

VERTOBLUE | ELECTRICAL DESIGN GUIDELINES

Household-specific water metering

The VertoBlue system, a wireless system for metering hot and cold domestic water, is installed in households according to the HVAC and electrical designs. The VertoBlue water metering system is a comprehensive service concept from Finland. The system comprises household-specific flow sensors, household units and household displays as well as a remotely readable collection unit for the building or housing company. The system requires no cabling.

Flow sensors (1–4 sensors / household unit) are installed in each household, and household units are installed near the sensors. The household units are numbered at the factory in accordance with the household numbering on the site.

The same sensor (V-15U) works on both hot and cold water lines.

With the household display, residents can easily track their own water consumption in real time. Alternatively, water consumption can be tracked with the VertoMobile mobile app (iOS, Android).

Metering data can be viewed in numerical and graphical form using the browser-based VertoLive service programme. For billing purposes, metering data is transferred to property management software using a compatible export file or interface. Further information on compatible software and interface solutions is available at verto.fi/vertolive.

The system can be configured to send any alerts to the mobile phone number or email address of the building manager or maintenance company, for example.

Our maintenance partner network ensures a comprehensive maintenance service all over Finland, and our competent customer service personnel provide a personal service throughout the country as well.

Our system has a five-year warranty. The warranty requires an approved commissioning inspection. When installation is nearing completion, the plumbing contractor arranges the commissioning inspection procedure with the device manufacturer in good time (at least two weeks in advance).

The VertoBlue symbols are in the MagiCad product database.

Collection unit

Only the EVG collection unit needs a 230V electrical socket (can be freely placed in the property).

The collection unit is connected into a fixed socket-outlet with a power source that is included in the equipment delivery. The electrical contractor must ensure that the cables are suitable for the building/apartment and meet the regulations for fire safety and electrical installations.

The collection unit is installed in the main electrical cabinet or other suitable location, with consideration to the coverage of the radio network and mobile network.

If the collection unit is read remotely via a broadband connection (TCP/IP), a data socket for an RJ45 network cable is required.

VertoNordic Oy

Hopunkatu 11
FI-38200 Sastamala
Finland

tel. + 358 10 734 0700
verto@verto.fi
verto.fi

VAT FI 26007833
Y-tunnus – Business ID
2600783-3

Household units

The household units (EVH-Rb) are powered by their own battery pack (battery pack replaceable, battery pack life approx. 15 years).

The household units are installed near the flow sensors in each household in compliance with electrical and fire safety regulations and in a manner that makes it easy to access and service the device if necessary. If service hatches are applied, their size must be at least 500 x 500 mm.

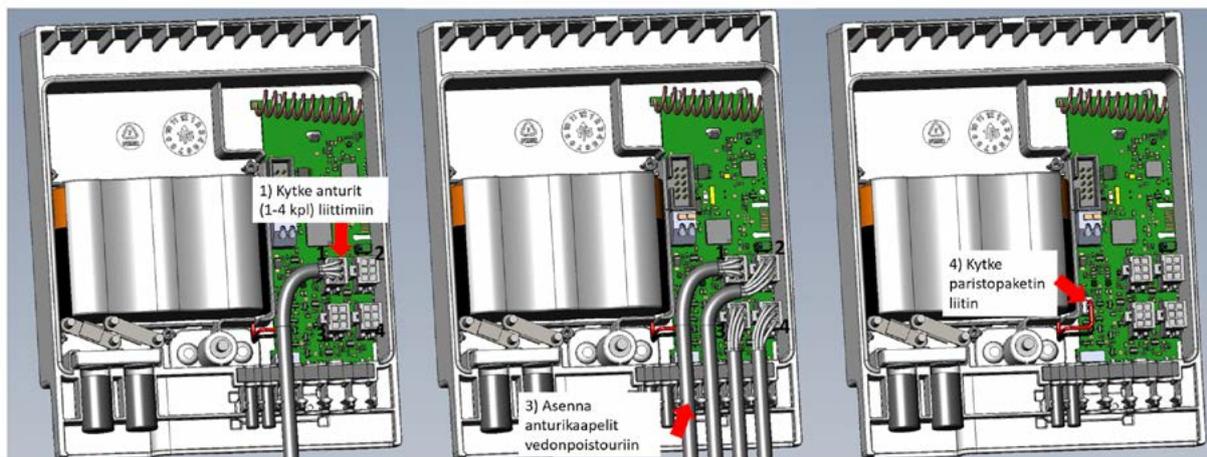
The household units may not be installed in a position where their cable connections face upward. Other installation positions are acceptable.

The flow sensors have a one-metre connecting cable. If necessary, this can be extended using the instrumentation cable WRU0005 (M8 extension 5 m) supplied by Verto. The sensors in the household (1 to 4 sensors per household) are connected to one household unit. If more than 4 flow sensors are needed in a household, such extra flow sensors must be connected to a separate household unit.

The flow sensors' bodies are made of a durable composite (PPS).

Installation of the household units

The equipment's battery pack has a safe life of up to 15 years. The battery pack is supplied by VertoNordic Oy. The equipment may not be powered with any other kind of battery pack. The battery pack is replaceable and may only be replaced by Verto's authorised maintenance provider.



Naming the household units

The household units should be named according to the household numbers on the site (e.g. A01, A02, A03, B04, B05, etc.). The household numbers should be provided to Verto when the order is placed.

Data transmission between the household units and the collection unit

Transmission of data between the household units and the collection unit is accomplished wirelessly via a LoRa radio connection.

VertoNordic Oy

Hopunkatu 11
FI-38200 Sastamala
Finland

tel. + 358 10 734 0700
verto@verto.fi
verto.fi

VAT FI 26007833
Y-tunnus – Business ID
2600783-3

Household-specific household display

As from the beginning of 2018, a Ministry of the Environment decree regulates that household-specific water meters be installed so that they are easy to service and read (Decree of the Ministry of the Environment on Water supply and sewer systems of properties, Section 10). Furthermore, according to the Measuring Instrument Directive of the European Union, residents shall have the opportunity to effortlessly track the water consumption of their household without requiring any auxiliary equipment to do it.

The VertoBlue system's household display enables residents to track their consumption of hot and cold domestic water separately within the home. The household display can be placed in a dry space in the apartment using the wall mount that is included in the delivery. The household display is attached to the wall mount by a magnet. It is recommendable to install the display at the height of 180 cm in the entryway or hallway of the household.

As an additional service, the household display features household temperature measuring. This should be observed when determining the installation location.

Once the household unit has been connected, the display device and the household unit are paired where necessary in accordance with separate instructions, see Installation and user instructions.



The collection unit and the property's main water meters

The metering data is transmitted securely from the collection unit to the VertoLive cloud service by means of NBloT technology (mobile network) or a broadband connection.

1–4 main water meters equipped with impulse transmitters can be connected to the collection unit. These water meters must be located in the same building with the collection unit. As cabling, use a shielded twisted pair cable.

Avoid installing weak current cables and strong current cables side by side.

To avoid impurities that could adversely affect water metering, it is advisable to install water filter of the same size as the pipe inside the building's water supply pipes.

VertoNordic Oy

Hopunkatu 11
FI-38200 Sastamala
Finland

tel. + 358 10 734 0700
verto@verto.fi
verto.fi

VAT FI 26007833
Y-tunnus – Business ID
2600783-3