

Installation and Service Instructions

for use by heating contractor

VIESSMANN

Vitocom 100

Type LAN1

Communication interface for remote monitoring and control of heating systems via the internet, for the following user interfaces:

- Vitotrol app
- Vitodata 100 (www.vitodata100.viessmann.com)



VITOCOM 100



Product may not be exactly as shown

IMPORTANT

Read and save these instructions for future reference.

Safety Instructions

Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained



WARNING

This symbol warns against the risk of injury.



CAUTION

This symbol warns against the risk of material losses and environmental pollution.

Note: Details identified by the word "Note" contain additional information.

Target group

These instructions are exclusively designed for qualified contractors.

- Work on the refrigerant circuit must only be carried out by qualified and authorized refrigeration engineers
- Work on electrical equipment must only be carried out by a qualified electrician
- The system must be commissioned by the system installer or a qualified person authorized by the installer

Regulations

Observe the following when working on this system:

- National installation requirements
- All legal instructions regarding the prevention of accidents
- All legal instructions regarding environmental protection
- The Code of Practice of relevant trade associations
- All current safety regulations.

Working on the system

- Isolate the system from the power supply and check that it is no longer 'live', e.g. by removing the separate fuse or by means of a main isolator

Note: In addition to the control circuit, there may be several power circuits.



WARNING

Contact with 'live' components can lead to severe injuries.

Some components on the PCBs will remain 'live' even after the power supply has been switched off. Before removing covers from appliances, wait at least 4 minutes for the power to dissipate.

- Safeguard the system against unauthorized reconnection



CAUTION

Electronic assemblies can be damaged by electrostatic discharges. Before beginning work, touch grounded objects, such as heating or water pipes, to discharge static loads.

Repair work



CAUTION

Repairing components that fulfil a safety function can compromise the safe operation of your system. Replace faulty components only with original Viessmann spare parts.

Auxiliary components, spare and wearing parts



CAUTION

Spare and wearing parts that have not been tested together with the system can compromise its function. Installing non-authorized components and making non-approved modifications or conversions can compromise safety and may invalidate our warranty. For replacements, use only original spare parts supplied or approved by Viessmann.

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Safety and Liability

Operational reliability

Note: The Vitocom 100 establishes communication via the internet between the connected Vitotronic control unit and the user interfaces, e.g. Vitodata 100 or Vitotrol app.

Technical details on the control functions and the messages transferred should be taken from the installation and service instructions for the Vitotronic control unit or the heat source.

The respective range of functions will only be available if the following conditions are met:

- The Vitotronic control units and the Vitocom 100 must be connected and configured correctly.
- The Vitocom 100 is connected to the internet via a DSL router.
- Internet access must be available at all times.
- User registration has been carried out (see page 16).
- In order to send messages via the Vitodata 100, the recipients must be set up correctly on the Vitodata server.
- To ensure that messages can still be transferred during mains failure, we recommend connecting the Vitocom 100 and DSL router to the power supply via a UPS.

Note: - The heating system and the functionality of the message paths must be checked at regular intervals.
 - For further improvement of the operational reliability of the heating system, we recommend implementing supplementary measures, e.g. frost protection or monitoring for water damage.

Liability

Viessmann accepts no liability for loss of profit, unattained savings, or other direct or indirect consequential losses resulting from the use of the Vitocom or the software, nor for losses resulting from inappropriate use.

The Viessmann General Terms and Conditions apply; these are listed in the relevant current Viessmann price list.

Viessmann accepts no liability for SMS and e-mail services provided by network operators.

The terms and conditions of the relevant network operators therefore apply.

Heating system

- The Vitocom 100, type LAN1 can be used with Vitotronic control unit, with or without heating circuits downstream.
- The max. number of devices (LON subscribers) comprising of cascade control boiler(s) and heating circuit control units is 30.

Supported heat sources

For an up to date list of supported heat sources, see Online help Vitodata 100 (www.vitodata100.viessmann.com).

System Requirements

IP network

DSL router with a free LAN connection (on site).

- Internet connection with “flat rate” (flat rate tariff **independent** of time and data volume) with high level of availability, i.e. the Vitocom 100 is permanently connected with the Vitodata server.
- Have dynamic IP addressing (DHCP) in the network (LAN) checked on site, and if required set up, by an IT expert prior to commissioning.
- Determine the routing and safety parameters in the IP network (LAN) so that port 80 and port 443 are approved for direct outgoing connections. Prior to commissioning have this checked on site by an IT expert and, if necessary, set up.

