

DSC

GS4005/3G4005/TL405LE 3.00 Universal Cellular/ Ethernet Telephone Communicators

Installation Guide



No.	Parts
1	Deck
2	Base
3	Indicator lights (LED)
7	Closing screw (installation position)
8	Base mounting holes (4)
9	Hinge for the cover
10	Hole for antenna cable
11	2700mAh rechargeable battery (optional) - case versions only
12	Wall mounted anti-tamper device
13	Hole for fixing the wall-mounted anti-tamper device
14	SIM card holder
15	PC-LINK connector
16	Programming Jumpers: See "Jumper Descriptions" on page 11
17	USB port: only versions with housing
18	Anti-sabotage contact

No.	Parts
19	Terminal board
20	Pins for placing the electronic card
21	JP2 Jumper for current consumption limitation (only versions with housing): see "Jumper descriptions" on page 11
22	Battery connector: only versions with housing
23	ANTLTE-02 adapter cable
24	Nut for fixing the adapter cable
25	Integrated antenna: only versions with housing
26	Hole for the antenna cable in the metal bracket
27	Metal support
28	ANTLTE-02, multiband antenna with 2m cable and SMA connector (optional)
29	Multiband antenna with 2m cable and MMCX connector (optional)
30	Holes for fixing the electronic card (4)
31	Ethernet port: only versions with housing

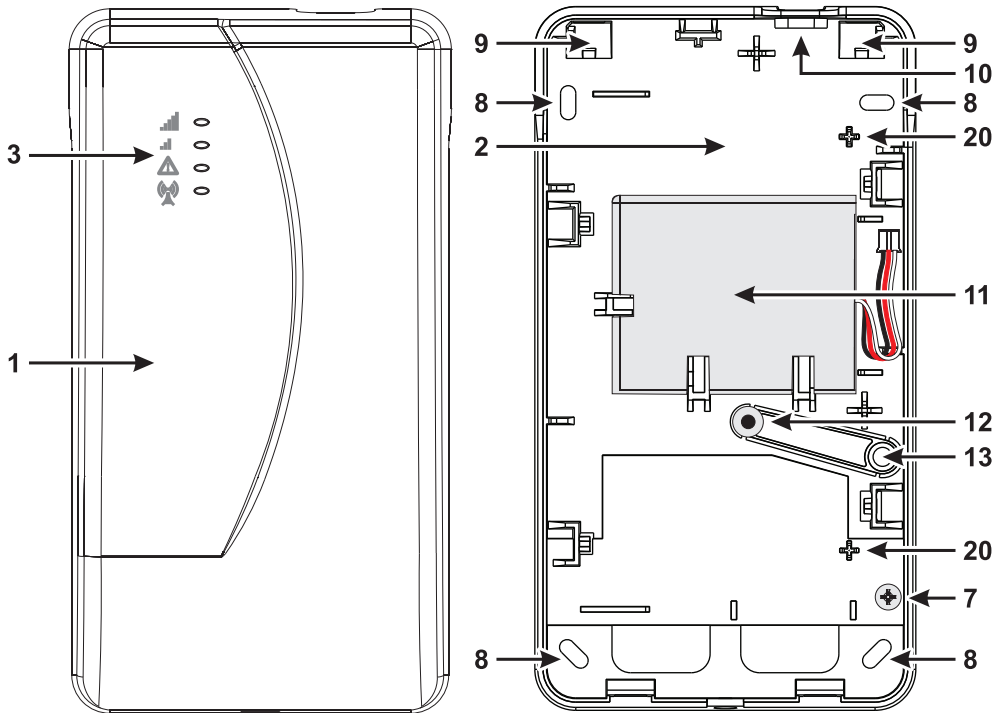


Figure 1 -Parts Identification: Cased version.

