

## GSM V2 MODULE



### ***Restarter and monitoring for devices***

The controller has a relay for switching devices and three inputs monitoring, for example, which you can control the power supply work buffer or other devices. There is possibility connection of an additional board with RJ45 ports (4 LAN inputs, 4 outputs LAN + PoE) or another board with 4 relays.

### **SPECIFICATIONS:**

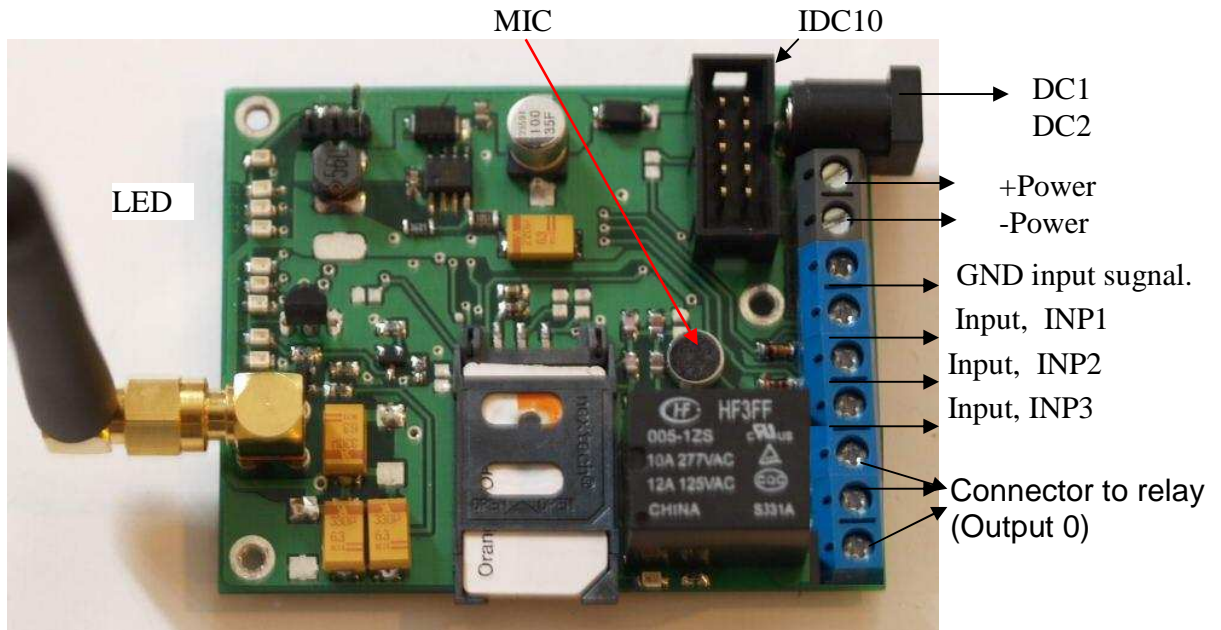
- **SUPPLY VOLTAGE:** 6 to 35V DC.
- **POWER Consumption:** max:2,5 W, min:0,3W, average:0,5W
- **TEMPERATURE:** -30 to +70 degrees Celsius.
- **SIZE:** 68x73mm.
- **GSM:** 850/900/1800/1900MHz.
- **SIM CARD:** 1,8V i 3V
- **1 RELAY** for ON/ OFF other devices, contact normally available open and normally closed.
- **3 DIGITAL INPUTS** (up to 5V) to monitor other devices, e.g: as power supplies buffer
- **1 ANALOG INPUT:** for voltage measurement from different sensors, by default, when the jumper near connector IDC 10 is put on, measures the voltage input.
- **Protection against wrong polarity power supply**

**- Measurement of supply voltage**

**FEATURES:**

- Control via commands sent via SMS.
- Execute the command after you call the module, authorizing up to 80 numbers.
- Commands sending the authorization code (to protect against unauthorized commands), the default code 1234.
- Turn off / restart output - the ability to disable the output on a permanent or a time (restart from 1s to 99s).
- Monitoring of additional devices
- Temperature measurement system itself.
- Environment Temperature measurement.
- Voltage measurement.
- Automatic warning (send SMS) after crossing the up or down preset voltage. The hysteresis is 0.5 V.
- Execute the command after crossing the up or down the set preset voltage. The hysteresis is 0.5 V
- Eavesdropping environment, command (1234:set:call:microfon)
- Automatic warning (send SMS) after crossing the up or down the set temperature. Hysteresis is 3 degrees.
- Thermostat, execution of the command after crossing the up or down to set the temperature. Hysteresis is 3 degrees.
- Scheduler for the command "reboot".
- The validation mode (sends a text message confirming the execution of commands set on / off and reboot) or without confirmation of received commands. Commands which sets the options are always confirmed, provided funds for the SIM card
- Reset your authorization code (the default 1234) and PIN (which is compare with PIN in SIM CARD) (the default 0000) with jumpers.
- Signaling operation using LEDs.
- Connection of the additional board with RJ45 ports (4 LAN Input, 4 ye LAN + PoE).
- Connection of an additional board with 4 relays.

