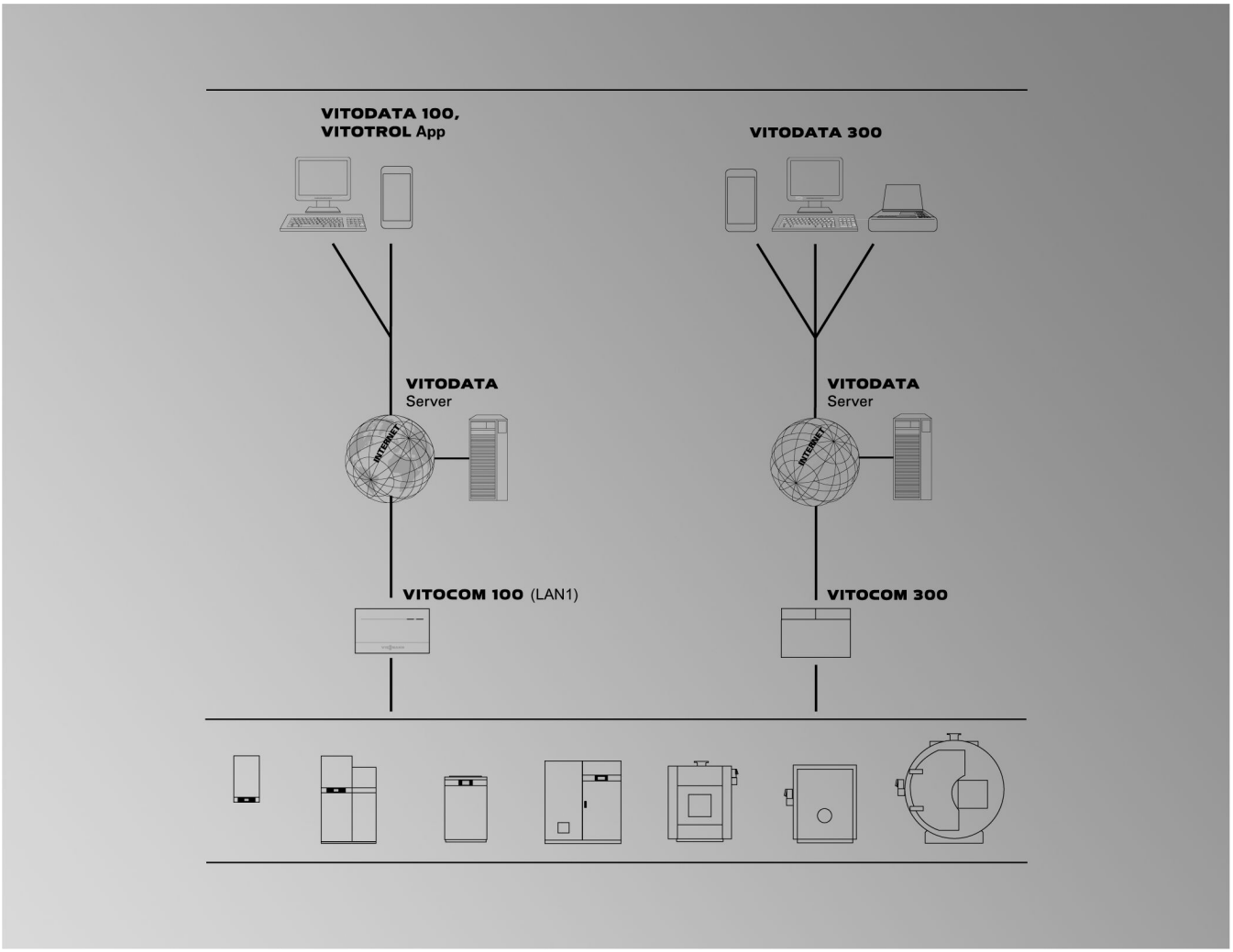
VIESMANN

Data communication

Vitocom, Vitodata, Vitosoft, Vitogate
for commercial systems above 60 kW rated heating output

Technical guide



TeleControl

For commercial system users with systems above 60 kW rated heating output
Vitocom 100
- **Type LAN1** with **Vitotrol app** and **Vitodata 100**

Vitocom 300
- **Type LAN3** with **Vitodata 300**

ServiceControl

- **Vitosoft 300**

Building Automation

- **Vitogate 200, type KNX**
- **Vitogate 300, type BN/MB**

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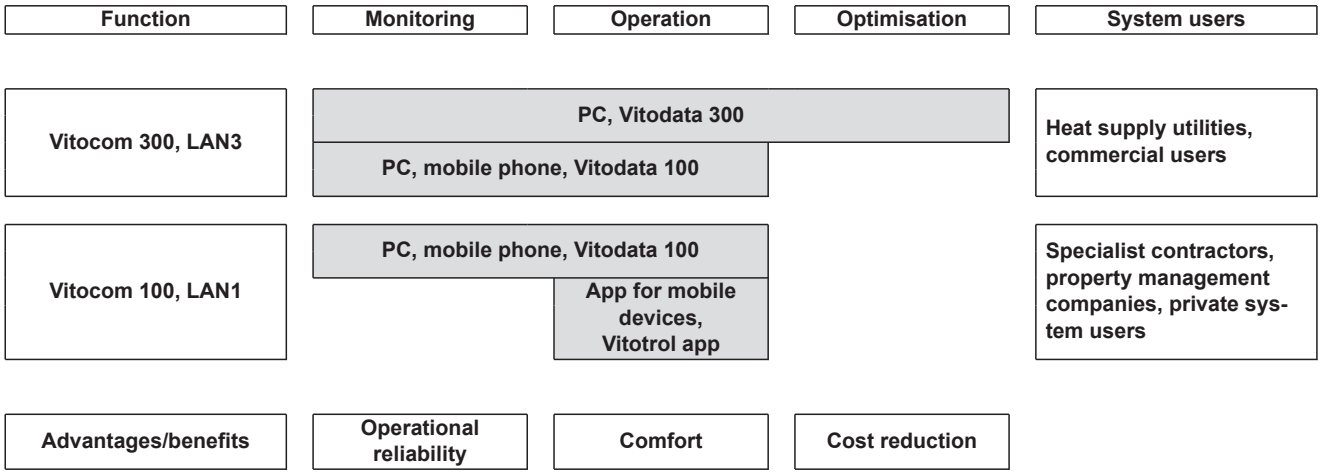
1.1 Device types, operating functions and product benefits

1

The following overview provides guidance on selecting a suitable Vitocom device. The selection depends on the required functions for operating and monitoring the heating system, the primary use, and the intended user or operator.



1.2 Applications and users

Selection aids

The following table provides guidance on selecting a suitable Vitocom device. The selection depends on the required application for operating and monitoring the heating system and the intended user or operator. The TeleControl products offer solutions particularly for the listed applications in energy, heating and fault management.

Operating function	User	Required products	Information
Energy management			
Optimising, operating and monitoring Viessmann heating systems with Vitotronic control unit	Commercial operators – Heat supply utilities – Local authorities – Commercial enterprises – Municipal services – Heating contractors	Vitocom 300 with Vitodata 300 user interface	Page 13
Heating management			
Operating and monitoring Viessmann heating systems with Vitotronic control unit	Specialist contractors, property management – Local authorities – Commercial enterprises – Hotels – Residential facilities and homes for the elderly – Apartment buildings – Heating contractors	Vitocom 100, type LAN1 with Vitodata 100 user interface	Page 9
Operating Viessmann heating systems with Vitotronic control unit	Private system users in detached and two-family houses as well as holiday homes	Vitocom 100, type LAN1 with Vitotrol app	Page 7
Fault management			
Monitoring up to 26 on-site components of a Viessmann heating system or third party system (via digital inputs of the Vitocom)	– Clubs, sports facilities – Residential facilities and homes for the elderly – Local authorities – Commercial enterprises – Detached and two-family houses – Apartment buildings – Hotels, clinics, churches – Municipal services – Specialist contractors	Vitocom 300 with Vitodata 300 user interface	Page 13

Intended use

Vitocom 100, type LAN1 and Vitocom 300, type LAN3

Install and operate Vitocom products as intended, in conjunction with the electronic control units and controllers for the Viessmann heat and power generators designed for this system. Also take account of the relevant installation, service and operating instructions. In particular, observe the current and voltage specifications for connections and hook-ups.

Use the Vitocom products exclusively for monitoring, operating and optimising systems with the user and communication interfaces specified for this purpose in the relevant printed documentation. With regard to the communication interfaces, ensure on site that the system requirements specified in the product documentation are met at all times for every transfer medium employed. For this, use the approved communication components supplied with the products (e.g. tested and qualified mobile phone routers). Only use the specified components for the mains power supply (e.g. power supply units).

1.3 Device and operating functions; general system requirements

TeleControl product	Vitocom 100 Type LAN1		Vitocom 300 Type LAN3
Operation	**Vitotrol app**	**Vitodata 100**	**Vitodata 300**
User			
– Heat supply utilities	—	—	X
– Heating contractors	—	X	X
– System users	X	X	—
Integral interface	Ethernet, IP networks		
Communication			
– Mobile network	Only via mobile phone router; see **www.vitocom.info**		
– Ethernet, IP networks	X	X	X
Vitocom inputs and outputs			
– Digital inputs	—	—	2
– Digital outputs	—	—	1
– Analogue inputs	—	—	0
– M-Bus interface	—	—	1
Vitocom inputs and outputs in fully expanded system with all possible extension modules			
– Digital inputs	—	—	26
– Digital outputs	—	—	7
– Analogue inputs	—	—	24
– M-Bus interface	—	—	1
Control device			
– Smartphone	X	X	X
– Mobile phone	—	—	—
– PC	—	X	X
Interface for control device			
– SMS	—	—	—
– Internet browser	—	X	X
– Vitotrol app terminal devices	X	—	—
Relaying messages			
– SMS	—	X	X
– Email	—	X	X
Operating function			
– Switching times, holiday program	X	X	X
– Operating program	X	X	X
– Set values	X	X	X
– Heating curve slope/level	X	X	X
– Scanning operating conditions and temperatures	X	X	X
– Codes	—	—	X
– Optimisation	—	—	X

Note
The Vitotrol app and Vitodata 100 can be used simultaneously. Vitodata 100 and Vitodata 300 ***cannot*** *be used simultaneously.*

Information on risks
Vitocom wireless signals (when communicating via a mobile network) can interfere with electronic medical devices – particularly pacemakers, hearing aids and defibrillators, for example. If any such equipment is used, avoid the immediate vicinity of the Vitocom while it is operational.

Information on fault messages
The Vitocom only relays faults of connected control units and of the components connected to configured inputs of the Vitocom. For technical details, see the installation and maintenance instructions of the devices.

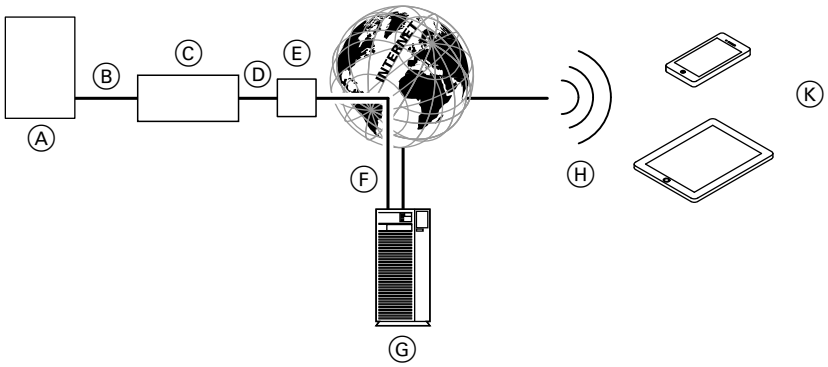
Requirements for fault messages:
- The control units **and** the Vitocom must be configured correctly.
- The Vitocom message paths must be set up
- The heating system and functionality of the message facilities must be checked at regular intervals.
- To improve the operational reliability of the heating system, we recommend allowing for supplementary measures, e.g. frost protection or monitoring for water damage
- Vitocom 300: So that messages can still be transferred during a power failure, we recommend using a UPS (uninterruptible power supply) module

Information on liability
Viessmann rejects all liability for loss of profit, unattained savings, or other direct or indirect consequential losses resulting from the use of the Vitocom or the software, as well as losses resulting from inappropriate use.
The Viessmann General Terms and Conditions apply, which are included in each current Viessmann pricelist.
We accept no liability for SMS and email services provided by network operators. The terms and conditions of the relevant network operators therefore apply.

2.1 Vitocom 100, type LAN1 with Vitotrol app

Application

- For remote control of Viessmann heating systems with Vitotronic control units via IP network
- For commercial system users with systems above 60 kW rated heating output



Ⓐ Heat generator with control unit (see page 41)
Ⓑ LON cable
Ⓒ Vitocom 100, type LAN1
Ⓓ IP network (on site)
Ⓔ DSL router (on site)
Ⓕ Secure internet connection to the Vitodata server
Ⓖ Vitodata server
Ⓗ Mobile network
Ⓚ Mobile control device with Vitotrol app:
- Remote control of the heating system
- Message retrieval.