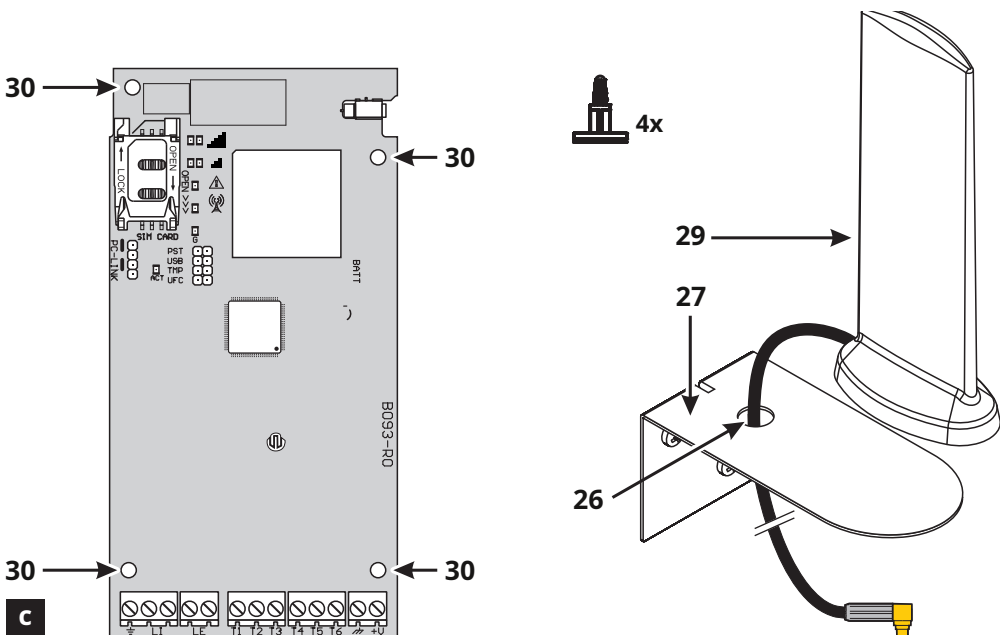
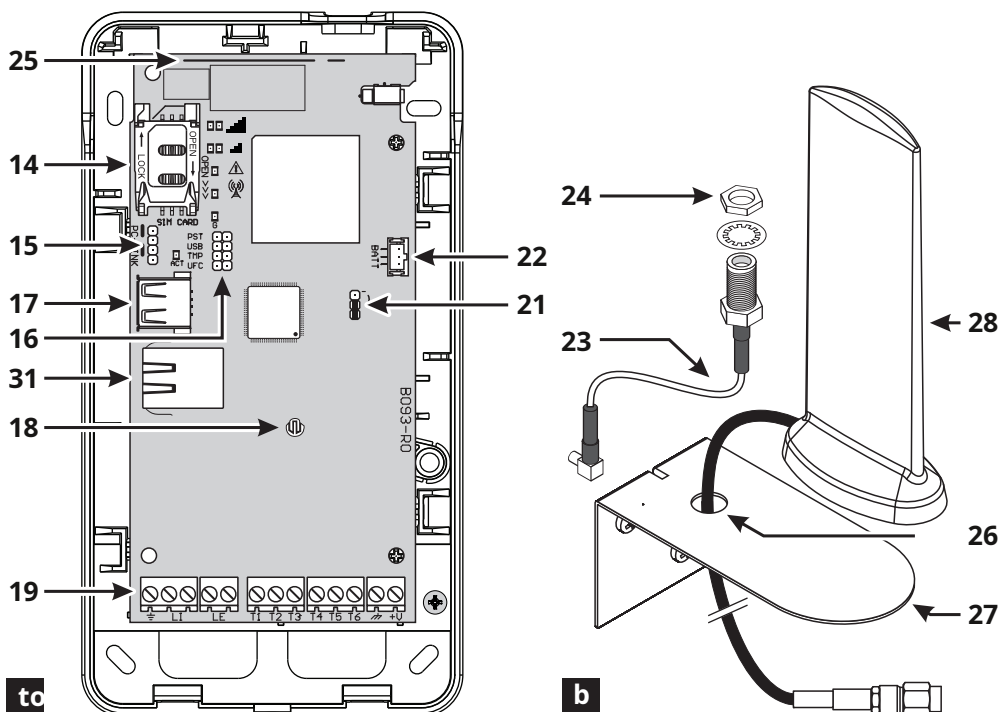


Figure 2 –Identification of the parts:**a)**version with housing;**b)** ANTLTE-02,multiband antenna with 2m cable and connector SMA (optional);**c)**kit version.

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These instructions apply to communicators with firmware revision 3.00 and higher.

Hereby, Tyco Safety Products Canada Ltd. declares that radio equipment type GS4005, GS4005-K, 3G4005, 3G4005-K and TL405LE-EU is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following Internet address: **GS4005** <http://dsc.com/pdf/2104001>; **GS4005-K** <http://dsc.com/pdf/2104002>; **3G4005** <http://dsc.com/pdf/2104003>; **3G4005-K** <http://dsc.com/pdf/2104004>; **TL405LE-EU** <http://dsc.com/pdf/2104005>.

* J) The GS4005, GS4005-K, 3G4005 and 3G4005-K models have been certified by IMQ/A to comply with the following standards:

EN 50136-1: 2012 and **EN 50136 2: 2013** for the operation of the alarm transmission system **SP2**(D2, M2, T2, S0, I0) for voice/text alarm messages and **SP4**(D3, M3, T4, S2, I3) for digital messages **EN 50131-10**, Security grade 2 **T031**

EN 50130-5 Class II

* J) The product model TL405LE-EU has been certified by IMQ/A to comply with the following standards:

EN 50136-1: 2012 and **EN 50136 2: 2013** for the operation of the alarm transmission system **SP2**(D2, M2, T2, S0, I0) for voice/text alarm messages and **DP3**(D3, M3, T4, S2, I3) for digital messages **EN 50131-10**, Security grade 2 **T031**

EN 50130-5 Class II

To ensure compliance with the standard **T031**, the Communicator must be connected to the panel using the terminals **LI** and the following events and messages/codes must be programmed: INTRUSION ALARM, TAMPER ALARM, MAIN POWER FAILURE, BATTERY FAILURE, ASSAULT, ARMED, DISARMED, INHIBITED ZONE AND ISOLATED ZONE.

