[med]
AUTOMOTIVE SOLUTIONS

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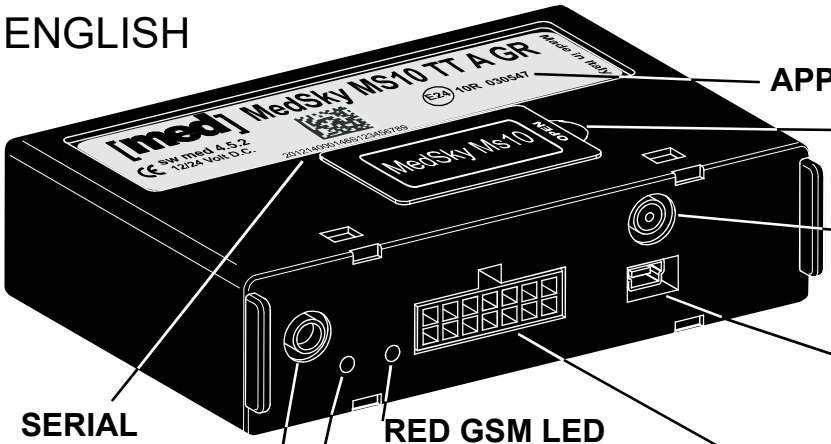
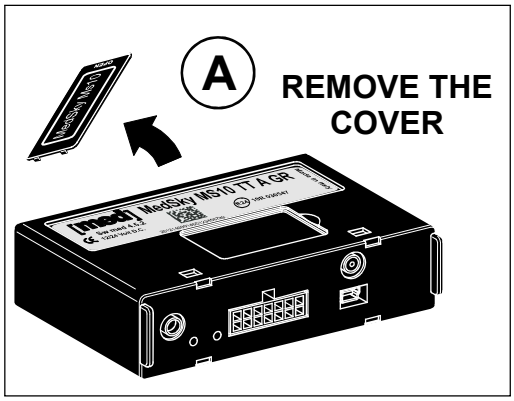
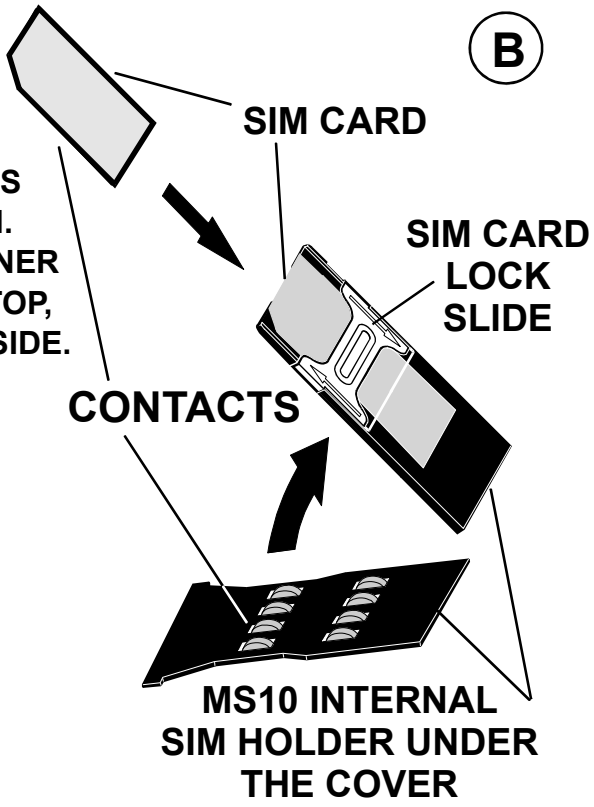
MEDSKY MS10 TT A GR

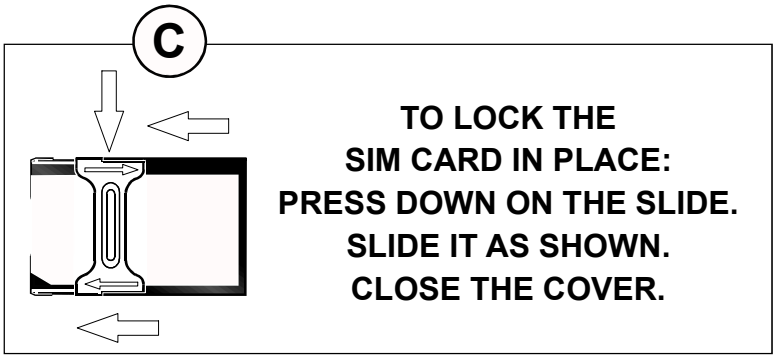
2022

ENGLISH









Installed peripheral including: **GPS receiver, Quad Band Telephone Module**, **GPRS**, "**MOTION**" sensor, **Buffer Battery**, **GPS** and **GSM Antennas** and **Wiring**.
Communication on **Voice Data SMS GPRS** channels.