Note: During operation, the Vitocom 100 establishes a secure internet connection to the Vitodata server. The Vitocom 100 cannot be connected to any other servers.

User account on the Vitodata server

Operating a Vitocom 100 and using the Vitotrol app require a valid user account on the Vitodata server. Registration is possible either using the Vitodata 100 user interface or the Vitotrol app (see page 16).

Operator unit for the Vitotrol app

Recommended mobile end device (for operating system, see App Store):

- iPhone 4 and iPhone 4S
- iPad and iPad2
- iPod Touch with retina display

Operator unit for the Vitodata 100 user interface

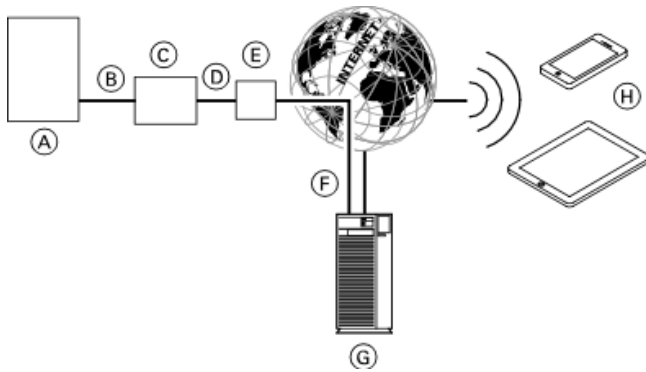
Computer equipped with the following:

- Windows XP, Windows Vista, Windows7 operating system
- Web browser Microsoft Internet Explorer, Version 8.0 or Mozilla Firefox, Version 3.0
- ‘Live’ internet connection

Recipients

- End device (e.g. computer) for receiving email.
- Mobile phone for receiving SMS (only with internet service “Vitodata 100 fault management”).
- Fax for receiving messages (only with internet service “Vitodata 100 fault management”).

Operation with the Vitotrol App



Legend

- (A) Heat source with control unit (see page 4)
- (B) LON cable
- (C) Vitocom 100
- (D) IP network (on site)
- (E) DSL router (on site)
- (F) Secure internet connection to the Vitodata server
- (G) Vitodata server
- (H) Mobile end device (see page 5) with the Vitotrol app:
 - Remote control of the heating system.
 - Message retrieval.

For remote control of Viessmann heating systems with Vitotronic control units via IP networks.

Functions

Vitotrol app control functions

- Setting set temperatures.
- Setting operating programs.
- Scanning operating conditions and temperatures

Note: The Vitotrol app only allows the user to access one system at a time using a single end device. For further information on the Vitotrol app, see www.viessmann.de/vitotrolapp.

Forwarding messages

Pending messages in the heating system, e.g. sensor or burner faults are transferred via LON to the Vitocom 100. The Vitocom 100 transmits these messages to the Vitodata server. The Vitotrol app scans the status of the heating system cyclically and displays the messages.

Note: Heating system messages are only displayed if the Vitotrol app is enabled on the mobile end device.

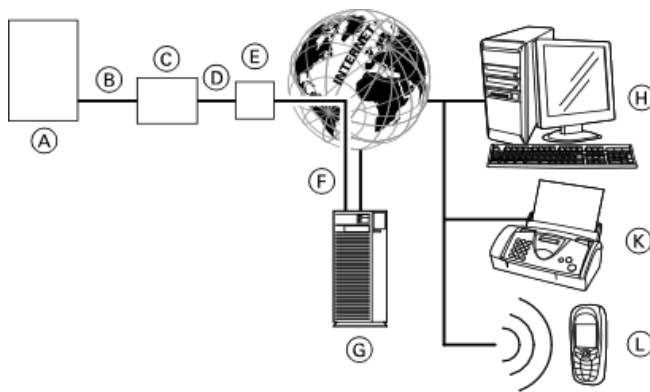
Content of messages

- Notification type
- Message code
- Message text



Heat source installation and service instructions

Operation with Vitodata 100 User Interface



Legend

- Ⓐ Heat source with control unit (see page 4)
- Ⓑ LON cable
- Ⓒ Vitocom 100
- Ⓓ IP network (on site)
- Ⓔ DSL router (on site)
- Ⓕ Secure internet connection to the Vitodata server
- Ⓖ Vitodata server, registration and log-in via www.vitodata100.viessmann.com
- Ⓗ Computer:
 - Remote control of the heating system via the Vitodata 100 user interface
 - Receipt of messages via email
- Ⓚ Fax for receiving messages (only with internet service "Vitodata 100 fault management")
- Ⓛ Mobile phone for receiving messages via SMS (only with internet service "Vitodata 100 fault management")

For remote monitoring and control of Viessmann heating systems with Vitotronic control units via IP networks.

