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AGM Advanced
GSM/GPRS Module

Universal Version Installation and Programming Instructions



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1. Introduction

RISCO Group's AGM, Universal Advanced GSM/GPRS Stand alone Module, is a cellular communication module enabling any existing security panel to communicate through the GSM cellular network.

The AGM can be used as the main communication line or as a backup to PSTN line using telephone line simulation.

1.1 Main Features

- Full PSTN line simulation
- Primary or backup GSM/GPRS operation modes
- 4 alarm inputs
- 4 outputs that can be activated by system events, SMS or CLIP control
- Report to two Monitoring Stations by SMS, GPRS or voice (using line simulation)
- Selective event reporting to 8 Follow Me destinations using SMS, E-mail or voice messages (using the Plug On voice module)
- 3 LED Status indication
- Advanced remote SMS system control
- Local / Remote configuration using the AGM Configuration Software through the GSM data channel (9600 bps) or by SMS commands
- GSM signal supervision and level measurement
- Wall and cover tamper protection
- Prepaid SIM card support
- Backup battery charger and battery protection feature
- Quad Band GSM 850/900/1800/1900MHz
- Output and Input status verification by SMS commands

2. AGM Components

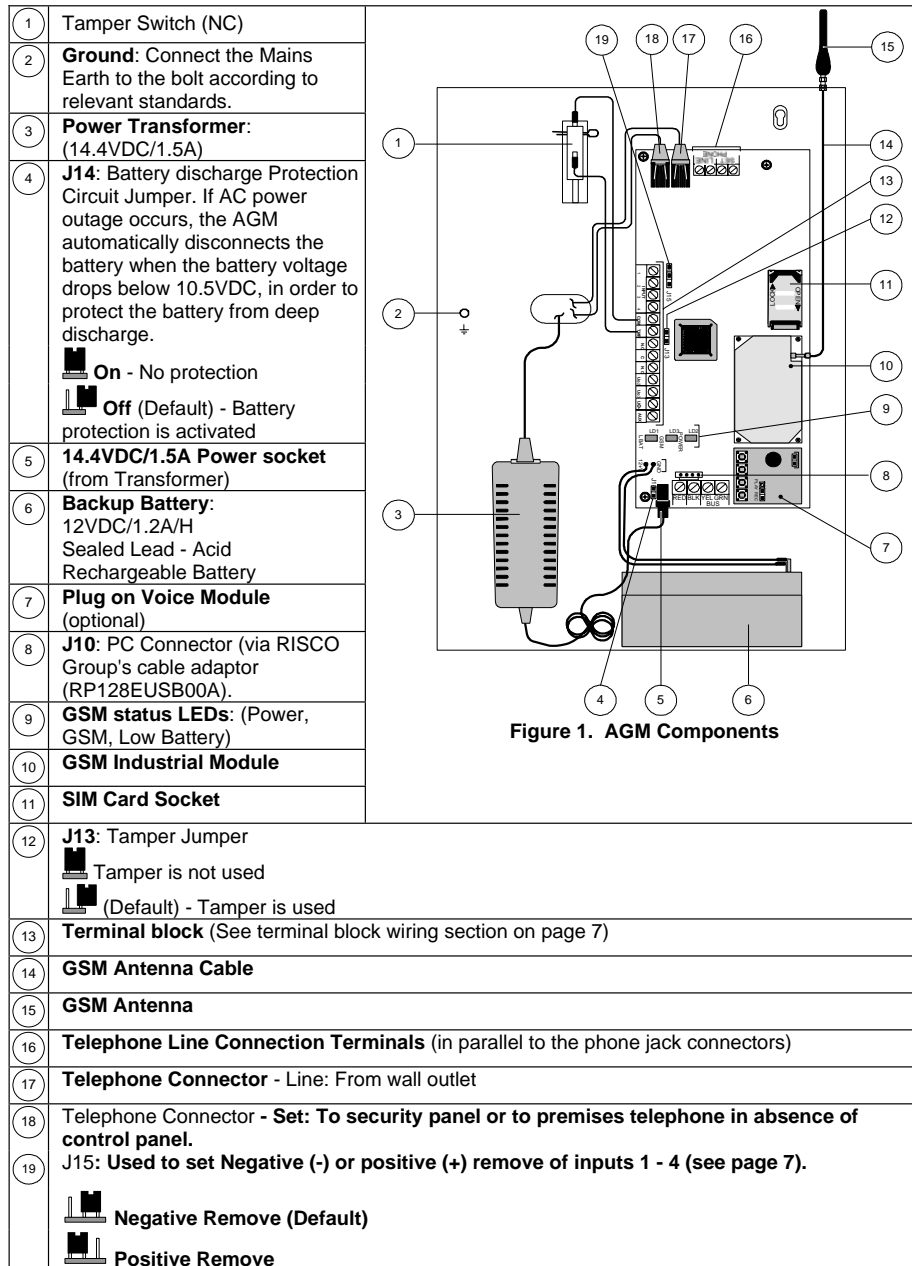


Figure 1. AGM Components

3. Installation

3.1 Preliminary Considerations

- ◆ The AGM Module should be located in a safe and dry place, away from radio and electromagnetic transmitting devices.
- ◆ Select a mounting location near a 110/220VAC electrical power supply.

