

Installation and Service Instructions

for contractors

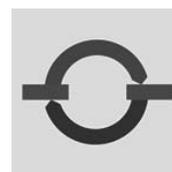
VIESSMANN

Vitoconnect 100

Type OPTO1

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

- ViCare app
- Vitotrol Plus app
- Vitoguide



VITOCONNECT 100



Product may not be exactly as shown

IMPORTANT

Read and save these instructions for future reference.

Safety Instructions

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause product/property damage, severe personal injury, and/or loss of life. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

■ **Product documentation**

Read all applicable documentation before commencing installation. Store documentation near boiler in a readily accessible location for reference in the future by service personnel.

► *For a listing of applicable literature, please see section entitled "Important Regulatory and Installation Requirements".*



■ **Warranty**

Information contained in this and related product documentation must be read and followed. Failure to do so renders the warranty null and void.



■ **Licensed professional heating contractor**

The installation, adjustment, service and maintenance of this equipment must be performed by a licensed professional heating contractor.

► *Please see section entitled "Important Regulatory and Installation Requirements".*



■ **Advice to owner**

Once the installation work is complete, the heating contractor must familiarize the system operator/ultimate owner with all equipment, as well as safety precautions/requirements, shutdown procedure, and the need for professional service annually before the heating season begins.

 **WARNING**

Installers must follow local regulations with respect to installation of carbon monoxide detectors. Follow the Viessmann maintenance schedule of the boiler contained in this manual.

Operating and Service Documentation

It is recommended that all product documentation such as parts lists, operating and service instructions be handed over to the system user for storage. Documentation is to be stored near boiler in a readily accessible location for reference by service personnel.

Operational Reliability

The Vitoconnect 100 enables communication via the internet between the connected Vitotronic control unit and the Viessmann server.

The full range of functions is only available if the following conditions are met:

- The Vitotronic control units and the Vitoconnect 100 must be connected and configured correctly.
- The Vitoconnect 100 is connected to the internet via a WLAN router.
- Internet access must be available at all times.
- The user has been registered (see page 14).
- To ensure that messages can still be sent if there is a power failure, we recommend connecting the Vitoconnect 100 and WLAN router to the power supply via a UPS.

Note: The heating system and the functionality of the message paths must be tested at regular intervals.

To further improve the operational reliability of the heating system, we recommend implementing supplementary measures, e.g. frost protection or monitoring for water leakage.

Liability

Viessmann accepts no liability for loss of profit, unattained savings, or other direct or indirect consequential losses resulting from use of the Vitoconnect 100, the Viessmann server or the software, or for damage resulting from inappropriate use.

The Viessmann General Terms and Conditions apply, which are included in each current Viessmann price list. Viessmann accepts no liability for SMS via push notification or email services, which are services provided by network operators. The terms and conditions of the relevant network operators apply in this context.

About these Installation Instructions

 Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.

 **WARNING**

Indicates an imminently hazardous situation which, if not avoided, could result in death, serious injury or substantial product/property damage.

► *Warnings draw your attention to the presence of potential hazards or important product information.*

 **CAUTION**

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/property damage.

► *Cautions draw your attention to the presence of potential hazards or important product information.*

IMPORTANT

► *Helpful hints for installation, operation or maintenance which pertain to the product.*



► *This symbol indicates that additional, pertinent information is to be found.*

► *This symbol indicates that other instructions must be referenced.*

Intended Use

Install and operate Vitoconnect products as intended, in conjunction with the electronic control units and controllers for the Viessmann heat equipment designed for this system. In particular, observe the current and voltage specifications for connections and hook-ups.

Use Vitoconnect products exclusively for remotely operating and optimizing systems, in conjunction with the user and communication interfaces specified for this purpose in the relevant printed documentation. For 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, only use the approved communication components supplied with the products. Only use the specified components for the mains power supply (e.g. mains power adaptors).

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System Requirements

Heating system

The Vitoconnect 100, type OPTO1 can be used for one single boiler system with Vitotronic control unit, without heating circuits downstream.