INSTALLATION MANUAL

INTERNAL INSTALLATION FILE'S

Landi Renzo S.p.A. - Sede legale: Via Nobel, 2/4 - 42025 - Corte Tegge - Cavriago (RE) - Italia - P.IVA 00523300358
med è un marchio **LANDI RENZO S.p.A.**
Stabilimento e Sede commerciale di: Via dell'Industria, 20 - 42025 - Corte Tegge - Cavriago (RE) - Italia
Tel. +39 0522 945628 / +39 0522 945627 - e-mail: **service@medautomotive.it**

ISO/TS 16949
BUREAU VERITAS
Certification

INSTALLATION PROCEDURE

Before installation, carefully read the all of the instructions for installation and operation.

⚠ WARNINGS: ⚠

SIM-CARD

MS10 requires a SIM CARD in order to work which can be purchased from Mobile Phone Operators.

For "stand alone" use, you must have at least one "**SMS**" (DATA and/or VOICE line).

With the "FLEET MANAGEMENT" for "LOGISTICAL" applications (herein after referred to as **C.S. WEB**), you must have a "**GPRS**" line.

With the "SECURITY" or controller (herein after referred to as **C.S.**) and / or "FLEET MANAGEMENT" for "LOGISTICAL" applications, you must have a "**DATA**" line.

Remove the following from the **SIM CARD:** **LOCK CODE (PIN) / ANSWERING MACHINE / CALL FORWARDING**

CHECK THAT THE SERVICE CENTRE NUMBER IS ENTERED.

For example, for ITALY: TIM: +39 335 9609600 / 9608000 or VODAFONE: +39 349 2000200

WARNING:

- Some telephone cards must be "activated" by making and receiving a telephone call before they are installed in the satellite system.
- **If the vehicle travels outside the country, make certain that the SIM is enabled for international roaming.**
- **Ask for a "BY VOLUME" rate for the GPRS** (not by time). Evaluate intently all the different offers from the various Phone Operators to find the most convenient one.
- For SECURITY installations we advise using a contract SIM CARD;we also advise using a PRE-PAID or PAY-AS-YOU-GO SIM CARD which could make the Remote Monitoring Service ineffective (as a rule if PRE-PAID or PAY-AS-YOU-GO SIM CARDS are not topped-up at least every 8 to 12 months the telephone operators may "cancel" them, even if there is still credit left on them).

GPRS

With GPRS, connection to the W (Web Centre) is continuous to see vehicle movements on any PC connected to internet with the **S.C.**

If the vehicle travels abroad, make certain you have selected a SIM CARD from your Telephone Provider that has valid rates for the countries crossed.

ANTENNE

- The GPS antenna must be positioned with the rounded part upwards.
  Make sure that it is not located under metal parts or shielded windshields.
- The excess wire must be laid out with wide curves. Do not roll up or cut.
- The cables cannot be lengthened.
- Do not use GPS / GSM combination antennas. Use the ones provided in the kit.