The communicator is certified by IMQ-SECURITY SYSTEM if powered by the panel without a backup battery.

The installation of the systems must be carried out strictly in accordance with the instructions described in this manual, and in compliance with the current local laws and regulations. The devices mentioned above have been designed and manufactured to the highest standards of quality and performance. The manufacturer recommends that the installed system be fully checked at least once a month. Digital Security Controls will not be liable for damage resulting from improper installation or maintenance by unauthorised personnel. Digital Security Controls reserves the right to change the technical specifications of this product without prior notice.

WEEE Product recycling declaration

 For information about recycling this product, you should contact the company from which it was originally purchased. If you wish to dispose of this product and not return it for repair, you must ensure that it is returned as identified by your supplier. This product may not be placed in the normal waste stream. Directive 2012/19/EU Waste electrical and electronic equipment.

INTRODUCTION

The devices of the series **GS4005**, **3G4005** and **TL405LE** are cellular telephone communicators that provide a PSTN backup line, capable of transmitting voice and text alarm messages to the end user, as well as digital messages to compatible Sur-Gard system receivers. The application **ConnectAlarm** which runs on Android and iOS mobile devices, allows you to manage the communicator and the control panel connected to it, and view events from the communicator and the control panel. The model **TL405LE** The Sur-Gard Communicator features an Ethernet interface that can be used as a primary communication channel, or as a backup cellular communication channel (dual-path), for the transmission of digital messages to compatible Sur-Gard system receivers. The Ethernet interface allows for an alternate, faster way to program the communicator. The following versions are available:

- **GS4005**: Communication card with 2G module in plastic housing.
- **GS4005-K**: Equipment with communication card with 2G module, antenna with 2 m cable, adapter and metal support.
- **3G4005**: Communication card with 3G module in plastic housing, for the global market.
- **3G4005-K**: Equipment with communication card with 3G module, antenna with 2 m cable, adapter and metal support, for the global market.
- **TL405LE-EU**: Dual-way communication card with LTE module and Ethernet interface, in plastic housing, for the European Union market.
- **TL405LE-LAU**: Dual-way communication card with LTE module and Ethernet interface, in plastic housing, for the Latin American, Australian and New Zealand markets.

The outdoor remote antenna **ANTLTE-10** with 10m cable is available for special installation requirements.

The information in this manual is common to all versions. The term "communicator" refers to functions shared by all versions. Information relating to specific models is highlighted, referencing the respective code.

*- Some topics in this manual may not be applicable to your version: see "General Specifications" on page 6 for features for your version. References to Ethernet apply only to **TL405LE**.*

This manual includes instructions on programming and using the communicator.

Safety instructions

Read the safety information before installing the equipment.

!Important: This equipment must be installed by a qualified person only. A qualified person

A specialist is an installer with appropriate technical training. The installer must take into account the potential risks during installation and the measures available to minimise the risks to himself and to other people.

- Before installing this equipment, disconnect all power sources connected to the alarm panel (e.g. mains, battery and telephone line).
- Install the equipment indoors, in a non-hazardous environment, where the following conditions are met:
 - Pollution level - Maximum 2
 - Overvoltages - Category II
- Internal wiring must be properly installed to prevent it from transmitting stress to the cable and terminal connections, loosening terminal connections, and damaging conductor insulation.
- Inform the user that this equipment does not have any user-serviceable parts. All equipment must be serviced by a qualified person.

- These instructions should be used in conjunction with the panel installation manual. Follow all instructions in this manual exactly.