Functions

Vitodata 100 control functions

- Setting set temperature values, heating curve slope and level.
- Setting operating programs, holiday programs and switching times.
- Setting party or economy mode.
- Scanning operating conditions and temperatures

Forwarding messages

Pending messages in the heating system, e.g. sensor or burner faults, are transferred via LON to the Vitocom 100. The Vitocom 100 transmits these messages to the Vitodata server. The messages can be displayed on the Vitodata 100 user interface. If recipients (email, fax or SMS) are stored on the Vitodata server, the messages are automatically forwarded to these recipients.

Note: The Vitodata fault management internet service is required for forwarding messages by fax or SMS (Vitocom 100 standard delivery, free of charge for 3 years).

Content of messages

- Date and time
- System description
- Message text
- Fault code
- System status



Heat source installation and service instructions

Checking Network Settings

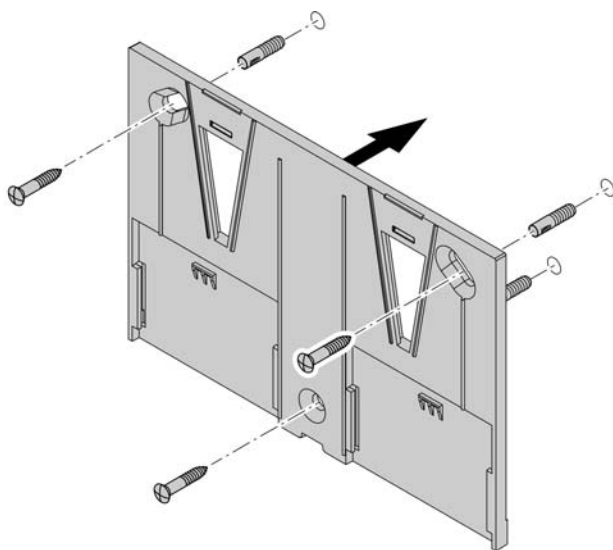
Have the following settings on the DSL router checked, and if necessary adjusted, by an IT expert:

- Dynamic IP addressing (DHCP) must be enabled.
- Port 80 and port 443 must be approved for outgoing connections.

Sequence Overview

Sequence		Responsibility	Page
Installation			
1	Check system requirements.	Heating contractor/IT expert	5
2	Install wall mounting bracket.	Heating contractor	8
3	Install communication module in Vitotronic module in Vitoronic control unit.	Heating contractor	See communication module installation
4	Connect Vitocom 100 to the Vitotronic control unit.	Heating contractor	
6	Connect Vitocom 100 to network (LAN).	Heating contractor/IT expert	10
7	Insert Vitocom 100 in wall mounting bracket.	Heating contractor	10
8	Power supply	Heating contractor	10
Commissioning			
9	Switch on Vitocom 100.	Heating contractor	13
10	Check LON connection to the Vitotronic control unit.	Heating contractor	14
11	Register user and set up heating system. ■ Operation with the Vitotrol app ■ Operation with the Vitodata 100 user interface	Heating contractor/system user	16 16
12	Trigger heating system fault and check reporting.	Heating contractor	16

Installing the Wall Mounting Bracket



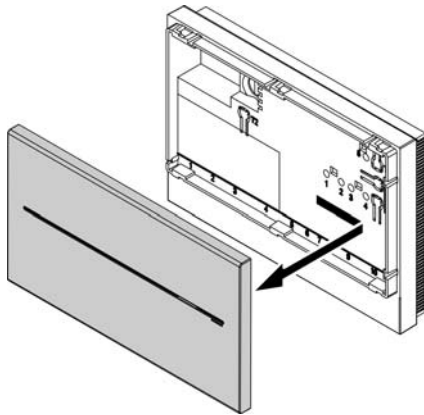
Note: The installation site must be dry and free from the risk of frost. Safeguard ambient temperatures between 32° F and 104° F (0 and 40 °C).

