Venus GX (VGX) manual

In many ways the **Venus GX (VGX)** and the **Color Control GX (CCGX)** are the same device. They share a lot of hardware, and they run on identical software - our 'Venus OS' - therefore firmware numbering is the same; and new version releases always apply to both devices at the same time.

As many of the functions of the two devices are identical, the CCGX Manual should also be consulted if something is not specifically covered in this VGX manual.

This manual refers to the latest firmware version. A device connected to the internet will perform new-version updates automatically. Check the latest firmware version here.

Venus GX/CCGX comparison table

See Victron GX product range.

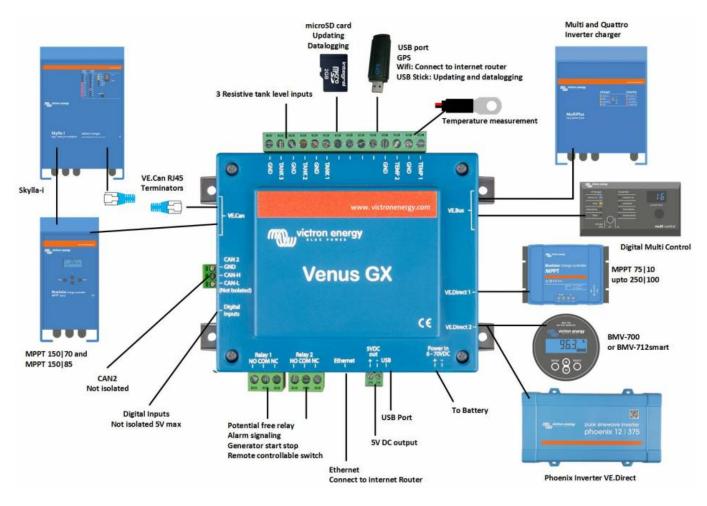
1. What's in the Box?

- Venus GX (VGX)
- VE.Can terminator (2 pcs).
- Power cable with inline fuse and M8 terminal eyes for battery- or DC busbar-attachment.
- Terminal Blocks for all the connectors on each side.
- Label showing WiFi key and product details.





1.1 Overview of connections



2. Accessing the device

Because the Venus GX has no visual display or buttons, it is accessed for setting-up and monitoring by using the 'Remote Console' feature. You can do this through VRM, using the built-in WiFi Access Point, or by using the local LAN/WiFi network.

2.1 Accessing 'Remote Console' via VRM

Connect the Venus GX to the internet by plugging it into a working Ethernet network which as a DHCP

server (most networks do). It will immediately connect to VRM.

Go to https://vrm.victronenergy.com/ and follow the instructions to add the device. More information about this is available in the VRM Manual.

When you've done that, click the 'Remote Console' link to open the window, like this:

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|--|--|--------------------|-----------------------|
| \leftarrow \rightarrow C \blacksquare Secure https://vrm.vic | tronenergy.com/installation/1495/dashboard | | |
| wictron energy | | | C |
| Q thuis X | Device List | 12:44 | |
| | BMV-702 | 90% 52.42V 16.2A > | esc 🗸 |
| < васк | BlueSolar Charger MPPT 150/70 | ow > | |
| Dashboard | Fronius Galvo 3.1-1 | 1757W > | |
| ୍ଷ Advanced | Grid meter | 14W > | |
| 🛇 Device list | MultiPlus 48/5000/70-50 | Bulk > | |
| l Settings + | Notifications | > | |
| 🗟 Remote Console | <u> 네</u> Pages 🗸 🗸 | ⊒ Menu | Matthijs Thuis |
| 🖉 Notes | | | Remote Console |
| Photos | | | |
| < Share | | | |

More information about 'Remote Console' on VRM is explained here.

2.2 Accessing 'Remote Console' via the built-in WiFi Access Point

Steps:

- 1. Make sure you are no further than a few metres away from the Venus GX
- 2. Go to the WiFi settings on your phone / tablet / laptop.
- 3. After searching, it will show up in the list:
- 4. Connect to WiFi using the 'WiFi key' which you will find printed on the side of the box ...and also on a card in the plastic bag which you should keep in a safe place.
- 5. Once connected, navigate to 172.24.24.1

Note that for added security it is possible to disable the WiFi Access Point. See Settings \rightarrow Wi-Fi \rightarrow Create access point.

Caution: Once WiFi Access is disabled the only way to get it back is by using 'Remote Console' on VRM -which requires a working internet connection; or via 'Remote Console' on LAN which requires a working network connection (but no internet).

2.3 Finding the IP address

If you've accidentally disabled Remote Console on VRM, the only way to re-enable it is via Remote

Console on LAN. And to do that you'll need to find the IP address of the Venus GX. There are several ways of finding it:

IP Address on VRM

On VRM, you'll find the IP address on the Device List page of the installation. Note that this does require the Venus GX to be connected to the internet.

| •• | | 0 41 | m.victronenergy.com ර | 000+ |
|-----|------------------------|--------------------------|-----------------------------------|------|
| m | victron energy | | | |
| Q | Search an installation | Device list for Home | | |
| | BACK | | | |
| ୍ | Dashboard | Gateway | | |
| V. | Advanced | _ | | |
| 0 | Device list | Product | Color Control GX | |
| 0 | Settings + | Firmware version | v2.07-7 | |
| ₽ | Remote Console | Remote on LAN | 192168.471 | |
| ď | Notes | Firmware updates | Automatic update | |
| 8 | Photos | Last connection | 5 minutes ago | |
| < | Share | Logging interval | 15 minutes | |
| .09 | Alarm logs | Last power up or restart | 2017-04-19 15:36 | |
| | | Remote Console on VRM | Enabled but not online Learn more | |
| | 🔿 Log out | Two way communication | Disabled | |
| | | Remote support | Enabled and online | |
| | | | | |

Network (on Microsoft Windows)

In a local network, for example at home, you can also find the Venus GX in the Windows 'Network' overview:

Double-clicking the icon will open up Remote Console on LAN.

