.WaterUsage	48	384570	Indicates the water usage of the device (Collection group)
MultiStateValue:384607	1234	Zone.2.AllToilets.Cleaning	19	384607	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:384800	1234	Zone.2.Toilet.1	29	384800	WcFlush Automatic Mains
CharStringValue:384801	1234	Zone.2.Toilet.1.DeviceSerial	40	384801	Serial number of the device
CharStringValue:384802	1234	Zone.2.Toilet.1.ZoneName	40	384802	Name of the zone/room the device is assigned to
MultiStateValue:384901	1234	Zone.2.Toilet.1.ConnectionStatus	19	384901	State of the connection between gateway and device
BinaryValue:384903	1234	Zone.2.Toilet.1.GenericWarning	5	384903	The device has a warning
BinaryValue:384904	1234	Zone.2.Toilet.1.GenericError	5	384904	The device has an error
BinaryValue:384906	1234	Zone.2.Toilet.1.LowBattery	5	384906	Battery in the device is low
BinaryValue:384907	1234	Zone.2.Toilet.1.UsageActive	5	384907	Device is currently in use
BinaryValue:384908	1234	Zone.2.Toilet.1.ValveOpen	5	384908	Valve in the device is currently opened
PositveIntegerValue:384940	1234	Zone.2.Toilet.1.UsageCount	48	384940	Counts the usages of the device
PositveIntegerValue:384941	1234	Zone.2.Toilet.1.FlushCount	48	384941	Counts the flushes of the device
PositveIntegerValue:384943	1234	Zone.2.Toilet.1.AutomaticFlushCount	48	384943	Counts the automatic flushes of the device
PositveIntegerValue:384944	1234	Zone.2.Toilet.1.ManualFlushCount	48	384944	Counts the manual flushes of the device
PositveIntegerValue:384945	1234	Zone.2.Toilet.1.FullFlushCount	48	384945	Counts the full flushes of the device
PositveIntegerValue:384946	1234	Zone.2.Toilet.1.PartialFlushCount	48	384946	Counts the partial flushes of the device
PositveIntegerValue:384947	1234	Zone.2.Toilet.1.HygieneFlushCount	48	384947	Counts the flushes based on local hygiene programs of the device
PositveIntegerValue:384970	1234	Zone.2.Toilet.1.WaterUsage	48	384970	Indicates the water usage of the device
MultiStateValue:385001	1234	Zone.2.Toilet.1.Locate	19	385001	Used to locate the device (writable)
PositveIntegerValue:385003	1234	Zone.2.Toilet.1.DrainVolume	48	385003	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:385005	1234	Zone.2.Toilet.1.Flush	5	385005	Used to trigger a single flush at the device (writable)
MultiStateValue:385007	1234	Zone.2.Toilet.1.Cleaning	19	385007	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:385200	1234	Zone.2.Toilet.2	29	385200	WcFlush Automatic Mains
CharStringValue:385201	1234	Zone.2.Toilet.2.DeviceSerial	40	385201	Serial number of the device
CharStringValue:385202	1234	Zone.2.Toilet.2.ZoneName	40	385202	Name of the zone/room the device is assigned to
MultiStateValue:385301	1234	Zone.2.Toilet.2.ConnectionStatus	19	385301	State of the connection between gateway and device
BinaryValue:385303	1234	Zone.2.Toilet.2.GenericWarning	5	385303	The device has a warning
BinaryValue:385304	1234	Zone.2.Toilet.2.GenericError	5	385304	The device has an error
BinaryValue:385306	1234	Zone.2.Toilet.2.LowBattery	5	385306	Battery in the device is low
BinaryValue:385307	1234	Zone.2.Toilet.2.UsageActive	5	385307	Device is currently in use
BinaryValue:385308	1234	Zone.2.Toilet.2.ValveOpen	5	385308	Valve in the device is currently opened
PositveIntegerValue:385340	1234	Zone.2.Toilet.2.UsageCount	48	385340	Counts the usages of the device
PositveIntegerValue:385341	1234	Zone.2.Toilet.2.FlushCount	48	385341	Counts the flushes of the device
PositveIntegerValue:385343	1234	Zone.2.Toilet.2.AutomaticFlushCount	48	385343	Counts the automatic flushes of the device
PositveIntegerValue:385344	1234	Zone.2.Toilet.2.ManualFlushCount	48	385344	Counts the manual flushes of the device
PositveIntegerValue:385345	1234	Zone.2.Toilet.2.FullFlushCount	48	385345	Counts the full flushes of the device
PositveIntegerValue:385346	1234	Zone.2.Toilet.2.PartialFlushCount	48	385346	Counts the partial flushes of the device
PositveIntegerValue:385347	1234	Zone.2.Toilet.2.HygieneFlushCount	48	385347	Counts the flushes based on local hygiene programs of the device
PositveIntegerValue:385370	1234	Zone.2.Toilet.2.WaterUsage	48	385370	Indicates the water usage of the device
MultiStateValue:385401	1234	Zone.2.Toilet.2.Locate	19	385401	Used to locate the device (writable)
PositveIntegerValue:385403	1234	Zone.2.Toilet.2.DrainVolume	48	385403	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:385405	1234	Zone.2.Toilet.2.Flush	5	385405	Used to trigger a single flush at the device (writable)
MultiStateValue:385407	1234	Zone.2.Toilet.2.Cleaning	19	385407	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:385600	1234	Zone.2.Toilet.3	29	385600	WcFlush Automatic Mains
CharStringValue:385601	1234	Zone.2.Toilet.3.DeviceSerial	40	385601	Serial number of the device
CharStringValue:385602	1234	Zone.2.Toilet.3.ZoneName	40	385602	Name of the zone/room the device is assigned to
MultiStateValue:385701	1234	Zone.2.Toilet.3.ConnectionStatus	19	385701	State of the connection between gateway and device
BinaryValue:385703	1234	Zone.2.Toilet.3.GenericWarning	5	385703	The device has a warning
BinaryValue:385704	1234	Zone.2.Toilet.3.GenericError	5	385704	The device has an error
BinaryValue:385706	1234	Zone.2.Toilet.3.LowBattery	5	385706	Battery in the device is low
BinaryValue:385707	1234	Zone.2.Toilet.3.UsageActive	5	385707	Device is currently in use
BinaryValue:385708	1234	Zone.2.Toilet.3.ValveOpen	5	385708	Valve in the device is currently opened
PositveIntegerValue:385740	1234	Zone.2.Toilet.3.UsageCount	48	385740	Counts the usages of the device
PositveIntegerValue:385741	1234	Zone.2.Toilet.3.FlushCount	48	385741	Counts the flushes of the device
PositveIntegerValue:385743	1234	Zone.2.Toilet.3.AutomaticFlushCount	48	385743	Counts the automatic flushes of the device
PositveIntegerValue:385744	1234	Zone.2.Toilet.3.ManualFlushCount	48	385744	Counts the manual flushes of the device
PositveIntegerValue:385745	1234	Zone.2.Toilet.3.FullFlushCount	48	385745	Counts the full flushes of the device
PositveIntegerValue:385746	1234	Zone.2.Toilet.3.PartialFlushCount	48	385746	Counts the partial flushes of the device