Note: When selecting the installation site, bear in mind the length of the connecting cables (standard delivery).

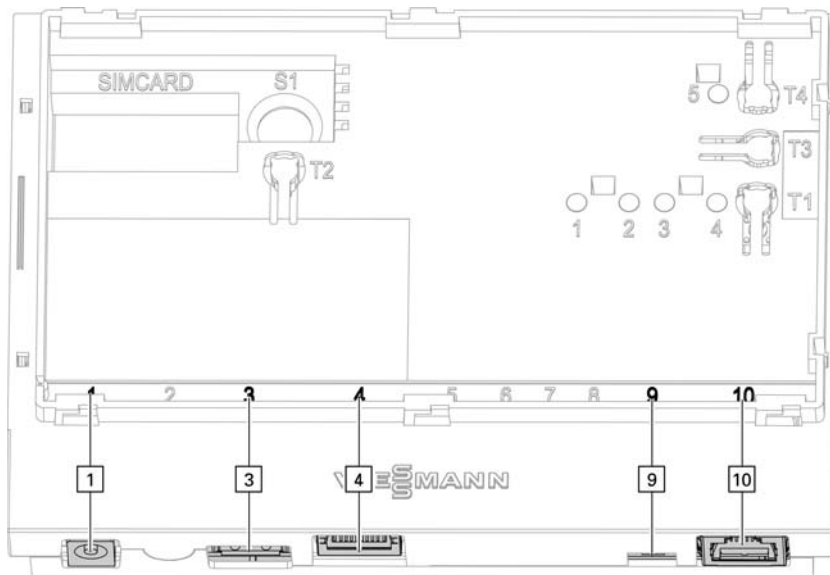
Connecting cables	Length
LAN connecting cable (may be extended on site by IT expert)	6.5 ft. (2 m)
(may be extended with accessory, see communication module installation instructions)	23 ft. (7 m)
Connecting cable for plug-in power supply unit	Approx. 6.2 ft. (1.9 m)

Removing the Cover

Refit in reverse order.



Overview of Connections



- 1** Plug-in power supply unit connection, 5 V–, internal +, external –, min. .6 A (see page 13)
- 3** Not Used
- 4** RJ 45 connector for LAN connection cable to DSL router (see page 10 and “Explanation of displays” see page 11, 12)
- 9** LON terminator, is enabled in the delivered condition (position of switch left, do not adjust)
- 10** RJ 45 connector for LON connection cable (red) to the Vitotronic control unit (see communication module installation instructions)

Installing the Communication Module in the Vitotronic Control Unit



Communication module installation instructions

Connecting the Vitocom 100 to the Vitotronic Control Unit



Communication module installation instructions

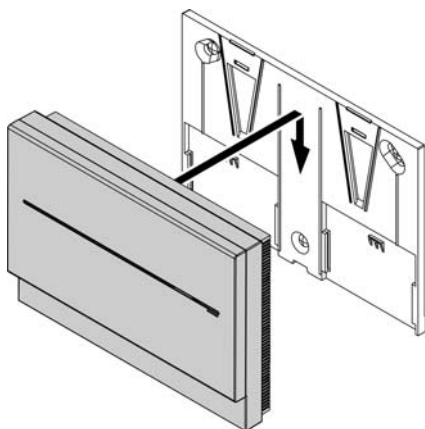
Connecting to the Network (LAN)

1. Plug LAN connecting cable into LAN connection 4 of the Vitocom 100.
2. Plug the free end of the LAN connecting cable into a LAN connection on the DSL router or at the on-site network installation.



DSL router documentation (on site)

Inserting the Vitocom 100 to the Wall Mounting Bracket

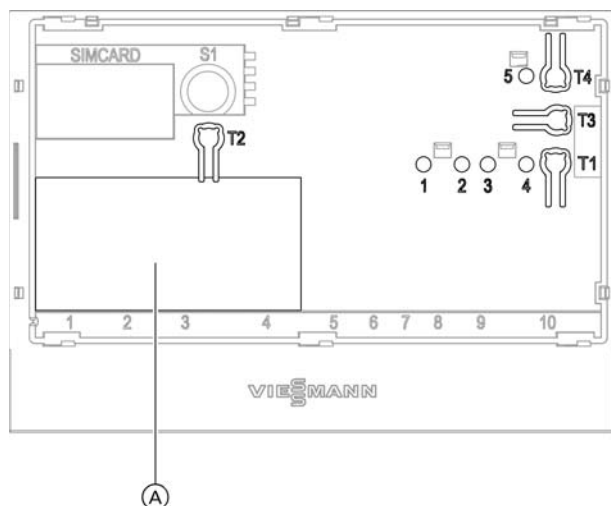


Power Supply

See chapter "Switching on the Vitocom 100" on page 13.