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| Videos | E Desktop Downloads Recent Places Ubraries Documents Music | VEX.SVR VE-TST-BPC Other Devices (55) | | | - |
| | Videos | | | | : |
| Versus GX (b0d5cd1f779) Categories Other Devices Network location | Venus GX (b0 | | | | |

Open the 'Properties' window to see the IP address.

This uses Universal plug-and-play broadcast technology.

3. LEDs and Push-button - explanation

3.1 LEDs

Boot-up

On the side of the Venus GX, there is an LED. During power-up it it goes through these states:

- Stage 1: Both green and red illuminate briefly and faintly (it's hard to see the green) for approximately 1 second.
- Stage 2: Red illuminates for approximately 1 second.
- Stage 3: Green illuminates for approximately 0.5 seconds.
- Stage 4: Both green and red illuminate briefly and faintly (it's hard to see the green) for approximately 1 second.

After that the LED will be blinking green continually.

Factory re-install

During a forced factory re-install - a very uncommon operation - the LED has these definitions:

- Off: No action is being taken.
- Red blinking: Re-install in progress.
- Green illuminated: Re-install complete.
- Red illuminated: Error.

3.2 Small button located to the right of the green 14-Terminal Connector Block

This button is used to force a factory re-install; see previous chapter.

There are no other functions allocated at present.

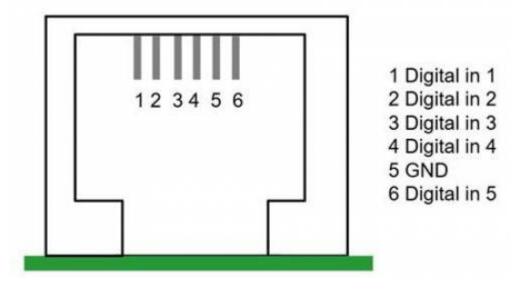
4. Digital Inputs

The Venus GX has five digital inputs. The channels are accessible via the RJ-12 socket on the side. This is available for self-wiring by the user/installer.

4.1. Wiring details

The inputs are non-isolated. They operate at 3V3 levels, and can withstand up to 5V input. Each input

has an internal 10k pull-up resistor to 3V3. We recommend wiring it to a potential free relay or otherwise open collector/optocoupler output.



| RJ12 pinout | Input |
|-------------|--------|
| pin1 | input1 |
| pin2 | input2 |
| pin3 | input3 |
| pin4 | input4 |
| pin5 | gnd |
| pin6 | input5 |

4.2. Configuration

Each of the digital inputs can be configured as a pulse meter, or as one of a number of predefined sensors that can also be configured as alarms.

The possible configurable functions are:

| Function | States |
|---------------|-----------------|
| Pulse meter | N/A |
| Door alarm | Open/Closed |
| Bilge pump | On/Off |
| Bilge alarm | Ok/Alarm |
| Burglar alarm | Ok/Alarm |
| Smoke alarm | Ok/Alarm |
| Fire alarm | Ok/Alarm |
| CO2 alarm | Ok/Alarm |
| Generator | Running/Stopped |

The function of each input can be configured in the GUI under Settings \rightarrow I/O \rightarrow Digital Inputs.

| < | Digital inputs | 11:37 |
|-----------------|----------------|---------------|
| Digital input 1 | | Disabled |
| Digital input 2 | | Disabled |
| Digital input 3 | | Pulse meter |
| Digital input 4 | | Door alarm |
| Digital input 5 | | Disabled |
| | | |
| <u>네</u> Pages | | ≣ Menu |

Once the input is configured for its intended purpose, it will show up with other devices.

| | Device List | 08:45 |
|---------------|-------------|---------|
| Bilge alarm | | Ok > |
| Bilge pump | | On > |
| Pulse meter | | 145m³ > |
| Notifications | | > |
| Settings | | > |
| | | |
| <u></u> | ≡м | 1enu |

Other parameters related to that function can be configured by entering the device menu and selecting Setup. For pulse meters, you can configure the unit, the multiplier (the volume represented by each pulse) and reset the counter.

| < | Setup | 11:48 |
|-------------------|-------|---------------|
| Volume unit | | Cubic metre |
| Inverted | | OFF |
| Multiplier | | 0.1 |
| Reset counter | | 0 |
| | | |
| | | |
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9/10

- To swap the labels attached to the alarm, set *Inverted* to on.
- If a logical low input (0V) should be considered a positive condition, set *Inverted alarm logic* to on.

| < | Setup | | 09:40 |
|--------------------|-------|---------------|-------|
| Enable alarm | | ON | |
| Inverted | | | OFF |
| Invert alarm logic | | | OFF |
| | | | |
| | | | |
| | | | |
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4.3. ModbusTCP

The values/states of the digital inputs are available on ModbusTCP. For more details about this, please download a copy of the document "Modbus-TCP register list" from our website.

5. How does the Venus GX compare with the CCGX?

See products_running_venus_os

6. More information

- Color Control GX manual
- Generator auto start/stop on CCGX and Venus GX
- CCGX Frequently asked questions
- How to update Venus-OS
- CCGX Remote VEConfigure and remote firmware updates
- VRM Portal
- VRM Portal trouble shooting Remote Console
- Open source

DISQUS

View the discussion thread.

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