PositveIntegerValue:385747	1234	Zone.2.Toilet.3.HygieneFlushCount	48	385747	Counts the flushes based on local hygiene programs of the device
PositveIntegerValue:385770	1234	Zone.2.Toilet.3.WaterUsage	48	385770	Indicates the water usage of the device
MultiStateValue:385801	1234	Zone.2.Toilet.3.Locate	19	385801	Used to locate the device (writable)
PositveIntegerValue:385803	1234	Zone.2.Toilet.3.DrainVolume	48	385803	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:385805	1234	Zone.2.Toilet.3.Flush	5	385805	Used to trigger a single flush at the device (writable)
MultiStateValue:385807	1234	Zone.2.Toilet.3.Cleaning	19	385807	Used to switch on and off the cleaning mode of the device (writable)

StructuredView:396800	1234	Zone.2.AllUrinals	29	396800	Collection group for all urinals
CharStringValue:396802	1234	Zone.2.AllUrinals.ZoneName	40	396802	Name of the zone/room the device is assigned to
MultiStateValue:396901	1234	Zone.2.AllUrinals.ConnectionStatus	19	396901	State of the connection between gateway and device (Collection group)
BinaryValue:396903	1234	Zone.2.AllUrinals.GenericWarning	5	396903	The device has a warning (Collection group)
BinaryValue:396904	1234	Zone.2.AllUrinals.GenericError	5	396904	The device has an error (Collection group)
BinaryValue:396906	1234	Zone.2.AllUrinals.LowBattery	5	396906	Battery in the device is low (Collection group)
BinaryValue:396907	1234	Zone.2.AllUrinals.UsageActive	5	396907	Device is currently in use (Collection group)
BinaryValue:396908	1234	Zone.2.AllUrinals.ValveOpen	5	396908	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:396940	1234	Zone.2.AllUrinals.UsageCount	48	396940	Counts the usages of the device (Collection group)
PositiveIntegerValue:396941	1234	Zone.2.AllUrinals.FlushCount	48	396941	Counts the flushes of the device (Collection group)
PositiveIntegerValue:396947	1234	Zone.2.AllUrinals.HygieneFlushCount	48	396947	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:396970	1234	Zone.2.AllUrinals.WaterUsage	48	396970	Indicates the water usage of the device (Collection group)
PositiveIntegerValue:397006	1234	Zone.2.AllUrinals.FlushTime	48	397006	Used to adjust the flush time for an urinal (writable) (Collection group)
MultiStateValue:397007	1234	Zone.2.AllUrinals.Cleaning	19	397007	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:397200	1234	Zone.2.Urinal.1	29	397200	Urinal IR Control
CharStringValue:397201	1234	Zone.2.Urinal.1.DeviceSerial	40	397201	Serial number of the device
CharStringValue:397202	1234	Zone.2.Urinal.1.ZoneName	40	397202	Name of the zone/room the device is assigned to
MultiStateValue:397301	1234	Zone.2.Urinal.1.ConnectionStatus	19	397301	State of the connection between gateway and device
BinaryValue:397303	1234	Zone.2.Urinal.1.GenericWarning	5	397303	The device has a warning
BinaryValue:397304	1234	Zone.2.Urinal.1.GenericError	5	397304	The device has an error
BinaryValue:397306	1234	Zone.2.Urinal.1.LowBattery	5	397306	Battery in the device is low
BinaryValue:397307	1234	Zone.2.Urinal.1.UsageActive	5	397307	Device is currently in use
BinaryValue:397308	1234	Zone.2.Urinal.1.ValveOpen	5	397308	Valve in the device is currently opened
PositiveIntegerValue:397340	1234	Zone.2.Urinal.1.UsageCount	48	397340	Counts the usages of the device
PositiveIntegerValue:397341	1234	Zone.2.Urinal.1.FlushCount	48	397341	Counts the flushes of the device
PositiveIntegerValue:397347	1234	Zone.2.Urinal.1.HygieneFlushCount	48	397347	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:397370	1234	Zone.2.Urinal.1.WaterUsage	48	397370	Indicates the water usage of the device
MultiStateValue:397401	1234	Zone.2.Urinal.1.Locate	19	397401	Used to locate the device (writable)
PositiveIntegerValue:397403	1234	Zone.2.Urinal.1.DrainVolume	48	397403	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:397405	1234	Zone.2.Urinal.1.Flush	5	397405	Used to trigger a single flush at the device (writable)
PositiveIntegerValue:397406	1234	Zone.2.Urinal.1.FlushTime	48	397406	Used to adjust the flush time for an urinal (writable)
MultiStateValue:397407	1234	Zone.2.Urinal.1.Cleaning	19	397407	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:397600	1234	Zone.2.Urinal.2	29	397600	Urinal IR Control
CharStringValue:397601	1234	Zone.2.Urinal.2.DeviceSerial	40	397601	Serial number of the device
CharStringValue:397602	1234	Zone.2.Urinal.2.ZoneName	40	397602	Name of the zone/room the device is assigned to
MultiStateValue:397701	1234	Zone.2.Urinal.2.ConnectionStatus	19	397701	State of the connection between gateway and device
BinaryValue:397703	1234	Zone.2.Urinal.2.GenericWarning	5	397703	The device has a warning
BinaryValue:397704	1234	Zone.2.Urinal.2.GenericError	5	397704	The device has an error
BinaryValue:397706	1234	Zone.2.Urinal.2.LowBattery	5	397706	Battery in the device is low
BinaryValue:397707	1234	Zone.2.Urinal.2.UsageActive	5	397707	Device is currently in use
BinaryValue:397708	1234	Zone.2.Urinal.2.ValveOpen	5	397708	Valve in the device is currently opened
PositiveIntegerValue:397740	1234	Zone.2.Urinal.2.UsageCount	48	397740	Counts the usages of the device
PositiveIntegerValue:397741	1234	Zone.2.Urinal.2.FlushCount	48	397741	Counts the flushes of the device
PositiveIntegerValue:397747	1234	Zone.2.Urinal.2.HygieneFlushCount	48	397747	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:397770	1234	Zone.2.Urinal.2.WaterUsage	48	397770	Indicates the water usage of the device
MultiStateValue:397801	1234	Zone.2.Urinal.2.Locate	19	397801	Used to locate the device (writable)
PositiveIntegerValue:397803	1234	Zone.2.Urinal.2.DrainVolume	48	397803	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:397805	1234	Zone.2.Urinal.2.Flush	5	397805	Used to trigger a single flush at the device (writable)
PositiveIntegerValue:397806	1234	Zone.2.Urinal.2.FlushTime	48	397806	Used to adjust the flush time for an urinal (writable)
MultiStateValue:397807	1234	Zone.2.Urinal.2.Cleaning	19	397807	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:398000	1234	Zone.2.Urinal.3	29	398000	Urinal IR Control
CharStringValue:398001	1234	Zone.2.Urinal.3.DeviceSerial	40	398001	Serial number of the device