Display and Control Elements

Without cover

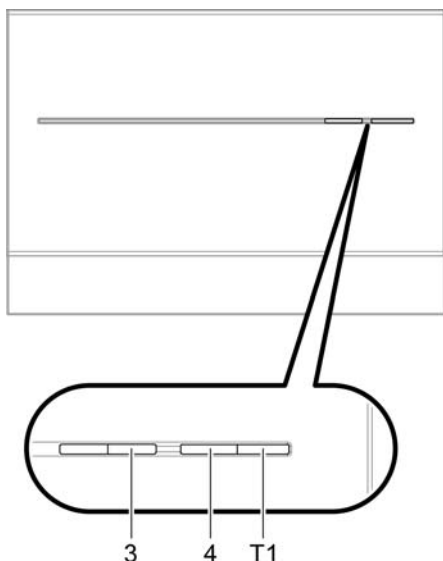


Legend

- Ⓐ Rating plate
- "T1" Maintenance button (see page 17)
- "T2" No function
- "T3" LON key, only when integrating the Vitocom 100 into a BMS (send service PIN).
- "T4" Reset button (see page 17)
- "1" LON service indicator (green LED)
- "2" No function
- "3" IP connection status (green and yellow LED)
- "4" Operating status display (green and red LED)
- "5" Display for data transfer service interface (green LED)

Display and Control Elements *(continued)*

With cover



"T1" Maintenance button (see page 17)

"3" IP connection status (green and yellow LED)

"4" Operating status display (green and red LED)

Explanation of displays

LON service indicator "1"	
Flashes green	LON subscriber check successful (see page 13).
IP State of connection "3"	
Flashes yellow/illuminates yellow	Establishing a connection (see page 13), or connection fault (see page 18), to the DSL router (DHCP server), internet or vitodata server.
Illuminates green	Connection to the Vitodata server established.
Flashes green	Data transfer between the Vitocom 100 and Vitodata server enabled.
Operating status display "4"	
Illuminates red	Service enabled (see page 17).
Flashes red	Heating system fault.
Flashes green longer than 3 min	Fault when initializing the Vitocom 100 (see page 18).
Illuminates green	"Standard mode", no heating system or Vitocom 100 fault.
Flashes green	The Vitocom 100 will initialise after the power supply unit is lugged in or the reset button is pressed.
Flashes green quickly	Software update is being installed. The device must not be isolated from the mains.

Switching on the Vitocom 100

Note: If the connection values of the power supply unit do not match the power consumption of the Vitocom 100, this can lead to interruption of operations and damage to the power supply or the Vitocom 100.

Only use the power supply unit supplied.

1. Plug LV side of the plug-in power supply unit into terminal 1 (see page 9) of the Vitocom 100.
2. Plug power supply unit into standard 120V ~ socket. Vitocom 100 is initialized (see "Initialization").

Initialization

When the Vitocom 100 is initializing, the following processes run in sequence:

1. The Vitocom 100 starts and loads the internal operating software
The operating status display "4" (see page 12) flashes green after max. 40 sec. After a few minutes, operating status display "4" illuminates green.
2. Connect with the Vitodata server
IP connection status display "3" (see page 12) shows the procedure for establishing the connection:
 - Flashes yellow slowly:
 - The Vitocom 100 is integrated into the on-site IP network (obtain IP address of DHCP server).
 - Flashes yellow quickly:
 - Internet connection is being established.
 - Illuminates yellow:
 - Connection to the Vitodata server is being established.
 - Illuminates green:
 - Secure connection to the Vitodata server is established.
3. Connect with the Vitotronic control unit via LON
The Vitocom 100 creates a list of all LON participants.
Note: It may take several minutes to establish the connection via LON.

Initialization successful

The Vitocom 100 is ready for operation. The following LED indicators illuminate green: operating status display "4" and IP connection status "3".

Initialization not successful

If a fault occurs during initialization, this is indicated by the associated LED indicators. For troubleshooting measures, see page 18.