Remote switching and remote scanning

The Vitotrol app enables access to the following control unit parameters:
- Selecting set temperatures
- Setting the operating program and switching times
- Scanning operating conditions and temperatures

Note
The Vitotrol app enables users to access only one system at a time using a terminal device.

Messages
Any messages currently active in the heating system, e.g. sensor or burner faults, are transmitted to the Vitocom 100, type LAN1 via LON. The Vitocom 100, type LAN1 transmits these messages to the Vitodata server. Subject to the Vitotrol app being enabled on the mobile terminal device, it will regularly check the heating system status and display any messages. No scanning in the delivered condition whilst the mobile terminal device is being charged (for changeover, see Vitotrol app).

System requirements

Heating system:
- For **one** single boiler system with Vitotronic control unit, with or without heating circuits downstream.
- Standard socket 230 V/50 Hz.

IP network:
- DSL router with available LAN socket (on site).
- Internet connection with flat rate (tariff **without** restriction on time or data volume) and high availability, i.e. the Vitocom 100, LAN1 is permanently linked to the Vitodata server.
- Dynamic IP addressing (DHCP) in the network (LAN); have this checked and (if required) set up on site by an IT expert **prior** to commissioning.
- Determine the routing and security parameters in the IP network (LAN) so that port 80 and port 443 are enabled for direct outward connections; have this checked and (if required) set up on site by an IT expert **prior** to commissioning.

Note
The Vitocom 100, type LAN1 establishes a secure internet connection to the Vitodata server during operation. Connecting the Vitocom 100, type LAN1 with any other type of server is not possible.

User account on the Vitodata server:
A valid user account on the Vitodata server is required to operate a Vitocom 100, type LAN1; the same applies to the use of the Vitotrol app. Users can register for this either via the Vitotrol app or via the Vitodata 100 user interface.

Recommended mobile terminal device:
- Mobile devices with Apple iOS operating system, version 10 or higher
- Mobile devices with Google Android operating system, version 4.4 or higher

Note
*For further details, see **www.vitotrol-app.info***

Mobile network:
- Adequate signal strength from the mobile network where the Vitotrol app is used.
- For access via WLAN: Adequate signal strength where the Vitotrol app is used.

TeleControl — Vitocom 100 (cont.)

Message destinations:
- Vitotrol app
- Terminal device (e.g. computer) for receiving emails

Configuration

In the case of dynamic IP addressing (DHCP) the Vitocom 100, type LAN1 will be configured automatically. The DSL router requires no separate settings.

Observe the network settings of the DSL router (see "IP network").

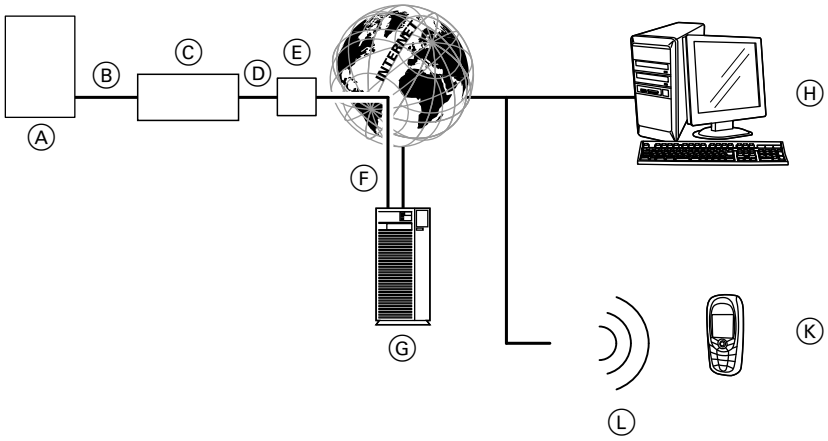
Benefits

- Use in heating systems in detached and two-family houses as well as holiday homes
- Remote monitoring device for heating contractors and system operators (e.g. caretakers)
- Inexpensive
- Straightforward operation via iOS and Android operating systems. For supported terminal devices, see **www.vitotrol-app.info**
- All messages sent to a PC or mobile phone
- Easy commissioning through automatic configuration

2.2 Vitocom 100, type LAN1 with Vitodata 100 user interface

Application

- For remote monitoring and remote control of Viessmann heating systems with Vitotronic control units via IP network
- For commercial system users with systems above 60 kW rated heating output



Ⓐ Heat generator with control unit (see page 41)
Ⓑ LON cable
Ⓒ Vitocom 100, type LAN1
Ⓓ IP network (on site)
Ⓔ DSL router (on site)
Ⓕ Secure internet connection to the Vitodata server
Ⓖ Vitodata server, registration and login at **www.vitodata100.com**
Ⓗ Control device:
- Remote control of the heating system via Vitodata 100 user interface
- Receiving messages via email

Ⓚ
- Smartphone/PDA for receiving messages via email and SMS
- Mobile phone for receiving SMS messages

Ⓛ Mobile network

Remote switching and remote scanning

The Vitodata 100 user interface enables a wide range of heating management functions. Users can access the following control unit parameters:
- Adjusting set temperatures, heating curve slope and level
- Setting operating programs, holiday programs and switching times
- Adjusting set values
- Scanning operating conditions and temperatures

Messages
Any messages currently active in the heating system, e.g. sensor or burner faults, are transmitted to the Vitocom 100, type LAN1 via LON. The Vitocom 100, type LAN1 transmits these messages to the Vitodata server. The messages can be displayed on the Vitodata 100 user interface. If message destinations have been saved on the Vitodata server (email, SMS), messages are automatically relayed to them.

Content of messages
- System description
- Message code, message text
- Time
- Additional information

System requirements

Heating system:
- For max. 5 single boiler systems or cascades with Vitotronic control unit, with or without downstream heating circuits
- The max. number of devices (LON subscribers) comprising boiler and heating circuit control units is 20.
- Standard socket 230 V/50 Hz.

IP network:
- DSL router with available LAN socket (on site).
- Internet connection with flat rate (tariff **without** restriction on time or data volume) and high availability, i.e. the Vitocom 100, LAN1 is permanently linked to the Vitodata server.
- Dynamic IP addressing (DHCP) in the network (LAN); have this checked and (if required) set up on site by an IT expert **prior** to commissioning.
- Determine the routing and security parameters in the IP network (LAN) so that port 80 and port 443 are enabled for direct outward connections; have this checked and (if required) set up on site by an IT expert **prior** to commissioning.

TeleControl — Vitocom 100 (cont.)

Note
The Vitocom 100, type LAN1 establishes a secure internet connection to the Vitodata server during operation. Connecting the Vitocom 100, type LAN1 with any other type of server is not possible.

User account on the Vitodata server:
A valid user account on the Vitodata server is required to operate a Vitocom 100, type LAN1; the same applies to the use of the Vitotrol app. Users can register for this either via the Vitotrol app or via the Vitodata 100 user interface.

Control device with the following features:
- Internet browser:
  Microsoft Internet Explorer version 9 or higher
  or
  Firefox version 3 or higher
  or
  Safari Mobile iOS version 10 or higher
- Active internet connection

Message destinations:
- Terminal device (e.g. computer) for receiving emails
- Mobile phone (incl. smartphone) for receiving SMS

2

Configuration

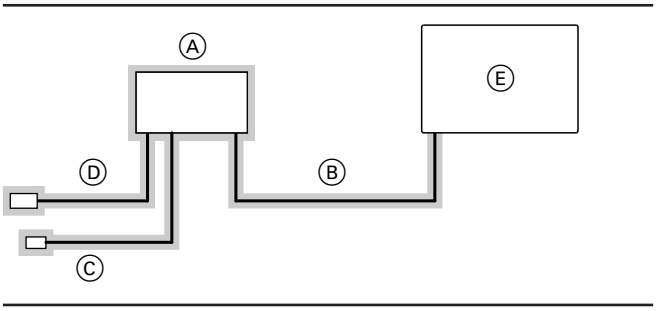
In the case of dynamic IP addressing (DHCP) the Vitocom 100, type LAN1 will be configured automatically. The DSL router requires no separate settings.

Observe the network settings of the DSL router (see "IP network"). For further details on terms of use, see **www.vitodata.info**

Benefits

- Use in heating systems in detached and two-family houses as well as holiday homes
- Remote monitoring device for heating contractors and system operators (e.g. caretakers)
- Affordable
- Easy operation via PC and smartphone
- System monitoring
- All messages sent to a PC or mobile phone
- Simplified commissioning through automatic configuration

2.3 Standard delivery and accessories

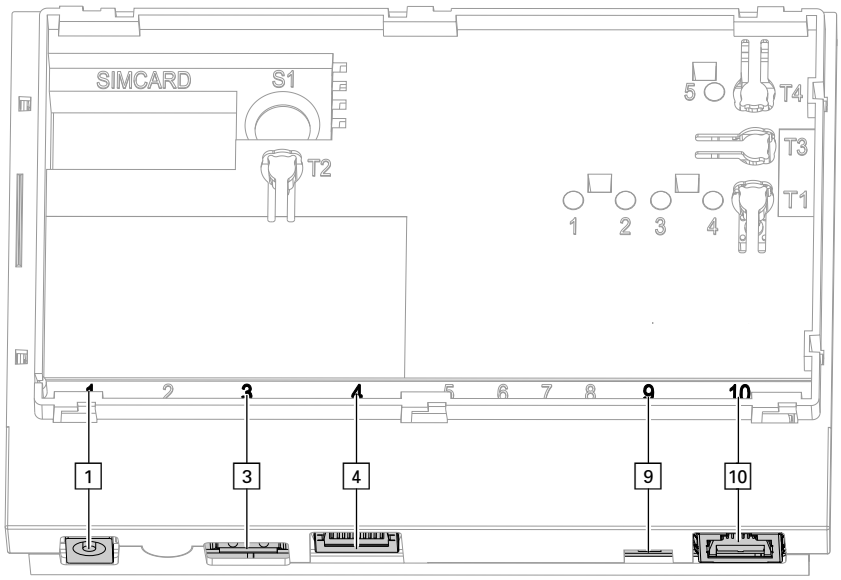


= Standard delivery

Pos.	Designation	Part no.
Ⓐ	**Vitocom 100, type LAN1** with fixing materials	
	– Without communication module	Z011389
	– With communication module for installation in the control unit of the heat generator	Z011224
Ⓑ	LON cable, 7 m long	
Ⓒ	LAN cable, 2 m long	
Ⓓ	Power cable with plug-in power supply unit, 1.9 m long	
	Supported control units:	
Ⓔ	Boiler and heating circuit control units (see table on page 41)	See Viessmann pricelist
	Current list of supported heat generators:	
	– For Vitodata 100: See Vitodata online help at **www.vitodata100.com**	
	– For Vitotrol app: See **www.vitotrol-app.info**	

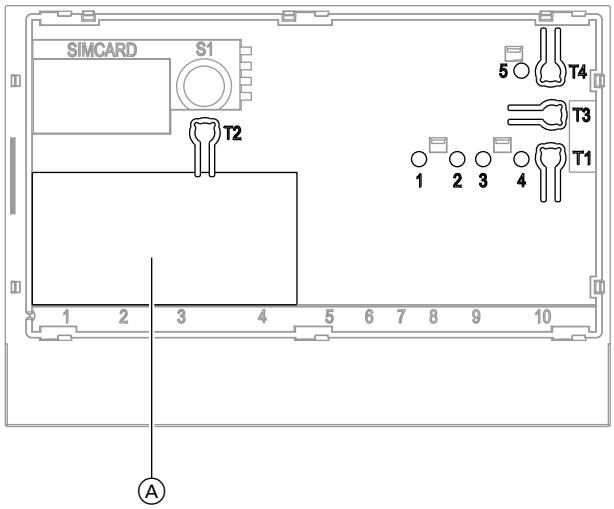
2.4 Specification

Connections



1 Plug-in power supply unit connection, 5 V⎓, internal +, external –, min. 1.6 A
3 Service interface: Do not make any on-site connections.
4 RJ45 socket for LAN cable to the DSL router
9 LON terminator, enabled in the delivered condition
10 RJ45 socket for LON cable (red) to the Vitotronic control unit

Display and controls

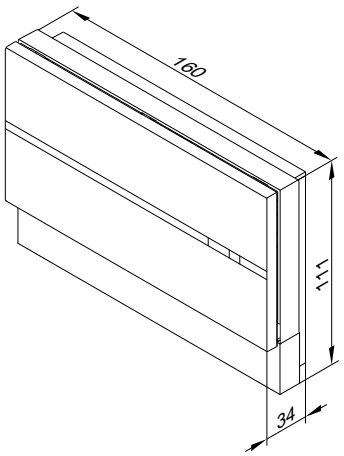


Ⓐ Type plate
"T1" Service button
"T2" No function
"T3" LON button for sending the service PIN (only when integrating the Vitotronic control unit into BMS)
"T4" Reset button
"1" LON service indicator (green LED)
"2" No function
"3" IP connection status (green and yellow LED)
"4" Operating status indicator (green and red LEDs)
"5" Indicator, data transfer service interface (green LED)

Specification

Power supply via plug-in power supply unit	230 V~/5 V⎓
Rated current	1.6 A
Power consumption	8 W
Protection class	II
IP rating	IP 30 to EN 60529; ensure through design/installation.
Permissible ambient temperature	
– Operation	0 to +55 °C Installation in living spaces or boiler rooms (standard ambient conditions)
– Storage and transport	−20 to +85 °C

Dimensions

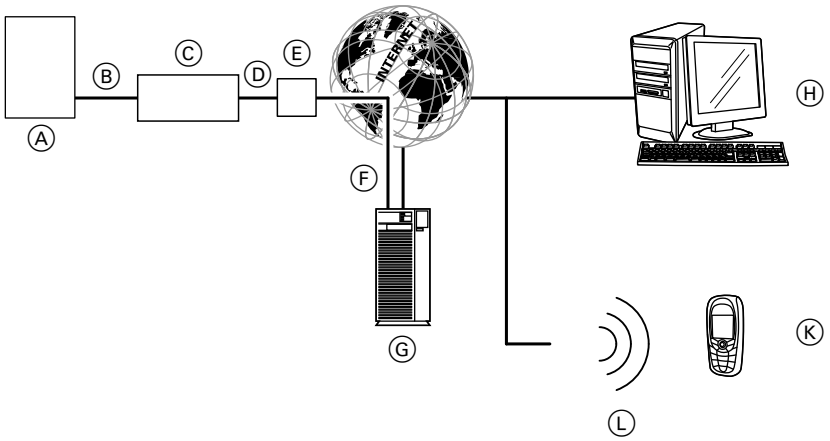


3.1 Vitocom 300, type LAN3 with Vitodata 300 user interface

Application

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

For remote monitoring of on-site components and third party systems via IP networks.