CharStringValue:398002	1234	Zone.2.Urinal.3.ZoneName	40	398002	Name of the zone/room the device is assigned to
MultiStateValue:398101	1234	Zone.2.Urinal.3.ConnectionStatus	19	398101	State of the connection between gateway and device
BinaryValue:398103	1234	Zone.2.Urinal.3.GenericWarning	5	398103	The device has a warning
BinaryValue:398104	1234	Zone.2.Urinal.3.GenericError	5	398104	The device has an error
BinaryValue:398106	1234	Zone.2.Urinal.3.LowBattery	5	398106	Battery in the device is low
BinaryValue:398107	1234	Zone.2.Urinal.3.UsageActive	5	398107	Device is currently in use
BinaryValue:398108	1234	Zone.2.Urinal.3.ValveOpen	5	398108	Valve in the device is currently opened
PositiveIntegerValue:398140	1234	Zone.2.Urinal.3.UsageCount	48	398140	Counts the usages of the device
PositiveIntegerValue:398141	1234	Zone.2.Urinal.3.FlushCount	48	398141	Counts the flushes of the device
PositiveIntegerValue:398147	1234	Zone.2.Urinal.3.HygieneFlushCount	48	398147	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:398170	1234	Zone.2.Urinal.3.WaterUsage	48	398170	Indicates the water usage of the device
MultiStateValue:398201	1234	Zone.2.Urinal.3.Locate	19	398201	Used to locate the device (writable)
PositiveIntegerValue:398203	1234	Zone.2.Urinal.3.DrainVolume	48	398203	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:398205	1234	Zone.2.Urinal.3.Flush	5	398205	Used to trigger a single flush at the device (writable)
PositiveIntegerValue:398206	1234	Zone.2.Urinal.3.FlushTime	48	398206	Used to adjust the flush time for an urinal (writable)
MultiStateValue:398207	1234	Zone.2.Urinal.3.Cleaning	19	398207	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:398400	1234	Zone.2.Urinal.4	29	398400	Urinal IR Control
CharStringValue:398401	1234	Zone.2.Urinal.4.DeviceSerial	40	398401	Serial number of the device
CharStringValue:398402	1234	Zone.2.Urinal.4.ZoneName	40	398402	Name of the zone/room the device is assigned to
MultiStateValue:398501	1234	Zone.2.Urinal.4.ConnectionStatus	19	398501	State of the connection between gateway and device
BinaryValue:398503	1234	Zone.2.Urinal.4.GenericWarning	5	398503	The device has a warning
BinaryValue:398504	1234	Zone.2.Urinal.4.GenericError	5	398504	The device has an error
BinaryValue:398506	1234	Zone.2.Urinal.4.LowBattery	5	398506	Battery in the device is low
BinaryValue:398507	1234	Zone.2.Urinal.4.UsageActive	5	398507	Device is currently in use
BinaryValue:398508	1234	Zone.2.Urinal.4.ValveOpen	5	398508	Valve in the device is currently opened
PositiveIntegerValue:398540	1234	Zone.2.Urinal.4.UsageCount	48	398540	Counts the usages of the device
PositiveIntegerValue:398541	1234	Zone.2.Urinal.4.FlushCount	48	398541	Counts the flushes of the device
PositiveIntegerValue:398547	1234	Zone.2.Urinal.4.HygieneFlushCount	48	398547	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:398570	1234	Zone.2.Urinal.4.WaterUsage	48	398570	Indicates the water usage of the device
MultiStateValue:398601	1234	Zone.2.Urinal.4.Locate	19	398601	Used to locate the device (writable)
PositiveIntegerValue:398603	1234	Zone.2.Urinal.4.DrainVolume	48	398603	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:398605	1234	Zone.2.Urinal.4.Flush	5	398605	Used to trigger a single flush at the device (writable)
PositiveIntegerValue:398606	1234	Zone.2.Urinal.4.FlushTime	48	398606	Used to adjust the flush time for an urinal (writable)
MultiStateValue:398607	1234	Zone.2.Urinal.4.Cleaning	19	398607	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:398800	1234	Zone.2.Urinal.5	29	398800	Urinal IR Control
CharStringValue:398801	1234	Zone.2.Urinal.5.DeviceSerial	40	398801	Serial number of the device
CharStringValue:398802	1234	Zone.2.Urinal.5.ZoneName	40	398802	Name of the zone/room the device is assigned to
MultiStateValue:398901	1234	Zone.2.Urinal.5.ConnectionStatus	19	398901	State of the connection between gateway and device
BinaryValue:398903	1234	Zone.2.Urinal.5.GenericWarning	5	398903	The device has a warning
BinaryValue:398904	1234	Zone.2.Urinal.5.GenericError	5	398904	The device has an error
BinaryValue:398906	1234	Zone.2.Urinal.5.LowBattery	5	398906	Battery in the device is low
BinaryValue:398907	1234	Zone.2.Urinal.5.UsageActive	5	398907	Device is currently in use
BinaryValue:398908	1234	Zone.2.Urinal.5.ValveOpen	5	398908	Valve in the device is currently opened
PositiveIntegerValue:398940	1234	Zone.2.Urinal.5.UsageCount	48	398940	Counts the usages of the device
PositiveIntegerValue:398941	1234	Zone.2.Urinal.5.FlushCount	48	398941	Counts the flushes of the device
PositiveIntegerValue:398947	1234	Zone.2.Urinal.5.HygieneFlushCount	48	398947	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:398970	1234	Zone.2.Urinal.5.WaterUsage	48	398970	Indicates the water usage of the device
MultiStateValue:399001	1234	Zone.2.Urinal.5.Locate	19	399001	Used to locate the device (writable)
PositiveIntegerValue:399003	1234	Zone.2.Urinal.5.DrainVolume	48	399003	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:399005	1234	Zone.2.Urinal.5.Flush	5	399005	Used to trigger a single flush at the device (writable)
PositiveIntegerValue:399006	1234	Zone.2.Urinal.5.FlushTime	48	399006	Used to adjust the flush time for an urinal (writable)
MultiStateValue:399007	1234	Zone.2.Urinal.5.Cleaning	19	399007	Used to switch on and off the cleaning mode of the device (writable)

StructuredView:558000	1234	Zone.3.AllDevices	29	558000	Collection group for all devices
CharStringValue:558002	1234	Zone.3.AllDevices.ZoneName	40	558002	Name of the zone/room the device is assigned to
MultiStateValue:558101	1234	Zone.3.AllDevices.ConnectionStatus	19	558101	State of the connection between gateway and device (Collection group)
BinaryValue:558103	1234	Zone.3.AllDevices.GenericWarning	5	558103	The device has a warning (Collection group)
BinaryValue:558104	1234	Zone.3.AllDevices.GenericError	5	558104	The device has an error (Collection group)
BinaryValue:558106	1234	Zone.3.AllDevices.LowBattery	5	558106	Battery in the device is low (Collection group)
BinaryValue:558107	1234	Zone.3.AllDevices.UsageActive	5	558107	Device is currently in use (Collection group)