Checking the LON Connection to the Vitotronic Control Unit

To check the LON connection, carry out LON participants check on the Vitotronic control unit.

Requirements:

- The Vitocom 100 is connected to the Vitotronic control unit via LON.
- All devices are switched on.
- LON participants numbers are assigned to the Vitotronic control units.
- The Vitotronic control unit is the fault manager.

Note: The Vitocom 100 has the LON participants number "99" (fixed).



Performing a participants check

- Heat source installation and service instructions or
- Vitotronic control unit service instructions

Note: If the participants check was successful, LON service display "1" flashes green (see page 12) at the Vitocom 100 for approx. 1 min and "Check OK" appears in the Vitotronic display.

Updating LON participants list

In the following cases, the LON participants list in the Vitocom 100 must be updated:

- New LON participants installed.
- LON participants has been removed.
- The LON communication module of an existing subscriber has been replaced.

To update the LON participants list, hold down reset button "T4" (see page 11) for approx. 10 sec.

Note: If the reset button is held down for approx. 30 sec., the Vitocom 100 is returned to its delivered condition.

Configuring Network Using Static IP

If dynamic IP addressing (DHCP, factory setting) is not being used.

Version 1: Network with static IP addressing

The router and network are already set to static IP addressing.

1. Press maintenance button "T1" on the Vitocom 100 for at least 15 s (max. 25 s).
The Vitocom 100 is now set to static IP address "192.168.10.90".
2. Connect the Vitocom 100 to a computer using the LAN cable.
Note: The computer's network card must be configured to "192.168.10.10".
3. Enter the current IP address of the Vitocom 100 ("192.168.10.90") into the web browser.
The network configuration web page appears.
4. Select language in the upper right section of the page.
5. Enter user name and password (fixed):
"User name": vitocom
"Password": viessmann
6. Set "DHCP" to Off.
Dynamic IP addressing is switched off.
7. Ask the IT contractor to set a valid configuration:
 - "IP address"
 - "Subnet mask"
 - "Gateway"
 - "DNS server 1"
 - "DNS server 2"**Note:**
 - The IP address must not be assigned.
 - An incorrect entry or spelling is indicated with a red border around the relevant entry field.
 - The IP addresses of the DNS servers need be specified only if such servers are used in the internal network.
8. Store the settings using "Save".
A web page appears confirming that the process has been successful.

Version 2: Network still set to dynamic IP addressing

Only after the Vitocom 100 has been set to static IP addressing should the router and network be adjusted (by an IT contractor).

1. Connect the Vitocom 100 to the LAN network (DSL router) using the LAN cable.
2. Determine the current IP address of the Vitocom 100 via the DSL router.
3. Enter the current IP address of the Vitocom 100 into the web browser.
The network configuration web page appears.
4. Select language in the upper right section of the page.
5. Enter user name and password (fixed):
"User name": vitocom
"Password": viessmann
6. Set "DHCP" to Off.
Dynamic IP addressing is switched off.
7. Ask the IT contractor to set a valid configuration:
 - "IP address"
 - "Subnet mask"
 - "Gateway"
 - "DNS server 1"
 - "DNS server 2"**Note:**
 - The IP address must not be assigned.
 - An incorrect entry or spelling is indicated with a red border around the relevant entry field.
 - The IP addresses of the DNS servers need be specified only if such servers are used in the internal network.
8. Store the settings using "Save".
A web page appears confirming that the process has been successful.
9. Ask the IT contractor to set the DSL router to static IP addressing.

Registering the User / Setting up the Heating System

For operation of the heating system via the Vitodata 100 user interface and the Vitotrol app, a user account must be created on the Vitodata server and the heating system must be set up. For this, carry out **one-off** user registration.

Via the Vitotrol app

1. Start the Vitotrol app.
2. Press on "Create access" and complete all fields on the registration form.

Note: - In the "Password" field, assign a new password (min. 6 characters: a..z, A..Z, 0..9) and confirm this in the "Enter password again" field.
- "Connection data" can be found on the Vitocom 100 type plate (see page 11)

3. Press **"Register"**.
An email is sent (Subject: "Your registration for the Vitodata 100") is sent with an activation link to the previously specified email address.
4. Open the email in your inbox and follow the activation link provided to complete the registration. The user account and the system are fully set up.

