

GTM 1660 RAPSODY

Simple SMS alarm module



+SWISS GTM

MANUAL



The GTM modules are developed to be connected to the 2G GSM 850, GSM 900, DCS 1800 and PCS 1900 network using harmonized frequencies, therefore no particular notification is necessary. [AXELPROD GSM Solutions](#) declares its GTM products described in this manual are conform to the directive 1999/5/CE from march 9, 1999 (see conformity declaration).

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Minimum material you need:

- A GTM 1660 RAPSODY.
- The GTM manual.
- A magnet GSM antenna.(Order code ANT-MAG2).
- A SIM card purchased from your GSM operator (AXELPROD does not provide SIM card).
(SIM PIN code must be disable before inserting the SIM card)
- A power supply (8 to 32 Volts).

With the options :

- Spy cables (Serial-USB adapter and spy cable), for debug functions.

Or the kit:

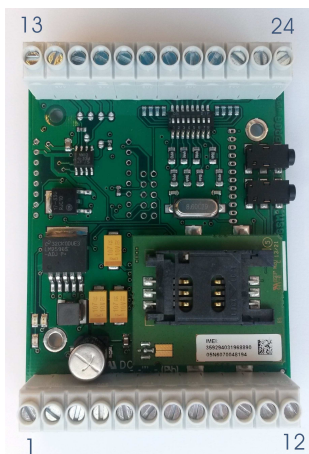
- A GTM 1660 RAPSODY.
- A magnet GSM antenna..
- Spy cables (Serial-USB adapter and spy cable), for debug functions.

Features :

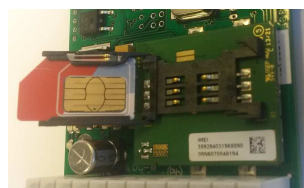
- 16 digital inputs, 4 destinations per input.
- 6 digital outputs with activation/deactivation by SMS.
- Periodical SMS, 4 destinations.

Hardware:

Outlines: 70 x 85 mm, height: 60 mm.



Inserting the SIM card :



The GTM must be OFF and the SIM PIN code must be disable before inserting the SIM card

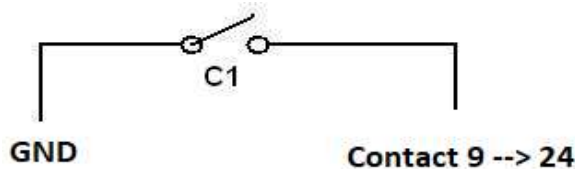
GTM 1660 RAPSONY

| Contact | Function | Contact | Function |
|---------|-----------------------|---------|------------------------|
| 1 | POWER SUPPLY + | 13 | DI5: DIGITAL INPUT 5 |
| 2 | POWER SUPPLY GND | 14 | DI6: DIGITAL INPUT 6 |
| 3 | DO1: DIGITAL OUTPUT 1 | 15 | DI7: DIGITAL INPUT 7 |
| 4 | DO2: DIGITAL OUTPUT 2 | 16 | DI8: DIGITAL INPUT 8 |
| 5 | DO3: DIGITAL OUTPUT 3 | 17 | DI9: DIGITAL INPUT 9 |
| 6 | DO4: DIGITAL OUTPUT 4 | 18 | DI10: DIGITAL INPUT 10 |
| 7 | DO5: DIGITAL OUTPUT 5 | 19 | DI11: DIGITAL INPUT 11 |
| 8 | DO6: DIGITAL OUTPUT 6 | 20 | DI12: DIGITAL INPUT 12 |
| 9 | DI1: DIGITAL INPUT 1 | 21 | DI13: DIGITAL INPUT 13 |
| 10 | DI2: DIGITAL INPUT 2 | 22 | DI14: DIGITAL INPUT 14 |
| 11 | DI3: DIGITAL INPUT 3 | 23 | DI15: DIGITAL INPUT 15 |
| 12 | DI4: DIGITAL INPUT 4 | 24 | DI16: DIGITAL INPUT 16 |

Power supply: 8 to 32 Volts, 500mA, better 1 A.
 Current consumption: 50 mA, stand by
 Temperature range: -10 to 80°C, storage.
 -10 to 55°C, functioning.
 Maximum collector current: 80 mA, 42V max.
 (open collector output)

Description and functioning :

Digital Inputs : Contacts from 9 to 24.



Digital inputs are not protected by optocouplers, therefore care must be taken against electrical discharges that can damage the inputs.

Digital inputs are designed to be connected to a free potential contact to ground (see drawing above)

Closing C1 will trigger the alarm, if SMS message and destination are programmed, the SMS will be sent to the destinations programmed, 4 destinations maximum.

If programmed, a SMS sending is possible when the contact C1 goes back to an open position.

Quick start :

- Insert SIM card with **SIM PIN disabled**. Connect and turn on power supply.
- Send the SMS to the GTM: DI01A:Alarm text for DI1,+41256156456
- +41256156456 put your own phone number instead, wait for the confirmation SMS.
- Short-circuit DI01 (contact #9) to the power supply GND for 5 secondes and wait for the SMS.

SMS programming, digital inputs:

SMS for Input DIXXY : XX from 01 to 16, Y could be «A» or «R»
(«A» is for Alarm text message and destination for incoming alarm)
(«R» is for Alarm text message and destination for outgoing alarm, if needed)

DIXXY:Sms text 60 characters max, +41256156456,+456514651651,+3365896532

(fake international phone numbers, program your own, separated by a coma)

SMS example to program input 1,incoming alarm :

DI01A:Alarm for DI1,+41256156456,+456514651651

SMS example to program input 1,outgoing alarm :

DI01R:Alarm return for DI1,+41256156456,+456514651651

SMS example to clear programming on Input 1 :

DI01A:

or

DI01R:

SMS example to resquest programming for Input 1 :

DI01A:?

or

DI01R:?