3.2 Installing the AGM

3.2.1. SIM Card Installation

1. Perform steps A to D if a PIN number is required:

**Important:**

Do not install SIM card while power is applied to the AGM.
Do not touch SIM Card connectors! If doing so, you may release an electrical discharge that could damage the SIM card.

- A. Insert the SIM card into the AGM with PIN code disabled and power up the AGM.
 - B. Set the PIN code by means of SMS or AGM Configuration Software.
 - C. Power down the AGM and remove the SIM card.
 - D. Place the SIM card in any standard GSM mobile phone (while powered down).
 - E. Power up the GSM mobile phone and enable the SIM's required PIN code (the same PIN code defined in step B).
 - F. Power down the GSM mobile phone and remove the SIM card.
 - G. Place the SIM back into the AGM.
2. If required, program the SMS center address into the SIM card using means of SMS, or AGM Configuration Software.

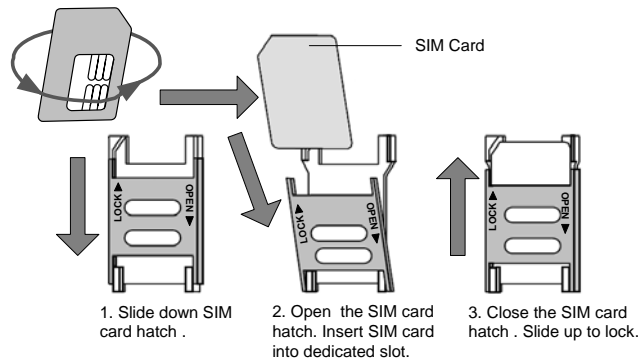


Figure 2. SIM Card Insertion

3.2.2. Wall Mounting (Metal Box Installation)

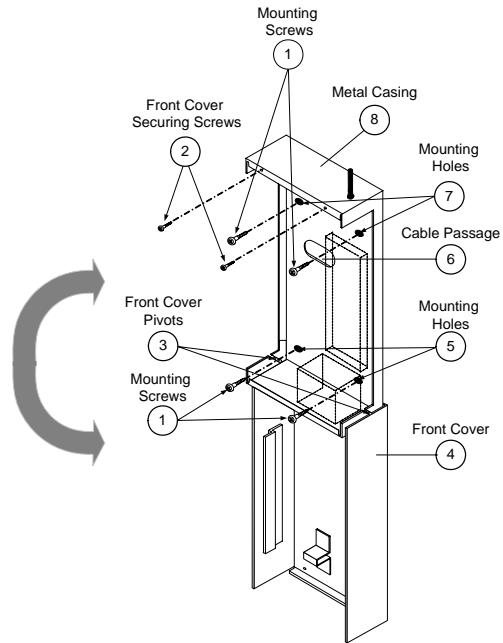


Figure 3. AGM- Installation

1. Remove the two screws securing the AGM front cover (2, Figure 3).
2. Tilt and rotate the front cover downwards until it locks vertically to the casing (alternately lift up to remove the cover).
3. Use the metal casing as a template for marking the installation holes (mark through the mounting holes, see 5 and 7, Figure 3).
4. Drill the four installation holes in the wall and insert anchors (if necessary).
5. Insert external cables (GND, power, and phone lines) through the cable passage (6, Figure 3).
6. Align the AGM with the mounting holes and fasten it firmly to the wall with all four supplied screws (1, Figure 3).
7. Attach the AGM antenna.
8. Connect the AGM backup battery cables to the backup battery.
9. Connect the AGM Module to mains.
10. Install the front cover in its place (in a reverse sequence of the removal (see Figure 3).

4. Wiring the AGM

| Connector | Wiring Diagram | Description |
|-----------------------|----------------|---|
| INPUT (1, 2, 3, 4) | | <p>The Inputs polarity is defined by jumper J15.</p> <p>Negative remove: Connect the detector/s to the required Input/s terminal/s (Input 1, 2, 3 or 4) and the COM (0V) terminal.</p> <p>Positive remove: Connect the detector/s to the required Input/s terminal/s (Input 1, 2, 3 or 4) and the AUX (14.4VDC) terminal.</p> |
| COM | | 0V |
| TMP | | Tamper alarm activates when the front cover is open or the entire box is removed from the wall. |
| UO1 Relay (3A) | | <p>NC: Normally closed contact C: Common contact NO: Normally open contact</p> <p style="text-align: right;">External power supply</p> |
| UO2 to UO4 (100mA) | | Wire the devices that you want to activate to the outputs terminals |
| AUX | | 14.4VDC |