5. In the Vitotrol app, press "Log in" and log in with the following access details:

User name: Email address specified
Password: Password indicated

The heating system can be operated via the Vitotrol app.



Refer to Vitotrol app online help

Note: It is also possible to register via the Vitodata 100 user interface, using the access details specified.

Via the Vitodata 100 user interface

Register user

1. Open with internet browser "http://www.vitodata100.viessmann.com".
2. On the start page, press "Register" and complete all fields on the registration form.

Note: In the "Password" field, assign a new password (min. 6 characters: a..z, A..Z, 0..9) and confirm this in the "Enter password again" field.

3. Press "Next".
4. Check and enter the confirmation code from the graphic displayed. Tick to accept the terms of use.
5. Press "Register". An email is sent (Subject: "Your registration for the Vitodata 100") with an activation link to the previously specified email address.
6. Open the email in your inbox and follow the activation link provided to complete the registration. The user registration is complete. The user account is fully set up.

Setting up the heating system

1. Open with internet browser "http://www.vitodata100.viessmann.com" and log in to the Vitodata server.

User name: Email address specified
Password: Password indicated

2. Select "Create a new system", select system type "Vitocom 100, type LAN1" and enter "Connection data".

Note: The manufacturer's details can be found on the Vitocom 100 type plate (see page 11).



Refer to Vitodata 100 online help

Function Test

1. Simulate a fault in the heating system, e.g. sensor fault.



Heat source service instructions

2. Check the following:

- Operating status display "4" (see page 11) flashes red.
- The fault message is displayed in the Vitotrol app and sent to the recipients stored in the Vitodata 100.

Note: - If a fault is rectified, this is confirmed with a message.

- If the fault is not rectified, then a repeat message is sent on the 3 days following.

Enabling Maintenance

With this function, the transfer of messages from the heating system to the Vitodata server is suppressed, e.g. for maintenance work.

1. Prior to maintenance work on the heating system, briefly press the maintenance button "T1" (approx. 1 sec).
 - Operating status display "4" (see page 11) illuminates red.
 - The message "Maintenance button ON" is displayed in the Vitotrol app and sent to the recipients stored in the Vitodata 100.

Note: If the maintenance button was not pressed before maintenance work, then a fault message may be sent, depending on the activity.

2. Briefly press the maintenance button again once the maintenance work has been carried out (approx. 1 sec).
 - The operating status display "4" (see page 11) changes from red to green (if no fault has developed in the heating system).
 - The message "Maintenance button OFF" is displayed in the Vitotrol app and sent to the recipients stored in the Vitodata 100.

Note: The maintenance function is automatically reset after 8 h.

Regular Function Testing

The functionality of the message paths must be checked at regular intervals (see "Function testing" on page 16).

Return to Delivered Condition

Press reset button "T4" (see page 11) (approx. 30 sec), until operating status display "4" and IP connection status display "3" go out.

The following processes are performed:

- The Vitocom 100 LON subscriber list is updated.
- The Vitocom 100 is newly initialized (see page 13).

Troubleshooting Measures

Faults on the Vitocom 100 are indicated by various LED indicators (see page 11).

Faults with LED indicator

	Type of fault and measures
IP connection status "3"	
Flashes yellow slowly	IP address could not be obtained. ■ Check LAN connecting cable. ■ At the router, check whether DHCP has been set, check other network settings. ■ If necessary, replace the Vitocom 100.
Flashes yellow quickly	IP address obtained, but no internet connection. ■ Check internet connection using another LAN participant, e.g. laptop. ■ If no internet connection is possible even with another LAN participant, have the network settings checked at the DSL router by an IT expert.
Illuminates yellow	Internet connection available, but the Vitodata server cannot be reached. Disconnect plug-in power supply unit and reconnect again after approx. 15 sec. Connection attempt is repeated (see page 13).
Operating status display "4"	
Flashes green longer than 3 min	Fault when initializing the Vitocom 100 ■ Disconnect plug-in power supply unit and reconnect again after approx. 15 sec. ■ If necessary, replace the Vitocom 100.

Faults without LED indicator

Fault	Measures
All displays on the Vitocom 100 are off.	Check the Vitocom 100 power supply.
The messages are displayed in the Vitotrol app, but not sent to the recipients.	Check configuration of the recipients in the Vitodata 100.
The Vitocom 100 reports "participant failure".	Check LON connecting cables.