## PINS and COMPONENTS DESCRIPTION



Złącze/Element	Opis
<b>Input</b>	3 input (INP) to monitor the status of external devices
<b>Conector relay</b>	connecting external devices (describe see below)
<b>DC1 i DC2</b>	power supply module, you can choose one of the connectors Jack or Connector
<b>LED</b>	9 LED, signaling module operation (describe see below)
<b>MIC</b>	microphone, used to listen
<b>IDC10</b>	Conector to the additional board

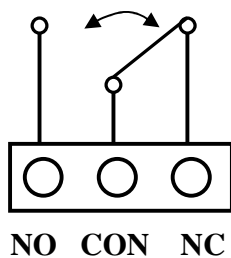
### DESCRIPTION LEDs signaling module operation:

LED  
1 2 3 4 5 6 7 8 9



- 1- second blinking means no logging module to the GSM network, and blink every 3 seconds means that the module has logged onto the GSM network
- 2- lighting up means to start the GSM module,
- 3- lighting up means that module is logged to the GSM network and a willingness to work
- 4- lighting up the signal performance of the command, other commands will not performed at that time,
- 5- lighting up the red LED at the start of the module indicates incompatible SIM card pin to pin stored in the module. . **WARNING!** Be necessarily determine the correct pin on the sim card. Lighting up at the same time, 4 and 5 LEDs during the start-up means lack or inappropriate touching sim card.,
- 6- Indicates input INP1 activity
- 7- Indicates input INP2 activity
- 8- Indicates input INP3 activity
- 9- Indicates power connection

### **RELAY CONNECTORS DESCRIPTION:**



**Fig.1**

**NO** – normally open

**CON** – common contact

**NC** – normally closed

The relays are able to switch AC voltage 277VAC 10A 125VAC 12A

## **GENERAL DESCRIPTION**

When you first start the module, insert the SIM card from the set pin "0000", you can also use the card without a PIN. After powering on about 1 seconds, 2 LED lights up (indicating the start of the GSM) and after about 20 seconds, LED 3 mean the logged module for GSM network and willingness to work. Since then, the module is ready to work and can send control commands.

By default, the relay is in a position as in Figure 1 (relay not active and the LED in it is not illuminated), when typing command "reboot: x" the x output( NO) goes into closed, while the x output (NC) goes into open (LED in it is illuminated) for the set time.

Command "set: off: x" " the x output( NO) goes into closed, while the x output (NC) goes into open for an indefinite period, return to the state occurs after the type command, "set: on: x" or after a reboot / off module If wasn't enabled option to remember the state of the relay.

Lighting up 6, 7 or 8 LED means that, one of the inputs monitoring is activated. When the activation x input is sent sms message "INPx ACTIVE", with deactivation x input is sent sms message "INPx DEACTIVE, the contents of this message you can change the commands set: inpx: on / off.

### **The default settings restarter that can be changed using appropriate commands:**

**Name: GSMV2** - device name can be freely changed command 1234: set: name: x, where x can have a max of 15 characters

**Confirm:off** – off confirm (sms reply), executing commands "reboot:x" and set: on:x, set:off:x

**Monitor:off** – off monitoring of the inputs INP

**Relay\_state:off** – off memorizing the states (the set command set: on: x or set:off:x) relays (outputs) after a restart module

**T\_warn:off** – off the notification of the exceeded temperature

**T\_func:off** – off command is executed after the exceeded temperature

**V\_warn:off** – off the notification of exceeding the voltage

**V\_func: off** – off command is executed after the exceeding the voltage

**Time:5** – default reboot time after the command reboot: x without a parameter "t",

**Set\_temp:40** – temperature at which the excess (up or down) will be notified and /or execution of the set command,

**Temp\_call: 24** – (not showing after the command 1234: status: set) - the value calibrate the temperature sensor, if the measurement in the room turns out that measured temperature deviates from the true, the difference can be calibrated by adding or subtracting from the number 24 a certain value, such as the ambient temperature is greater than indicated by a device with 2 degrees, add 24 +2 and set command "1234: Set: temp-cal: 26".