4.1 LED Indications

| LED | State | Description |
|---------------------------------|----------|---|
| Power (Green) | On | Power OK |
| | Off | Power not present |
| | | |
| GSM (Yellow) | | The GSM LED Indicates the GSM network status |
| | On | Network not available |
| | Flashing | GSM communication OK, connected to the network status |
| | Off | Power not present |
| L.BAT (Low Battery, Red) | | The Low Battery LED Indicates the GSM backup battery status |
| | On | Low Battery (below 11 VDC) |
| | Off | Battery OK |

4.2 Automatic GSM Signal Level Measurement

After powering up the AGM with the SIM card inside, the module performs an automatic signal level test.

For the first 30 seconds after powering up, the Green LED will flash between 0-5 times in cycles, (with a delay of 5 seconds between each cycle), indicating the RSSI level (0= No network connection, 5= Very High).

If the signal level is not satisfactory or poor, consider installing the AGM in a better signal receiving location.

| GSM Network Signal level | Flashes |
|---------------------------|---------|
| 5 – Very High | 5 |
| 4 - High | 4 |
| 3 - Medium | 3 |
| 2 - Low | 2 |
| 1 - Very Low | 1 |
| 0 - No network connection | 0 |

5. AGM Modes of Operation

The AGM is connected serially between the telephone line (if available) and additional devices using the same telephone line service.

Based on the AGM line simulation capability, the module constantly checks the availability of both the PSTN and the GSM lines.

During regular operation mode, all calls and data transmission are carried out using the primary line (PSTN-default or GSM). In the case of trouble with the main line, the line is routed to the backup.

At the end of a call, the availability of the main line is rechecked.

If the line is not restored, the system stays on the back up line until the restoration of the main line.

The AGM has three operation modes:

- **GSM Back Up** - The outgoing calls are performed through the PSTN line. When the PSTN line is not available for the time defined in PSTN Lost Delay parameter, the outgoing calls will be directed through the GSM network.
- **GSM Only** - The outgoing calls are performed through the GSM voice channel only. Use this option when no PSTN line is available.
- **GSM Main** - The outgoing calls are performed through the GSM voice channel. When the GSM network is not available for the time defined in GSM Loss Delay parameter, the outgoing calls will be directed through the PSTN line.

6. Monitoring Station Reporting

The AGM enables to report events to two different Monitoring Stations, using Contact ID or SIA formats via three different channels: Voice, SMS, or GPRS.

The security level achieved varies from one technology to another, as described below.

◆ Voice channel

Full event report using PSTN simulation operation mode when connected to a security panel.

◆ SMS Channel

AGM input events and internal AGM events can be sent to the Monitoring Station using encrypted SMS messages (128 BIT AES encryption).

The event messages are received by RISCO Group's IP/GSM Receiver Software located in the MS site. The IP/GSM Receiver translates the SMS messages to standard protocols used by the Monitoring Station applications (For example; Contact ID, SIA etc).

◆ GPRS Channel

AGM input events and internal AGM events can be sent over the GPRS network using TCP/IP protocol to RISCO Group's IP/GSM Receiver software located at the MS site. All messages are encrypted (128 BIT AES encryption is used).



Note:

For GPRS communication, the GPRS channel in the SIM card has to be enabled.

7. Inputs

The AGM has four inputs, which NC and NO devices can be connected to.

Inputs can be activated by negative or positive remove according to the J15 Jumper position.

Each input event and its restore can be reported to the Monitoring Station (by SMS or GPRS) or to any of the 8 Follow Me destinations (by SMS, Voice message or Email)

Triggering of input event can be defined to be immediate or after a delay.

Each input can be defined as a 24-hour type (constantly activated) or as an Arm/Disarm type (activated or deactivated by a remote SMS user command).

Input 3 can also be defined as type "Switch from PSTN to GSM". When a phone line is connected to the AGM, the user has the ability to manually switch the outgoing line from PSTN to GSM (Latch operation).

Input 4 can also be defined as type "Stop Follow Me". When triggered it will stop all Follow Me calls following the current event.

8. Outputs

The AGM has four outputs (one 3A relay output and three-100mA Open Collector outputs) that can be activated automatically according to various events, or manually by SMS commands from pre defined Follow Me telephone numbers. Each output can be defined to be pulsed or latched.

