

GSM Module

AVG06

**Integrated GSM module for
Access Control**

Installation and Operation Manual

Version 1.0 (Apr 2015)

Edition I

This product is subject to continual enhancement and
therefore specifications may be changed or altered
without prior notice

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AVG06 Description

The AVG06 is a compact Quad Bands GSM gate and access control with local 2 zones mini alarm; unit is designed for cellular access control for homes, electric strike activator and small to medium parking lots. The AVG06 is housed in small metal case. Each phone number that is stored in the AVG-06 is identified; when such phone number calls the AVG-06 the relay is activated. The AVG-06 is unable to be activated when calling from hidden number phones. Supports up to 64 phone numbers for gate open accounts.

The AVG06 contains a build-in two relays gate relay and alarm relay. The gate relay is remote controlled and is applicable for activation of most access control controller. For applications that requires power back-up some solutions are available.

Support few GSM bands (see the technical specifications).

AVG06 standard pack contains: GSM unit, Zero dB GSM antenna, Installation Manual. Power supply is not included.

Programming and parameters setting is done by SMS, PC programming is not available.

SIM card parameters. SMS enabled, without voice message service, without charges limits (not must), caller ID is enabled and unlocked, Pin Code disabled. See sample fig. 1

AVG06 SIM and Location

Prior to placing the unit check the receiving radio level is good and stable. Don't locate the unit in metal or deep ground places. Locate in dry and cool location.

1. Connections with power off:
Gently insert SIM card to **SIM** slot, to remove gently press the Yellow button.
Connect GSM antenna to **ANT** connector. **Don't power up without antenna.**
2. Notice LEDs location as shown in figure 1

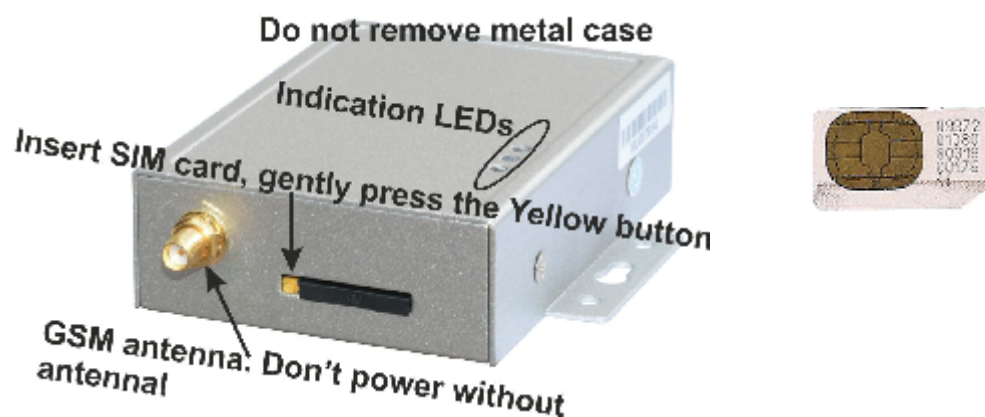


Figure 1: AVG06 SIM card placing and LEDs & SIM card

Starting and Wiring

Before setting the AVG06, you need a GSM phone, SIM card to insert into the AVG06 and 12V 1.5A power supply. The SIM and GSM phone should be SMS and ID numbers enabled.

The GSM phone is your programmer, make sure the phone number is disclosed. Every SMS sent to the AVG06 and correctly received, will be acknowledged by a SMS confirmation to the programming phone. Make sure the AVG-06 SIM can send SMS. It's recommended to store the commands in your programming phone for future applications. During programming, pay attention to the dot sign (.), it's critical.

Antenna: Connect the antenna to the RF connector. **Do not power up without antenna.**
Relay: Notice that the relay drive 5A (at 30V) maximum. Don't connect higher current or voltage.

The AVG-06 identifies the calling number and activates the supplied relay, so it doesn't count as a call. It's useful for access control. The unit store 1600 regular and 400 special dated/time limited numbers. Each registered number activates the relay; 3 seconds pulse, times/modes are programmable at "Gate Delay" parameter.

Power Supply: Use a DC power supply, well filtered at 12-24V 1.2A or higher. Optional power supplies by Av-Gad: AV-20, AV-21, AV-21B or AV-40.