General specifications

Model	GS4005	GS4005-K	3G4005	3G4005-K	TL405LE-EU	TL405LE-LAU
In box	S	N	S	N	S	S
Cell phone standard to	2G	2G	3G	3G	LTE	LTE
Double track	N	N	N	N	S	S
Simulates a PSTN line	S	S	S	S	S	S
Detects the absence of a PSTN line and automatically switches to cellular network	S	S	S	S	S	S
Manage and report incoming and outgoing phone calls	S	S	S	S	S	S
Cellular signal strength indicator	S	S	S	S	S	S
Terminals, programmable as open collector inputs or outputs	6	6	6	6	6	6
Terminals T1, T2 and T3	S	S	S	S	S	S
Remote management of entries and exits through the application ConnectAlarm	S	S	S	S	S	S
Surge protection on telephone lines	S	S	S	S	S	S
Integrated antenna	S	N	S	N	S	S
External antenna with magnetic base	N	S	N	S	N	N
Transmission of SMS messages to mobile phone and application ConnectAlarm for communicator events	S	S	S	S	S	S
Transmission of voice messages via the cellular network for communicator events	S	S	S	S	S	S
Conversion of Contact ID and SIA messages from the control panel connected to the terminals LI , to SMS, and push notifications to the app ConnectAlarm	S	S	S	S	S	S
Conversion of Contact ID and SIA messages from the control panel connected to the terminals LI , to voice messages over the cellular network	S	S	S	S	S	S
Transmission of Contact ID and SIA messages to PSTN and IP receivers Sur-Gard System I, II, III, IV and 5	S	S	S	S	S	S
Voice and SMS over LTE	N	N	N	N	S	S
PC programmable options	S	S	S	S	S	S
Communicator locked when PINs are default (EN50136-2)	S	S	S	S	S	S
Programmable text messages (each with a maximum length of 70 characters)	32	32	32	32	32	32
Text messages for each entry	2	2	2	2	2	2
Status text messages	18	18	18	18	18	18
Periodic text message	1	1	1	1	1	1
Programmable phone numbers (16 digits max.)	32	32	32	32	32	32
Phone numbers for sending SMS messages	8	8	8	8	8	8
Telephone numbers for transmitting events to Sur-Gard receivers	8	8	8	8	8	8
Phone numbers for remote exit activation	32	32	32	32	32	32
Remote output activation via call recognition or SMS	S	S	S	S	S	S
Remaining credit control for prepaid SIM cards	S	S	S	S	S	S
Transmission Monitoring with the Dashboard (PTM)	S	S	S	S	S	S
Anti-tamper detection	S	N	S	N	S	S
PC-LINK port	S	S	S	S	S	S
USB Type A connector (host and device)	S	N	S	N	S	S
Ethernet interface	N	N	N	N	S	S
Programming with USB drive	S	N	S	N	S	S
Advanced diagnostics and event log export via USB drive	S	N	S	N	S	S
Loading custom presets using a USB drive	N	N	N	N	S	S
Programming and firmware updates, local and remote	S	S	S	S	S	S
Transmission of alarm events via cellular network	S	S	S	S	S	S
Transmission of alarm events via Ethernet channel	N	N	N	N	S	S

Model	GS4005	GS4005-K	3G4005	3G4005-K	TL405LE-EU	TL405LE-LAU
Programmable priority with PSTN/Cellular	S	S	S	S	S	S
Two-way communication with cell phone	S	S	S	S	S	S
Optional backup battery	S	N	S	N	S	S
Current limiter (bridge) JP2	S	N	S	N	S	S
Alarm panel management and status monitoring	S	S	S	S	S	S
Remote programming of PowerSeries panels via cellular network (Handover) ^b	S	S	S	S	S	S
Remote programming of PowerSeries panels via Ethernet (Handover) ^c	N	N	N	N	S	S
Interference detection	S	S	S	S	S	S

- a. Check that the operator of the SIM used has 2G, 3G or LTE coverage, depending on the model, in the area where the communicator will be installed. If the mobile operator only supports LTE communication in the area where you are going to install the communicator, enable the option **Voice and SMS over LTE**. For more information see "Generic" on page 51.
- b. See "Handover" on page 89 for more information.
- c. See "Handover" on page 89 for more information.

Technical specifications

Power for the communicator is supplied by the panel to which it is connected or by an external power supply which, if necessary, recharges an optional backup battery. The sole purpose of the battery is to supply power in the event of failure of the main power supply (8 hours standby).

-If the communicator is powered by battery, ONLY communicator events are transmitted.

Main power and battery voltage (optional) are monitored.
The power supply for communicators with housing must be of the SELV type, with power limited to 1 A.

Version	GS4005-K 3G4005-K	GS4005 3G4005	TL405LE-EU	TL405LE-LAU
Supply voltage	from 10.7 to 27.6 V ₋	from 10.7 to 27.6 V ₋	from 10.7 to 27.6 V ₋	from 10.7 to 23.5 V ₋
Average quiescent current at 13.8 V ₋ , without battery (excluding outputs)	90 mA	90 mA	110 mA	110 mA
Average current consumption per hour	100 mA	100 mA	120 mA	120 mA
Maximum current consumption in current limited mode at 13.8 V ₋ (only versions with housing, excluding outputs)	230 mA	230 mA	230 mA	230 mA
Maximum current consumption at 13.8 V ₋ (excluding exits)	450 mA	450 mA	470 mA	470 mA
Maximum current on open collector output	100 mA	100 mA	100 mA	100 mA
Maximum line loop resistance between the device connected in series to LI	1 Kohm	1 Kohm	1 Kohm	1 Kohm
Maximum number of parallel devices connected to LI	1	1	1	1
Environmental classification	II	II	II	II
Operating temperature	from -10 to +40 °C	from -10 to +40 °C	from -10 to +40 °C	from -10 to +40 °C
Humidity	from 0 to 95%	from 0 to 95%	from 0 to 95%	from 0 to 95%
Dimensions (W x H x D)	76 x 151 x 20 mm (PCB only)	101 x 186 x 41 mm	101 x 186 x 41 mm	101 x 186 x 41 mm
Weight	66 g	250 g	250 g	250 g

Table 1 –Technical specifications.