BinaryValue:558108	1234	Zone.3.AllDevices.ValveOpen	5	558108	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:558140	1234	Zone.3.AllDevices.UsageCount	48	558140	Counts the usages of the device (Collection group)
PositiveIntegerValue:558141	1234	Zone.3.AllDevices.FlushCount	48	558141	Counts the flushes of the device (Collection group)
PositiveIntegerValue:558147	1234	Zone.3.AllDevices.HygieneFlushCount	48	558147	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:558170	1234	Zone.3.AllDevices.WaterUsage	48	558170	Indicates the water usage of the device (Collection group)
MultiStateValue:558207	1234	Zone.3.AllDevices.Cleaning	19	558207	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:595200	1234	Zone.3.AllWashbasins	29	595200	Collection group for all washbasins
CharStringValue:595202	1234	Zone.3.AllWashbasins.ZoneName	40	595202	Name of the zone/room the device is assigned to
MultiStateValue:595301	1234	Zone.3.AllWashbasins.ConnectionStatus	19	595301	State of the connection between gateway and device (Collection group)
BinaryValue:595303	1234	Zone.3.AllWashbasins.GenericWarning	5	595303	The device has a warning (Collection group)
BinaryValue:595304	1234	Zone.3.AllWashbasins.GenericError	5	595304	The device has an error (Collection group)
BinaryValue:595306	1234	Zone.3.AllWashbasins.LowBattery	5	595306	Battery in the device is low (Collection group)
BinaryValue:595307	1234	Zone.3.AllWashbasins.UsageActive	5	595307	Device is currently in use (Collection group)
BinaryValue:595308	1234	Zone.3.AllWashbasins.ValveOpen	5	595308	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:595340	1234	Zone.3.AllWashbasins.UsageCount	48	595340	Counts the usages of the device (Collection group)
PositiveIntegerValue:595341	1234	Zone.3.AllWashbasins.FlushCount	48	595341	Counts the flushes of the device (Collection group)
PositiveIntegerValue:595347	1234	Zone.3.AllWashbasins.HygieneFlushCount	48	595347	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:595370	1234	Zone.3.AllWashbasins.WaterUsage	48	595370	Indicates the water usage of the device (Collection group)
MultiStateValue:595407	1234	Zone.3.AllWashbasins.Cleaning	19	595407	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:595600	1234	Zone.3.Washbasin.1	29	595600	Lavatory Tap IFP
CharStringValue:595601	1234	Zone.3.Washbasin.1.DeviceSerial	40	595601	Serial number of the device
CharStringValue:595602	1234	Zone.3.Washbasin.1.ZoneName	40	595602	Name of the zone/room the device is assigned to
MultiStateValue:595701	1234	Zone.3.Washbasin.1.ConnectionStatus	19	595701	State of the connection between gateway and device
BinaryValue:595703	1234	Zone.3.Washbasin.1.GenericWarning	5	595703	The device has a warning
BinaryValue:595704	1234	Zone.3.Washbasin.1.GenericError	5	595704	The device has an error
BinaryValue:595706	1234	Zone.3.Washbasin.1.LowBattery	5	595706	Battery in the device is low
BinaryValue:595707	1234	Zone.3.Washbasin.1.UsageActive	5	595707	Device is currently in use
BinaryValue:595708	1234	Zone.3.Washbasin.1.ValveOpen	5	595708	Valve in the device is currently opened
PositiveIntegerValue:595740	1234	Zone.3.Washbasin.1.UsageCount	48	595740	Counts the usages of the device
PositiveIntegerValue:595741	1234	Zone.3.Washbasin.1.FlushCount	48	595741	Counts the flushes of the device
PositiveIntegerValue:595747	1234	Zone.3.Washbasin.1.HygieneFlushCount	48	595747	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:595770	1234	Zone.3.Washbasin.1.WaterUsage	48	595770	Indicates the water usage of the device
MultiStateValue:595801	1234	Zone.3.Washbasin.1.Locate	19	595801	Used to locate the device (writable)
PositiveIntegerValue:595803	1234	Zone.3.Washbasin.1.DrainVolume	48	595803	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:595807	1234	Zone.3.Washbasin.1.Cleaning	19	595807	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:596000	1234	Zone.3.Washbasin.2	29	596000	Lavatory Tap IFP
CharStringValue:596001	1234	Zone.3.Washbasin.2.DeviceSerial	40	596001	Serial number of the device
CharStringValue:596002	1234	Zone.3.Washbasin.2.ZoneName	40	596002	Name of the zone/room the device is assigned to
MultiStateValue:596101	1234	Zone.3.Washbasin.2.ConnectionStatus	19	596101	State of the connection between gateway and device
BinaryValue:596103	1234	Zone.3.Washbasin.2.GenericWarning	5	596103	The device has a warning
BinaryValue:596104	1234	Zone.3.Washbasin.2.GenericError	5	596104	The device has an error
BinaryValue:596106	1234	Zone.3.Washbasin.2.LowBattery	5	596106	Battery in the device is low
BinaryValue:596107	1234	Zone.3.Washbasin.2.UsageActive	5	596107	Device is currently in use
BinaryValue:596108	1234	Zone.3.Washbasin.2.ValveOpen	5	596108	Valve in the device is currently opened
PositiveIntegerValue:596140	1234	Zone.3.Washbasin.2.UsageCount	48	596140	Counts the usages of the device
PositiveIntegerValue:596141	1234	Zone.3.Washbasin.2.FlushCount	48	596141	Counts the flushes of the device
PositiveIntegerValue:596147	1234	Zone.3.Washbasin.2.HygieneFlushCount	48	596147	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:596170	1234	Zone.3.Washbasin.2.WaterUsage	48	596170	Indicates the water usage of the device
MultiStateValue:596201	1234	Zone.3.Washbasin.2.Locate	19	596201	Used to locate the device (writable)
PositiveIntegerValue:596203	1234	Zone.3.Washbasin.2.DrainVolume	48	596203	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:596207	1234	Zone.3.Washbasin.2.Cleaning	19	596207	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:596400	1234	Zone.3.Washbasin.3	29	596400	Lavatory Tap IFP
CharStringValue:596401	1234	Zone.3.Washbasin.3.DeviceSerial	40	596401	Serial number of the device
CharStringValue:596402	1234	Zone.3.Washbasin.3.ZoneName	40	596402	Name of the zone/room the device is assigned to
MultiStateValue:596501	1234	Zone.3.Washbasin.3.ConnectionStatus	19	596501	State of the connection between gateway and device
BinaryValue:596503	1234	Zone.3.Washbasin.3.GenericWarning	5	596503	The device has a warning
BinaryValue:596504	1234	Zone.3.Washbasin.3.GenericError	5	596504	The device has an error