**Repeat:5** – number of notices sent within one minute for the activity of the one of the inputs INP. This means that if the input state has changed more than 5 times the one minute it so i get up to max 5 messages (10sms).

**VCC:26** – voltage at which the excess (up or down) will be notified and /or execution of the set command

**Active\_number:1** – the number of numbers, which will be sent an "sms" with the crossing temperature, voltage, and the activity of one of the inputs INP. One is that Notification will be sent to a first in the list a phone number, max 4 numbers.

**Inp\_low:on** – INPx inputs activated by the low status,

**PIN: 0000** – pin for sim card if the card requires a pin,

**Kod autoryzacji:1234** – authorization code placed in front of each command, protects against unauthorized commands.

The default functions:

**call\_function:reboot**

**term\_function1:set:off**

**term\_function2:set:on**

**vcc\_function1:set:off**

**vcc\_function2:set:on**

## **CONTROL COMMANDS (send by SMS)**

The command consists of a minimum (Max5) two unit separated by **colon ":"**. The first part is always the authorization code (default 1234), where command has parameters they must be separated by one of four characters: spaces, commas, periods, or colon. Parameter in square brackets is optional, "x" is a number from 0 to 9, "y" is a number from 0 to 9 or a letter from 'a' to 'z'. All commands must precede authorization code (default 1234).

In examples, parameters are separated by a comma, instead you can use spaces, period or colon. Unit must be separated by colons, as in examples.

- "**1234:reboot:[x],[x],[x],[x],[x],[t][x][x]**" - switch x output, or outputs for the time served after parameter 't', or in the event of a command without a parameter 't' of the default time 5 seconds (default time can change the command "set: time, x ')  
example usage:

1234:reboot – restart exit 0 (relay on the main circuit board) for 5 seconds

1234:reboot:0 – restart exit 0 (relay on the main circuit board) for 5 seconds

1234:reboot:1,2,0,3,4 - restart all five outputs for 5 seconds

1234:reboot:1,2,t21 – restart output 1 and 2 at time 21 seconds

### **Commands unit "set"**

- "**1234:set:time,x[x]**" - set the default time (default 5 seconds) restart.

example usage:

1234:set:time:15 – sets the default time for 15 seconds (max 99)

- "**1234:set:off:[x],[x],[x],[x],[x]** – switch x output, or outputs for the indefinite period time (LED in relay is illuminated)

przykład użycia:

1234:set:off:2 – switch output 2

1234:set:off:2,1,3 – switch three outputs: second, one and third

- "**1234:set:on:[x],[x],[x],[x],[x]** – switch x output, or outputs for the indefinite period time (LED in relay is no illuminated)

- „**1234:set:call:**” - sets command which would be activated when someone dialing

Example usage:

1234: set: call: reboot: 2

1234:set:call:microfon - set eavesdropping function

- "**1234:set:code:yyyy**" - sets a four-authorization code

- "**1234:set:pin:xxxx**" - sets a four-PIN on the SIM card..

-"**1234:set:number:x:xxxxxxxxx**" – a set one of eighty 9-digital phone numbers, which will be able to perform the command after ringto the restarter. To four (depends on how many active) first numbers will also send SMS in case of changes in the inputs INP or exceeded the set temperature or voltage.

example usage:

1234:set:number:1:633123123 – sets the first number

1234:set:number:2:633222111 – set the second number

-"**1234:set:active-number:x**"- sets the amount (max 4) of numbers, which will send sms for over-temperature, voltage and activity of one of the inputs INP.

example usage:

1234:set:active-number:1 – activates only one number

1234:set:active-number:4 – activates the four numbers

1234:set:active-number:0 – no numbers activated, it will not work notification,

- "**1234:set:name:yyyyyyyyyyyyyyyyyy**" – sets the device name, max 15 characters

example usage:

1234:set:name:restarter\_hous

- "**1234:set:relay:on**" - turns on memorizing the states (the set command set: on: x or set: off: x) relays (outputs) after a restart module or power down

- "**1234:set:relay:off**"- turns off memorizing the states (the set command set: on: x or set: off: x) relays (outputs) after a restart module or power down

- "**1234:set:temp:**" – sets the temperature at the crossing, which will be sent notification

example usage:

1234:set:temp:28

- "**1234:set:temp-cal:**" – sets the value of temperature sensor calibration, 24+- value

- "**1234:set:repeat:**" – sets the number of notifications sent within one minute activity of one of the inputs INP, max 9 notifications (18 sms)

-"**1234:set:confirm:on**" - enable (sends back an SMS) received command confirmation (only for reboot and set:on/off)

- "**1234:set:confirm:off**" - disable received command confirmation (if the SIM card



contained in the module allows sending SMS).