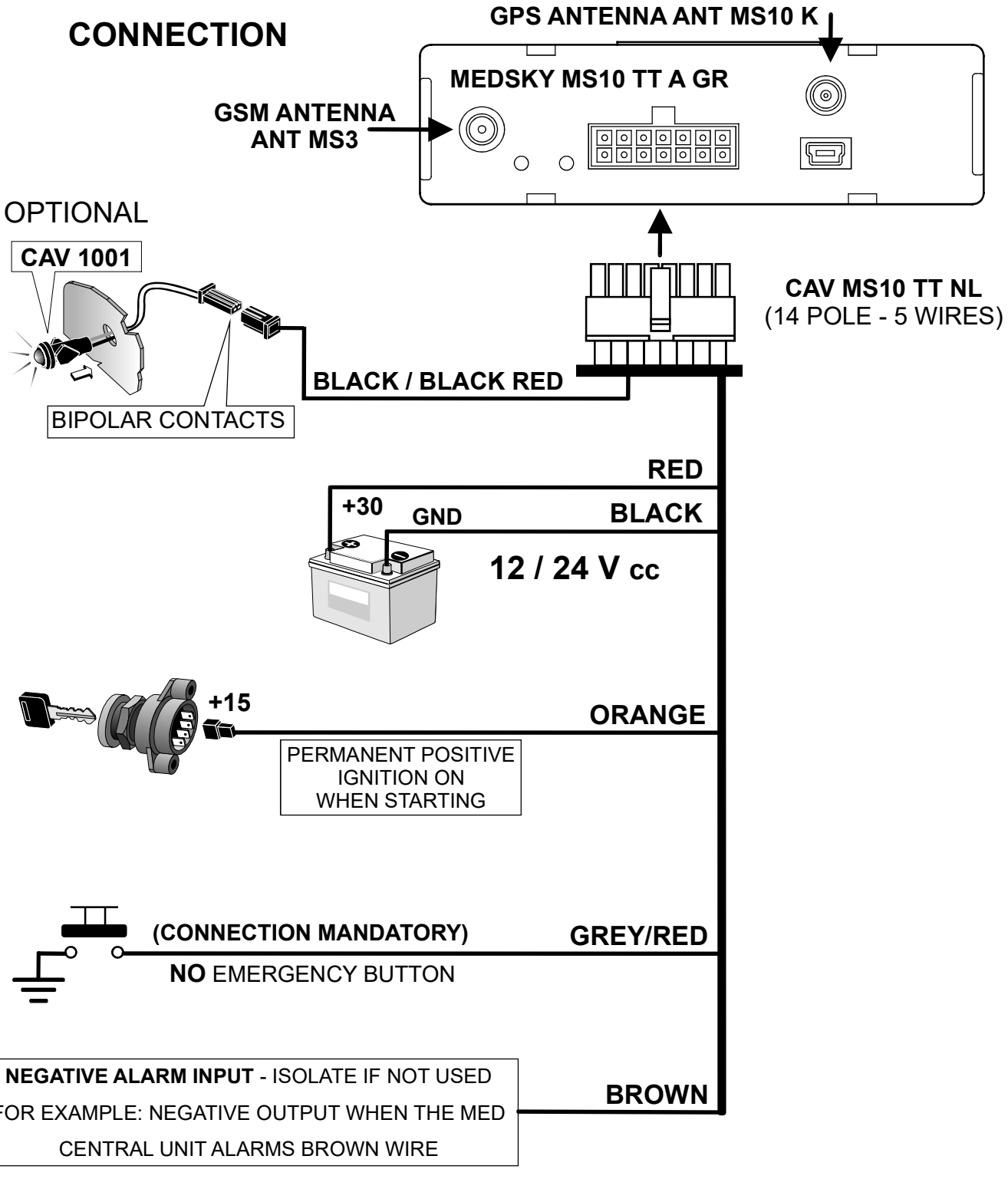
POSITIONING / CONNECTIONS

- Install it inside the passenger compartment. Attach it firmly to the vehicle (using screws, silicone, Velcro, etc.), located far away from heat sources.
  Protect from leaks and condensate by pulling the cables from the bottom upwards.
- Suitably isolate the wires that are not used.
- Disconnect the negative pole of the battery before performing the connections.

Use FAST-ON or weld and suitably insulate the joints.

- Do not use tap connectors.
- For vehicles with ADR (automatic battery disconnect), please contact the nearest MED Service centre / Distributor / Representative.
- For industrial machines, earth moving equipment, and farm equipment, a waterproof housing is needed with suitable vibration "absorbers".
- For boats, roll-off vehicles, and mobile cases, please contact the nearest MED Service centre / Distributor / Representative.
- For SECURITY installations, the peripheral, GPS / GSM antennas must not be visible.
  The cables must be inserted in the original runners, covered with protective casing or reinforced tape in the same original vehicle colour, especially where the cables are visible, such as under the hood.
  Do not use plastic adhesive tape that could come off when exposed to heat.