BinaryValue:596506	1234	Zone.3.Washbasin.3.LowBattery	5	596506	Battery in the device is low
BinaryValue:596507	1234	Zone.3.Washbasin.3.UsageActive	5	596507	Device is currently in use
BinaryValue:596508	1234	Zone.3.Washbasin.3.ValveOpen	5	596508	Valve in the device is currently opened
PositiveIntegerValue:596540	1234	Zone.3.Washbasin.3.UsageCount	48	596540	Counts the usages of the device
PositiveIntegerValue:596541	1234	Zone.3.Washbasin.3.FlushCount	48	596541	Counts the flushes of the device
PositiveIntegerValue:596547	1234	Zone.3.Washbasin.3.HygieneFlushCount	48	596547	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:596570	1234	Zone.3.Washbasin.3.WaterUsage	48	596570	Indicates the water usage of the device
MultiStateValue:596601	1234	Zone.3.Washbasin.3.Locate	19	596601	Used to locate the device (writable)
PositiveIntegerValue:596603	1234	Zone.3.Washbasin.3.DrainVolume	48	596603	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:596607	1234	Zone.3.Washbasin.3.Cleaning	19	596607	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:596800	1234	Zone.3.Washbasin.4	29	596800	Lavatory Tap IFP
CharStringValue:596801	1234	Zone.3.Washbasin.4.DeviceSerial	40	596801	Serial number of the device
CharStringValue:596802	1234	Zone.3.Washbasin.4.ZoneName	40	596802	Name of the zone/room the device is assigned to
MultiStateValue:596901	1234	Zone.3.Washbasin.4.ConnectionStatus	19	596901	State of the connection between gateway and device
BinaryValue:596903	1234	Zone.3.Washbasin.4.GenericWarning	5	596903	The device has a warning
BinaryValue:596904	1234	Zone.3.Washbasin.4.GenericError	5	596904	The device has an error
BinaryValue:596906	1234	Zone.3.Washbasin.4.LowBattery	5	596906	Battery in the device is low
BinaryValue:596907	1234	Zone.3.Washbasin.4.UsageActive	5	596907	Device is currently in use
BinaryValue:596908	1234	Zone.3.Washbasin.4.ValveOpen	5	596908	Valve in the device is currently opened
PositiveIntegerValue:596940	1234	Zone.3.Washbasin.4.UsageCount	48	596940	Counts the usages of the device
PositiveIntegerValue:596941	1234	Zone.3.Washbasin.4.FlushCount	48	596941	Counts the flushes of the device
PositiveIntegerValue:596947	1234	Zone.3.Washbasin.4.HygieneFlushCount	48	596947	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:596970	1234	Zone.3.Washbasin.4.WaterUsage	48	596970	Indicates the water usage of the device
MultiStateValue:597001	1234	Zone.3.Washbasin.4.Locate	19	597001	Used to locate the device (writable)
PositiveIntegerValue:597003	1234	Zone.3.Washbasin.4.DrainVolume	48	597003	Used to open the valve of the device for a requested amount of water (writable)
MultiStateValue:597007	1234	Zone.3.Washbasin.4.Cleaning	19	597007	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:744000	1234	Zone.4.AllDevices	29	744000	Collection group for all devices
CharStringValue:744002	1234	Zone.4.AllDevices.ZoneName	40	744002	Name of the zone/room the device is assigned to
MultiStateValue:744101	1234	Zone.4.AllDevices.ConnectionStatus	19	744101	State of the connection between gateway and device (Collection group)
BinaryValue:744103	1234	Zone.4.AllDevices.GenericWarning	5	744103	The device has a warning (Collection group)
BinaryValue:744104	1234	Zone.4.AllDevices.GenericError	5	744104	The device has an error (Collection group)
BinaryValue:744106	1234	Zone.4.AllDevices.LowBattery	5	744106	Battery in the device is low (Collection group)
BinaryValue:744107	1234	Zone.4.AllDevices.UsageActive	5	744107	Device is currently in use (Collection group)
BinaryValue:744108	1234	Zone.4.AllDevices.ValveOpen	5	744108	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:744140	1234	Zone.4.AllDevices.UsageCount	48	744140	Counts the usages of the device (Collection group)
PositiveIntegerValue:744141	1234	Zone.4.AllDevices.FlushCount	48	744141	Counts the flushes of the device (Collection group)
PositiveIntegerValue:744143	1234	Zone.4.AllDevices.AutomaticFlushCount	48	744143	Counts the automatic flushes of the device (Collection group)
PositiveIntegerValue:744144	1234	Zone.4.AllDevices.ManualFlushCount	48	744144	Counts the manual flushes of the device (Collection group)
PositiveIntegerValue:744145	1234	Zone.4.AllDevices.FullFlushCount	48	744145	Counts the full flushes of the device (Collection group)
PositiveIntegerValue:744146	1234	Zone.4.AllDevices.PartialFlushCount	48	744146	Counts the partial flushes of the device (Collection group)

PositiveIntegerValue:744147	1234	Zone.4.AllDevices.HygieneFlushCount	48	744147	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:744170	1234	Zone.4.AllDevices.WaterUsage	48	744170	Indicates the water usage of the device (Collection group)
MultiStateValue:744207	1234	Zone.4.AllDevices.Cleaning	19	744207	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:756400	1234	Zone.4.AllToilets	29	756400	Collection group for all toilets
CharStringValue:756402	1234	Zone.4.AllToilets.ZoneName	40	756402	Name of the zone/room the device is assigned to
MultiStateValue:756501	1234	Zone.4.AllToilets.ConnectionStatus	19	756501	State of the connection between gateway and device (Collection group)
BinaryValue:756503	1234	Zone.4.AllToilets.GenericWarning	5	756503	The device has a warning (Collection group)
BinaryValue:756504	1234	Zone.4.AllToilets.GenericError	5	756504	The device has an error (Collection group)
BinaryValue:756506	1234	Zone.4.AllToilets.LowBattery	5	756506	Battery in the device is low (Collection group)
BinaryValue:756507	1234	Zone.4.AllToilets.UsageActive	5	756507	Device is currently in use (Collection group)
BinaryValue:756508	1234	Zone.4.AllToilets.ValveOpen	5	756508	Valve in the device is currently opened (Collection group)
PositiveIntegerValue:756540	1234	Zone.4.AllToilets.UsageCount	48	756540	Counts the usages of the device (Collection group)
PositiveIntegerValue:756541	1234	Zone.4.AllToilets.FlushCount	48	756541	Counts the flushes of the device (Collection group)
PositiveIntegerValue:756543	1234	Zone.4.AllToilets.AutomaticFlushCount	48	756543	Counts the automatic flushes of the device (Collection group)
PositiveIntegerValue:756544	1234	Zone.4.AllToilets.ManualFlushCount	48	756544	Counts the manual flushes of the device (Collection group)