8.1 Output Events

Output defined as "Follow Event" can automatically be activated by the following events:

- ◆ **Input 1 - 4 event:** Activates following triggering / restore of an input.
- ◆ **Tamper:** Activates following AGM tamper alarm.
- ◆ **PSTN Lost:** Activates following a loss of PSTN line (connected to the GSM). The output will be activated after the defined PSTN Loss Delay time.
- ◆ **GSM Trouble:** Activates in the following cases:
 - There is no SIM card in the AGM or SIM is faulty
 - GSM RSSI signal level is low
 - GSM network trouble
- ◆ **Mains power Loss:** Activates when the source of the main AC power is interrupted. The output will be activated after the predefined AC Loss Delay time.
- ◆ **Low Battery:** Activates when the AGM battery has insufficient reserve capacity and the voltage is lower than 11V.
- ◆ **SIM Card Expire:** Activates 30 days before the time defined in the SIM Expire timer.
- ◆ **Periodic Test:** Activates following the time defined in the Periodic Test timer.
- ◆ **GSM+PSTN Loss:** Activates following loss of PSTN and GSM network.

8.2 CLIP Control

Output 1 can be defined as CLIP control type. The CLIP (Calling Line Identity Presentation) feature enables the user to activate output 1 from Follow Me numbers authorized with this function, without being charged for a call from this phone to the AGM.

To be able to perform this operation, the user has to initiate a call to the AGM and hang up after the second ring.

While waiting, the AGM recognizes the telephone number (using the caller ID feature of the GSM network) that the call is initiated from, and activates output 1.

9. Follow Me Report

The AGM allows reporting events to eight Follow Me destinations using one of the following three reporting types:

- ◆ **Voice messaging:** Using the optional Plug on voice module (RP200GSV00A) the AGM enables to assign events with short audible messages. Up to four pre-recorded messages can be recorded (10 second message each).
- ◆ **SMS:** Predefined SMS event messages can be sent to a Follow Me number.



Note:

SMS input event messages can be manually defined according to the installation type.

- ◆ **E-mail:** The AGM can E-mail event messages to predefined E-mail addresses using GPRS. In order to do so, GPRS channel must be activated on the SIM and the GPRS parameters should be defined (see page 18).

9.1 Follow Me Events

| Event | Event description | SMS Default Message |
|--------------------------|--|---|
| Input 1-4 event | Report to Follow Me will be established when an input is triggered | I1: "Intruder alarm" I2: "Panic alarm" I3: "Fire alarm" I4: "Emergency alarm" |
| Input 1-4 restore | Report to Follow Me will be established when an input is restored to normal condition | I1: "Intruder restore" I2: "Panic restore" I3: "Fire restore" I4: "Emergency res." |
| Tamper | Report to Follow Me will be established following a tamper alarm | "GSM box tamper" |
| Tamper restore | Report to Follow Me will be established following to the restore of tamper alarm | "GSM box tamper OK" |
| No PSTN | Report to Follow Me will be established following loss of PSTN line (connected to the GSM). If PSTN Loss Delay time period is defined, the message will be sent after the delay time | "Phone Line Fail" |
| PSTN Restore | Report to Follow Me will be established following to the restore of PSTN line (connected to the GSM) to normal condition | "Phone Line OK" |
| GSM Restored | Report to Follow Me will be established following to the restore of the GSM line to normal condition. The AGM can establish a connection using the GSM network. | "GSM line OK" |

| Event | Event description | SMS Default Message |
|--------------------------------|---|-----------------------|
| Main Loss | Report to Follow Me will be established following interruption in the source of the main AC power. This activation will follow the delay time predefined in the AC Loss Delay timer | "Main power loss" |
| Main restore | Report to Follow Me will be established following to the restore of normal AC power supply | "Main power OK" |
| GSM Low battery | Report to Follow Me will be established following low battery condition (below 11V) | "GSM Low battery" |
| GSM Low battery restore | Report to Follow Me will be established following to the restore to normal of a weak standby battery | "GSM battery OK" |
| SIM Expire | SMS report to Follow Me will be established 30 days before the SIM Expiration Time defined for a prepaid SIM card. | "SIM expire: 1 month" |
| Periodic FM test | "Test Message" SMS report to Follow Me will be established following the time defined in the Follow Me Periodic Test parameter | "Periodic Test" |
| Provider message | An automatic SMS credit message received from the provider will be transferred to the Follow Me number. | - |

10. SMS User Remote Control Functions

The AGM enables the user to remotely control the AGM using SMS commands. For security reasons, a user code (4 digits. Default user code 1234) has to be used to perform the SMS user commands.

For higher security, the SMS remote control operations can be restricted to be performed only from predefined Follow Me telephone numbers, by using the GSM network Caller ID feature.

The following remote control operations can be performed by SMS. More details are described in the AGM User Instructions.

- Activation / Deactivations of AGM outputs defined as User activated,
- Arming / Disarming of Inputs defined as Arm / Disarm
- Changing / Defining Follow Me destinations (Telephone numbers or Email addresses)
- Receiving Prepaid SIM card credit information
- Getting AGM status test messages regarding PSTN line, AC power, Battery level and GSM network signal level
- Getting AGM Inputs status
- Getting AGM Outputs status
- Setting the AGM clock

11. AGM Programming

The AGM can be programmed via a standard PC, using the AGM Configuration Software application, or, via any GSM cellular phone, using SMS commands.