Supported control units

The Vitoconnect 100, type OPTO1, can be used in conjunction with the following Viessmann control units.

Heat generator			
Wall mounted or storage combi boilers	Floor standing boilers	Heat pumps and hybrid appliances	Solid fuel boilers
Supported control units			
Vitotronic 200, type ■ HO1 ■ HO1A ■ HO1B	Vitotronic 200, type ■ KW2 ■ KW6B Vitotronic 300, type ■ KW3	See www.viessmann.com/vitoconnect	

Note: For an up to date overview of the supported control units see www.viessmann.com/vitoconnect.

IP network

System requirements

- WLAN router with activated WLAN. The WLAN router of the system user must be protected by a sufficiently secure WPA2 password. We advise against unencrypted connection of the Vitoconnect 100 to a WLAN router.
- Internet connection with "flat rate" (tariff independent of time and data volume) and high availability, i.e. the Vitoconnect 100 is permanently linked to the Viessmann server.
- Dynamic IP addressing (DHCP, factory setting) on the network (WLAN) must be checked and, if required, set up on site by an IT contractor before commissioning.
- Set routing and security parameters in the IP network (LAN): Enable port 80 and port 443 for direct outbound connections. Have this checked and, if necessary, set up on site by an IT contractor before commissioning.

System Requirements *(continued)*

Note: During operation, the Vitoconnect 100 establishes a secure internet connection to the Viessmann server.
Connecting the Vitoconnect 100 to any other type of server is not possible.

User account

A valid user account on the Viessmann server is required for the operation of the Vitoconnect 100, irrespective of which control device is used. Registration for this occurs automatically during commissioning, either via the ViCare app or via the Vitotrol Plus app (see page 8).

Control device for ViCare app

Smart phone or tablet with the following operating systems:

- Apple iOS, version 8 or higher
- or
- Google Android, version 4.4 or higher

Control device for the Vitotrol Plus app

Smart phone or tablet with the following operating systems:

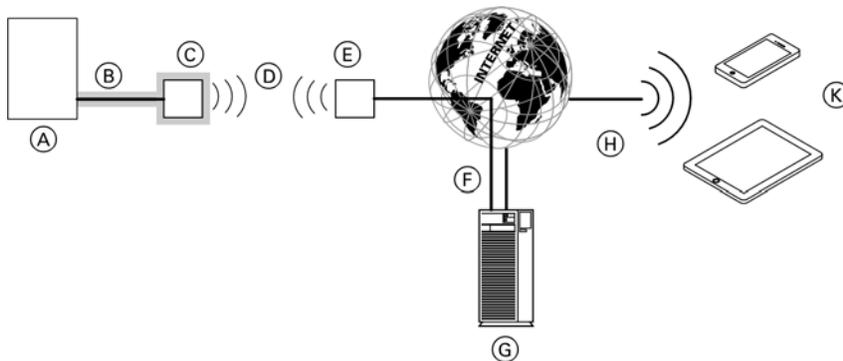
- Apple iOS, version 8 or higher
- or
- Google Android, version 4.4 or higher

Message destinations

End device for receiving email, e.g. computer, smart phone or tablet.

Operation Vi Apps

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



Legend

- | | |
|--|---|
| <ul style="list-style-type: none"> (A) Heat generator with control unit (B) Connecting lead Optolink/USB (C) Vitoconnect 100 (D) WLAN (E) WLAN router (on site) (F) Secure internet connection to the Viessmann server | <ul style="list-style-type: none"> (G) Viessmann Server (H) Mobile network or WLAN connection (K) Web-enabled control device |
|--|---|

Operation Vi Apps *(continued)*

Functions

ViCare app control functions

- Display of system status for system user
- Easy to use remote operating function, e.g. adjusting the set room temperature or operating mode
- Modifying the heating phases via switching time assistant
- Quick selection keys for Party mode and Economy mode (“Extended heating” and “Setback temperature”)
- Reporting of faults by push notification
- Automatically stored contact details for heating contractor
- Fault description in plain text
- Operating data of the system can be integrated in Vitoguide for contractors
- Easy transmission of system data, e.g. fault messages via email or telephone communication with the heating contractor
- Energy saving tips

Note: The ViCare app enables users to access only one system at a time using an end device.