Ⓐ Heat generator with control unit (see page 41)
Ⓑ LON cable
Ⓒ Vitocom 300, type LAN3
Ⓓ IP network (on site)
Ⓔ DSL router (on site)
Ⓕ Secure internet connection to the Vitodata server
Ⓖ Vitodata server, registration and login at **www.vitodata300.com**
Ⓗ Control device:
- Remote control of the heating system via Vitodata 300 user interface
- Receiving messages via email

Ⓚ
- Smartphone/PDA for receiving messages via email and SMS
- Mobile phone for receiving SMS messages

Ⓛ Mobile network

Remote monitoring, telecontrol and remote setup

The Vitodata 300 user interface provides access to all control unit parameters:
- Setting set values, heating curve slope and level
- Setting the operating program, holiday program and switching times
- Scanning operating conditions and temperatures
- Remote setup of control parameters via coding addresses
- Trend data can be evaluated and archived on the Vitodata 300 user interface.
- Recording energy consumption by integrating M-Bus heat meters

Messages

If the heating system develops a fault, e.g. with one of its sensors or the burner, the control unit recognises this and transmits it to the Vitocom 300, type LAN3 via LON. It transmits these messages to the Vitodata server. These messages can be displayed on the Vitodata 300 user interface. In addition, these messages will be relayed to the message destinations (SMS, email) saved on the Vitodata server.
Additional devices (see chapter "TeleControl — sample applications") and third party systems (monitoring limits via inputs and outputs) can also be monitored.

Content of messages
- System description
- Message code, message text
- Time
- Additional information

Hooking up auxiliary functions

- 2 digital inputs DI1 and DI2
- 1 digital output DO1
- 1 M-Bus interface
- 1 EM interface

Note
For detailed information see chapter "Specification".

Digital inputs DI1 and DI2
Using these inputs, on-site fault messages can be hooked up as low voltage signals. The inputs are monitored by the Vitocom 300, type LAN3. Input signals are relayed by the Vitocom 300, type LAN3 as messages.

Example:
Fault message from refrigeration, lifting and ventilation systems and central fault messages from a control panel.

TeleControl — Vitocom 300 (cont.)

Digital output DO1
On-site components can be hooked up via this output. The output can also be configured as a central fault message output. In other words, external signal transducers can be switched via this output.

M-Bus interface
For connecting up to 16 volume and consumption meters with M-Bus capability, may be extended by on-site M-Bus repeaters.

EM interface
Bus connection to up to 3 EM301 extension modules.

Hooking up auxiliary functions in conjunction with the EM301 extension module (accessories)

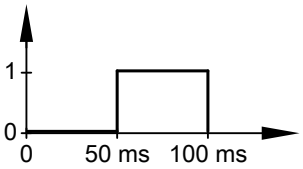
- 8 digital inputs DI1 to DI8
- 8 analogue inputs AI1 to AI8
- 2 digital outputs DO1 and DO2
- 1 EM interface

Digital inputs DI1 to DI8
Using these inputs, on-site fault messages can be hooked up via floating contacts. The inputs are monitored by the Vitocom 300, type LAN3. Input signals are relayed by the Vitocom 300, type LAN3 as messages.
The message must be programmed via the Vitodata 300 user interface to "Switch closed" (alarm N/O) or "Switch open" (alarm N/C). It is possible to scan the status of inputs via the control device (PC/laptop with internet access).

Example:
Fault message from refrigeration, lifting and ventilation systems and central fault messages from a control panel.

With Vitodata 300, these inputs can be configured as pulse counter inputs. The Vitocom 300, type LAN3 adds up the pulses determined via the floating contact.
Up to 10 Hz (pulse width > 50 ms).

Example:
Heat meter, flow meter for oil consumption



Analogue inputs AI1 to AI8
With Vitodata 300, these inputs can be configured and the values scanned.

Digital outputs DO1 and DO2
On-site components, which can be configured with Vitodata 300, can be switched via these outputs.

EM interface
Bus connection to the Vitocom 300.

System requirements

Heating system:
- For max. 5 single boiler systems or cascades with Vitotronic control unit, with or without downstream heating circuits.
- The control unit is connected to the Vitocom 300, type LAN3 via LON (for an overview of connectible control units, see page 41).
- The max. number of devices (LON subscribers) comprising boiler, heating circuit and cascade control units is 20.

IP network:
- DSL router with available LAN socket (on site)
- Internet connection with flat rate (tariff **without** restriction on time or data volume) and high availability, i.e. the Vitocom 300, LAN3 is permanently linked to the Vitodata server.
- Dynamic IP addressing (DHCP) in the network (LAN); have this checked and (if required) set up on site by an IT expert **prior** to commissioning.
  or
  Static IP addressing (e.g. when connecting to subnetworks) in the network (LAN) must be set up on the Vitocom 300 on site by an IT expert **prior** to commissioning.
- Determine the routing and security parameters in the IP network (LAN) so that port 80 and port 443 are enabled for direct outward connections; have this checked and (if required) set up on site by an IT expert **prior** to commissioning.

Control device with the following features:
- Internet browser:
  Microsoft Internet Explorer version 9 or higher
  or
  Firefox version 3 or higher
  or
  Safari Mobile iOS version 10 or higher
- Active internet connection

Message path:
- PC/laptop for receiving email
- Mobile phone (incl. smartphone) for receiving SMS

Configuration

In the case of dynamic IP addressing (DHCP) the Vitocom 300, type LAN3 will be configured automatically. The DSL router requires no separate settings.
In the case of static IP addressing, IP configuration must be performed on the Vitocom 300 and the DSL router by an IT expert. Observe the network settings of the DSL router (see "IP network").

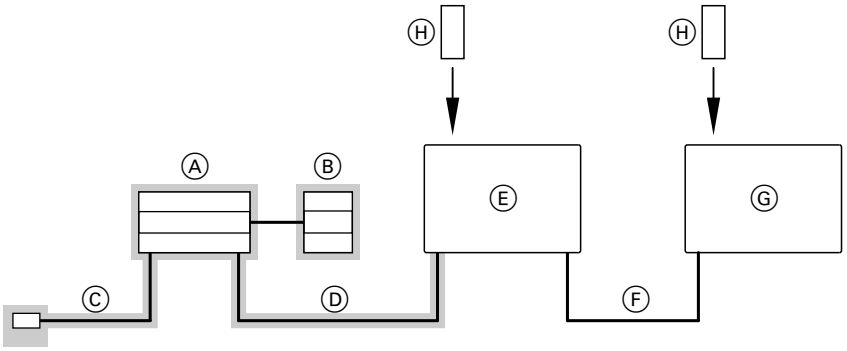
The output and inputs of the Vitocom 300, type LAN3 and the EM301 extension modules are configured with the Vitodata 300 user interface.
For use of the Vitocom 300, type LAN3 in the mobile network, see **www.vitocom.info**
For further details on terms of use, see **www.vitodata.info**

TeleControl — Vitocom 300 (cont.)

Benefits

- Powerful communication system for commercial users
- Low operating costs through internet connection
- System monitoring
- Comprehensive access to all controller data reduces time and effort during service work.
- All messages sent to a PC or mobile phone
- Optimisation of the heating system
- Recording trends
- Monitoring heating systems, even third party systems, via additional connections (see chapter "TeleControl — sample applications")
- Connection of heat meters via M-Bus interface

3.2 Standard delivery and accessories

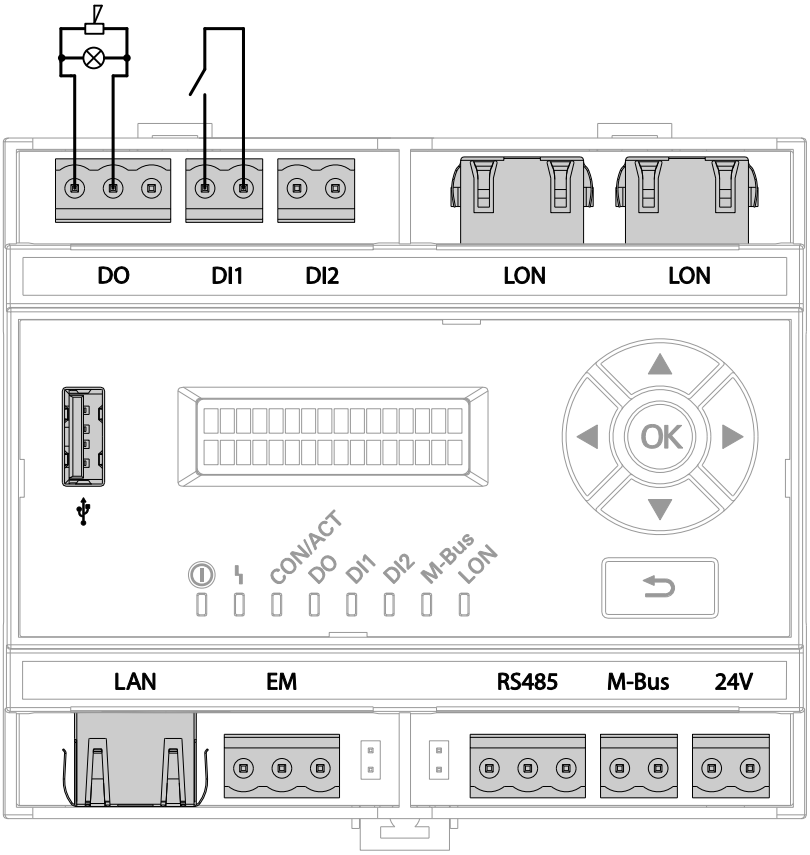


= Standard delivery

Pos.	Designation	Part no.
Ⓐ	**Vitocom 300, type LAN3** With integral LAN socket for IP networks – Without communication module – With communication module Ⓗ for installation in the control unit of the heat generator	 Z011394 Z011399
Ⓑ	Power supply unit	
Ⓒ	LAN cable (RJ45), 2 m long	
Ⓓ	LON cable, 7 m long	
	Supported control units:	
Ⓔ	Boiler control unit (see table on page 41)	See Viessmann pricelist
Ⓖ	Heating circuit or cascade control unit (see table on page 41) Current list of supported heat generators: – For Vitodata 100: See Vitodata online help at **www.vitodata100.com** – For Vitodata 300: See Vitodata online help at **www.vitodata300.com**	See Viessmann pricelist
	Accessories:	
No pos. no.	For accessories, see chapter "Accessories overview" on page 19	
Ⓕ	LON connection accessories (e.g. connecting cables, couplings, sockets, etc.), see page 42	

3.3 Specification

Connections



DO 1 digital output:
Floating relay contact,
3-pole, changeover contact, max. 2 A, 24 V⎓,
with LED indicator

DI1 - DI2 2 digital inputs:
For floating contacts,
2-pole, max. contact breaking capacity 24 V⎓, 7 mA,
with LED indicator

LON (Viessmann LON)
LON connections FTT 10-A (2 x RJ45) for connection to the control unit

24 V⎓ Power supply

M-Bus 1 M-Bus interface:
For the connection of meters with M-Bus communication interface to EN 1434-3
with LED indicator

RS485 Not assigned

EM EM301 extension module connection

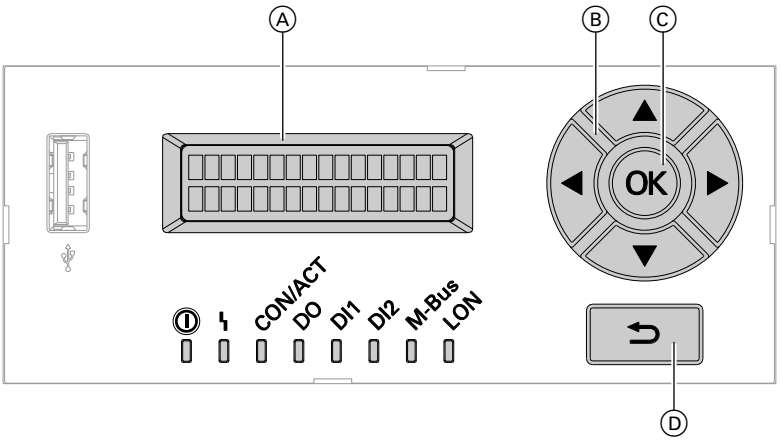
LAN Internet connection

Service interface: Do not make any on-site connections.

