Mod. GEO-1

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1 User Manual
GPS MODULE FOR EXTERNAL USE
⚠ Read all the instructions carefully

GEO-1 is a GPS module that allows you to capture the information of date, time and position from satellites. This information may be shared with Vemer devices designed to interface with GEO-1, so as to ensure a synchronization always perfect.

Code	Model	Description
VE747200	GEO-1	GPS module for external use

SAFETY WARNINGS

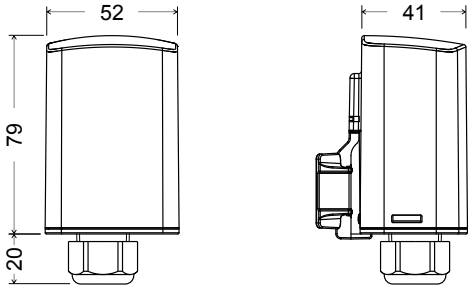
During product installation and operation it is necessary to observe the following instructions:

1) The product must be installed by a qualified person, in strict compliance with the connection diagrams.
2) Do not power the instrument if any part of it is damaged.
3) The product must be installed and activated in compliance with current electric system standards.
4) The electrical system in the building in which the product is to be installed should have an over-current switch and a protection device.
5) Do not use the product for purposes different from the one specified.
6) In case of malfunction do not perform repairs and contact immediately the technical support.
7) The product can be used in environments with category of overvoltage III and pollution degree 2.
8) Before accessing the connection terminals, verify that the leads are not live.
9) After installation, inaccessibility to the connection terminals without appropriate tools must be guaranteed.

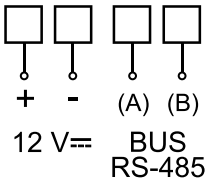
TECHNICAL CHARACTERISTICS

- Power supply: 12V DC (-20% ÷ +20%)
- Absorption: 30mA max (during receiving GPS)
- Wall or pole installation
- Wiring
  – Terminal block: flexible cable section: 0.75 ÷ 1.5 mm²
  – Cable gland: diameter of cables with sheath: 6 ÷ 12 mm
- Protection degree: IP54
- Operating temperature: -20 ÷ 50 °C
- Storage temperature: -25 ÷ 70 °C
- Operating humidity: 20÷90% non condensing
- Key to force sending data on RS-485 line to the connected devices
- Red / green / orange led for signaling device status (Figure 1)
- Operating frequency: 1575.42MHz (GPS RX Only)

2 DIMENSIONS



3 CONNECTION DIAGRAMS



4 DEVICE STATUS

- When you power on the led emits two red flashes as follows:

OFF	ON	OFF	ON	OFF
…	1 s	1 s	1 s	…

After the power on sequence, the GEO-1:
- acquires data of time, date, latitude, longitude and number of satellites received about every 30 seconds
- - sends data of time, date, latitude, longitude to the bus RS-485 (and to the connected devices) every 30 minutes

The flashing of the green led indicates the number of the received satellites (the higher the number of satellites received, the better the reception of the information):

Number of satellites	Green led sequence		
	ON	OFF	REPETITIONS
0 - 2	500 ms	500 ms	continuous
3 – 5	100 ms	300 ms	3 every 5 seconds
6 – 8	100 ms	300 ms	6 every 5 seconds
9 – 12	100 ms	300 ms	9 every 5 seconds

- Sending data to the bus RS-485 (and to the connected devices) is signaled by the red flashing of the led for 3 seconds as follows:

ON	OFF	ON	OFF	…..
100 ms	100 ms	100 ms	100 ms	…..

Note: at any time you can force sending data to the bus RS-485 by pressing the key (accessible by removing the cover, see figure 2).

- Failure to receive the correct data for more than 60 seconds causes an auto-reset of the device. After three fruitless recovery attempts, this condition is signaled by the red flashing of the led as follows:

ON	OFF	ON	OFF	…..
500 ms	500 ms	500 ms	500 ms	…..

In this case, the GEO-1 tries to restore the operation of the GPS module by continuing signaling; in case it succeeds, it will return to normal operation (flashing of the led of green colour according to the number of the detected satellites).

- Failure to receive the correct data for more than 30 minutes causes an auto-reset of the device with loading of factory settings and subsequent restart. This condition is signaled by the orange flashing of the led for 3 seconds as follows:

ON	OFF	ON	OFF	…..
300 ms	300 ms	300 ms	300 ms	…..

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5 INSTALLATION

- Installation can be wall or pole (by using the adapter in the package)
- Remove the cover by leveraging the teeth on the sides of the product
- Pass the cables through the cable entry on the bottom side and connect the power and bus cables respecting the wiring diagram
- Tighten the cable gland and replace the cover.

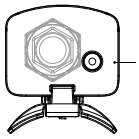

Figure 1

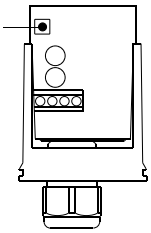

Figure 2

REFERENCE STANDARDS

EU DECLARATION OF CONFORMITY
Vemer declares that the device complies with the EU directive 2014/53 / EU (RED) with reference to the following standards: • EN 61010-1 • ETSI EN 301 489-1 • ETSI EN 301 489-19 • ETSI EN 303 413
The full text of the EU declaration of conformity is available on the Internet www.vemer.it

information to users pursuant to art. 14 of the directive 2012/19 / EU of the european parliament and of the council of 4 july 2012 on waste electrical and electronic equipment (WEEE)

If the crossed-out bin symbol appears on the equipment or packaging, this means the product must not be included with other general waste at the end of its working life.

The user must take the worn product to a sorted waste center, or return it to the retailer when purchasing a new one.

Products for disposal can be consigned free of charge (without any new purchase obligation) to retailers with a sales area of at least 400 m², if they measure less than 25 cm.

An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.