For further information on the ViCare app, see www.vicare.info

Vitotrol Plus app control functions

- Remote control of all heating circuits in a heating system
- Setting operating programs, set values and time programs (central heating and DHW heating)
- Calling up system information
- Displaying messages in plain text
- Automatic forwarding of messages via email
- Displaying consumption data (where available)
- Integral showcase function

For further information on the Vitotrol Plus app, see www.vitotrol.info

Forwarding messages

Any pending messages from the heating system, e.g. sensor or burner faults, are transmitted to the Vitoconnect 100 via Optolink/USB cable supplied. The Vitoconnect 100 transmits these messages to the Viessmann server. The ViCare app and Vitotrol Plus app regularly check the heating system status and display any messages.

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

Message contents

- Message type
- Message code
- Message text

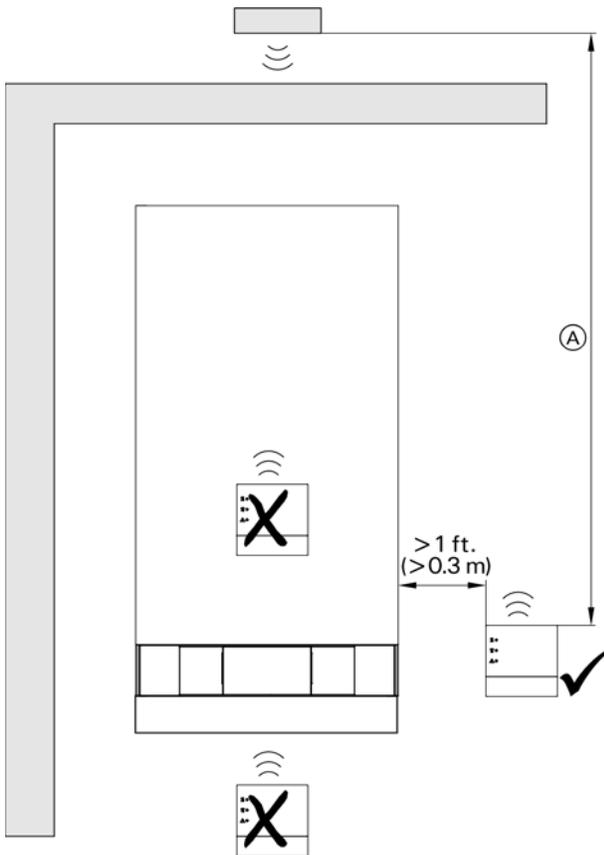


Relevant boiler Installation and Service instructions

Sequence Overview

Sequence		Responsibility	Page
Installation			
1	Check system requirements.	Heating contractor/IT contractor	6
2	Fit wall mounting bracket for Vitoconnect 100.	Heating contractor	10
3	Connect the Vitoconnect 100 to the heat generator.	Heating contractor	10
4	Insert the Vitoconnect 100 into the wall mounting bracket.	Heating contractor	10
5	Establish power supply.	Heating contractor	10
Commissioning			
6	Check network settings.	IT contractor	12
7	Register user and set up heating system. <ul style="list-style-type: none"> ■ Operation with ViCare app ■ Operation with Vitotrol Plus App 	Heating contractor/system user	12

Installation Location



Sample illustration with wall mounted appliance

(A) To ensure a good WLAN connection, keep the distance between the Vitoconnect 100 and the WLAN router as short as possible.

Installation type: Wall mounting

- Distance to heat generator minimum 1 ft. (0.3 m)
- Standard socket 120VAC/60 Hz 1 phase, max. 3 ft. (1 m) next to installation location
- Internet access with adequate WLAN signal
Note: The WLAN signal strength can be increased with commercially available WLAN repeaters.
Note: When selecting the installation site, bear in mind the length of the connecting cables (standard delivery).