Programming the AGM with the AGM Configuration Software can be performed using three options:

- ◆ **Locally:** Connect the AGM to the PC using RISCO Group's cable adaptor (RP128EUSB00A).
- ◆ **Remotely:** Remote programming is performed using the GSM data channel at 9600 bps.



Notes:

1. When calling the AGM from a PSTN line or from a different provider, the Data channel (CSO) in the SIM card should be enabled.
2. When calling the AGM from a number of the same provider the data channel is automatically enabled (Data number not required).

- ◆ **By SMS:** The AGM Configuration Software enables to send each parameter as a single SMS command or the entire screen, as if sent from a regular GSM cellular phone.

11.1 Installer SMS Programming

The AGM can be programmed using predefined SMS commands (see page 15) from any standard GSM cellular phone. Before any command line, a valid installer code should be used. Default installer code is 0200.

1. Sending a Single SMS Command (see page 15)

[Installer code] [4-digit Programming command] [=] [Programming data]

Example: Setting User Code (see page 16):

Installer code = 0200; Setting user code command=PWFM; New code=4444

```
0200PWFM=4444
```

2. Sending a Single SMS Command with Multiple Data (see page 18)

Use [,] to separate between data of the same command

Example: Setting events to Follow Me number 1 (see page 19):

Installer code = 0200; Command=F1RE Events: 1 (Input 1), 5 (Tamper), 8 (AC loss)

```
0200 F1RE =1,5,8
```

3. Sending Multiple SMS Commands (see page 18)

In one SMS message, you can contain several commands.

To separate between the programming commands put [:] at the end of each programming message. In this case the SMS format will be:

[Installer code] [4 digit command 1] [=] [Data command 1] [:] [4 digit command 2] [=] [Data command 2]:...

Example: Setting MS1 and MS2 channel type (Installer code = 0200):

Installer code=0200

Setting Monitoring stations 1/2 reporting type commands: M1TY/M2TY (see page 18)

Monitoring Station1 reporting type = SMS (1)

Monitoring Station2 reporting type = GPRS (2)

```
0200M1TY=1:M2TY=2
```

4. Receiving SMS Confirmation Message (see page 18)

The SMS commands can have a confirmation reply SMS message. To achieve that add [!] (Exclamation Mark) after the **installer code**. The AGM will send "0" for each command that succeeded and "4" for each command that failed.

[Installer code] [!] [4- digits command 1] [=] [Data command 1] [:] [4 digit command 2] [=] [Data command 2]:...

Example: Reporting MS1 and MS2 channel type (Installer code = 0200):

```
0200!M1TY=1:M2TY=2
```

A confirmation reply SMS message for both commands will be:

Security system:

00

5. Reading Parameter Value by SMS (see page Error! Bookmark not defined.)

Use the following sequence to receive the current data of the requested command:

[Installer code] [4- digits command 1] [?]

Example: Requesting information for communication format:

```
0200 MSCF?
```

Assuming that the communication format is Contact ID, the SMS reply message will be:

Security system:

0420

11.2 SMS Programming Commands

The table below provides the entire set of commands available. The procedure of programming the commands is identical and uses the same syntax as described in the previous section. The order of the commands is identical to the order in the AGM Configuration Software.

| Command Description | Programming Options | Default |
|---|---|------------|
| Parameters | | |
| Standard Parameters : Settings | | |
| RLMD:AGM Operation Mode Configures the AGM module mode of operation. For more details see page 16. | 0: GSM Backup 1: GSM Only 2: GSM Main | 0 |
| RSST:GSM Network Sensitivity Set the minimum acceptable network signal level (RSSI level). | 1: Low Signal 2: Average Signal 3: High Signal | 2 |
| Standard Parameters : Timers | | |
| PSLT: PSTN Loss Delay The time after which the AGM will switch over to the GSM network following PSTN loss. | 10 to 255 seconds | 10 sec. |
| GSLT: GSM Loss Delay The time after which the AGM will switch over to the PSTN line following GSM network loss. | 1 to 255 minutes | 4 min |
| MTDT: AC Loss Delay In case of AC power loss, this parameter specifies the delay time before reporting the event or operating the output. | 0 to 255 minutes | 30 minutes |
| Standard Parameters :Controls | | |
| CLDG: Caller ID The Caller ID function enables the AGM to restrict SMS remote control operations to predefined Follow Me phone numbers. 0: Caller ID deactivated. The AGM can receive SMS control messages from any phone number. 6: Caller ID activated. The AGM can receive SMS control messages only from recognized Follow Me numbers. The AGM checks the last 6 digits of the telephone number from which the SMS was sent from and compares them to the last digits of the Follow Me numbers defined in the AGM. If the digits coincide, the number is recognized and the operation will be executed. | 0: Caller ID deactivated 6: Caller ID activated | 0 |
| ICDS: Incoming Call Disable This parameter is used to disable all incoming calls trying to come in via the GSM voice channel. When this parameter is enabled, SMS or Remote programming is still allowed. | 0: Incoming voice call enabled 1: Incoming voice call disabled | 0 |
| Standard Parameters :Access Codes | | |
| PWFM: User Code 4 digit user code for remote SMS system operations | 4 digits | 1234 |
| PWIN: Installer Code 4 digit code used for remote SMS or PC Software | 4 digits | 0200 |