Specification

Rated voltage	24 V⎓
Rated current	710 mA
Rated output	17 W
Protection class	II to EN 61140
IP rating	IP 30 to EN 60529; ensure through design/installation.
Function type	Type 1B to EN 60730-1
Permissible ambient temperature	
– Operation	0 to +50 °C Installation in living spaces or boiler rooms (standard ambient conditions)
– Storage and transport	−20 to +85 °C
Installation	Mounting rail installation TS35 to EN 50022, 35 x 15 and 35 x 7.5

Display and controls Vitocom 300



Ⓐ Display
Ⓑ Cursor keys
Ⓒ To confirm a selection
Ⓓ One step back in the menu or cancellation of the setting that has been started
LON LON indicator
M-Bus M-Bus indicator
DI2 DI2 indicator
DI1 DI1 indicator
DO DO indicator
CON/ACT IP connection status indicator
ϟ Fault indicator
⏻ Operating status indicator

Information on the Vitocom 300 M-Bus interface

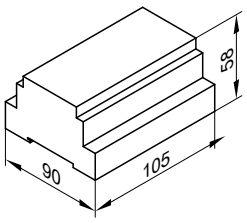
Up to 16 heat meters can be hooked up to any one M-Bus interface. This can be extended by on-site M-Bus repeaters.
Only heat meters with M-Bus slave interface to EN 1434-3.

The M-Bus protocols of the various meters can differ from each other.

Cable recommendation for M-Bus installations

Type	Max. cable length in m	Cable cross-section in mm²	Number of terminal devices	Transfer rate in Baud
Domestic installation	350	0.5	250	9600
Small WAN installation	1000	0.5	60	2400
Standard	2000	0.8	60	2400
Large WAN installation	3000	1.5	60	2400
Grid installation	5000	1.5	16	300
Maximum (linear topology)	10000	1.5	1	300

Dimensions

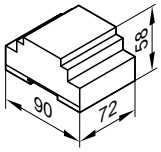


3.4 Specification, Vitocom 300 power supply unit

Specification

Rated voltage	100 to 240 V~
Rated frequency	50/60 Hz
Rated current	0.8 to 0.4 A
Output voltage	24 V⎓
Max. output current	2 A
Protection class	II to EN 61140
IP rating	IP 20 to EN 60529, ensure through design/installation.
Primary/secondary potential separation	SELV to EN 60950
Electrical safety	EN 60335
Permissible ambient temperature – Operation – Storage and transport	 −20 to +55 °C −25 to +85 °C
Installation	Mounting rail installation TS35 to EN 50022, 35 x 15 and 35 x 7.5

Dimensions



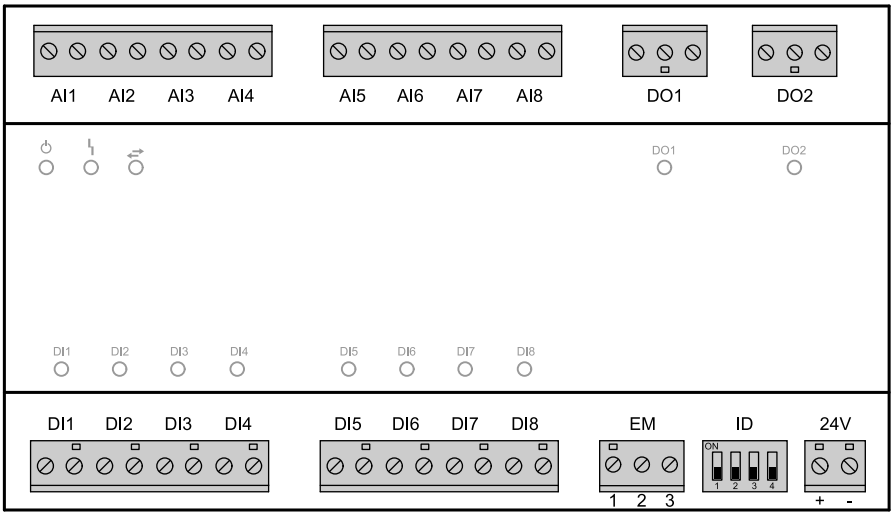
3.5 Accessories

Vitocom 300 accessories overview

Vitocom 300 accessories	Part no.	Page
EM301 extension module	Z012117	20
UPS module for uninterruptible power supply	7143432	21
Additional rechargeable power pack to increase the capacity of the UPS module	7143436	21
Wall mounted enclosure – 2 rows – 3 rows	 7143434 7143435	21
Collector temperature sensor (NTC 20 kΩ)	7831913	22
Contact temperature sensor (NTC 10 kΩ)	7426463	22
Immersion temperature sensor (NTC 10 kΩ)	7438702	22
Flue gas temperature sensor (NTC 20 kΩ)	7452531	23
Outside temperature sensor (NTC 10 kΩ)	7814197	23
Control unit accessories:		
LON communication module for mounting inside the following control units: – Vitotronic 100, types CC1E and CC1I – Vitotronic 200, type CO1E, CO1I, KO1B and KO2B – Vitotronic 200, types WO1B and WO1C (in the case of individual heat pumps or lag heat pumps in a cascade, via LON) – Vitotronic 300, types CM1E and CM1I – Vitotronic 200-H	7172173	
LON communication module for mounting inside the following control units: – Vitotronic 100, type GC7B – Vitotronic 200, type GW7B, HO1B and KW6B	7179113	
LON communication module for cascade control for mounting inside the following control units: – Vitotronic 300-K, type MW2B – Vitotronic 200, type WO1B and WO1C For the lead heat pump in a cascade controlled via LON.	7172174	
LON connection accessories (e.g. connecting cables, couplings, sockets, etc.)	—	42
Further sensors:		
Room temperature sensor – Part no. 7408012: Ni500 – Part no. 7438537: NTC 10 kΩ	7408012 7438537	23

EM301 extension module for Vitocom 300, type LAN3

Part no. Z012117



3

AI1 − AI8 Analogue inputs:
- 0 − 10 V⎓
- 4 − 20 mA
- Viessmann temperature sensors NTC 10 kΩ, NTC 20 kΩ, Ni500 or Pt500
- Pulse counter

DO1, DO2 Digital outputs:
- Floating relay contacts
- 3-pole
- Changeover contact, max. 2 A~, 230 V~
- With LED indicator

24 V Power supply via Vitocom 300 or prior extension module

ID DIP switch for setting the device address (delivered condition)

EM For connecting the Vitocom 300, type LAN3, bus cable

DI1 − DI8 Digital inputs:
- For hooking up signals via floating contacts
- 2-pole
- Breaking capacity of the external contact 24 V⎓, 7 mA
- With LED indicator
- N/C or N/O contact
- N/C or N/O alarm contact
- Pulse counter

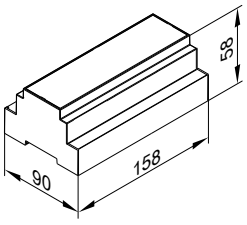
Analogue inputs AI1 to AI8

Possible connections	Specification
Temperature sensors	
– Viessmann NTC 10 kΩ	Measuring range 10 to 130 °C
– Viessmann NTC 20 kΩ	Measuring range 10 to 210 °C
– Viessmann Ni500	Measuring range 0 to 130 °C
– Viessmann Pt500	Measuring range 0 to 130 °C
DC signal	– 0 to 10 V⎓ – Internal resistance 9.6 kΩ
Current signal	– 4 to 20 mA− – Internal resistance 220 Ω

Specification

Rated voltage	24 V⎓
Rated current	375 mA
Protection class	II to EN 61140
IP rating	IP 20 to EN 60529, ensure through design/installation.
Function type	Type 1B to EN 60730-1
Permissible ambient temperature	
– Operation	0 to +50 °C Installation in living spaces or boiler rooms (standard ambient conditions)
– Storage and transport	−25 to +85 °C
Installation	Mounting rail installation TS35 to EN 50022, 35 x 15 and 35 x 7.5

Dimensions



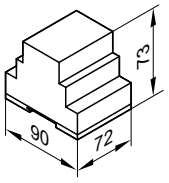
5414671

UPS module 700 mAh

Part no. 7143432
The UPS module for uninterruptible power supply enables a heating system power failure to be relayed/reported.
Use only use the UPS module in conjunction with the original Vitocom 300 power supply unit and the original additional rechargeable power pack.
When operating with the emergency power supply, turning off the Vitocom 300 at the ON/OFF switch and turning off the mains isolator are also reported as faults.
A buffer time of three hours must be ensured to guarantee that information is reliably relayed to all control devices.

Recommendation:
- Without extension module:
  Uninterruptible power supply module is sufficient
- With extension module for partial allocation of the inputs/outputs:
  Uninterruptible power supply module is sufficient

Dimensions



Specification

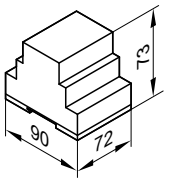
Input voltage	24 V⎓
Output voltage	24 V⎓
Charging current	100 mA
Deep discharge protection	< 22 V⎓
Rechargeable power pack capacity	700 mAh
Power failure notification	2 x floating changeover contacts
Max. contact breaking capacity	1 A
Permissible ambient temperature – Operation – Storage and transport	 0 to +40 °C Installation in living spaces or boiler rooms (standard ambient conditions) −20 to +65 °C
Installation	Mounting rail installation TS35 to EN 50022, 35 x 15 and 35 x 7.5
Service life	Approx. 3 years

Additional rechargeable power pack 700 mAh

Part no. 7143436
For increasing the capacity of the UPS module.

Recommendation:
- Incl. extension modules when all inputs/outputs have been allocated:
  UPS module **and** additional rechargeable power pack

Dimensions



Specification

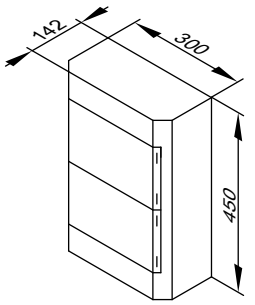
Rated voltage	24 V⎓
Rechargeable power pack capacity	700 mAh
Permissible ambient temperature – Operation – Storage and transport	 0 to +40 °C Installation in living spaces or boiler rooms (standard ambient conditions) −20 to +65 °C
Installation	Mounting rail installation TS35 to EN 50022, 35 x 15 and 35 x 7.5
Service life	Approx. 3 years

Wall mounted enclosure

The wall mounted enclosure is designed for the installation of the Vitocom 300 modules if no control panel or distribution board is available.

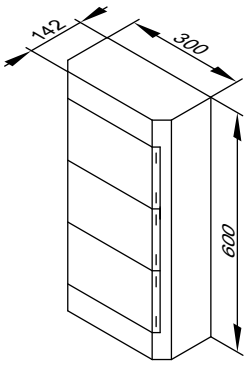
TeleControl — Vitocom 300 (cont.)

2 rows
Part no. 7143434



- For Vitocom 300 power supply unit and 1 EM301 extension module
- 28 separate units
- U_i = 400 V
- PE/N terminal 2 x 17-pole, 6/16/25 mm²
- Rail spacing 150 mm
- Flexible entries at the top
- With cable shield, cover and marking strips, additional dual membrane connectors and further accessories

3 rows
Part no. 7143435



- For Vitocom 300 power supply unit and 2 EM301 extension modules
- 42 separate units
- U_i = 400 V
- PE/N terminal 2 x 25-pole, 6/16/25 mm²
- Rail spacing 150 mm
- Flexible entries at the top
- With cable shield, cover and marking strips, additional dual membrane connectors and further accessories

Collector temperature sensor

Part no. 7831913
For connection inside the device.
On-site extension of the connecting lead:
- 2-core lead, length up to 60 m with a cross-section of 1.5 mm² (copper)
- Never route this cable immediately next to 230/400 V cables.

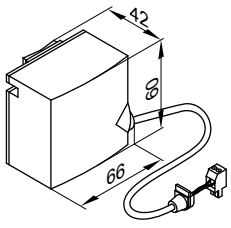
Specification

Cable length	2.5 m
IP rating	IP 32 to EN 60529; ensure through design/installation.
Sensor type	Viessmann NTC 20 kΩ at 25 °C
Permissible ambient temperature	
– Operation	−20 to +200 °C
– Storage and transport	−20 to +70 °C

Contact temperature sensor

To capture the temperature on a pipe.
Secured with a tie.

