GSM Module
AVG-14

Integrated GSM module for Alarm Control Panels and PSTN Backup

Installation and Operation Manual

Version 1.02
Edition III

AVG-14
GSM Backup Unit

The AVG-14 GSM is a wireless communicator for alarm and fire panels that uses the cell phone network (GSM) to transmit alarms, voice and other events. The AVG-14 checks the PSTN line status, in case the PSTN line fails, the AVG-14 emulates the PSTN line signal to the panel and dials out using the GSM network to communicate. Any dialing and central station data transmitted via the AVG-14, reach the central station or user phone number through PSTN or GSM network.

The AVG-14 is also used as phone line in sites (or alarm systems) without PSTN line; just plug a simple phone to the AVG-14 and dial. Programming is not required, simply plug and play. The AVG-14 does not send SMS.

Main Features

- Panel compatibility: Contact ID alarm panel to transmit alarms over GSM network, dialing the programmed phones in the alarm panel, DTMF commands with Av-Gad panels, voice generated by SVM or other sources.
- Use as telephone line backup: AVG-14 uses the telephone line (PSTN) as the main transmission line and uses the GSM channel as backup.
- Low current consumption. Uses 30 mA while in idle state and 400 mA at transmitting mode.
- AVG14 standard pack contains: GSM unit, Zero dB GSM antenna, Installation Manual, Cable with RJ-11 both ends, RJ-11 cable with one end free wires, DC 12VPower Supply. AVG14B: Supplied with metal bracket for in-box assembly, special DC wiring, Cable with RJ-11 both ends, RJ-11 cable with one end free wires.
- Prevents RF disturbancesand other problems caused by low-end similar units.
- Very simple to install, nothing to program, fast and easy settings.

SIM card parameters: Important! Verify the SIM you are using is G2 compatible, without voice message service, without charges limits and PIN code is not activated

---

Switch off power and disconnect PSTN before SIM inserting. GSM generation III SIM is not compatible with AVG-14. Verify that the SIM in use is open for application and ID enabled.
Do not power up without SIM card

LED Indicators

Power indicator: LED on while power source is connected correctly.

Signal indicator: Level LEDs on indicates that the terminal is on GSM network plus the reception level, at three Red LEDs on the AVG-14 function properly, including DTMF commands and CS reporting, at two LEDs consider to change location, or use an high gain antenna.

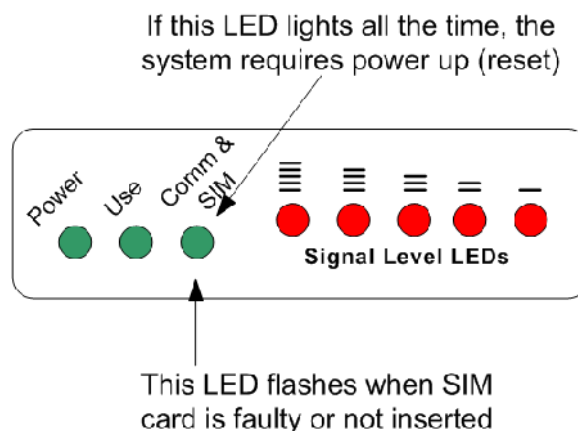LEDs off indicate that the terminal has failed to search for GSM network.

Figure 1: LEDs function

AVG-14 Wiring

Antenna: Connect the antenna to the GSM module; place the antenna as far as possible from the AVG-14 and do not leave any coiling of the antenna cable to avoid radiant interference. When interfaced to Av-Gad panels set the panel/dialer to CCTV/GSM Modem Mode; cut jumper as shown in the PCB layout drawing.

SIM Card: Carefully insert the SIM card (consider SIM card parameters)

PSTN (Telephone Line Input): Connect the line input to the PSTN line.