| Command Description | Programming Options | Default |
|--|---|---------|
| PINC: PIN Code 4 digit PIN (Personal Identity Number) code required to access the GSM provider | 4 - 8 digits | - |
| Standard Parameters :Dial Parameters | | |
| SYRT: System Retries The number of times the AGM redials a phone number after failing to establish communication | 0 - 9 times | 3 |
| SYRW: System Retries Wait The number of seconds between attempts to redial the same phone number. | 30,60 seconds | 30 |
| Standard Parameters :Periodic Test | | |
| PRDT: Periodic Test Time The time that the AGM will automatically call a Follow Me number in order to check communication with the AGM or send a test report signal to the Monitoring Station. | 24 hour format HH:MM (Example: 16:00=1600) | 1200 |
| PRTP: Periodic Test Recurrence The recurrence of performing the periodic test. | 0: Never 1: Every day 2: Every 2 days 3: Every 3 days 4: Every 4 days 5: Every 5 days 6: Every 6 days 7: Every 7 days 28: Every month | 0 |
| Advanced Parameters :Telephone Prefixes (see Appendix, page 21) | | |
| PBX1.. PBX2: Public Exchange Prefix A number dialed to access an outgoing line when the AGM is connected to a Private Branch Exchange (PBX) and not directly to a PSTN line. | Max. 6 digits | - |
| PCS1.. PCS6: Constant Prefix Initial digits of a phone number that will not to be corrected when calling through the GSM network. | Max. 6 digits | - |
| PADD: Prefix to Add Initial digits of telephone numbers that will be added to the beginning of a telephone number before calling through the GSM network. | Max. 6 digits | - |
| PRMV: Prefix to Remove Initial digits of telephone numbers that will be deleted before calling when using the GSM network. | Max. 6 digits | - |
| Advanced Parameters :Prepay SIM Card | | |
| PPMS: Prepay SMS Credit Message SMS message sent to the provider in order to receive the current credit level of the SIM card used in the AGM. Your service provider predefines the SMS message. | Max. 18 digits | - |
| PPSP: Phone To Send Credit The provider's phone number to which the credit level SMS message request will be sent to. | Max. 32 digits | - |
| PPRP: Phone To Receive Credit The provider's telephone number from which an automatic SMS credit status message will be sent from. | Max. 32 chars | - |
| PPET: SIM Expiration Time The life length of a Pre-paid SIM card is defined by the provider. After each charging of the SIM, the user will have to manually reset the SIM's card expiration time. 30 days before the expiring time, a notification will be sent by SMS | 0 - 36 month | - |

| Command Description | Programming Options | Default |
|---|--|-------------------|
| to a Follow Me number (if defined) Set the SIM expiring date (in months) according to the time given by the provider. | | |
| Advanced Parameters :GPRS → APN | | |
| GPAP: GPRS- APN | Max. 30 digits | - |
| GPUS: GPRS - User ID | Max. 20 digits | - |
| GPPW: GPRS - Password | Max. 20 digits | - |
| Advanced Parameters :GPRS → Email | | |
| SMIP: MAIL SMTP IP | | 0.0.0.0 |
| SMPO: MAIL SMTP Port | Max. 5 digits | - |
| SMUS: MAIL SMTP User name | Max. 10 chars | - |
| SMPW: MAIL SMTP PW | Max. 10 chars | - |
| SMPR: MAIL Prefix The AGM Email address name section. For example, in the GSM@riscogroup.com E-mail address, the prefix name is "GSM". | Max. 16 chars | |
| SMDO: MAIL Domain The AGM module Email address domain section. For example, in the E-mail address GSM@riscogroup.com, the domain name is riscogroup.com | Max. 32 chars | |
| Advanced Parameters :GPRS → SMS | | |
| SMSO: SMS/Email System Label | Max. 35 chars | "Security System" |
| SSRV: SMS Center Phone Lets you set the phone number of the message delivery center. This number can be obtained from the network operator. | Max. 32 chars | - |
| Inputs | | |
| I1TY .. I2TY: Inputs 1/2 Type 24 Hour: Input is activate all time Arm/Disarm: Input is activated/deactivated by SMS user command | 0: 24 Hour 1: Arm/Disarm | 0 |
| I3TY: Input 3 Type Switch to PSTN: The user can manually switch the outgoing line from PSTN to GSM (Latch operation). | 0: 24 Hour 1: Arm/Disarm 2: Switch PSTN to GSM | 0 |
| I4TY: Input 4 Type Stop Follow Me: When triggered it will stop all Follow Me reports. | 0: 24 Hour 1: Arm/Disarm 3: Stop Follow Me | 0 |
| I1TR to I4TR: Input 1..4 Termination | 1: Negative Remove NC 2: Negative Remove NO 3: Positive Remove NC 4: Positive Remove NO | 2 |
| I1RD to I4RD: Input Report Delay The time (in seconds) that an input violation must last before triggering, followed by an alarm report send to the MS. | 0 - 255 seconds | 0 |
| Outputs | | |
| U1FL: Output 1 Type Follow Event: The output will be activated following events defined by the UxRE command. It will be deactivated when all events are restored. Follow user: The output is activated / deactivated by SMS user message command. Clip control: See page 10. | 0: Follow Event 1: Follow User 2: Clip control | 0 |