CONNECTION



DESCRIPTION / INSTALLATION OF THE PARTS

INTERNAL "MOTION" SENSOR:

The peripheral has a sensor that detects any "motion" or "movement" of the vehicle that performs a number of functions, including:

- Surveillance of the vehicle position, performing "anti-tow" function.
  That is, it indicates if the vehicle is lifted (for example by a tow truck) or towed.
- Optimizes energy savings, drastically reducing it when the vehicle is still.

INTERNAL BUFFER BATTERY:

The Ni-Mh battery provides a number of hours of independent operation, with the system completely on (almost 1 hour when followed, when there is good telephone coverage).
It is automatically recharged by the vehicle battery, preferentially when running.
If replacement is necessary, the peripheral must be sent to MED.

14 POLE CABLE - 5 WIRES - CAV MS10TT NL

RED + 30 wire: Positive from battery or from main fuse box cable.

BLACK GND: Direct ground from battery or to chassis, only in the points indicated by the vehicle manufacturer.

ORANGE + 15 wire: (Input **1**) - **Permanent positive ignition on when starting. Connection mandatory**. Manages a number of system functions, including: anti-tow, movement, GPS hidden, internal battery charge, etc.

GREY/RED wire - **EMERGENCY BUTTON - EMERGENCY -** (Input **4**)
Always active input. Normally Open button to **ground. Connection mandatory. Required for managing numerous system functions, including: emergency alarm, system reset.** It must be installed in a position that is easily reached by the driver.
More than one button can be installed. They must be connected in parallel.

BROWN wire **ALARM INPUT NEGATIVE** - (Input **2**) **Always active input.**
Negative output when the med central unit alarms brown wire. Isolate if not used.
It must not be connected directly to the door, bonnet, trunk or supplementary module push buttons to avoid the continuous sending of non-existent alarms.

CAV USB / MINI USB

This cable allows you to connect the **MS10** peripheral with the PC for programming, to check on the settings and saved data, facilitating final inspection.

DESCRIPTION OF FUNCTIONS THAT CAN BE PROGRAMMED USING A PC AND MED 4.6.0 SOFTWARE

PARAMETERS THAT CAN ALWAYS BE MODIFIED:

MAIN USER TELEPHONE NUMBER

This can be entered using the med software or by sending an SMS from the main telephone: REG ON.

MAXIMUM SPEED CONTROL

This activates and sets the warning that the maximum speed has been exceeded.

TOTAL / PARTIAL ODOMETER SETTING

The system has a total odometer. We recommend that you set the kilometre reading to the value of kilometres already travelled by the vehicle. It also has a trip odometer, which can be zeroed by the main user by SMS or DTMF. The SMS POS allows you to read both data.

SETTING THE FORCED GEO FENCE

This allows you to send alarms regarding the "movement" of a vehicle outside a work area (Geofencing) as well as vary the radius in kilometres (xxx.x km) and to set the geographic coordinates for the centre of the area (Latitude and Longitude).

SETTINGS THAT CAN ONLY BE PERFORMED WITH "STAND-ALONE" USE OF THE SYSTEM OR WITH C.S. AND LEVEL 1

SYSTEM IN SERVICE / OUT OF ORDER WITH THE OUT OF SERVICE MESSAGE
Enable / disenable the sending of alarms, with the possibility of enabling daily SMS that remind you that the system is "OUT OF ORDER".

AUTOMATIC SYSTEM "FUNCTION" CONTROL (survival)
This allows you to set the period (in minutes) for sending the control SMS to the main user.
The standard setting calls for sending 1 SMS for week (10080 minutes = 7 days).

AUTOMATIC GPS CONTROL
This allows you to exclude the control of the correct GPS operation.
Exclusion is only recommended for special applications.

MOVEMENT SENSOR SET-UP
This allows you to exclude alarms being sent for vehicle "movement" as well as to vary the sensibility (values from 1 to 9; **0** to be used only for testing).
It is active in any cast to "awaken" the MS10.
Exclusion is only recommended for special applications or on boats.

ANTI-TOW SENSOR SET-UP
This allows you to exclude sending alarms regarding vehicle "movement" as well as to vary the parking radius. The standard set-up is 500 meters.
Exclusion is only recommended for special applications.