Version	Operating frequency (MHz)		
	GSM/GPRS/EDGE	UMTS/HSPA	LTE
GS4005, GS4005-K	850/900/1800/1900	N/A	N/A
3G4005, 3G4005-K	850/900/1800/1900	850/900/1900/2100	N/A
TL405LE-EU	900/1800	900/2100	700/800/900/1800/2100/2600
TL405LE-LAUto	850/900/1800/1900	850/900/1700/1900/2100	700/850/900/1700/1800/1900/2100/2300/2600

Table 2 –Operating frequency

to.**Note:**Operating frequencies in each country may vary. In the case of Mexico, the bands used are: 2G, 850/1800/1900; UMTS/HSPA, 850/1900/2100; LTE, 1700/1900/2100/2600.

Maximum radio frequency power	Class 4 (2 W) @ 850/900 MHz, GSM Class 1 (1 W) @ 1800/1900 MHz, GSM Class E2 (0.5 W) @ 850/900 MHz, EDGE Class E2 (0.4 W) @ 1800/1900 MHz , EDGE Class 3 (0.25 W) @ 850/900/1700/1900/2100 MHz, WCDMA Class 3 (0.2 W) @ 700/800/850/900/1700/1800/1900/2100/2300/2600 MHz, LTE
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Table 3 –Maximum radio frequency power.

Interface type between SPT (Monitored Premises Transceiver) and AS (Alarm System)	Own interface		Own interface	
ATS (alarm transmission system)	SINGLE WAY		DOUBLE TRACK	
System performance alarm transmission	SP4 for messages digital	SP2 for messages vocals/text	DP3 for messages digital	SP2 for messages vocals/text
Average transmission time	D3 (20 s)	D2 (60 s)	D3 (20 s)	D2 (60 s)
Maximum transmission time	M3 (60 s)	M2 (120 s)	M3 (60 s)	M2 (120 s)
Notification time	T4 (180 s)	T2 (25 h)	T4 (180 s)	T2 (25 h)
Replacement security	S2	S0	S2	S0
Information security	I3	I0	I3	I0

Table 4 –Features EN 50136-1:2012 and EN 50136-2:2013.

Identification of the parts

The numbers**in bold**In this manual, reference is made to the main parts of the communicator shown in Figures 1 and 2, and in the table on page 2.

Description of the bridges

Bridge	Position	Description
PST		Handover disabled (factory setting).
		Handover enabled (see "Handover" on page 89).
USB		The communicator behaves like a USB device (factory setting).
		The communicator behaves as a USB Host.
TMP		Anti-tamper enabled (factory setting)
		Tamper disabled (factory setting)
UFC		Future use.
JP2(only versions with housing)		No limit on communicator current consumption (factory setting)
		Communicator current consumption limited to 230 mA. !Backup battery required!

Table 5 –Description of the bridges.

Description of the indicator lights

The communicator has indicator lights (LEDs) that indicate the following information.

- During initialization, all LEDs are lit for less than 1 second. During the restore to factory settings, the LEDs are lit for 1 second.

From the factory, the LEDs  and  remain off while the LEDs  and  remain on.

LED	Color	Name	Description
 	Green/yellow	Cellular signal strength	Network type for packet service (see Table 7). Cellular signal strength (see Table 8). Type of communication (see table 9).
	Red	Failure	See Table 10.
	Yellow	Line status	On: The communicator has switched to the simulated PSTN. Slow flashing: Line busy, voice message transmission.
G	Green	Cellular network status	LED for technical assistance.
ACT	Green	USB	Power on: Host. Off: Device. Slow blinking: error. Rapid blinking: activity.

Table 6 –LED indicator

LED	Color	Type of network for packet service
 	Green Yellow	2G or 3G LTE

Table 7 –Type of network for packet service

		Cellular signal strength
Off	Off	No cell signal.
Off	On	Low cellular signal strength
On	On	High cellular signal strength.

Table 8 –Cellular signal strength

		Type of communication
Slow blinking	Slow blinking	Initialization: LEDs flash until the communicator receives a cellular signal.
Fast blinking	Off	Incoming SMS: LED flashes for a few seconds.
Slow blinking	Off	Remote Session: The LED may flash for a few seconds after the session ends.
Off	Slow blinking	Voice Call: Reports the voice call of the communicator, NOT that of the panel to which it is connected.