Part no. 7426463
With connecting lead



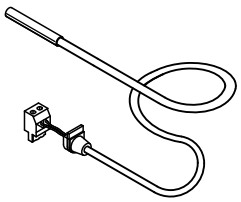
Specification

Cable length	5.8 m, fully wired
IP rating	IP 32D to EN 60529; ensure through design/installation.
Sensor type	Viessmann NTC 10 kΩ at 25 °C
Permissible ambient temperature	
– Operation	0 to +120 °C
– Storage and transport	–20 to +70 °C

Immersion temperature sensor

To capture the temperature in a sensor well

Part no. 7438702



Specification

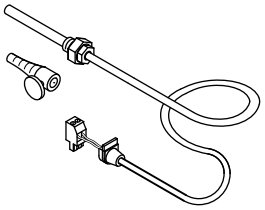
Cable length	5.8 m, fully wired
IP rating	IP 32 to EN 60529; ensure through design/installation.
Sensor type	Viessmann NTC 10 kΩ at 25 °C
Permissible ambient temperature	
– Operation	0 to +90 °C
– Storage and transport	–20 to +70 °C

Flue gas temperature sensor

For flue gas temperature scanning, flue gas temperature monitoring and service display, if an adjustable temperature has been exceeded.
With threaded cone.
Installation on the flue pipe. The distance from the boiler must be approx. 1.5 times the flue pipe diameter, measured from the boiler back edge to the chimney.

- Condensing boilers with Viessmann balanced flue system:
  Order the balanced flue pipe with retainer for the flue gas temperature sensor separately
- For condensing boilers with on-site flue pipe:
  The aperture required for the flue pipe installation must be designed and inspected on site. Install the flue gas temperature sensor in a stainless steel sensor well (on site).

Part no. 7452531



Specification

Cable length	3.5 m, fully wired
Sensor type	Viessmann NTC 20 kΩ at 25 °C
Permissible ambient temperature	
– Operation	0 to +250 °C
– Storage and transport	–20 to +70 °C

Outside temperature sensor

Installation location:

- North or north-westerly wall of the building
- 2 to 2.5 m above the ground, for multi storey buildings in the upper half of the second floor

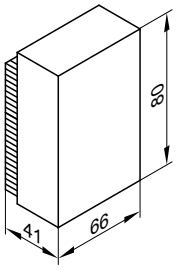
Connection:

- 2-core lead, length up to 35 m with a cross-section of 1.5 mm^2 (copper)
- Never route this lead immediately next to 230/400 V cables.

Part no. 7814197

Specification

IP rating	IP 43 to EN 60529; ensure through design/installation.
Sensor type	Viessmann NTC 10 kΩ at 25 °C
Permissible ambient temperature during operation, storage and transport	−40 to +70 °C

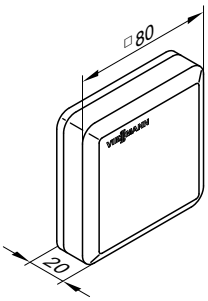


Room temperature sensor

Installation in the main living room on an internal wall opposite radiators. Never install inside shelving units, in recesses, or immediately by a door or heat source (e.g. direct insolation, fireplace, TV set, etc.).
Connection:

- 2-core lead, max. length 30 m, with a cross-section of 1.5 mm^2 (copper)
- Never route this cable immediately next to 230/400 V cables.

TeleControl — Vitocom 300 (cont.)



Part no. 7438537

Specification

Protection class	III
IP rating	IP 30 to EN 60529; ensure through design/installation.
Sensor type	Viessmann NTC 10 kΩ at 25 °C
Permissible ambient temperature	
– Operation	0 to +40 °C
– Storage and transport	−20 to +65 °C

3

4.1 Vitotrol app

The Vitotrol app is an internet service for the remote control of all heating circuits in a heating system with Vitotronic control unit in conjunction with a Vitocom 100, type LAN1. The Vitotrol app accesses the heating system data via the Vitodata server. This data is used by mobile devices with operating systems Apple iOS version 10 or higher, or Google Android version 4.4 or higher.

The Vitotrol app can be downloaded from the Apple App Store or the Google Play Store.
For further information on the Vitotrol app, see Apple App Store, Google Play Store and **www.vitotrol-app.info**

Languages

- Danish
- German
- English
- French
- Italian
- Dutch
- Polish
- Romanian
- Russian
- Swedish
- Slovak
- Spanish
- Czech
- Turkish
- Hungarian

Benefits

Mobile use with heating systems in small utility buildings.
- Affordable
- Easy operation via control devices with Apple iOS or Google Android operating systems
- Message display in plain text
- Communication with Vitocom 100, type LAN1

Standard delivery

Vitotrol app, internet service for the remote control of heating systems.

Distribution via the Apple App Store and Google Play Store for downloading to mobile control devices.

5.1 Vitodata 100 user interface

Vitodata 100 is a user interface for heating systems. All data on the heating system is maintained and archived on the Vitodata server. The data is utilised by the control devices for which they are intended.

For comprehensive information regarding login, terms of use and function, see **www.vitodata100.info**

Languages

- Danish
- German
- English
- French
- Italian
- Dutch
- Polish
- Russian
- Swedish
- Spanish
- Czech
- Hungarian

System requirements

Control device (PC or laptop):
- CPU: Pentium 4, 530 MHz or higher **or**
  AMD Athlon 64, 3200 MHz
- RAM: ≥512 MB
- Monitor:
  Minimum resolution 1024 × 768 pixels
- Software:
  Microsoft Internet Explorer version 9 or higher
  or
  Firefox version 3 or higher
  or
  Safari Mobile iOS version 10 or higher
- Internet access (e.g. DSL)

Access rights

To safeguard the individual user's access rights to the system, the system administrator will be entitled to manage users and their access rights. Every user receives a personal password.

Configuration

After online user registration, login credentials are made available to users.

In order to configure a system, the user needs to be logged in with the administrator password.

Benefits

- Communication with Vitocom 100, type LAN1
- Remote heating system setup
- Message display in plain text
- Automatic relaying of messages to configured message destinations
- Access rights for all hooked-up systems can be adjusted individually
- System and user administration

Standard delivery

Use of the Vitodata 100 internet service (Vitodata 100 user interface) on the user control device.

Heating system login at **www.vitodata100.com**

6.1 Vitodata 300 user interface

Vitodata 300 is a user interface for heating systems. All data on the heating system is maintained and archived on the Vitodata server. The data is utilised by the control devices for which they are intended.
For comprehensive information regarding login, terms of use and functions, see **www.vitodata.info**. User registration and login at **www.vitodata300.com**

The Vitodata 300 user interface enables the specific transfer of messages via email and SMS.
- Access expansion to several users simultaneously
- Graphic evaluation of trend data on the Vitodata 300 user interface
- Graphic illustration of the system data with the aid of several customer-specific system diagrams (jpg, bmp, gif)

System requirements

Control device (PC or laptop):
- CPU: Pentium 4, 530 MHz or higher **or**
  AMD Athlon 64, 3200 MHz
- RAM: ≥512 MB
- Monitor:
  Minimum resolution 1024 × 768 pixels
- Software:
  Microsoft Internet Explorer version 9 or higher
  or
  Firefox version 3 or higher
  or
  Safari Mobile iOS version 10 or higher
- Internet access: DSL

Access rights

Systems are allocated to an organisational unit (OU) to safeguard individual users' access rights to the systems. One user may be the user for several OUs. Only the administrator of an OU is entitled to manage users and their access rights. Every user receives a personal password.

Configuration

After successfully registering online, Viessmann customers can use and configure systems immediately using the Vitodata 300 user interface. Users of Vitodata who are not already Viessmann customers must first apply for a Viessmann customer number. For more information, see **www.vitodata.info**

Benefits

- Communication with the Vitocom 300
- Remote heating system setup
- Display of messages in plain text and administration of the operating log
- Automatic relay (SMS, email) of messages in accordance with the roster administration
- Access rights for all hooked-up systems can be adjusted individually
- Quick system overview through graphic system schemes
- System and user administration
- Graphic illustration of trend data for rapid system optimisation
- The Vitocom 300, type LAN3 enables the scanning of volume and consumption meters with M-Bus interface.

Standard delivery

Use of the Vitodata 300 user interface via the Vitodata server on the user control device.
Heating system login at **www.vitodata300.com**

Supported devices:
- Vitocom 300, type LAN3

For detailed information on Vitodata 300 terms of use and billing of the Vitodata 300 user fees, see **www.vitodata.info**

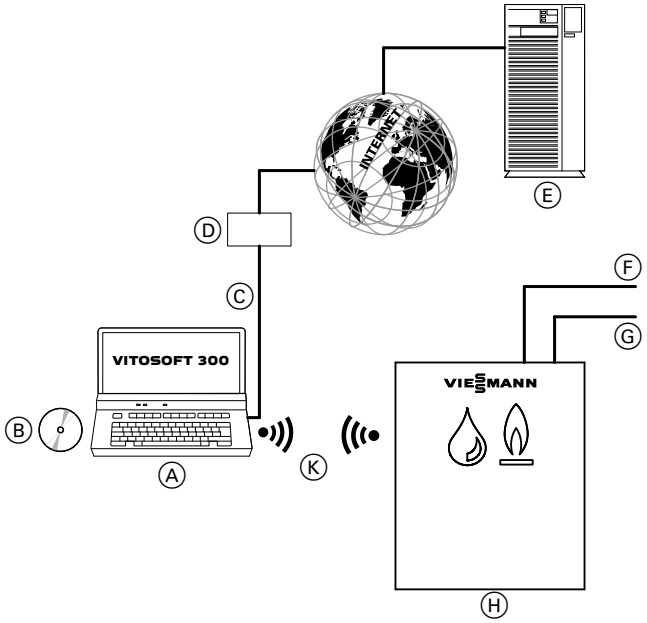
7.1 Vitosoft 300, type SID1

Vitosoft 300, type SID1, is a software tool to support the service, commissioning and diagnosis of heating systems. This tool can be used for heating systems with one or more heat generators with or without heating circuits downstream.

- Floorstanding gas or oil boilers with Vitotronic boiler and heating circuit control units
- Wall mounted and storage combi boilers with Vitotronic control units
- Heat pumps with Vitotronic 200, type WO1B and WO1C
- Solid fuel boilers with Vitotronic 200 control units, type FO1

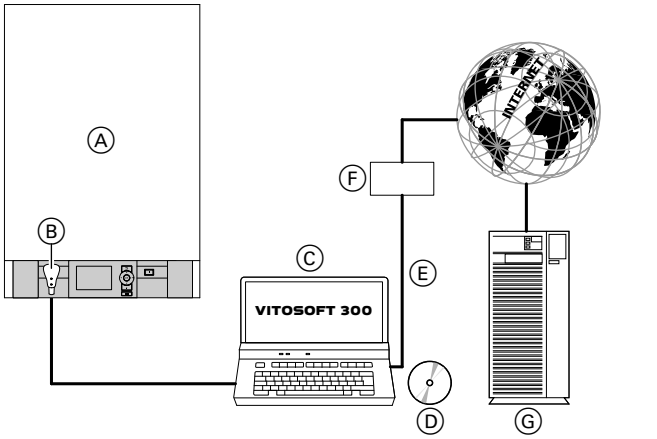
Establishing a connection to the system

Connection via WiFi



Ⓐ Laptop with Vitosoft 300 installed
Ⓑ Vitosoft 300 installation DVD
Ⓒ Internet connection (only for downloading updates)
Ⓓ Router, network switch
Ⓔ Viessmann server
Ⓕ LON connection to other boiler and heating circuit control units
Ⓖ KM-BUS for connection of additional devices (e.g. remote control units)
Ⓗ Boiler with Vitotronic control unit with integral WiFi interface
or
In multi boiler systems: Cascade control with integral WiFi interface
(For overview of control units which can be connected, see page 41)
Ⓚ WiFi connection

Connection via Optolink diagnostic adaptor



Ⓐ Boiler with control unit (for an overview of connectible control units, see page 41)
Ⓑ Optolink/USB diagnostic adaptor
Ⓒ Laptop with Vitosoft 300 installed
Ⓓ Vitosoft 300 installation DVD
Ⓔ Internet connection (only for downloading updates)
Ⓕ Router, network switch
Ⓖ Viessmann server

Service, commissioning and diagnosis

The following tasks can be easily and efficiently carried out with Vitosoft 300:

- Commissioning heating systems
- Optimising heating systems
- Diagnosis during service calls
- Supporting maintenance tasks

ServiceControl — Vitosoft 300 (cont.)