Dialer: Connect your alarm dialer or plain-wired phone to the Dialer socket.
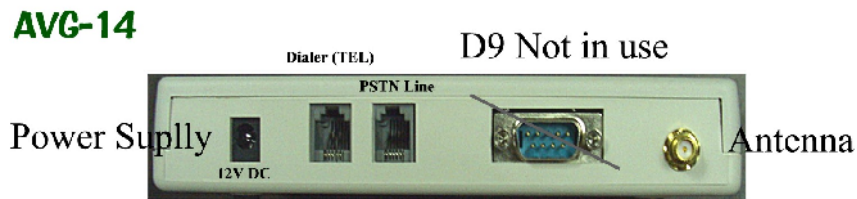
Figure 2: wiring the AVG-14

Power Supply: Connect to a 12V power supply. If used for central station reporting wire the unit to the battery terminals.

Operating State: Approximately 30 sec's after power up, check the operating state indicated by the Power LED: The LED is steady during power up phase, then blinks when the connection to the GSM network is established. The Signal indicator LED will stay lit whenever there is signal.

Connect to alarm panel: Refer to figure 3, AVG-14 dials via GSM if the PSTN fails and to the battery as your power source.
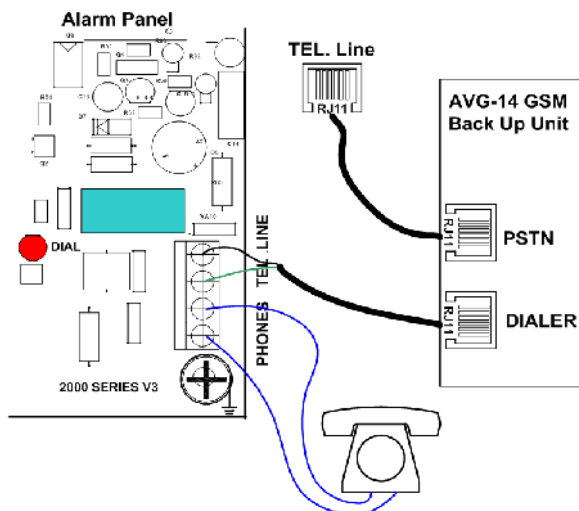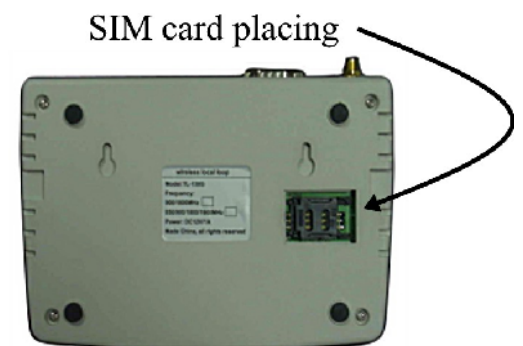

Figure 3: Wiring the AVG-14 to Alarm Panel   Figure 4: SIM card

Installing the SIM Card

Proceed as follows:

Open the lid at the bottom side where the SIM housing is located. Slide back the SIM door and lift it up. Slide the SIM card into the SIM door making sure that the clipped corner of the SIM card lines up with the clipped corner of the SIM holder. Close the SIM door.

Slide the SIM door to lock the SIM card in place.

Powering Up the AVG-14

Power is disconnected. Insert the SIM card, wire the PSTN and dialer as figure 3 displays, connect the antenna, then the power supply, wait 30 seconds for unit registration to the GSM net. Test the unit by dialing. For alarm applications: Power the AVG-14 direct from your alarm panel battery, also verify that the central station reporting functions. The start up current is over 1 ampere, use a high quality power supply; 12V, 1A DC.

Verifications and Tests

Simulate a PSTN Line Failure: Disconnect the PSTN line from AVG-14, verify that your dialing device functions.

Reconnect the PSTN Line: Verify that your dialing device functions.

Technical Specifications

Parameter	Result	Parameter	Result
GSM Module (G2)	850, 900, 1800, 1900 MHz. Channel Space: 200 KHz	Indicators	Eight LEDs
Antenna	0dB, 2.5m Cable	PSTN plug	RJ-11
Antenna connector	RF SMA type	Dialer plug	RJ-11
SIM Card	Standard Genern. II	Standby current	80 mA
Power Supply	DC 12V 1A	Operating current	Up to 260 mA
Power Polarity	Fully protected	Dimensions	L x W x H: 165 x 108 x 33 mm
Housing	ABS	Weight	Gross 0.4 KG