Table 9 -Type of communication

LED fault indicator

Normally, this LED is off. It flashes to indicate a fault. The communicator monitors faults in the order listed in Table 10. The most significant fault condition is indicated by the number of RED LED flashes, as shown in the following table.

Priorities	Description	Blinking
1 (HIGH)	Firmware issue (bad firmware): Invalid data has been found in the external flash memory.	1
2	Power problems: The supply voltage is less than 10V.	2
3	Battery problems: The battery voltage is lower than 3.4V.	3
4	Factory PIN: EN50136 option is enabled and the Level 4, Installer or User PIN is the factory set PIN.	4
5	Radio Module Failure: The microprocessor is unable to communicate with the radio module during the initialization sequence.	5
6	SIM Issue: SIM card PIN has been enabled.	6
7	Cellular network problem: The radio module cannot connect to the cellular network.	7
8	Mobile data network problem: The radio module cannot connect to the mobile data network.	8
9	Ethernet connection not available: Check your Ethernet connection and the settings related to the Ethernet interface.	9
10	IP Receiver Problem 1: Initialization failure; monitoring failure; missing ACK.	10
11 (LOW)	IP Receiver Problem 2: Initialization failure; monitoring failure; missing ACK.	11

Table 10 -LED fault indicator.

a. If the Ethernet connection is not available when the communicator is powered on, the communicator will not signal the Ethernet connection missing fault. This way, you will not get the Ethernet connection missing fault if you want to use the communicator without an Ethernet connection.

Description of terminals

The terminals**T1,T2,T3,T4,T5**and**T6**can be programmed as described below.

- Open collector outputs: Outputs can be activated by scheduled events (auto triggering), SMS or by call acknowledgement (remote triggering); see "Output Triggering" on page 36 for more details. Maximum current consumption per output is 100 mA.
- Inputs: Inputs send SMS messages or voice messages when activated.

Terminals	GS4005/3G4005/TL405LE
-	Ground: This terminal must be connected to the electrical system ground to protect the device from telephone line surges and to meet safety requirements.
LI	Internal telephone line: These terminals must be connected to the panel or other communications terminal.
YOU	External telephone line: These terminals can be connected to the PSTN line.
T1	Factory setting: output, RTC fault.
T2	Factory setting: output, no cellular network.
T3	Factory setting: input, interconnect present.
T4	Factory setting: output, anti-tamper.
T5	Factory setting: output, cellular network failure.
T6	Factory settings: output, interference.
M	Ground: Negative and common power terminals for the open collector outputs.
+ V	Power supplied by the panel: ensure it is protected and current limited (limited power supply) in accordance with EN 60950-1:2006. To connect the power supply, use a cable with a maximum length of 3 meters and a cross section of 0.75 mm². For shorter cables, use appropriate cross sections.

Facility

!Connect the power supply and telephone circuits only after the communicator has been set up and connected to the building's ground circuit.

Before inserting or removing the SIM card, make sure the communicator is NOT turned on.

- The communicator must be installed only by a QUALIFIED TECHNICIAN, indoors, in a safe and dry place, away from radio transmitting equipment.

Position the communicator for good cellular signal coverage. DO

NOT run any wires over the circuit board.

Do not use power cords longer than 3 m.

Installing the kit version

The kit version consists of a circuit board intended to be placed inside an anti-theft alarm panel, preferably in a metal box, and an antenna that connects to the board via a coaxial cable.

During normal operation, the card, antenna and cable may generate electromagnetic fields that could cause disturbances in nearby electronic devices that are not immune to such fields, so it is recommended to place the card as far away as possible from such electronic devices and to install the antenna on the external surface of the cabinet or away from it, using the appropriate support.

It is recommended to leave a minimum amount of coaxial cable inside the metal cabinet and leave the excess outside the cabinet.

To install the kit version, proceed as follows and shown in Figure 3.

1. Open the panel.
2. Locate a place inside the panel to place the card, including the wiring.
3. Insert the four adhesive plastic supports provided into the holes **30** of the communicator, as shown in Figure 3.
4. Secure the communicator inside the panel.
5. Optional: If your panel has a plastic housing, or if you want to place the antenna within 2 meters of the panel to improve cellular signal strength, attach the bracket **27** in the desired position **and** Pass the antenna cable through the hole **26**.
6. Place the antenna **29** in the metal housing or on the bracket **27** from the panel, so that the magnetic base adheres to the surface.
7. Route the antenna cable through an opening in the case.
8. Connect the antenna cable to the connector **43** of the communicator.
9. Place the bridge **TMP** to disable tamper detection.
10. Proceed with the installation as described in the "Power on and testing" paragraph on page 20.
11. Close the panel.