Ordering Parts

The following information is required:

- Serial no. (see Vitocom 100 rating plate (A))
- Position number of the required part (from this parts list)

Standard parts are available from your local supplier.

Parts List

0001 Vitocom 100

0002 Casing

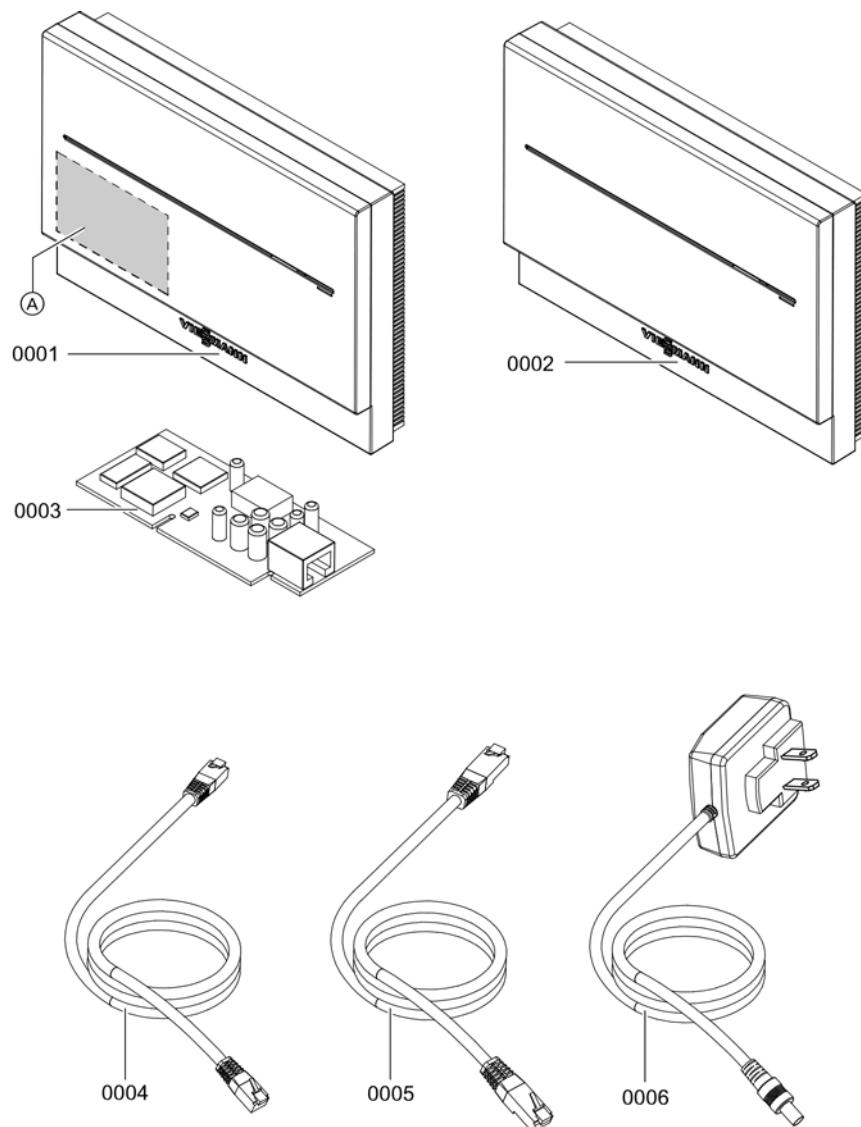
0003 LON communication module

0004 LAN connecting cable

0005 LON connecting cable, red

0006 Plug-in power supply unit

(A) Vitocom 100 rating plate (under the cover)



Specifications

Vitocom 100, type LAN1

Operating voltage	5V–
Rated current	1.6 A
Power consumption	8 W
Permiss. ambient temperature	
■ during operation	32°F to 131°F (0°C to +55°C) Installation in living spaces and boiler rooms (standard ambient conditions)
■ during storage and transport	-4°F to 185°F (-20°C to +85°C)
Plug-in power supply unit	
Rated voltage	120V ~
Rated frequency	60 Hz
Rated current	0.25 A
Output voltage	5V–
Output current	1.6 A
Permiss. ambient temperature	
■ during operation	32°F to 104°F (0°C to +40°C)
■ during storage and transport	-40°F to 158°F (-40°C to +70°C)

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(recycled and recyclable) paper.



Technical information subject to change without notice.