Connecting cables	Length
Connecting cable Optolink/USB for connecting the Vitoconnect 100 to the boiler control unit	10 ft. (3 m)
Plug-in power supply unit with connecting cable	3 ft. (1 m)

Range

The range of WLAN connections can be reduced by walls, ceilings and interior fixtures. These weaken the WLAN signal, which may result in poor reception.

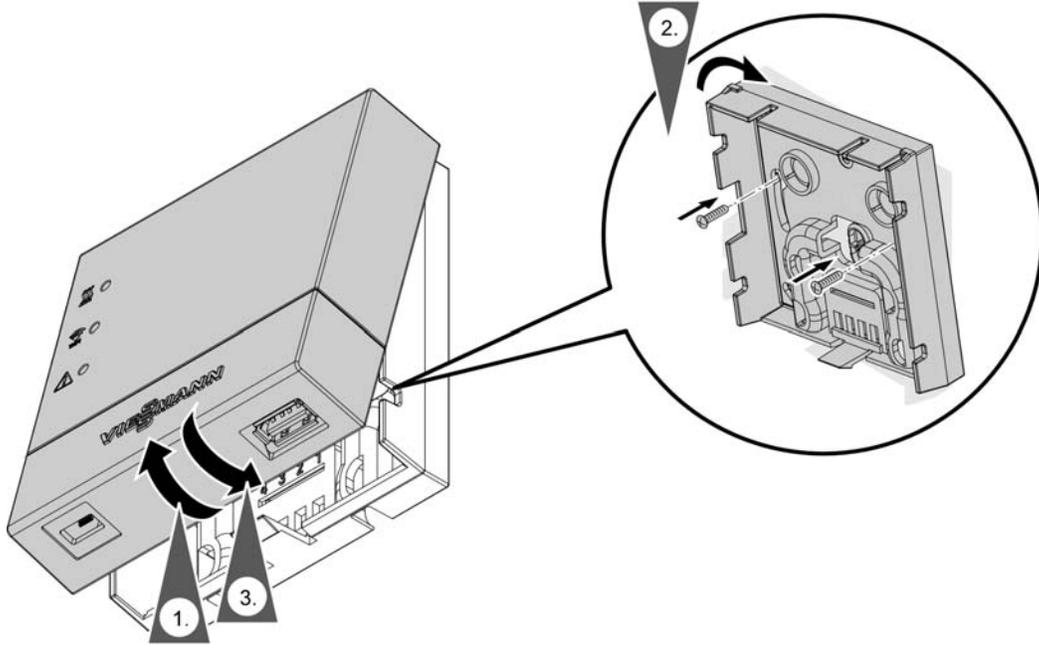
Range reduction:

- On their way between transmitter and receiver, WLAN signals are damped, e.g. by air or when penetrating walls.
- WLAN signals are reflected by metallic objects e.g. reinforcements in walls, metal foil of thermal insulation and thermal glazing with metallized thermal vapour deposit.
- WLAN signals are isolated by service ducts and elevator shafts.
- WLAN signals suffer interference from appliances that also operate with high frequency signals, such as computers, audio and video systems, wireless signals, electrical transformers and pre-ballast. Distance to such appliances min. 7 ft. (2 m).

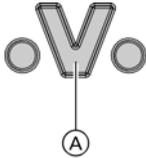
Installing the Wall Mounting Bracket

For indoor installation only.

Note: The installation site must be dry and free from the risk of frost.
Ensure ambient temperatures between 23 and 104°F (-5°C and 40°C).