PositiveIntegerValue:756545	1234	Zone.4.AllToilets.FullFlushCount	48	756545	Counts the full flushes of the device (Collection group)
PositiveIntegerValue:756546	1234	Zone.4.AllToilets.PartialFlushCount	48	756546	Counts the partial flushes of the device (Collection group)
PositiveIntegerValue:756547	1234	Zone.4.AllToilets.HygieneFlushCount	48	756547	Counts the flushes based on local hygiene programs of the device (Collection group)
PositiveIntegerValue:756570	1234	Zone.4.AllToilets.WaterUsage	48	756570	Indicates the water usage of the device (Collection group)
MultiStateValue:756607	1234	Zone.4.AllToilets.Cleaning	19	756607	Used to switch on and off the cleaning mode of the device (writable) (Collection group)
StructuredView:756800	1234	Zone.4.Toilet.1	29	756800	WFlush Automatic Mains
CharStringValue:756801	1234	Zone.4.Toilet.1.DeviceSerial	40	756801	Serial number of the device
CharStringValue:756802	1234	Zone.4.Toilet.1.ZoneName	40	756802	Name of the zone/room the device is assigned to
MultiStateValue:756901	1234	Zone.4.Toilet.1.ConnectionStatus	19	756901	State of the connection between gateway and device
BinaryValue:756903	1234	Zone.4.Toilet.1.GenericWarning	5	756903	The device has a warning
BinaryValue:756904	1234	Zone.4.Toilet.1.GenericError	5	756904	The device has an error
BinaryValue:756906	1234	Zone.4.Toilet.1.LowBattery	5	756906	Battery in the device is low
BinaryValue:756907	1234	Zone.4.Toilet.1.UsageActive	5	756907	Device is currently in use
BinaryValue:756908	1234	Zone.4.Toilet.1.ValveOpen	5	756908	Valve in the device is currently opened
PositiveIntegerValue:756940	1234	Zone.4.Toilet.1.UsageCount	48	756940	Counts the usages of the device
PositiveIntegerValue:756941	1234	Zone.4.Toilet.1.FlushCount	48	756941	Counts the flushes of the device
PositiveIntegerValue:756943	1234	Zone.4.Toilet.1.AutomaticFlushCount	48	756943	Counts the automatic flushes of the device
PositiveIntegerValue:756944	1234	Zone.4.Toilet.1.ManualFlushCount	48	756944	Counts the manual flushes of the device
PositiveIntegerValue:756945	1234	Zone.4.Toilet.1.FullFlushCount	48	756945	Counts the full flushes of the device
PositiveIntegerValue:756946	1234	Zone.4.Toilet.1.PartialFlushCount	48	756946	Counts the partial flushes of the device
PositiveIntegerValue:756947	1234	Zone.4.Toilet.1.HygieneFlushCount	48	756947	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:756970	1234	Zone.4.Toilet.1.WaterUsage	48	756970	Indicates the water usage of the device
MultiStateValue:757001	1234	Zone.4.Toilet.1.Locate	19	757001	Used to locate the device (writable)
PositiveIntegerValue:757003	1234	Zone.4.Toilet.1.DrainVolume	48	757003	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:757005	1234	Zone.4.Toilet.1.Flush	5	757005	Used to trigger a single flush at the device (writable)
MultiStateValue:757007	1234	Zone.4.Toilet.1.Cleaning	19	757007	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:757200	1234	Zone.4.Toilet.2	29	757200	WFlush Automatic Mains
CharStringValue:757201	1234	Zone.4.Toilet.2.DeviceSerial	40	757201	Serial number of the device
CharStringValue:757202	1234	Zone.4.Toilet.2.ZoneName	40	757202	Name of the zone/room the device is assigned to
MultiStateValue:757301	1234	Zone.4.Toilet.2.ConnectionStatus	19	757301	State of the connection between gateway and device
BinaryValue:757303	1234	Zone.4.Toilet.2.GenericWarning	5	757303	The device has a warning
BinaryValue:757304	1234	Zone.4.Toilet.2.GenericError	5	757304	The device has an error
BinaryValue:757306	1234	Zone.4.Toilet.2.LowBattery	5	757306	Battery in the device is low
BinaryValue:757307	1234	Zone.4.Toilet.2.UsageActive	5	757307	Device is currently in use
BinaryValue:757308	1234	Zone.4.Toilet.2.ValveOpen	5	757308	Valve in the device is currently opened
PositiveIntegerValue:757340	1234	Zone.4.Toilet.2.UsageCount	48	757340	Counts the usages of the device
PositiveIntegerValue:757341	1234	Zone.4.Toilet.2.FlushCount	48	757341	Counts the flushes of the device
PositiveIntegerValue:757343	1234	Zone.4.Toilet.2.AutomaticFlushCount	48	757343	Counts the automatic flushes of the device
PositiveIntegerValue:757344	1234	Zone.4.Toilet.2.ManualFlushCount	48	757344	Counts the manual flushes of the device
PositiveIntegerValue:757345	1234	Zone.4.Toilet.2.FullFlushCount	48	757345	Counts the full flushes of the device
PositiveIntegerValue:757346	1234	Zone.4.Toilet.2.PartialFlushCount	48	757346	Counts the partial flushes of the device
PositiveIntegerValue:757347	1234	Zone.4.Toilet.2.HygieneFlushCount	48	757347	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:757370	1234	Zone.4.Toilet.2.WaterUsage	48	757370	Indicates the water usage of the device
MultiStateValue:757401	1234	Zone.4.Toilet.2.Locate	19	757401	Used to locate the device (writable)
PositiveIntegerValue:757403	1234	Zone.4.Toilet.2.DrainVolume	48	757403	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:757405	1234	Zone.4.Toilet.2.Flush	5	757405	Used to trigger a single flush at the device (writable)
MultiStateValue:757407	1234	Zone.4.Toilet.2.Cleaning	19	757407	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:757600	1234	Zone.4.Toilet.3	29	757600	WFlush Automatic Mains
CharStringValue:757601	1234	Zone.4.Toilet.3.DeviceSerial	40	757601	Serial number of the device
CharStringValue:757602	1234	Zone.4.Toilet.3.ZoneName	40	757602	Name of the zone/room the device is assigned to
MultiStateValue:757701	1234	Zone.4.Toilet.3.ConnectionStatus	19	757701	State of the connection between gateway and device
BinaryValue:757703	1234	Zone.4.Toilet.3.GenericWarning	5	757703	The device has a warning
BinaryValue:757704	1234	Zone.4.Toilet.3.GenericError	5	757704	The device has an error
BinaryValue:757706	1234	Zone.4.Toilet.3.LowBattery	5	757706	Battery in the device is low
BinaryValue:757707	1234	Zone.4.Toilet.3.UsageActive	5	757707	Device is currently in use
BinaryValue:757708	1234	Zone.4.Toilet.3.ValveOpen	5	757708	Valve in the device is currently opened
PositiveIntegerValue:757740	1234	Zone.4.Toilet.3.UsageCount	48	757740	Counts the usages of the device