System requirements

Heating system
- Viessmann heat generator with Vitotronic control unit
- Heating systems with Vitotronic 200-H heating circuit control unit, type HK1B or HK3B
- Heating systems with Vitocom 300 communication interface: Communication only via LON

Control device (PC or laptop) – hardware
- Processor: Intel Core 2 Duo or higher
- RAM: > 2 GB
- Hard drive memory: > 10 GB
- Monitor: Minimum resolution 1024 × 768
- DVD drive for installing the Vitosoft 300 software from the data carrier
- USB interface to connect the Optolink/USB diagnostic adaptor (for connection to the control unit)

Control device (PC or laptop) – software
- Operating system:
  Windows 8 or Windows 10
- Software:
  Microsoft Internet Explorer version 9 or higher

Update service
- Internet access (DSL or UMTS/HSDPA) for downloading software updates

Note
In order to install Vitosoft 300, the control device (PC or laptop) must have a DVD drive.

Interface

WiFi interface or Viessmann Optolink interface for communication with Viessmann control units

Installation

Vitosoft 300 is installed from the DVD supplied, which offers user prompts. Depending on the operating system, additional software components may need to be installed in order to run Vitosoft 300. During installation, software components are downloaded from the Vitosoft 300 update server.

Note
Ensure you are connected to the internet via broadband before starting the installation process. This is so the current version of Vitosoft 300 can be installed.

Software registration

The software must be registered to enable permanent use of Vitosoft 300, including software updates and product documentation, in line with the licensing terms.

To register, keep the following information to hand:
- Valid registration key (on the inside cover of the DVD)
- Vitosoft 300 part number (on the back of the DVD cover)

Note
An active internet connection is required for registration.

For further information about registering Vitosoft 300 online, see **www.vitosoft.info**

Configuration

Once the diagnostic adaptor has been plugged into the Optolink interface, the connection to the control unit is made automatically. After the program has started, Vitosoft 300 calls up the data stored in the control unit and presents this in the Vitosoft "Overview" menu.

Update service

Purchasing Vitosoft 300 enables and entitles the user to download and use all Vitosoft 300 updates from the Vitosoft 300 update server for a period of 5 years.
Obtaining Vitosoft 300 updates after this time requires a new purchase of Vitosoft 300.

Note
Checking availability and downloading new updates requires an active broadband connection.
Subject to an active internet connection being available, with each program start, Vitosoft 300 checks whether any software updates are available.

Benefits

- Automatic recognition of the system configuration
- Parameters are compared for rapid recognition of any altered system settings
- System administration for structured archiving of system data
- Extensive diagnostic options with online trend function
- Parameters are set for the entire control unit configuration
- Electronic access to the device documentation
- Acceptance report
- Spare parts search
- Update service via the internet

7.2 Standard delivery and accessories

See previous diagram.

Pos.	Designation	Part no.
Ⓓ	**Vitosoft 300, type SID1** – DVD with Vitosoft 300 software and electronic device documentation – Program updates for Vitosoft 300 and for the electronic device documentation for a period of 5 years	Z008373
	Accessories:	
Ⓑ	Optolink/USB diagnostic adaptor Connecting cable between the USB connection on the PC/laptop and the Optolink connection on the heat generator control unit, approx. 2 m long	7438374
	Further components:	
Ⓐ	Viessmann heat generator with control unit Supported boiler and heating circuit control units (see table on page 41)	See Viessmann pricelists, or installed on site
Ⓒ	PC or laptop for operating Vitosoft 300	On site
Ⓔ	Internet connection	On site

8.1 Vitogate 200, type KNX

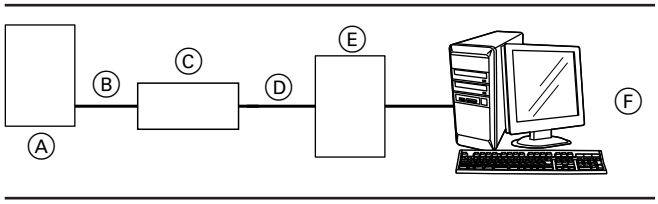
The Vitogate 200 type KNX gateway is designed to hook up Vitotronic control units with integral LON communication module (accessories) to KNX systems.

Vitogate 200 is designed for the following heating systems with Vitotronic control unit:
- Heating systems with one or more floorstanding boilers
  - Small boilers from 2011 or later, including Vitorondens 200
  - Medium sized boilers from 2001 to 2017
- Wall mounted and storage combi boilers from 2004 or later
- Heat pumps with Vitotronic 200, types WO1B and WO1C from 2009 or later, including Vitovent 300
- Hybrid appliances including Vitovalor 300

For an overview of supported boiler and heating circuit control units, see table on page 41.

The KNX product database for Vitogate 200, type KNX, can be downloaded from **www.vitogate.info**.

Note
To set the parameters for the communication objects of the KNX system, download and import the KNX product database into the KNX software tool (ETS).



Ⓐ Boiler with Vitotronic
Ⓑ LON cable
Ⓒ Vitogate 200
Ⓓ KNX cable (on site)
Ⓔ KNX system
Ⓕ Configuration and visualisation of the KNX system

Vitogate 200 offers the following functions:
- Relaying fault messages
- Remote control of heating systems via suitable visualisation facilities (e.g. switching, changing set values)
- Transfer of device and operating data.
  The data point lists are available on request from your Viessmann sales office.
- Data transfer from the Vitotronic control unit to Vitogate 200 via Viessmann LON
- Data transfer from Vitogate 200 to the KNX system via the KNX bus (on-site connecting cable)
- Remote monitoring of heating systems via the on-site KNX system (e.g. actual values, operating states)
- If a KNX individual room controller is installed on site, set values can be specified for standard mode.

Note
Authorised contractors must link the Vitogate 200, type KNX to the on-site KNX system; this is not part of the Viessmann standard delivery.

System requirements

Heating system:
- For heating systems with one or more heat generators with or without heating circuits downstream
- For all Vitotronic control units that are connected to the Vitogate 200 via LON.

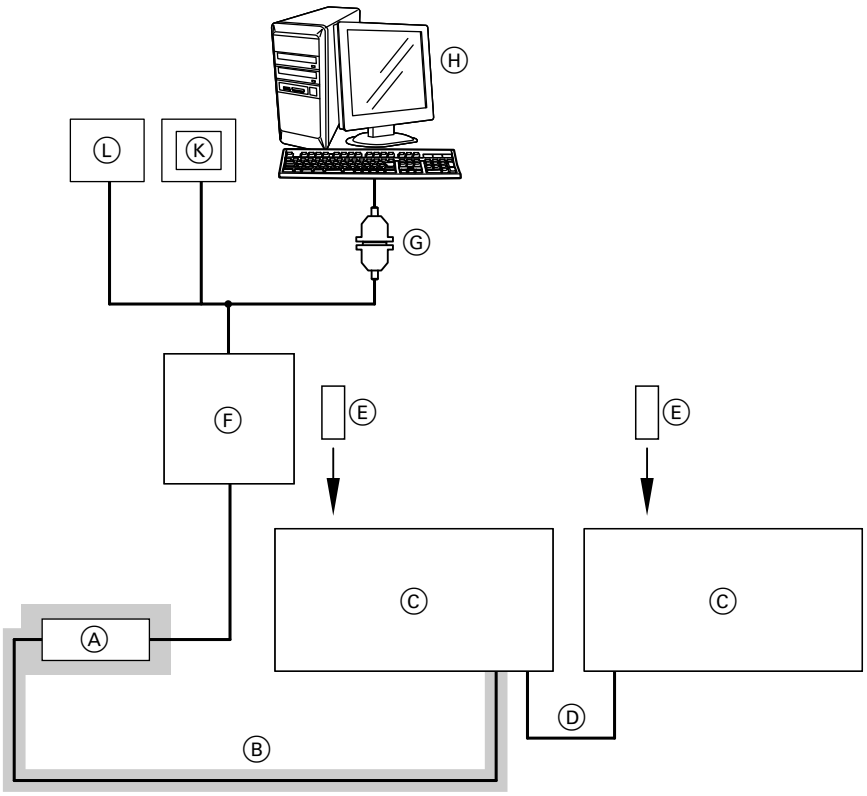
Configuration
The configurations on the KNX side of Vitogate 200 are made with parameter software ETS version 5 or higher. For this, use the product database at **www.vitogate.info**.

KNX system
The product database provided contains every data point that can be selected for the supported Vitotronic control units. In addition, Vitogate enables messages to be transmitted to the KNX/EIB system using one error bit and one error byte.

Benefits

- Heating systems and heating control units remain one standalone, matched system, the functions of which can be controlled by changing parameters.
- Independent of the standard settings in the delivered condition, the available data points can be configured differently by a contractor using the ETS parameter software (incl. KNX product database)

8.2 Standard delivery and accessories

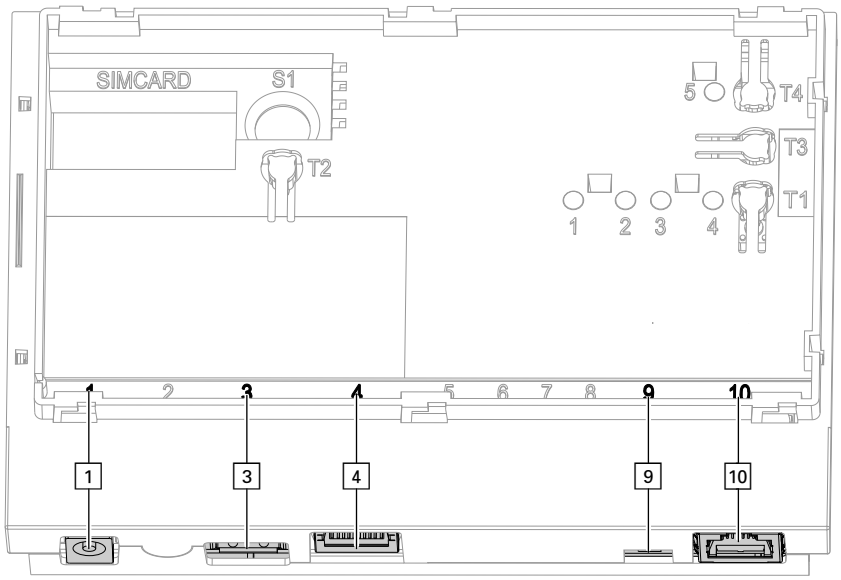


= Standard delivery

Pos.	Designation	Part no.
Ⓐ	Vitogate 200, type KNX	Z012827
Ⓑ	LON cable, 7.0 m long	
	Accessories:	
	EIB product database (at **www.vitogate.info**).	Download
Ⓒ	Vitotronic control unit (see table on page 41)	See Viessmann pricelist
Ⓓ	LON connection accessories (e.g. connecting cables, couplings, sockets), see page 42	
Ⓔ	LON communication module for – Vitotronic 100, type GC1B, GC4B, CC1I, CC1E – Vitotronic 200, type GW1B, KO1B, KO2B, CO1I and CO1E – Vitotronic 200, types WO1B and WO1C For individual heat pumps or lag heat pumps in a cascade via LON. – Vitotronic 200-H – Vitotronic 300, types GW2B and GW4B	7172173
	LON communication module for – Vitotronic 100, type GC7B – Vitotronic 200, type GW7B, HO1B, HO2B, HO2C and KW6B	7179113
	LON communication module for – Vitotronic 200, types WO1B and WO1C For the lead heat pump in a cascade controlled via LON. – Vitotronic 300-K, type MW2B Integrated for Vitotronic 300-K, type MW1B.	7172174
	Additional accessories (on site):	
Ⓕ	KNX radiator valve servomotor, constant controller (on site)	On site
Ⓖ	Data interface/USB	On site
Ⓗ	PC with visualisation software	On site
Ⓚ	KNX display unit	On site
Ⓛ	KNX room temperature controller	On site

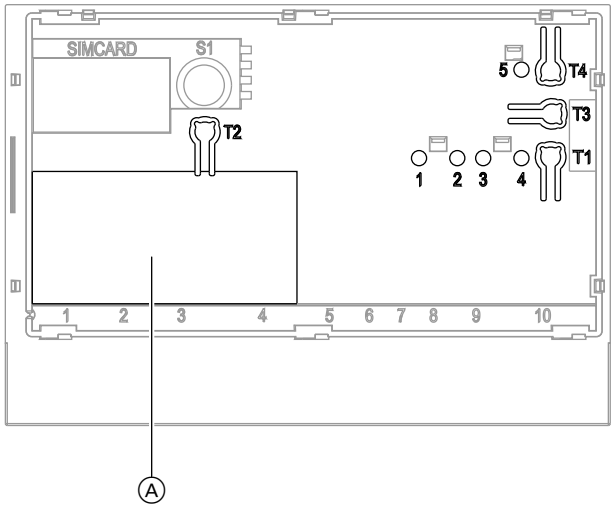
8.3 Specification

Connections



1 Plug-in power supply unit connection, 5 V⎓, internal +, external –, min. 1.6 A
3 Service interface: Do not make any on-site connections.
4 RJ45 socket for LAN cable to the DSL router
9 LON terminator, enabled in the delivered condition
10 RJ45 socket for LON cable (red) to the Vitotronic control unit

Display and controls



Ⓐ Type plate
"T1" No function
"T2" KNX: For programming the physical address
"T3" LON: Only when integrating the gateway into BMS (service PIN)
"T4" Reset button
"1" LON service indicator (green LED)
"2" KNX service indicator (red LED)
"3" KNX connection status (yellow LED)
"4" Operating status indicator (green and red LEDs)
"5" No function

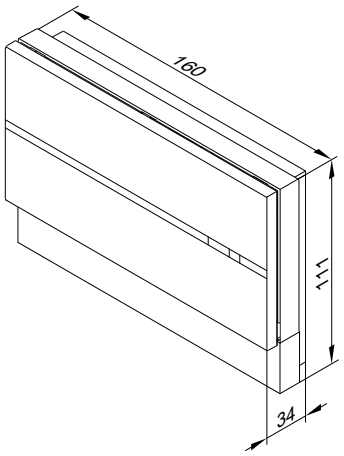
Specification

KNX bus coupler (TP 1) interface

Building Automation — Vitogate 200 (cont.)

