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GPS LOCATION TRANSDUCER

MB-GPS-1

WARRANTY. The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us. More information how to make a com-

pliant can be found on the website: www.fif.com.pl/reklamacie





Do not dispose of this device in the trash along with other wastel According to the law on Waste, dectro coming from households free of charges and on give any amount to up to that end point of collection, as well as to store the coastion of the purchase of new equipment (in accordance with the principle of del-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature one as threat to the environment and human health.

Purpose

The MB-GPS-1 transducer, based on the received signal, provides current data for its location:

- * geographical coordinates (length/width);
- * data (year/month/day);
- * time (hour/minutes/seconds);
- * altitude (meters above the sea level).

Functioning

The device is equipped with the location module of the GPS (Global Positioning System) and the GLONASS system (Russian: ГЛО-НАСС, Глобальная навигационная спутниковая система, Globalnaja nawigacionnaja sputnikowaja sistiema).

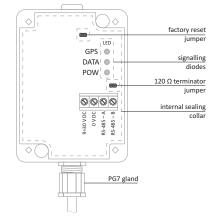
The device, based on one of these signals, provides current data for its location: geographical coordinates (length and width), date and time.

If the satellite signal is lost, the device continues the countdown in the internal clock. When the satellite signal is re-established, the internal clock time is synchronized to the received value.



The MB-GPS-1 transducer cannot be used in navigation systems.

Description of the device



Diode designations

[GPS] ON

GPS/GLONASS signal received correctly

OFF no GPS/GLONASS signal

[DATA]

flashing communication with the module

OFF no communication

[POW]

ON power supply

OFF no power supply

(!)

All elements visible after removing the top cover.

Default settings

Modbus address 1

speed 9600 bps parity none stop bits 2

Restore factory settings

To restore the factory settings:

- 1) Turn the device power off.
- 2) Set the jumper to restore factory settings.
- 3) Turn the device power on.
- 4) Remove the jumper to restore factory settings



Leaving the factory settings reset jumper in place will reset the settings after each power-on.

Technical data

power supply 9÷30 V DC
maximum current consumption 40 mA
port RS-485
communication protocol Modbus RTU
working type SLAVE

communication parameters

speed (adjustable) 1 200÷115 200 bit/s

data bits 8

stop bits 1/1,5/2

parity EVEN/ODD/NONE

address 1÷247
power consumption 0.3 W
working temperature -40÷70°C

terminal 2.5 mm² screw terminals

tightening torue 0.4 Nm dimensions 60×85×35 mm mounting surface

protection level IP65

CE declaration

F&F Filipowski sp. j. declares that the device is in conformity with the essential requirements of Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC. The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found at www.fif.com.pl on the product page.

-1- -2- -3- D200321 -4-

Modbus registers

R reading only
R/W reading and writing
R/PW reading and protected writing (writing possible only in configuration mode)

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Registers are read with the 0x03 commands and written with the 0x06 command.

Address	Mode	Command description
0x00	R	1 – if GPS/GLONASS signal is correctly received
		0 – if there is no signal
001	R	Time (in seconds) since GPS/GLONASS signal loss [LSW]
0x01		(only counts if satellite signal was received at least once
0x02	R	Time (in seconds) since GPS/GLONASS signal loss [MSW
UXUZ		(only counts if satellite signal was received at least once
	R	Current UTC time – hours (calculated from the internal
0x10		RTC clock if there is no satellite signal)
	R	Current UTC time – minutes (calculated from the interna
0x11		RTC clock if there is no satellite signal)
	R	Current UTC time – seconds (calculated from the interna
0x12		RTC clock if there is no satellite signal)
		Current date – days (calculated from the internal RTC
0x20	R	clock if there is no satellite signal)
0x21	R	Current date – months (calculated from the internal RTC
		,
		clock if there is no satellite signal)
0x22	R R	Current date – years (calculated from the internal RTC
		clock if there is no satellite signal)
0x23		Current date – day of the week [1-7] (calculated from the
		internal RTC clock if there is no satellite signal)

(does not change if there is no satellite signal) 0x31 R Last time received from GPS/GLONASS — minute (does not change if there is no satellite signal) 0x32 R Last time received from GPS/GLONASS — second (does not change if there is no satellite signal) 0x40 R Last date received from GPS/GLONASS — day (does not change if there is no satellite signal) 0x41 R Last date received from GPS/GLONASS — months (does not change if there is no satellite signal) 0x42 R Last date received from GPS/GLONASS — months (does not change if there is no satellite signal) 0x43 R Last date received from GPS/GLONASS — day (does not change if there is no satellite signal) 0x50 R Latitude Tree is no satellite signal) 0x51 R Latitude Tree is no satellite signal) 0x52 R Latitude — degrees 0x52 R Latitude — minutes 0x53 R Latitude — seconds 0x54 R Latitude — decimal degrees [DD] (Float [LSW]) 0x55 R Latitude — decimal degrees [DD] (Float [MSW]) 0x60 R Longitude Tree is no satellite signal) 0x61 R Longitude — minutes	Address	Mode	Command description
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JX63 K LONGITUGE – SECONGS	0x63	R	Longitude – seconds

Address	Mode	Command description
0x64	R	Longitude – decimal degrees [DD]
		(Float [LSW])
0x65	R	Longitude – decimal degrees [DD]
0.000		(Float [MSW])
0x100	R/W	Modbus address (1÷247)
0x101	R/W	Transmision rate:
		0 - 1 200 bps
		1 - 2 400 bps
		2 – 4 800 bps
		3 – 9 600 bps
		4 - 19 200 bps
		5 - 38 400 bps
		6 - 57 600 bps
		7 – 115 200 bps
0x102	R/W	Parity control:
		0 - BRAK
		1 - EVEN
		2 – ODD
0x103	R/W	Number of stop bits:
		0 – 1 bit
		1 - 1,5 bita
		2 – 2 bity
0x104	R/W	Entering 1 restores the default configuration
0x400	R	Operating time – seconds [LSW]
0x401	R	Operating time – seconds [MSW]

Address	Mode	Command description
0x405	R	Program version
0x406÷0x40B		Device identifier – string "F&F_MB-GPS-1"
0x406	R	"F&"
0x407	R	"F_"
0x408	R	"MB"
0x409	R	"-G"
0x40A	R	"PS"
0x40B	R	"-1"
0x40F	R	Jumper condition restoring factory settings (1 – on, 0 – off

-5- -6- -7- -8-