PositiveIntegerValue:757741	1234	Zone.4.Toilet.3.FlushCount	48	757741	Counts the flushes of the device
PositiveIntegerValue:757743	1234	Zone.4.Toilet.3.AutomaticFlushCount	48	757743	Counts the automatic flushes of the device
PositiveIntegerValue:757744	1234	Zone.4.Toilet.3.ManualFlushCount	48	757744	Counts the manual flushes of the device
PositiveIntegerValue:757745	1234	Zone.4.Toilet.3.FullFlushCount	48	757745	Counts the full flushes of the device
PositiveIntegerValue:757746	1234	Zone.4.Toilet.3.PartialFlushCount	48	757746	Counts the partial flushes of the device
PositiveIntegerValue:757747	1234	Zone.4.Toilet.3.HygieneFlushCount	48	757747	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:757770	1234	Zone.4.Toilet.3.WaterUsage	48	757770	Indicates the water usage of the device
MultiStateValue:757801	1234	Zone.4.Toilet.3.Locate	19	757801	Used to locate the device (writable)
PositiveIntegerValue:757803	1234	Zone.4.Toilet.3.DrainVolume	48	757803	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:757805	1234	Zone.4.Toilet.3.Flush	5	757805	Used to trigger a single flush at the device (writable)
MultiStateValue:757807	1234	Zone.4.Toilet.3.Cleaning	19	757807	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:758000	1234	Zone.4.Toilet.4	29	758000	WFlush Automatic Mains
CharStringValue:758001	1234	Zone.4.Toilet.4.DeviceSerial	40	758001	Serial number of the device
CharStringValue:758002	1234	Zone.4.Toilet.4.ZoneName	40	758002	Name of the zone/room the device is assigned to
MultiStateValue:758101	1234	Zone.4.Toilet.4.ConnectionStatus	19	758101	State of the connection between gateway and device
BinaryValue:758103	1234	Zone.4.Toilet.4.GenericWarning	5	758103	The device has a warning
BinaryValue:758104	1234	Zone.4.Toilet.4.GenericError	5	758104	The device has an error
BinaryValue:758106	1234	Zone.4.Toilet.4.LowBattery	5	758106	Battery in the device is low
BinaryValue:758107	1234	Zone.4.Toilet.4.UsageActive	5	758107	Device is currently in use
BinaryValue:758108	1234	Zone.4.Toilet.4.ValveOpen	5	758108	Valve in the device is currently opened
PositiveIntegerValue:758140	1234	Zone.4.Toilet.4.UsageCount	48	758140	Counts the usages of the device
PositiveIntegerValue:758141	1234	Zone.4.Toilet.4.FlushCount	48	758141	Counts the flushes of the device
PositiveIntegerValue:758143	1234	Zone.4.Toilet.4.AutomaticFlushCount	48	758143	Counts the automatic flushes of the device
PositiveIntegerValue:758144	1234	Zone.4.Toilet.4.ManualFlushCount	48	758144	Counts the manual flushes of the device
PositiveIntegerValue:758145	1234	Zone.4.Toilet.4.FullFlushCount	48	758145	Counts the full flushes of the device
PositiveIntegerValue:758146	1234	Zone.4.Toilet.4.PartialFlushCount	48	758146	Counts the partial flushes of the device
PositiveIntegerValue:758147	1234	Zone.4.Toilet.4.HygieneFlushCount	48	758147	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:758170	1234	Zone.4.Toilet.4.WaterUsage	48	758170	Indicates the water usage of the device
MultiStateValue:758201	1234	Zone.4.Toilet.4.Locate	19	758201	Used to locate the device (writable)
PositiveIntegerValue:758203	1234	Zone.4.Toilet.4.DrainVolume	48	758203	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:758205	1234	Zone.4.Toilet.4.Flush	5	758205	Used to trigger a single flush at the device (writable)
MultiStateValue:758207	1234	Zone.4.Toilet.4.Cleaning	19	758207	Used to switch on and off the cleaning mode of the device (writable)

StructuredView:758400	1234	Zone.4.Toilet.5	29	758400	WcFlush Automatic Mains
CharStringValue:758401	1234	Zone.4.Toilet.5.DeviceSerial	40	758401	Serial number of the device
CharStringValue:758402	1234	Zone.4.Toilet.5.ZoneName	40	758402	Name of the zone/room the device is assigned to
MultiStateValue:758501	1234	Zone.4.Toilet.5.ConnectionStatus	19	758501	State of the connection between gateway and device
BinaryValue:758503	1234	Zone.4.Toilet.5.GenericWarning	5	758503	The device has a warning
BinaryValue:758504	1234	Zone.4.Toilet.5.GenericError	5	758504	The device has an error
BinaryValue:758506	1234	Zone.4.Toilet.5.LowBattery	5	758506	Battery in the device is low
BinaryValue:758507	1234	Zone.4.Toilet.5.UsageActive	5	758507	Device is currently in use
BinaryValue:758508	1234	Zone.4.Toilet.5.ValveOpen	5	758508	Valve in the device is currently opened
PositiveIntegerValue:758540	1234	Zone.4.Toilet.5.UsageCount	48	758540	Counts the usages of the device
PositiveIntegerValue:758541	1234	Zone.4.Toilet.5.FlushCount	48	758541	Counts the flushes of the device
PositiveIntegerValue:758543	1234	Zone.4.Toilet.5.AutomaticFlushCount	48	758543	Counts the automatic flushes of the device
PositiveIntegerValue:758544	1234	Zone.4.Toilet.5.ManualFlushCount	48	758544	Counts the manual flushes of the device
PositiveIntegerValue:758545	1234	Zone.4.Toilet.5.FullFlushCount	48	758545	Counts the full flushes of the device
PositiveIntegerValue:758546	1234	Zone.4.Toilet.5.PartialFlushCount	48	758546	Counts the partial flushes of the device
PositiveIntegerValue:758547	1234	Zone.4.Toilet.5.HygieneFlushCount	48	758547	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:758570	1234	Zone.4.Toilet.5.WaterUsage	48	758570	Indicates the water usage of the device
MultiStateValue:758601	1234	Zone.4.Toilet.5.Locate	19	758601	Used to locate the device (writable)
PositiveIntegerValue:758603	1234	Zone.4.Toilet.5.DrainVolume	48	758603	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:758605	1234	Zone.4.Toilet.5.Flush	5	758605	Used to trigger a single flush at the device (writable)
MultiStateValue:758607	1234	Zone.4.Toilet.5.Cleaning	19	758607	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:758800	1234	Zone.4.Toilet.6	29	758800	WcFlush Automatic Mains
CharStringValue:758801	1234	Zone.4.Toilet.6.DeviceSerial	40	758801	Serial number of the device
CharStringValue:758802	1234	Zone.4.Toilet.6.ZoneName	40	758802	Name of the zone/room the device is assigned to
MultiStateValue:758901	1234	Zone.4.Toilet.6.ConnectionStatus	19	758901	State of the connection between gateway and device
BinaryValue:758903	1234	Zone.4.Toilet.6.GenericWarning	5	758903	The device has a warning
BinaryValue:758904	1234	Zone.4.Toilet.6.GenericError	5	758904	The device has an error