Electrical Connections

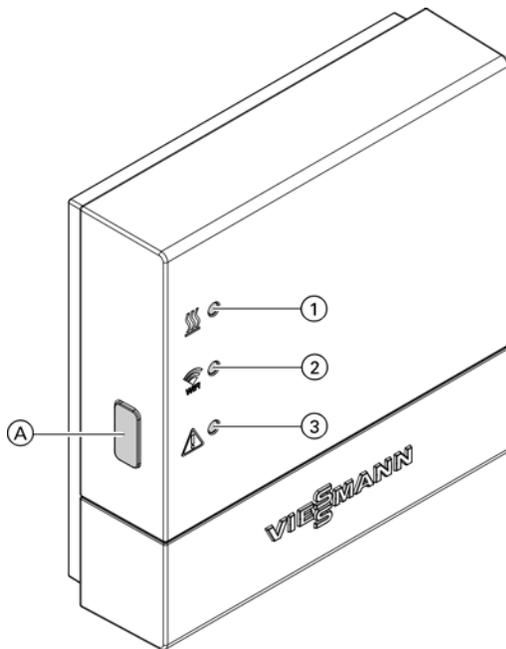
At the Vitoconnect 100, view from below	At the control unit of the heat generator
 <p>Ⓐ Micro USB for power supply from plug-in power supply unit Ⓑ For connecting lead Optolink/USB</p>	 <p>Ⓐ For connecting lead Optolink/USB</p>

1. Use the Optolink/USB connecting cable to connect the Vitoconnect 100 to the heat generator.

 Cable routing inside the heat generator: relevant boiler documentation

2. Insert the plug-in power supply unit with connecting cable into a standard 120VAC receptacle.

Display and Controls



- (A) Reset button
- ① LED indicates status of communication with heat generator.
- ② LED indicates status of communication with WLAN and Viessmann server.
- ③ LED indicates system functions (access point mode, offline mode, updates, faults).

Interpreting the LED Indicators

LED – Communication with the heat generator

Flashes yellow	Connection of Vitoconnect 100 to heat generator being established
Illuminates green	Connection of Vitoconnect 100 to heat generator successfully established
Flashes red	No connection to heat generator, see page 14.

LED – Communication with the Viessmann server

Flashes yellow	Connection of Vitoconnect 100 to WLAN router being established
Illuminates yellow	Connection of Vitoconnect 100 to WLAN router successfully established
Flashes green	Connection of Vitoconnect 100 to Viessmann server being established
Illuminates green	Connection of Vitoconnect 100 to Viessmann server successfully established
Flashes red	No connection to the internet, see page 14.

– System functions

Flashes yellow	Maintenance mode (no data transfer), see page 14
Pulsates yellow	Registration mode active (access point)
Flashes red	Fault at the control unit of the heat generator
Pulsates red	Fault, access point mode, see page 14
Flashes green	A new or updated version of Vitoconnect 100 firmware is being installed. Note: Do not damage Vitoconnect. Never disconnect the Vitoconnect 100 from the mains during firmware installation.

LED , and

All illuminated white	Vitoconnect 100 is starting up.
All illuminated yellow	The Vitoconnect 100 has been reset to the factory setting and can be recommissioned.

Note: Flashing: LED 0.5 sec. on and 0.5 sec. off
Pulsating: LED 0.1 sec. on and 0.9 sec. off

Checking the Network Settings

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

- Dynamic IP addressing must be set.
- Port 80 and port 443 must be enabled for outgoing connections.

Registering the User and Setting Up the Heating System

With ViCare app

1. Download the ViCare app from the app store or play store and install.

Note: If using an Apple iPad, limit the app search to "iPhone only".

2. Start the ViCare app and tap on "Create a new account".

3. Scan the QR code or enter the "Herstell Daten" (manufacturing data) and "ID".

Note: For the QR code, "Herstell Daten" (manufacturing data) and "ID", see sticker on the Vitoconnect 100.



4. Setting up the WLAN

Android: Automatic connection with WLAN "Vitoconnect"

- iOS:
- Close the ViCare app and call up the WLAN settings of the smart phone.
 - Connect with WLAN "Vitoconnect".
 - Insert WPA2 password from the clipboard. The WPA2 password is automatically available on the clipboard. If not, see sticker on the Vitoconnect.
 - Change back to ViCare app.