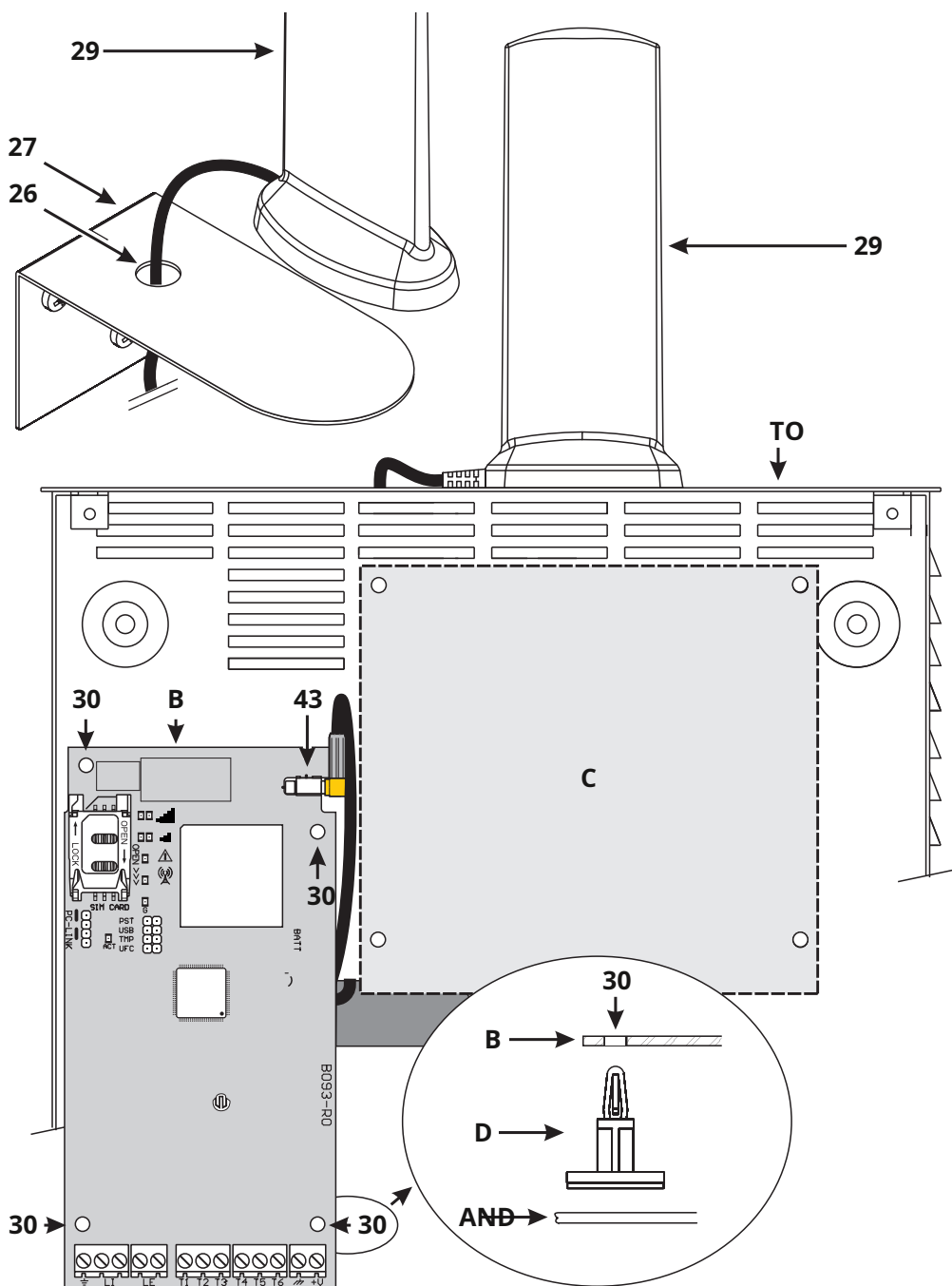


Figure 3 - Installing the communicator kit:**TO**)metal housing;**B**)communicator card;**C**)panel motherboard;**D**)adhesive plastic support;**AND**)metal housing base.

Installing the cased version

The housing version must be fixed to the wall with screws and plugs (not included) as described below and shown in figure 4.

1.Open the communicator: insert a flat screwdriver into the hole**33**and lift the base cover, then slide the cover up to completely separate it from the base.

2.If you want to place the optional battery**LIB2A6**, read the following steps, otherwise go to step**7**.

!There is a risk of explosion if the battery is replaced by an incorrect type. Dispose of used battery in accordance with local regulations. with the manufacturer's instructions. Batteries should be replaced by service personnel only.

3.Remove the electronic board: press the hooks**34**to release the card from the base.

4.Place the battery as shown in figure 4.

*- Make sure the washer**12**silicone or graphite is in place.*

5.Replace the plate: first insert the left side under the hooks**31**, then gently press the right side down until it snaps into place.

6.Connect the battery to the connector**22**after feeding the communicator with the terminals**+V**and**M**.

- The communicator will NOT function properly if it is powered only by the battery when it is first turned on.