- „**1234:set:monitor:on**”- enables monitoring of the inputs INP
- „**1234:set:monitor:off**”- disable monitoring of inputs INP(set by default)
- "**1234:set:termwarn:on**" - turns on sending information about exceeding the set temperature,
- "**1234:set:termwarn:off**" - turns off sending information about exceeding the set temperature,
- "**1234:set:termfunc:on**" - turns on executed of command after the exceeded temperature
- "**1234:set:termfunc:off**" - turns off executed of command after the exceeded temperature,
- „**1234:set:termfunc1:**”- set command which will run from exceeded the set temperature up

example usage:

```
1234:set:termfunc1:set:off:1
```

- „**1234:set:termfunc2:**”- set command which will run from exceeded the set temperature down

example usage:

```
1234:set:termfunc2:set:on:1
```

- "**1234:set:vccwarn:on**" - turns on sending information about exceeding the set voltage,
- "**1234:set:vccwarn:off**" – turns off sending information about exceeding the set voltage,
- "**1234:set:vccfunc:on**" - turns on executed of command after the exceeded voltage,
- "**1234:set:vccfunc:off**" - turns off executed of command after the exceeded voltage,
- „**1234:set:vccfunc1:**”- - set command which will run from exceeded the set voltage up

example usage:

```
1234:set:vccfunc1:set:off:0
```

- „**1234:set:vccfunc2:**”- set command which will run from exceeded the set temperature down

example usage:

```
1234:set:vccfunc2:set:on:0
```

- „**1234:set:sched:**”- sets the time in which you want to enable automatic restart output 0 (reboot command). The parameters in turn are: hour: minute, day of week, required format is hh:mm,x, x is the day of the week from 1 to 7, where one is Monday, if instead of numbers on the day of the week we will use an asterisk (\*) are command will be performed every day of the week. Disabling the scheduler occurs after the command 1234: Set: sched: off

example usage:

1234:set:sched:10:03,5 it means that every Friday on 10 AM hour and 3 minutes, command reboot will be executed

1234:set:sched:23:03,\* means that every day of the week at 23:03 command reboot will be executed.

- „**1234:set:clock:**”- sets the date and time for proper operation of the module scheduler, data format YY/MM/dd,hh:mm:ss+/-zz means year/month/day, hour: minute:second + or - time zone

example usage:

1234:set:clock:10/12/23,14:03:09+01 sets date for December 23, 2010, time 14:03 9 second time zone +01.

1234:set:clock – set the date and time of obtaining data from a received text message, you do not need manually enter data.

- „**1234:set:inp-low:on**”- INP activated by the low level

- „**1234:set:inp-low:off**”- INP activated by the high level

- „**1234:set:inp1:on:**”- sets the text which will be sent with input inp1 activation (Max 14 characters)

- „**1234:set:inp1:off:**”- sets the text which will be sent with input inp1 deactivation (Max 14 characters)

example usage:

1234:set:inp1:off:Power\_active

- „**1234:set:inp2:on:**”- the same as above for INP2

- „**1234:set:inp2:off:**”- the same as above for INP2

- „**1234:set:inp3:on:**”- the same as above for INP3

- „**1234:set:inp3:off:**”- the same as above for INP3

### Commands unit "tmp"

- "**1234:temp:ext**"- reads the ambient temperature
- "**1234:temp:gsm**" - reads the temperature of the GSM system itself

### Commands unit "status"

All commands the unit status send feedback, to work, the Sim card must be able to send SMS.

- „**1234:status:clock**"- reads the set date and time
- „**1234:status:vcc**"- reads the measured input voltage (jumper on the connector IDC10 must be established)
- „**1234:status:gsm**"- reads the logged-on operator and signal strength in units RSSI,,
- „**1234:status:set**"- reads the parameters that we may set the commands "set" , except set: temp-cal;,

- „**1234:status:relay**"- reads the status of the relay (outputs)

- „**1234:status:input**"- reads the status of monitoring inputs

- „**1234:status:number:x**"- reads the set numbers, because they are 80, we set a parameter x that are to be read, x from 1 to 8. Is also given information about the number of active numbers

example usage:

1234:status:number:1 - reads the first 10 numbers

1234:status:number:2 - reads the numbers from 11 to 20

1234:status:number:3 reads the numbers from 21 to 30

1234:status:number:8 reads the numbers from 71 to 80

- „**1234:status:func**"- reads the command set for call, termfunc1, termfunc2, vccfunc1, vccfunc2 and time for the sched.