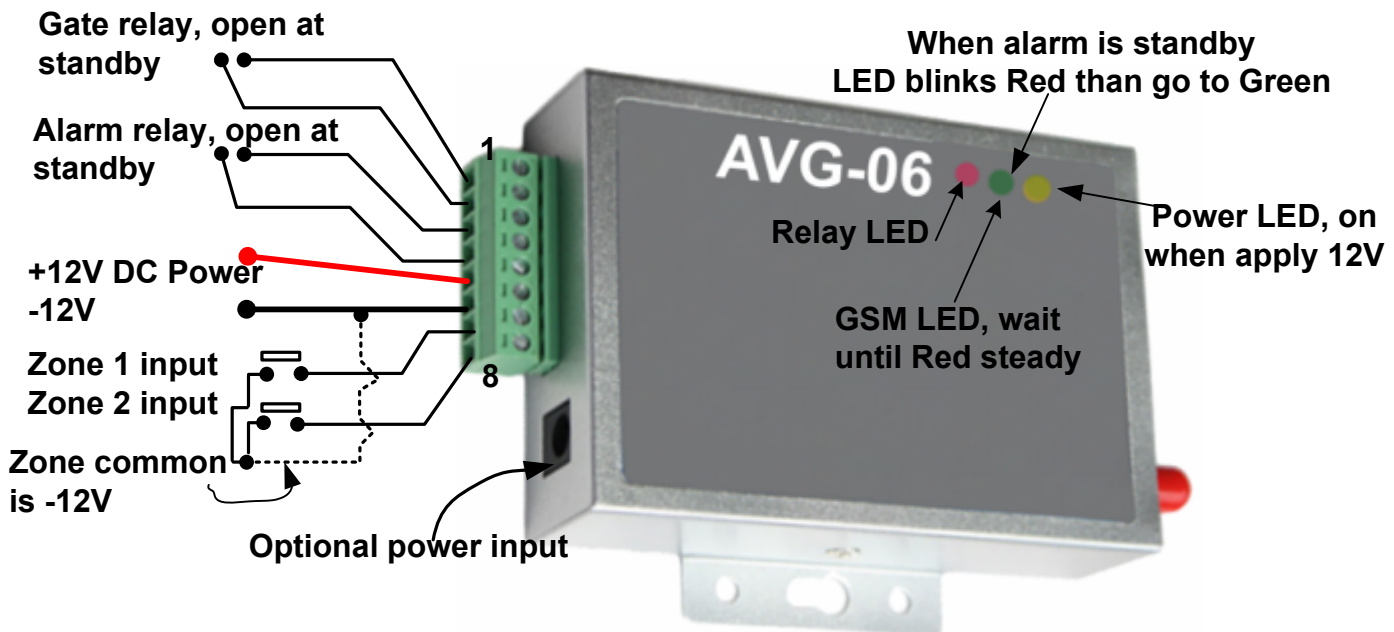


Figure 2: Wiring diagram AVG-06

After powering up wait 120-150 seconds, GSM LED is blinking, wait for GSM registration until the Red LED is on steady.

Test: Call for AVG-06 from a phone that is registered in memory: Busy means unit is Ok; if it receives a "customer unavailable" means no cellular network reception, SIM or unit faulty,

Alarm Mode and relays

You can connect detectors at the zone 1&2, if activated the local alarm relay change state and sends a text message (English only) to user 1 and 2 form gate users.

The Alarm is ready after 10 minutes after a listed user called the unit, the GSM LED is blinking in Red, when ready is Green steady. At alarm sends SMS to accounts 1 and 2 of the gate open listed numbers, refer to command 14 for text words at alarm.

1. AVG06 SMS control commands

Software Version: 01.0.0.0. Factory default password is 1234. PWD=password.

**Verify no space after DOT, no DOT at the end of command.
For password word PWD use capital letters, not pwd**

1.1 Password

Every SMS starts with pwd: password

PWD#PWDnewpassword#PWDnewpassword#

Example: **1234#PWD6666#PWD6666#**

New password is 6666 (notice PWD in capital letters.)

1.2 Add New Phone Number

A. Phone number, phone number

Add new phone numbers to the phone list

PWD#TELAuthorized Number#Serial Number#

Example: **1234#TEL0544777888#01#**

Add **0544777888** to the phone list as user 01

1.3 Display the phone number per user

PWD#TELSerial Number?

Example: **1234#TEL02?**

What is the phone number for user 02.

1.4 Delete Phone Number

D. Phone number. phone number

PWD#TEL#Serial Number?

Example: **1234#TEL#12?**

The phone number of user 12 was deleted.

When sending SMS commands make sure your phone is not in UNICODE writing mode, must be in TEXT mode, English characters (none upper fonts or Chinese, Hebrew, or Korean fonts).

1.5 Disable Alarm Mode Zone input

PWD#DA#

The D means delete

1.6 Set unit to open any one who dials to the unit

PWD#AA#

To disable this feature **pwd#AU#**

1.7 Enable Alarm Mode Zone input

PWD#EA#

The E means ENABLE

1.8 Inquiry about 2 zone alarm mode

PWD#AL?

The unit will send SMS AlarmEnable or AlarmDisable

1.9 Change gate open time

PWD#GOTTime#

Factory default is 0.5 second

Example: **pwd#GOT09#**

New time is 9 seconds (maximum). Inquire the set time command **pwd#GOT?**

1.10 Change the gate relay mode at every call

PWD#GOT00#

In this mode only users 01 02 and 03 can activate the unit, every call change the gate relay

1.11 Change alarm relay mode

PWD#KEYNC# for N.C. mode in standby or **pwd#KEYNO#** for N.O.

Factory default the relay is N.O.

1.12 get GSM reception RF level

PWD#CSQ?