BinaryValue:758906	1234	Zone.4.Toilet.6.LowBattery	5	758906	Battery in the device is low
BinaryValue:758907	1234	Zone.4.Toilet.6.UsageActive	5	758907	Device is currently in use
BinaryValue:758908	1234	Zone.4.Toilet.6.ValveOpen	5	758908	Valve in the device is currently opened
PositiveIntegerValue:758940	1234	Zone.4.Toilet.6.UsageCount	48	758940	Counts the usages of the device
PositiveIntegerValue:758941	1234	Zone.4.Toilet.6.FlushCount	48	758941	Counts the flushes of the device
PositiveIntegerValue:758943	1234	Zone.4.Toilet.6.AutomaticFlushCount	48	758943	Counts the automatic flushes of the device
PositiveIntegerValue:758944	1234	Zone.4.Toilet.6.ManualFlushCount	48	758944	Counts the manual flushes of the device
PositiveIntegerValue:758945	1234	Zone.4.Toilet.6.FullFlushCount	48	758945	Counts the full flushes of the device
PositiveIntegerValue:758946	1234	Zone.4.Toilet.6.PartialFlushCount	48	758946	Counts the partial flushes of the device
PositiveIntegerValue:758947	1234	Zone.4.Toilet.6.HygieneFlushCount	48	758947	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:758970	1234	Zone.4.Toilet.6.WaterUsage	48	758970	Indicates the water usage of the device
MultiStateValue:759001	1234	Zone.4.Toilet.6.Locate	19	759001	Used to locate the device (writable)
PositiveIntegerValue:759003	1234	Zone.4.Toilet.6.DrainVolume	48	759003	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:759005	1234	Zone.4.Toilet.6.Flush	5	759005	Used to trigger a single flush at the device (writable)
BinaryValue:759007	1234	Zone.4.Toilet.6.Cleaning	19	759007	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:759200	1234	Zone.4.Toilet.7	29	759200	WcFlush Automatic Mains
CharStringValue:759201	1234	Zone.4.Toilet.7.DeviceSerial	40	759201	Serial number of the device
CharStringValue:759202	1234	Zone.4.Toilet.7.ZoneName	40	759202	Name of the zone/room the device is assigned to
MultiStateValue:759301	1234	Zone.4.Toilet.7.ConnectionStatus	19	759301	State of the connection between gateway and device
BinaryValue:759303	1234	Zone.4.Toilet.7.GenericWarning	5	759303	The device has a warning
BinaryValue:759304	1234	Zone.4.Toilet.7.GenericError	5	759304	The device has an error
BinaryValue:759306	1234	Zone.4.Toilet.7.LowBattery	5	759306	Battery in the device is low
BinaryValue:759307	1234	Zone.4.Toilet.7.UsageActive	5	759307	Device is currently in use
BinaryValue:759308	1234	Zone.4.Toilet.7.ValveOpen	5	759308	Valve in the device is currently opened
PositiveIntegerValue:759340	1234	Zone.4.Toilet.7.UsageCount	48	759340	Counts the usages of the device
PositiveIntegerValue:759341	1234	Zone.4.Toilet.7.FlushCount	48	759341	Counts the flushes of the device
PositiveIntegerValue:759343	1234	Zone.4.Toilet.7.AutomaticFlushCount	48	759343	Counts the automatic flushes of the device
PositiveIntegerValue:759344	1234	Zone.4.Toilet.7.ManualFlushCount	48	759344	Counts the manual flushes of the device
PositiveIntegerValue:759345	1234	Zone.4.Toilet.7.FullFlushCount	48	759345	Counts the full flushes of the device
PositiveIntegerValue:759346	1234	Zone.4.Toilet.7.PartialFlushCount	48	759346	Counts the partial flushes of the device
PositiveIntegerValue:759347	1234	Zone.4.Toilet.7.HygieneFlushCount	48	759347	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:759370	1234	Zone.4.Toilet.7.WaterUsage	48	759370	Indicates the water usage of the device
MultiStateValue:759401	1234	Zone.4.Toilet.7.Locate	19	759401	Used to locate the device (writable)
PositiveIntegerValue:759403	1234	Zone.4.Toilet.7.DrainVolume	48	759403	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:759405	1234	Zone.4.Toilet.7.Flush	5	759405	Used to trigger a single flush at the device (writable)
MultiStateValue:759407	1234	Zone.4.Toilet.7.Cleaning	19	759407	Used to switch on and off the cleaning mode of the device (writable)
StructuredView:759600	1234	Zone.4.Toilet.8	29	759600	WcFlush Automatic Mains
CharStringValue:759601	1234	Zone.4.Toilet.8.DeviceSerial	40	759601	Serial number of the device
CharStringValue:759602	1234	Zone.4.Toilet.8.ZoneName	40	759602	Name of the zone/room the device is assigned to
MultiStateValue:759701	1234	Zone.4.Toilet.8.ConnectionStatus	19	759701	State of the connection between gateway and device
BinaryValue:759703	1234	Zone.4.Toilet.8.GenericWarning	5	759703	The device has a warning
BinaryValue:759704	1234	Zone.4.Toilet.8.GenericError	5	759704	The device has an error
BinaryValue:759706	1234	Zone.4.Toilet.8.LowBattery	5	759706	Battery in the device is low
BinaryValue:759707	1234	Zone.4.Toilet.8.UsageActive	5	759707	Device is currently in use
BinaryValue:759708	1234	Zone.4.Toilet.8.ValveOpen	5	759708	Valve in the device is currently opened
PositiveIntegerValue:759740	1234	Zone.4.Toilet.8.UsageCount	48	759740	Counts the usages of the device
PositiveIntegerValue:759741	1234	Zone.4.Toilet.8.FlushCount	48	759741	Counts the flushes of the device
PositiveIntegerValue:759743	1234	Zone.4.Toilet.8.AutomaticFlushCount	48	759743	Counts the automatic flushes of the device
PositiveIntegerValue:759744	1234	Zone.4.Toilet.8.ManualFlushCount	48	759744	Counts the manual flushes of the device
PositiveIntegerValue:759745	1234	Zone.4.Toilet.8.FullFlushCount	48	759745	Counts the full flushes of the device
PositiveIntegerValue:759746	1234	Zone.4.Toilet.8.PartialFlushCount	48	759746	Counts the partial flushes of the device
PositiveIntegerValue:759747	1234	Zone.4.Toilet.8.HygieneFlushCount	48	759747	Counts the flushes based on local hygiene programs of the device
PositiveIntegerValue:759770	1234	Zone.4.Toilet.8.WaterUsage	48	759770	Indicates the water usage of the device
MultiStateValue:759801	1234	Zone.4.Toilet.8.Locate	19	759801	Used to locate the device (writable)
PositiveIntegerValue:759803	1234	Zone.4.Toilet.8.DrainVolume	48	759803	Used to open the valve of the device for a requested amount of water (writable)
BinaryValue:759805	1234	Zone.4.Toilet.8.Flush	5	759805	Used to trigger a single flush at the device (writable)
MultiStateValue:759807	1234	Zone.4.Toilet.8.Cleaning	19	759807	Used to switch on and off the cleaning mode of the device (writable)