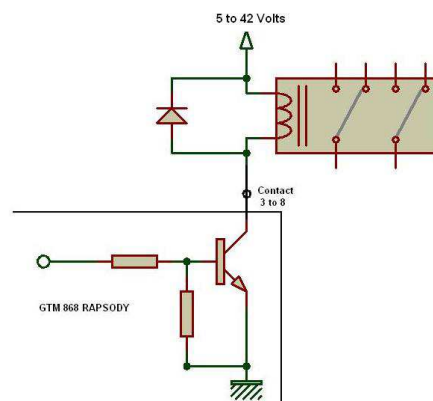
An sms will be sent back to the sender for confirmation.

Digital outputs:

Contacts from 3 to 8.

The digital outputs are open collector output type meaning that they have a limited collector current (80 mA). If needed, the user can place a relay, or else, in order to switch higher currents.

Example of an output with a relay:



SMS command, digital outputs:

SMS to turn on outputs X on/off, X from 1 to 6.

OUTX=ON

or

OUTX=OFF

SMS example to turn output 4 on :

OUT4=ON

SMS example to turn output 4 off :

OUT4=OFF

An sms will be sent back to the sender for confirmation.

Periodical SMS:

A SMS can be sent periodically from the GTM to the destinations, 4 destinations maximum. YYY from 001 to 240 hours. Hours always in 3 characters.

PERIOD:YYY,+41256156456,+456514651651

SMS example to program periodical SMS to 96 hours (4 days) :

PERIOD:096,+41256156456,+456514651651

SMS example to clear periodical SMS :

PERIOD:

SMS example to request periodical SMS :

PERIOD:?

Supplementary SMS commands :

Request SMS short manual : PROG=?

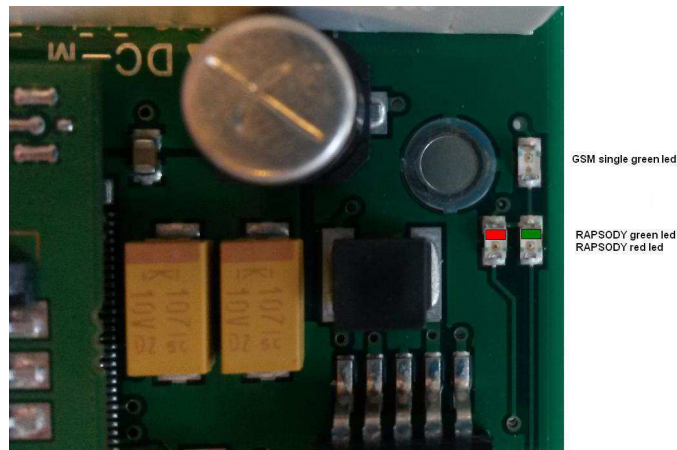
Clear all programming : CPR0G

Reboot GTM : RESET

Request All Inpus/Outputs status : STATUS

GSM AT commands : AT+COPS? (almost all AT commands are possible)

LED Behavior :



The single green led represents the GSM unit signal status:
 (This led is managed by the GSM itself and not by the GTM. Therefore its behaviour will depend directly on the GSM network, the SIM card and your GSM operator)

| GSM Single GREEN LED status | GSM Status |
|-----------------------------|---------------------------------|
| OFF | GSM is off. |
| FLASH (1 sec.) | GSM Net search / Not registered |
| FLASH (3 sec.) | Registered full service. |

The RAPSODY green and red led represent the GTM status as follow:

| GREEN LED / RED LED status | GTM Status |
|------------------------------|-----------------------------------|
| ON / ON -OFF/OFF very fast | GTM starts (re)booting |
| OFF / FLASH (1 sec.) | GTM is busy |
| OFF / ON -ON/OFF repeatidely | SIM PIN is not disabled or no SIM |
| FLASH (5 sec.)/ OFF | GTM is ready. |

Limitation Warranty

Each GTM product is warranted to be free from defects in material and workmanship under normal use. The warranty period is one year and begins on the date code marked underneath the module or by the SMS command <#V>. Parts, product repairs and services are warranted for 90 days. This warranty extends only to the original buyer or end-user customer or a GTM authorized seller and does not apply, in AXELPROD's opinion, if the module has been misused, altered, neglected or damaged by accident or abnormal conditions of operation or handling. AXELPROD warrants that software will operate substantially in accordance with its functional specifications for one year.

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To obtain warranty service, contact AXELPROD or your nearest GTM authorised service center or send the product, with a description of the difficulty, postage and insurance prepaid (FOB Destination), to the nearest AXELPROD authorized service center. AXELPROD assumes no risk for damage in transit. Following warranty repair, the product will be returned to Buyer, transportation prepaid (FOB Destination). If AXELPROD determines that the failure was caused by misuse, alteration, accident or abnormal condition of operation or handling, AXELPROD will provide an estimate of repair costs and obtain authorization before commencing the work. Following repair, the product will be returned to the Buyer transportation prepaid and the Buyer will be billed for the repair and return transportation charges (FQB Shipping Point).

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A complete manual of each GTM product is available for more details.

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