SECONDARY USER TELEPHONE NUMBERS
With "stand-alone" use of the system up to nine mobile telephone numbers can be entered either directly or by SMS that will the receive the alarm message SMS.
We recommend only entering mobile telephone numbers.
The telephone number must be preceded by its international prefix (+30 for Greece).

SYSTEM CHECK

The MS10 is supplied **OUT OF ORDER**, and therefore cannot send alarms until the system is "activated" by mobile telephone or by the final installation check and the loading of the system.

USING THE TWO LEDS ON THE PERIPHERAL:

Once installation is complete, power up the MS10 and position the vehicle outdoors, with the ignition on [+15] ON, so that it can detect its position with the GPS (the GPS antenna must be able to "see" the satellites).

With the ignition on [+15] ON, the **GREEN** and **RED LEDs** on the peripheral allow you to check directly that:

GREEN LED: GPS

- On and **steady** while calculating the position of the vehicle.
  When first turned on, a few minutes are required.
- **It blinks** once the position is acquired.

RED LED: GSM TELEPHONE

- **Short constant blinking** that continues even when the ignition is off [+15] OFF indicates that the system is "OUT OF ORDER".
- **It blinks fast** with equal time on and off, or with **groups of blinks;** indicate that the telephone is trying to hook up with the network and register.
- **It blinks slowly** when the telephone is registered.
  1 blink, GSM only; **2** quick blinks if the **GPRS** is working.
- **On steady** when in communication.

USING PC WITH MED 4.6.0 SOFTWARE AND THE CAV USB/MINI USB

This dedicated software allows you to display and modify some regulations, and to display the parameters of the telephone signal and GPS.
It is especially useful for simplifying the final inspection operations.
When connected to a PC with a USB port and accessing the final inspection display, MS10 shows the status and modifications of the internal sensor parameters, the GPS data with the geographic coordinates, the number of visible satellites, and information regarding the operation of the internal telephone. Other displays are available for modifying most of this data, especially if the system will be managed "stand-alone".
WARNING: With **C.S.**, only a few parameters can be modified after final inspection.

TROUBLESHOOTING

- **Both LEDs on the MS10 are OFF** with the ignition on [+15] ON**:** Check the power supply. WARNING: If the system is "active" (IN SERVICE), the LEDs could be off simply because the system is in STAND-BY. Turn **on** the ignition **[+15] ON**.
- **RED LED GSM Blinking fast or blinking in groups:** Check that the SIM-CARD has been inserted correctly in the peripheral and that the PIN-CODE has been removed. Check that the GSM antenna and cable are not damaged or that they make tight curves. Make certain that the area you are in has telephone coverage (network signal) using another mobile phone.
- **GREEN LED GPS Blinking** (ON / OFF for the same time): **If the vehicle has been out in the "open air" for at least 10 minutes with the ignition on** [+15] ON (metal or cement structure impede signal reception - the vehicle must not have the antenna pointing towards a very tall building that could block the sky), check the GPS antenna connection and cable for damage. The rounded parts of the GPS antenna must be horizontal, facing up towards the sky. No thick metal may be over top of the antenna. **Short blinks indicate that it has calculated the position.**

BUFFER BATTERY CHECK

Temporarily cut-off the main power source from the vehicle battery. Check that the two LEDs on the peripheral continue to function (obviously, the internal battery must be even partially charged). The SMS "V" indicates the internal battery voltage (about 9 to 10 Volts).
The same indication in and SMS "I" or "POS" without external power supply.
WARNING:

- The internal battery is only connected when the CAV MS10 TT NL is connected. Do not disconnect it.
- The internal battery will recharge when the ignition is on [+15] ON.

PERIPHERAL VERSION CHECK BY SMS

Send the **SMS**: **V** (type only the letter, without spaces)

The peripheral will answer with the following SMS:

Message	**Generated by MEDSKY MS10 TT A GR**
S/N XXXXXXXXXXXX:	Version and serial number of the peripheral
HW xx.xx	Peripheral hardware version
BOOT xx.xx	Peripheral base software version
SW xx.xx	Peripheral software version
K : xxxx	System configuration
T : +xxC	Internal temperature of the MS10 (measured inside, usually greater than the ambient temperature).
Backup battery: xxxxxmV	Internal buffer battery voltage in mV.
Gauge : xxxxx xx	Currently not used

CAUTION:

This message can always be sent to the peripheral, from any mobile phone.