Mains voltage	230 V~
Bus voltage	24 V⎓
Power consumption	< 10 W subject to equipment version
Protection class	II
IP rating	IP 30 to EN 60529; ensure through design/installation.
Permissible ambient temperature – Operation – Storage and transport	 +5 to +55 °C Installation in living spaces or boiler rooms (standard ambient conditions) −20 to +60 °C
Humidity	Humidity load to EN 60068: 5 to 95 %, non-condensing
Installation	Wall mounting

Dimensions

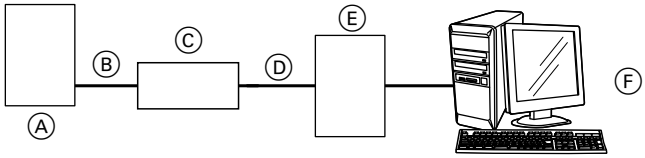


9.1 Vitogate 300, type BN/MB

The Vitogate 300 type BN/MB gateway is designed to hook up Vitotronic control units with integral LON communication module (accessories) to BACnet or Modbus systems.

Vitogate 300 is designed for the following heating systems with Vitotronic control unit:
- Heating systems with one or more floorstanding boilers
  - Small boilers from 2011 or later, including Vitorondens 200
  - Medium sized boilers from 2001 or later
- Wall mounted and storage combi boilers from 2004 or later
- Heat pumps with Vitotronic 200, type WO1B and WO1C, 2009 or later
- Vitobloc 200 via Vitobloc gateway from 2013 or later

For an overview of supported boiler and heating circuit control units, see table on page 41.



Ⓐ Boiler with Vitotronic
Ⓑ LON cable
Ⓒ Vitogate 300
Ⓓ BMS connecting cable (on site)
Ⓔ BMS
Ⓕ Configuration and visualisation of the BMS

Vitogate 300 offers the following functions:
- Relaying fault messages
- Remote control of heating systems via suitable visualisation facilities (e.g. switching, changing set values)
- Transfer of device and operating data.
  The data point lists are available on request from your Viessmann sales office.
- Data transfer from the Vitotronic control unit to Vitogate 300 via Viessmann LON
- Data transfer from Vitogate 300 to the BMS via RS485 or IP network (on-site connecting cable)
- Remote monitoring of heating systems via the on-site BMS (e.g. actual values, operating states)

Note
Authorised contractors must link the Vitogate 300, type BN/MB to the on-site BMS; this is not part of the Viessmann standard delivery.

System requirements

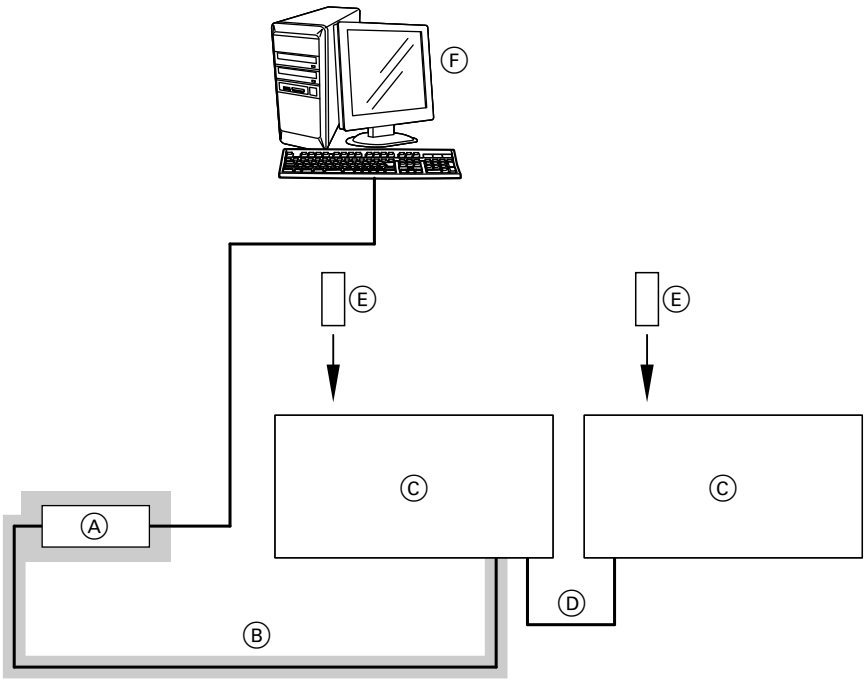
Heating system:
- For heating systems with one or more heat generators with or without heating circuits downstream
- For all Vitotronic control units that are connected to the Vitogate 300 via LON.

Configuration
The configurations on the BMS side of Vitogate 300 are made with the configuration webserver integrated in the Vitogate 300. It includes every data point that can be selected for the supported Vitotronic control units. In addition, the Vitogate 300 enables messages to be transmitted to the BMS using one error bit and one error byte.

Benefits

- Heating systems and heating control units remain one standalone, matched system, the functions of which can be controlled by changing parameters.
- Irrespective of the standard settings in the delivered condition, available data points can be selectively modified by a contractor using the configuration webserver integrated in the Vitogate 300.

9.2 Standard delivery and accessories

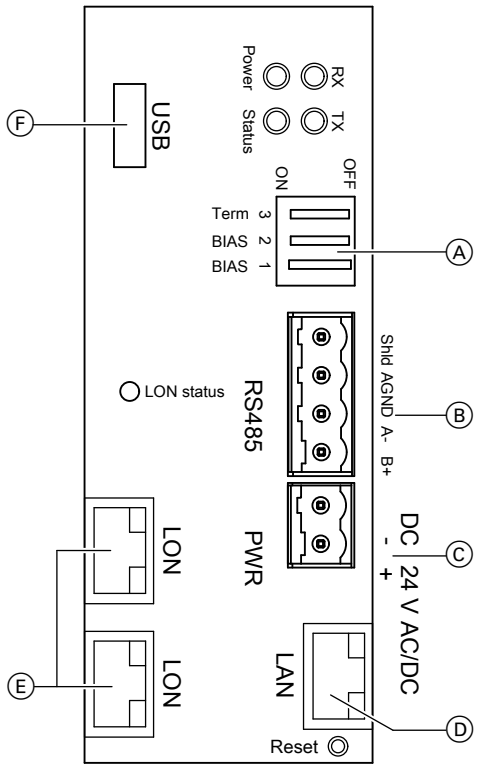


= Standard delivery

Pos.	Designation	Part no.
Ⓐ Ⓑ	Vitogate 300, type BN/MB LON cable, 7.0 m long	Z013294
	Accessories: Wall mounted enclosure For installation of Vitogate 300 if no control panel or standard distribution board is available	7143434
Ⓒ	Vitotronic control unit (see table on page 41)	See Viessmann pricelist
Ⓓ	LON connection accessories (e.g. connecting cables, couplings, sockets), see page 42	
Ⓔ	LON communication module for – Vitotronic 100, type GC1B, GC4B, CC1I, CC1E – Vitotronic 200, type GW1B, KO1B, KO2B, CO1I and CO1E – Vitotronic 200, types WO1B and WO1C For individual heat pumps or lag heat pumps in a cascade via LON. – Vitotronic 200-H – Vitotronic 300, types GW2B and GW4B	7172173
	LON communication module for installation in the following control units: – Vitotronic 100, type GC7B – Vitotronic 200, type GW7B, HO1B, HO2B, HO2C and KW6B	7179113
	LON communication module for – Vitotronic 200, types WO1B and WO1C For the lead heat pump in a cascade controlled via LON. – Vitotronic 300-K, type MW2B Integrated for Vitotronic 300-K, type MW1B.	7172174
Ⓕ	**Additional accessories (on site):** PC	On site

9.3 Specification

Connections



Ⓐ DIP switch:
1 Bias voltage for RS485 interface
2 Bias voltage for RS485 interface
3 120 Ω terminator, enabled in the delivered condition

Ⓑ RS485 connection: Interface for BACnet MS/TP or Modbus RS485

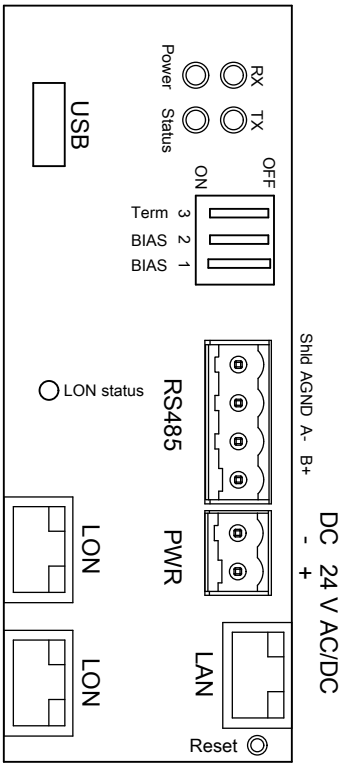
Ⓒ Plug-in power supply unit connection, 24 V⎓, min. 1.4 A

Ⓓ LAN connection (RJ45) for linking to PC/laptop, BACnet IP or Modbus TCP/IP

Ⓔ 2 x LON connection (RJ45), screened

Ⓕ USB connection for software updates

Display and controls



LON status	Illuminates green.
RX	Flashes yellow: Device receiving data.
TX	Flashes yellow: Device sending data.
Power	Illuminates green: Power ON, operating voltage present
Status	Multicolour status LED: Red, green, orange

Specification

Vitogate 300

Mains voltage	12 to 24 V AC/DC
Power consumption	Max. 320 mA
Rated output	Max. 3.85 W
Frequency range	47 to 63 Hz
Permissible ambient temperature – Operation – Storage and transport	 0 to 45 °C −10 to +65 °C
Permissible relative humidity – Operation – Storage and transport	 20 to 80 % relative humidity, non-condensing 10 to 85 % relative humidity, non-condensing
Dimensions (height x width x depth)	100 x 48 x 70 mm
Installation	Top-hat rail TS35 to EN 50022

Power supply unit

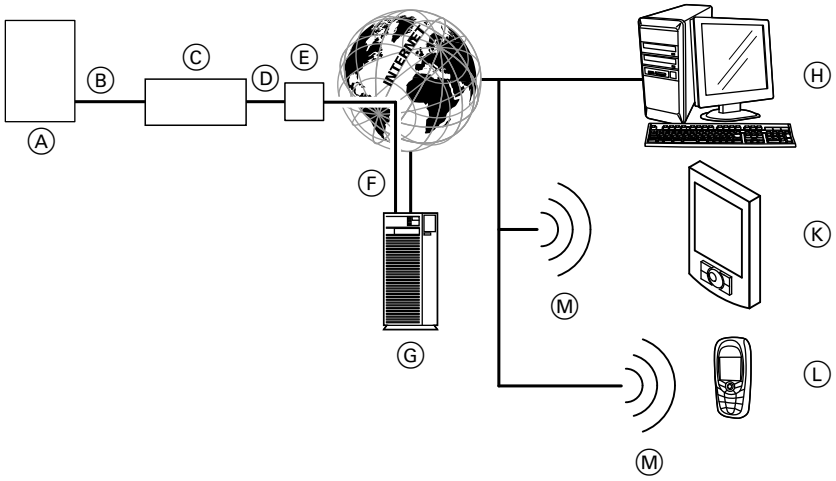
Rated voltage	100 to 240 V~
Rated frequency	45 to 65 Hz
Output voltage	24 V⎓ ±1 %
Output current max.	1.4 A
IP rating	IP 20
Protection class	II
Permissible ambient temperature – Operation – Storage and transport	 –25 to +70 °C > 55 °C output loss −40 to +85 °C
Max. humidity	95 % relative humidity at 25 °C, non-condensing
Dimensions (height x width x depth)	150 x 36 x 43 mm

10.1 Remote monitoring of heating systems with Vitobloc (CHP unit)

Application

For remote monitoring of Viessmann heating systems with Vitobloc Gateway or Vitobloc LON communication module via IP network. For use in the mobile network, see **www.vitocom.info**

Vitobloc with Vitocom 100, type LAN1 or Vitocom 300, type LAN3



Ⓐ Vitobloc CHP unit with Vitobloc Gateway or Vitobloc LON communication module
Ⓑ LON cable
Ⓒ Vitocom 100, type LAN1
or
Vitocom 300, type LAN3
Ⓓ IP network (on site)
Ⓔ DSL router (on site)
Ⓕ Secure internet connection to the Vitodata server
Ⓖ Vitodata server, registration and login at **www.vitodata100.com** or **www.vitodata300.com**
Ⓗ Control device PC/laptop:
- Access via internet browser to the Vitodata user interface
- Receiving messages via email

Ⓚ Smartphone for receiving messages via email and SMS
Ⓛ Mobile phone for receiving SMS messages
Ⓜ Mobile network

For further information on the Vitobloc Gateway or Vitobloc LON communication module, see the Vitobloc Gateway installation and operating instructions.
For use of the Vitocom 300, type LAN3 in mobile networks, see **www.vitocom.info**

Remote monitoring with the Vitodata 100 user interface

Access to the following Vitobloc parameters:
- Scanning temperatures
- Scanning operating conditions (e.g. status of engine values)

If the CHP unit develops a fault, e.g. with one of its sensors, the Vitobloc control unit recognises this and transmits it to the Vitocom via the Vitobloc Gateway or the Vitobloc LON communication module. The Vitocom transmits the messages to the Vitodata server, which relays the fault to the configured message destinations via SMS or email.