5. Follow the instructions in the app.

- Set up the home network.
- Enter location or allow ViCare app access to the location.
- Enter personal data.
- Accept data protection agreement and terms of use. The Vitoconnect 100 and ViCare app are set up.

Registering the User and Setting Up the Heating System *(continued)*

With Vitotrol Plus app

1. Download the Vitotrol Plus app from the app store or play store and install.
2. Start the Vitotrol Plus app and tap on "Create access".
3. Enter personal data.
4. When asked "Configure Vitoconnect 100 ", select yes.
5. Scan the QR code or enter the "Herstell Daten" (manufacturing data) and "ID".

Note: For the QR code, "Herstell Daten"(manufacturing data) and "ID", see sticker on the Vitoconnect 100.



6. Setting up the WLAN
 - Android: Automatic connection with WLAN "Vitoconnect"
 - iOS:
 - In the Vitotrol Plus app, tap on "WLAN settings". The WLAN settings of the smart phone are opened up.
 - Connect with WLAN "Vitoconnect".
 - Insert WPA2 password from the clipboard. The WPA2 password is automatically available on the clipboard. If not, see sticker on the Vitoconnect.
 - Change back to Vitotrol Plus app.
7. Follow the instructions in the app.
 - Set up the home network.
 - Enter system name and location.
 - Accept data protection agreement and terms of use. The Vitoconnect 100 and the Vitotrol Plus app are set up.

Troubleshooting Measures

Faults on the Vitoconnect 100 are signalled by various LED indicators (see page 11).

Faults with LED indication	
	Type of fault and corrective measures
 LED	
Flashes red	No connection to the heat generator <ul style="list-style-type: none"> ■ Check the plug-in connections (Optolink, USB). ■ Check the connecting lead.
 LED	
Flashes red	No connection to the internet <ul style="list-style-type: none"> ■ No WLAN connection <ul style="list-style-type: none"> – Check network settings during WLAN commissioning. – Check password during WLAN commissioning. ■ WLAN signal strength inadequate <ul style="list-style-type: none"> – Change the installation location of the Vitoconnect 100, see page 10 ■ WLAN connection established, but no internet connection <ul style="list-style-type: none"> – Check the internet connection with other subscriber, e.g. laptop. If no internet connection is possible even with other subscribers, have the network settings checked by an IT contractor.
 LED and  LED	
 LED flashes red  LED pulsates yellow	No connection to the internet WLAN password of the home network is incorrect. Re-enter.
 LED	
Flashes red	Fault at the control unit of the heat generator <ul style="list-style-type: none"> ■ Observe message in the ViCare app or Vitotrol Plus app.  Installation and service instructions of the relevant heat generator
Pulsates red	Fault, access point mode <ul style="list-style-type: none"> ■ Reset the network settings, see page 11
Flashes yellow	Maintenance mode (no data transfer) <ul style="list-style-type: none"> ■ Deactivate maintenance mode, see page 11
Flashes green	A new Vitoconnect 100 firmware is being installed. Note: Do not damage Vitoconnect 100. Never disconnect the Vitoconnect 100 from the mains during firmware installation.
Faults without LED indication	
Fault	Corrective measures
All indicators on the Vitoconnect 100 are off	Check the Vitoconnect 100 mains connection and plug-in power supply unit.

Maintenance Mode

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

Activation

Press reset button for approx. 2 sec. LED flashes yellow. Maintenance mode is activated.

Note: Maintenance mode is not terminated automatically and must be deactivated.

Deactivation

Press reset button for approx. 2 sec. LED is not longer illuminated.

Maintenance mode is deactivated.