From 3 to 32, if shows 3-6 the unit may not work as low GSM signal

1.13 Enable or Disable SMS sending when relay in active

To enable **PWD#R#**

To disable **pwd#N#**

1.14 SMS text sending when zone input activated

For zone 1: **pwd##TEXT1xxxxxxxxxxxxx#**

For zone 2: **pwd##TEXT2xxxxxxxxxxxxx#**

1.15 Reset the unit

To reset the unit to factory defaults send **RESET** (capital letters w/o PWD).

2. Trouble shooting - Power up always with antenna connected and good power supply

Problem	Solution
After power up no LEDs on	Check the power polarity, wait 10-20 seconds, check that Red LED start blinking. Unit is ready after 3 minutes.
The GSM gate opener is not sending me SMS after programmed	Check the SIM card you used with unit. Try to send SMS with the same SIM from your mobile phone. - Try to replace the antenna - Check if power supply is 12 to 24V DC. AC power supply do not fit and cause instability
The gate open is not activated by my phone	- Call the AVG06 SIM number; you should hear 1-2 rings tone than busy/disconnected. Check if answering service is activated, or you call the wrong number - You are calling from a none disclosed number, set your phone to disclose the number during outgoing calls
The AVG06 is used to work fine, after a while not responding, or messagethe number is not available now.....	- The SIM in the AVG06 provider has poor radio coverage in the region. Change the antenna location or try other provider (with better GSM coverage) SIM card. Send INFO command to get the RF level. - Other option is to use high gain GSM antenna. - Check that electricity was not down during this time
I replaced the SIM in the AVG06 and notice unstable unit	New SIM in most cases must be activated by the SI< provider and load with some money (For sending SMS) in order to work properly. Call the SIM provider or check the SIM in your working mobile phone if can call and send SMS
I need to setup fast entry via this gate, what to do?	Program the AVG06 to be activated by any call. You give the AVG06 Sin number to your accounts, they call the AVG06 to open the gate
I am using a heavy gate that need high current to command OPEN	Use the AVG06 relay to drive a relay module with high current capability, like AV-01 that can drive up to 10 amperes
In large parking lot I need to program 1000 users phone numbers, how?	You need to purchase our GSM modem and model AVG-10 or AVG-07. Get the phone numbers in Excel file. Purchase Av-Gad GSM modem and software pack for transferring the numbers fast via GSM network
I am trying to send programming commands form my phone but nothing works for me	If you are using a phone with upper fonts or new smart phone the SMS command includes none visible spaces or signs, try to do the same from other phone

3. AVG-06 Specifications

Electrical Specifications	
GSM module	QUAD PY
Frequency and GSM bands	Quad band: GSM 850/900/1800/1900 MHz GSM-850, E-GSM-900, DCS-1800, PCS-1900
Power Supply	Filtered 12-24 V DC, 1.2A. Max ripple 120 mV
Standby Current Consumption	60 mA
Communication Current Consumption	Idle: 120 mA. At power up: 1.1 Ampere
Relay output	5A max @ 30V. Output COM & N.O.
Antenna Socket	SMA connector (female) for GSM antenna
SIM Socket	Build-in, spring type
Indications	Solid state LEDs, 3 LEDs
Mechanical Specifications	
Dimensions (max) L x W x H	94mm x 65m x 24m
Temperature range operation	-20°C to +70°C ambient temperature
Humidity	Up to 85%
Protection class	IP40
Mechanical vibrations Amplitude	7.5mm at 5 - 200Hz sinus
Packing	Carton Box
Casing Material	Metal with UL94 HB painting
RoHS, WEEE	Components comply with the EU RoHS and WEEE Directives

AV-GAD LIMITED WARRANTY

Av-Gad Systems Ltd. (Av-Gad) warrants its products to be free from production defects in components; materials used and labor, for the period of twelve months following the date of production. Av-Gad will within the mentioned period, as its option, repair or replace any product failing to proper operation without charge the purchaser.

WARRANTY

This warranty shall not apply to any equipment, or any part thereof, which has been repaired by others, installed not proper, used improper, abused, altered damaged, subjected to acts of God or on which the serial and data code altered or removed.

Av-Gad will not be responsible for any dismantling or reinstallation expenses. In order to exercise the warranty, the purchaser must return the product, delivery and transportation costs prepaid and insured to Av-Gad.

After repair or replacement, Av-Gad assumes the cost of returning products under warranty.

There are no warranties, express or implied, which extend beyond the description of the face hereof.

There is no express or implied warranty of merchantability or a warranty of fitness for particular purpose. Additionally, this warranty is in lieu of all other obligations or liabilities on the part of Av-Gad.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within three months following the end of the warranty period. In no case shall Av-Gad be liable to anyone for any consequential or incidental damages for breach of this or any other warranty, express or implied, even if the loss or damage is caused by the seller's own negligence or fault.

Av-Gad is not an insurer of either the property or safety of the user's employees, family, or 3rd part and limits its liability for any loss or damage including incidental or consequential damages to Av-Gad original selling price of the product regardless of the cause of such loss or damage.