SYSTEM CONFIGURATION CHECK BY SMS:

If the system is powered and the antennas are connected, you can send it **SMS** messages:

S (type only the letter **S** like **S**ystem without any spaces)

The MS10 will respond with the following **SMS**:

Message	**Generated by: MS10 TT A GR**
I 1 ON	In. **1**: +15 ignition on = **positive** signal read (12 or 24 volts).
I 2 - ON	In. **2**: External Central Alarm input = **negative** signal read (ground).
I 4 - ON	In. **4**: Emergency Button = **negative** signal read (ground).
CS 0	Security Centre (C.S.): **0**=NO, **1**=Level 1, **2**=Level 2, **3**=Level 3**, X**=Level X.
PIC: - - - -	**I**nput **P**olarity **C**losed: **-** = active when negative, **+** = active when positive.
SAA: CCNAA NCNNNN	Active Alarm **S**tatus: **A** = **A**lways, **N** = **N**ever, **C** = a**C**tivated.

WARNING:

- **After the input/output information: ON = enabled, OFF = disabled.**
- **The message can always be sent, from any mobile phone.**
- **Many operative system parameters can be modified by PC using the dedicated med software 4.6.0, using the SMS or C.S.** See the user manual.

SYSTEM CONFIGURATION CHECK BY SMS:

If the system is powered and the antennas are connected, you can send it **SMS** messages:

I (type only the letter **I** as in Installation, without any spaces)

The MS10 will respond with the following **SMS**:

Message	**Generated by: MS10 TT A GR**
I 1 A	In. **1**: +15 ignition **A** = off, **C** = on (positive present).
I 2 A	In. **2**: External Central Alarm input **A** = no alarm, **C** = Alarm (ground).
I 4 A	In. **4**: Emergency button **A** = not pressed, **C** = pressed.
VB : 12.5V	Power supply voltage (main system battery, ex. 12.5 Volt; if not available, it is the voltage of the internal battery).
Pos : OK	**OK** = current position available with GPS on, therefore +15 ON. **NA** = Not available, no satellite visible or +15 OFF (ignition off).
Sat : XX	Number of visible satellites.
Gsm : X	Telephone signal intensity (field) - **4** = maximum signal level.
GPRS: W	GPRS **W** = Enabled, **N** = not enabled.
ST : IS	Status of peripheral: **FS** = **OUT OF ORDER** (In maintenance), **IS** = In service.
P : CUW	Control: **C** = Security Centre, **U** = User, **W** = Web Centre (via Internet connection)
Sai : CC....C	Input programming: **C** = active when closed, **A** = active when Open.

We recommend always performing a pre-inspection to check all of the inputs using the med software via PC or with the "I" SMS.

WARNING: The message can always be sent, from any mobile phone.

COMMANDS RESERVED FOR THE INSTALLER

	SMS
Check/configuration SMS:	**S**
System inspection/check:	**I**
Peripheral HW, SM, and FW version check:	**V**

CAUTION

- The MS10 is supplied **FS - OUT OF ORDER**, and therefore cannot send alarms if the system is not "enabled" by telephone, PC or **C.S.**

ACTIVATION OF "STAND-ALONE" SYSTEM

After completing installation, inserting the SIM-CARD, the first check using the GREEN and RED LEDs (on the peripheral), and the "**I**" SMS or with the PC, med software, and CAV USB/MINI USB (page 5), you can check that alarms and other system parameters have been sent correctly. This provides both a preliminary check of the system efficiency.

For more info also see the USER OPERATING MANUAL.

ACTIVATION BY SMS

Send **MEDSKY MS10 TT A GR** the **SMS**:

REG ON (type **REG** space **ON**)

The system saves the number of the mobile phone that sends the SMS in order to communicate the system alarms found later.

Then activate the system to send the alarms by putting it "IN SERVICE".

Send the SMS:

COM IS (type **COM** space **IS**)

The system is now active and ready to send the alarms.

CAUTION:

- The system only responds via SMS, sent to the number that sent the command.

Cod. 190.100.614 - Rev. 04 del 11/08/2022 - Printed in Italy

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