| Command Description | Programming Options | Default |
|---|--|------------------|
| U2FL to U4FL: Output 2 to Output 4 Type | 0: Follow Event 1: Follow User | 0 |
| U1TY to U4TY: Output Termination | 0: Pulse N.C. 1: Pulse N.O. 2: Latch N.C. 3: Latch N.O. | 1 |
| U1PR to U1PR: Output Pulse Delay The time in seconds that the output is activated when triggered. | 1-255 seconds | 5 |
| U1RE to U4RE: Output Report Event For events description, refer to page 10. | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: Tamper 6: PSTN loss 7: GSM trouble 8: Main power loss 9: Low battery 10: SIM card expired 11: Periodic test 12: PSTN+GSM loss | 0 |
| Follow Me Parameters | | |
| F1TY to F8TY: Follow Me Type The format of event reports to the Follow Me. For additional information, refer to page 11. | 0: Voice message 1: SMS 2: Email | 0 |
| F1TL to F8TL: Follow Me Phone Number Type in the telephone number including dialing prefixes and area code or special letters for Follow Me defined as SMS or Voice. For more details refer to the Appendix, page 21. | Max. 32 digits | - |
| F1ML to F1ML: Follow Me Email Address | Max. 31 chars | - |
| F1CA to F8CA: Follow Me Clip Control Define which Follow Me phones will be authorized to perform clip control operation to output 1 (when defined) | 0: Not authorized 1: Clip authorized | 0 |
| VORC: Voice Recurrence The number of times a voice message will be played when establishing a call to a Follow Me number. | 1 - 9 | 4 |
| F1RE to F8RE: Follow Me Report Event Choose the events that will be reported to each Follow Me. For more information refer to page 11. | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: Tamper 6: PSTN loss 7: GSM trouble 8: Main power loss 9: Low battery 10: SIM card expired 11: Periodic test 12: Provider message | |
| F1RS to F1RS: Follow Me Event Restore Choose which restore events will be reported to each Follow Me number. | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: Tamper 6: PSTN loss 8: Main power loss 9: Low battery | |
| V1RE to V4RE: Voice Message Assignment to Follow Me Choose which voice message will follow a specific triggering of an event or message | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: Tamper 6: PSTN loss 8: Main power loss 9: Low battery 11: Periodic test | 0 |
| Monitoring Station | | |
| M1TY or M2TY: Monitoring Station Channel report Type The manner of reporting events to the MS. For additional information refer to page 9. | 1: SMS 2: GPRS | 1 |
| M1AN or M2AN: Monitoring Station Account Number A six digit customer account number assigned by the Monitoring Station. | Max. 6 digits | 111111 222222 |
| M1TL or M2TL: Monitoring Station Telephone Number | Max. 32 digits | - |

| Command Description | | Programming Options | Default |
|--|---|---|----------------------|
| M1IP or M2IP: Monitoring Station IP Address | | Max. 15 digits | - |
| M1PT or M2PT: Monitoring Station Port | | Max. 5 digits | - |
| MSSP: Monitoring Station report backup The Report Backup menu contains options that enable the routing of events reporting to the Monitoring Station channels. | 0: Don't Call 1: Call 1st 2: Call 2nd 3: Call All | 4: Second back up first 5: First back up second | 4 |
| MSRE: Monitoring Station Report Events | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 5: Tamper | 6: PSTN loss 8: Main power loss 9: Low battery 11: Periodic test | - |
| MSRS: Monitoring Station Events Restore | 1: Input 1 2: Input 2 3: Input 3 4: Input 4 | 5: Tamper 6: PSTN loss 8: Main power loss 9: Low battery | |
| MSCF: Monitoring Station Communication Format The communication protocol used by the digital receiver at the Monitoring Station. | | 0420: Contact ID 0700: SIA | 0420 |
| Monitoring Station :Report Codes | | | |
| R11E | Input 1 event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0130 (Intruder) |
| R12E | Input 2 event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0120 (Panic) |
| R13E | Input 3 event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0110 (Fire Alarm) |
| R14E | Input 4 event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0100 (Medical) |
| R11R | Input 1 restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0130 (Intruder) |
| R12R | Input 2 restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0120 (Panic) |
| R13R | Input 3 restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0110 (Fire Alarm) |
| R14R | Input 4 restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0100 (Medical) |
| RPSE | PSTN event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0351 |
| RPSR | PSTN restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0351 |
| RACE | AC loss event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0301 |
| RACR | AC loss restore event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0301 |
| RLBE | Low battery event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0302 |
| RLBR | Low battery event restore | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0302 |
| RTME | Tamper event | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0137 |
| RTMR | Tamper restore | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0137 |