Supported devices
- Vitocom 100, type LAN1

Content of messages
- System description
- Message code, message text
- Time
- Additional information

Remote monitoring with the Vitodata 300 user interface

Access to the following Vitobloc parameters:
- Scanning temperatures
- Scanning operating conditions (e.g. status of engine values)

Note
A dynamic system scheme can be created for selected temperatures and operating conditions.

If the CHP unit develops a fault, e.g. with one of its sensors, the control unit recognises this and transmits it to the Vitocom via the Vitobloc Gateway or the Vitobloc LON communication module. The Vitocom transmits the messages to the Vitodata server, which relays the faults to the configured message destinations via SMS or email.

TeleControl — sample applications (cont.)

Supported device
- Vitocom 300, type LAN3

Content of messages
- System description
- Message code, message text
- Time
- Additional information

Only in conjunction with the Vitocom 300, type LAN3: The calculated energy consumption can be exported to volume and consumption meters with M-Bus capability via the M-Bus interface.

System requirements

Heating system:
- – Vitocom 100, type LAN1
  For one single boiler system with Vitobloc CHP unit, with or without downstream heating circuits.
  – Vitocom 300, type LAN3:
  For heating systems with one or more heat generators (incl. third party systems) with or without heating circuits downstream.
- The max. number of devices (LON subscribers) comprising boiler and heating circuit control units and Vitobloc Gateway is 20.
- All control units and the Vitobloc Gateway or Vitobloc LON communication module are connected to the Vitocom via LON (for an overview of connectible control units, see page 41).

Mobile network:
For using the Vitocom in mobile networks, see **www.vitocom.info**

IP network:
- DSL router with available LAN socket (on site).
- Internet connection with flat rate (tariff **without** restriction on time or data volume) and high availability, i.e. the Vitocom 100, type LAN1 or Vitocom 300, type LAN3 is permanently linked to the Vitodata server.
- Dynamic IP addressing (DHCP) in the network (LAN); have this checked and (if required) set up on site by an IT expert **prior** to commissioning.
  or
  Also possible with Vitocom 300: Static IP addressing (e.g. when connecting to subnetworks) in the network (LAN) must be set up on the Vitocom 300 on site by an IT expert **prior** to commissioning.
- Determine the routing and security parameters in the IP network (LAN) so that port 80 and port 443 are enabled for direct outward connections; have this checked and (if required) set up on site by an IT expert **prior** to commissioning.

Control device with the following features:
- Internet browser:
  Microsoft Internet Explorer for Vitodata 100 version 8 or higher; for Vitodata 300 version 9 or higher
  or
  Firefox version 4 or higher
  or
  Safari Mobile iOS version 4 or higher
- Active internet connection

Message path:
- PC/laptop or smartphone for receiving email
- Mobile phone (incl. smartphone) for receiving SMS

Configuration

The Vitocom is connected via LON to the Vitotronic control unit and the Vitobloc Gateway or Vitobloc LON communication module.

Note
For further information regarding configuration, see the Vitobloc Gateway operating instructions or ***www.vitodata.info***

	Configuration		
	IP connection	**LON**	**Outputs and inputs**
Vitocom 100, type LAN1	Automatic in the case of dynamic IP addressing (DHCP)	Automatic	—
Vitocom 300, type LAN3	Automatic in the case of dynamic IP addressing (DHCP) or To be set on the Vitocom 300 and on the router by an IT expert in the case of static IP addressing	Automatic	Via the Vitodata 300 user interface

Benefits

- Use in heating systems in private residential, municipal and commercial buildings.
- Use of the Vitodata 100 user interface for heating contractors and system users.
- Standard and joint remote monitoring of the Vitobloc CHP unit and the Viessmann boilers.
- Affordable.
- Easy operation via PC.
- System monitoring
- All messages to a PC or mobile phone.

11.1 General accessories

Tested M-Bus meters supported as standard

For a list of currently supported M-Bus meters, see
www.vitocom.info or **www.vitodata.info**

12.1 Combinations of Vitocom communication devices and Viessmann control units plus control options – current range

Application information on the current product range

Communications products	User interface	Viessmann control unit interface			Medium sized and industrial/commercial boilers				Heating circuit control unit	Heat pumps		Vitobloc 200
		①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪
TeleControl												
Vitocom 100 Type LAN1	Vitotrol app	—	X	—	X	X	—	X	X	X	X	—
	Vitodata 100	—	X	—	X	X	X	X	X	X	X	X
Vitocom 300 Type LAN3	Vitodata 300	—	X	—	X	X	X	X	X	X	X	X
ServiceControl												
Vitosoft 300 Type SID1	PC/laptop	—	—	X	X	X	X	X	X	X	X	—
Building automation												
Vitogate 200 Type KNX	BMS/ETS	—	X	—	—	—	—	X	X	X	X	—
Vitogate 300 Type BN/MB	BMS	—	X	—	X	X	X	—	X	X	X	X

① KM-BUS
② LON
③ Optolink
④ Vitotronic 100, types CC1E and CC1I
⑤ Vitotronic 200, types CO1E and CO1I
⑥ ■ Vitotronic 300, types CM1E and CM1I
■ Vitotronic 300-K, type MW1B
⑦ ■ Vitotronic 100, type GC7B
■ Vitotronic 200, type GW7B
⑧ Vitotronic 200-H, types HK1B and HK3B
⑨ Vitotronic 200, type WO1B
⑩ Vitotronic 200, type WO1C
⑪ Vitobloc gateway from EM-50 or LON3000 communication module for EM-6 to EM-20

12.2 Combinations of Vitocom communication devices and Viessmann control units plus control options – retrofitting in existing systems

Application information for retrofitting existing heating systems

Communications products	User interface	Viessmann control unit interface			Medium sized and industrial/commercial boilers				Heat pumps		Heating circuit control unit		Vitovalor 300-P
		①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫
TeleControl													
Vitocom 100 Type LAN1	Vitotrol app	—	X	—	—	—	X	—	—	X	—	—	—
	Vitodata 100	—	X	—	X	X	X	X	X	X	X	X	—
Vitocom 300 Type LAN3	Vitodata 300	—	X	—	X	X	X	X	X	X	X	X	X
ServiceControl													
Vitosoft 300 Type SID1	PC/laptop	—	—	X	X	X	X	X	X	X	X	X	X
Building Automation													
Vitogate 200 Type KNX	BMS/ETS	—	X	—	X	X	X	X	X	X	X	X	X
Vitogate 300 Type BN/MB	BMS	—	X	—	X	X	X	X	—	X	—	—	—

① KM-BUS
② LON
③ Optolink
④ Vitotronic 100, types GC1, GC1B and GC4B

⑤ ■ Vitotronic 200, type GW1
■ Vitotronic 300, type GW2

Note
Vitotronic 300, type GW2 not in conjunction with Vitogate 300, type BN/MB

⑥ Vitotronic 200, types GW1B, GW2B and GW4B
⑦ ■ Vitotronic 333, types MW1, MW1S, MW2 and MW2S
■ Vitotronic 300-K, types MW1, MW1S, MW2S and MW3B
⑧ Heat pump control unit WPR 300
⑨ Vitotronic 200, type WO1A
⑩ ■ Vitotronic 050, types HK1W, HK1S, HK3W and HK3S
■ Vitotronic 200, types HK1W, HK1S, HK3W and HK3S
⑪ ■ Vitotronic 050, type HK1M
■ Vitotronic 200, type HK1M
⑫ Vitotronic 200, type HO1E

12.3 Connecting Viessmann devices via LON

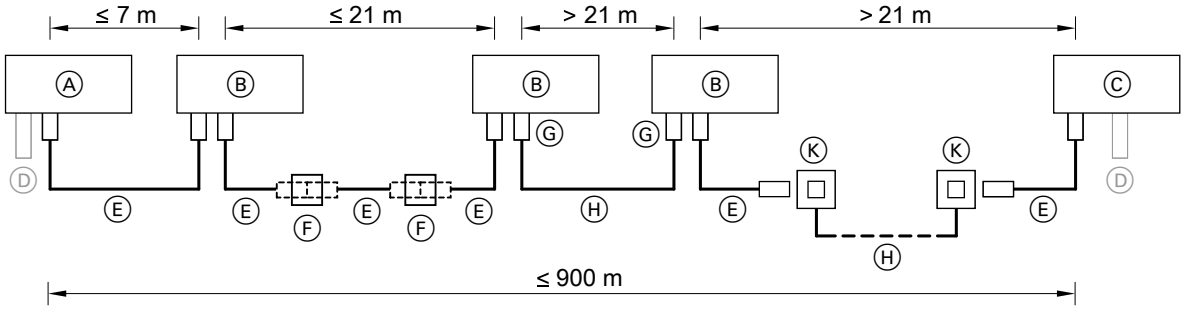
The Viessmann LON is designed for "line" bus topology with a terminator at both ends (accessories).
The transfer distances for LON are subject to the electrical properties of the relevant cable. For this reason, only use the specified cable types. Use only one cable type within each LON.

Cable types (on site):
■ 2-core cable, CAT5, screened
■ JY(St)Y 2 x 2 x 0.8 mm (telephone cable)

Observe the requirements for cabling and operation of the LON interface FTT 10-A.
All Viessmann appliances are connected with RJ45 plugs. The Viessmann LON always requires cores "1" and "2" plus the screen. The cores are interchangeable.
Up to 30 LON subscribers may be connected.

Note
When connecting external switching contacts and on-site components, observe the insulation requirements of IEC/EN 60335-1.

Connection examples



Pos.	Designation
Ⓐ	Boiler and heating circuit control unit or Vitocontrol
Ⓑ	LON subscriber, e.g. heating circuit control unit
Ⓒ	Vitocom or Vitogate
Ⓓ	Terminator (2 pce) Integrated into Viessmann appliances with only one LON interface
Ⓔ	LON cable, 7 m long
Ⓕ	LON coupling
Ⓖ	LON plug-in connectors (2 pce)
Ⓗ	Connecting cable
Ⓚ	LON socket (2 pce)

Always position LON subscribers with integrated terminators at the start or end of the LON:
■ E.g. always position Vitocontrol at the start of the LON (position Ⓐ).
■ E.g. always position Vitocom at the end of the LON (position Ⓒ).

Glossary

BMS (building management system)
Building management systems include the entire technical automation facilities in building services. This is part of building automation which is split over field, automation and management levels. The building management system is part of the management level.

HSDPA (high speed downlink packet access)
HSDPA is a data transfer process based on the UMTS mobile wireless standard, which enables data transfer rates similar to DSL in a mobile network. Typical data transfer rates are between 3.6 Mbit/s and 7.2 Mbit/s.

Glossary (cont.)

KNX/EIB system
The European Installation Bus (EIB) is a bus system used in small to medium sized buildings.
The EIB protocol is supported by the Konex communication standard (KNX) and meets the Konex TP-I requirements for data transfer.
KNX/EIB devices are configured with EIB Tool Software (ETS).

LAN (local area network)
A LAN is a computer network that extends over several rooms but rarely extends beyond a single property. The most common technical standard for network structures in LAN is Ethernet. The data transfer rates are between 10 and 1000 Mbit/s.
Important components of a LAN are switches, routers and, increasingly, internet gateway routers.

Control centre
A control centre is designed to give optimum support to people in control rooms, for central management of process and safety functions.

LON (local operating network)
LON is a network used in larger or commercial buildings.
LON supports Standard Network Variables (SNVT) and device profiles.
Commercially available software can be used to connect the SNVT.

SMS (short message service)
Text service developed for GSM networks. Texts of limited length can be transmitted.

UMTS (universal mobile telecommunications system)
UMTS is a mobile wireless standard with high transfer speeds. This standard makes it possible to use multimedia services via the mobile network.

WLAN (wireless local area network)
WLAN is a LAN based on wireless communication (mostly IEEE-802.11 standard). In some countries "WiFi" is also used to describe this system.

Keyword index

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Subject to technical modifications.

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