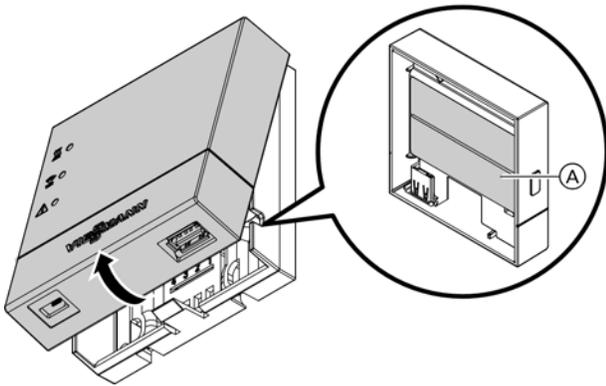
Resetting the Network Settings

1. Press reset button for 5 sec, until LED pulsates yellow.
2. Connect your smart phone with the internal WLAN of the Vitoconnect 100. For WLAN-SSID and WPA2 password see sticker on the Vitoconnect.
3. Open the internet browser on the smart phone and enter the address <http://vitoconnect.gateway>. Follow the instructions on the internet page.

Restoring the Factory Settings

1. Press the reset button for more than 30 sec, until all 3 LEDs flash yellow.
2. Release the reset button.
3. Press the reset button again for more than 5 sec, until all LEDs illuminate yellow.
4. Release the reset button.
The Vitoconnect 100 has been restored to the factory settings.

Parts List

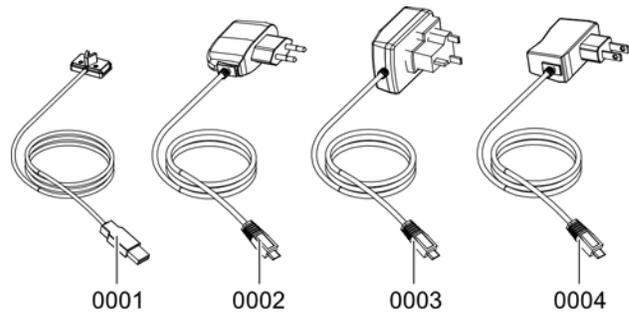


The following details are required when ordering parts:

- Part no. (see type plate A)
- Position number of the part (from this parts list)

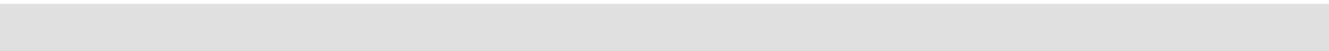
Parts

- 0001 USB/Optolink connecting cable
- 0002 Plug-in power supply unit EU
- 0003 Plug-in power supply unit UK
- 0004 Plug-in power supply unit US



Specification

Vitoconnect 100	
Rated voltage	5 V –
WLAN frequency	2,4 GHz
WLAN encryption	Unencrypted or WPA2
Internet protocol	IPv4
IP assignment	DHCP
Rated current	1 A
Power consumption	5 W
Permissible ambient temperature	
■ Operation	25 to 104°F (– 5 to +40°C) Installation in living spaces or boiler rooms (standard ambient conditions)
■ Storage and transport	-4 to 140°F (– 20 to +60°C)
Plug-in power supply unit	
Rated voltage	120VAC
Rated frequency	60 Hz
Output voltage	5 V –
Permissible ambient temperature	
■ Operation	25 to 104°F (– 5 to +40°C) Installation in living spaces or boiler rooms (standard ambient conditions)
■ Storage and transport	-4 to 140°F (– 20 to +60°C)



Quick Reference

°C	°F
-40	-40
-35	-31
-25	-13
-20	-4
-18	0
-16	+3
-14	+7
-12	+10
-10	+14
-9	+16
-8	+18
-7	+19
-6	+21
-5	+23
-4	+25
-3	+27
-2	+28
-1	+30
0	+32
+1	+34
+2	+36
+3	+37
+4	+39
+5	+41
+6	+43
+7	+45
+8	+46
+9	+48
+10	+50
+12	+54
+14	+57
+16	+61
+18	+64
+20	+68
+25	+77
+30	+86
+35	+95
+40	+104
+50	+122
+60	+140
+70	+158
+80	+176
+90	+194
+100	+212
+110	+230

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