| Command Description | | Programming Options | Default |
|---------------------|---------------|---|---------|
| RPTE | Periodic test | 4 digits (MSCF=0420) 2 chars (MSCF=0700) | 0602 |

| Diagnostics (can be performed by both the installer and the user) | |
|---|---|
| SFTR: Software Version Sending the SFTR command to the AGM will return the current Agm software version | SMS Structure: [Code][SFTR] Example: 1234 SFTR |
| ST: AGM Status Sending the ST command to the AGM will return the status of the AC power, Battery status, PSTN line status and GSM signal level. | SMS Structure: [Code][ST] Example: 1234 ST |
| STI: Inputs Status Sending the STI command will return the current input status (On/Off). | SMS Structure: [Code][STI] Example: 1234 STI |
| STO: Outputs Status Sending the STO command will return the current outputs status (Activated / Not -activated) | SMS Structure: [Code][STO] Example: 1234 STO |
| CLK: Receiving AGM time and date Sending the CLK command allows receiving the actual AGM TIME | SMS Structure: [Code][CLK] Example: 1234 CLK |
| CLK: Changing AGM time and date Sending the CLK command allows changing the AGM time and date. | SMS Structure: [Code][CLK][dd/mm/yy,hh,mm] Example: 1234 CLK 10/12/06,12,30 |

12. Technical Specifications

| Electrical Characteristics | |
|--|---|
| Voltage | 13.8VDC \pm 10% |
| Current Consumption | During Communication - 300mA |
| | During Standby - 70mA |
| Battery (not supplied): | 12VDC/1.2Ah |
| Battery Type: | Lead Acid (rechargeable). |
| Battery Dimensions Width x Height x Depth | 97 x 58 x 43 mm (3.8" x 2.3" x 1.7") |
| GSM Industrial Module | Quad Band GSM 850/900/1800/1900MHz |
| Connection | RS-485 Serial Link |
| Operating Temperature | 0°C to 55°C (32°F to 131°F) |
| Physical characteristics | |
| Dimensions (metal casing) Width x Height x Depth | 185 x 275 x 65 mm (7.2" x 10.8" x 2.6") With antenna installed: 185 x 335 x 65 mm (7.2" x 13.2" x 2.6") |
| Weight (with battery) | 2.1kg (4.6lbs) |

Appendix: Telephone Number Conversion in Line Simulation Mode

When the AGM operates in telephone line simulation mode, the telephone numbers dialed from the alarm control panel need to be adjusted according to the following conversion methodology. A description of the methodology is detailed below. For better understanding the procedure, use the example below.

Conversion Methodology

- 1.If the dialed number begins with an outgoing line number (when the module is connected to the PBX and not directly to the PSTN line), the outgoing line number will be deleted. (defined in SMS commands *PBX1...PBX2*)
Go to step 2
- 2.If the dialed number begins with a prefix, (Constant prefix – SMS commands *PCS1 .. PCS6*) recognized by the AGM, the module will not change the number.
Go to step 5 else go to step 3
- 3.If the dialed number begins with a prefix that needs to be removed , the module will delete the Prefix number (SMS command *PRMV*).
Go to step 5 else go to step 4
- 4.If the dialed number has no prefixes known to the AGM, the module will add a Prefix (Prefix to add – SMS command *PADD*) defined in the security panel (usually used for the local area code of the PSTN).
Go to step 5
- 5.Dial the number.

Example:

Note:

Prefixes are used for voice calls only.

The module is connected to PBX (Private Branch Exchange), which has a PSTN line in area code 03 after dialing the “access number” 9.

The outgoing calls through the GSM module are allowed to the following telephone numbers:

03 910-5555 - owner's residence

052 366-4444 - owner's cellular

054 366-5555 - owner's spouse cellular

The telephone numbers definition in the panel should be:

“99105555”, “90523664444”, “90543665555”

Configuring the module for such an operation requires programming the numbers and prefixes as described below:

PBX prefix: "9"

Prefix Constant: “052”, “054” (or “05” only)

Prefix to remove: None

Prefix to add: "03"

Telephone numbers dialed the by GSM module:

"039105555", "0523664444", "0543665555"

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WARNING: This product should be tested at least once a week.

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