7.Mark the hole positions**8**for fixing the base and hole position**13**for the wall-mounted anti-tamper device.

8.Drill holes in the marked positions.

!Be careful not to damage any wires or tubes embedded in the wall.

9.Route the cables channeled in the wall through the openings**35**or break the eyelashes**32**to pass exposed cables inside the housing.

10.Fix the base to the wall.

11.Proceed with the installation as described in the "Power on and testing" paragraph on page 20.

12.For double track version only, break the blind hole**35**If you have connected an Ethernet cable: break the section**35a**, and **35b**, depending on the type of Ethernet cable you are using, as shown in Figure 4a and 4b.

13.Close the communicator: remove the screw**7**from its installation position; tilt the cover slightly; bring the top of the cover towards the base; slide the cover down; press the bottom of the cover against the base until it snaps into place; if necessary, secure the cover to the base with the screw**7**in the hole**36**.

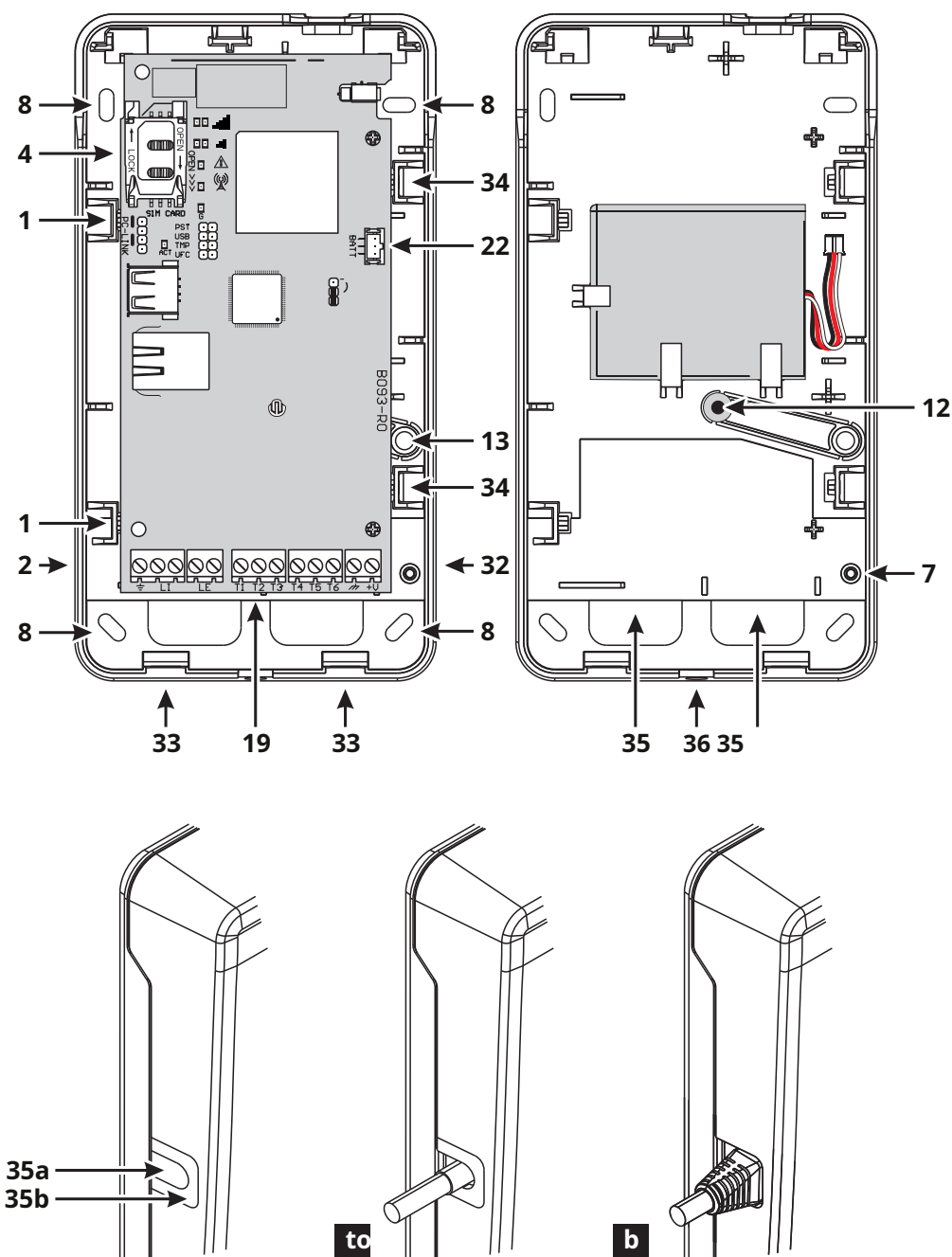


Figure 4 -Installing the communicator with housing.

Power on and test

1.Place the SIM card into the SIM holder**14**as shown by the arrows, with the contacts facing down.

- The operation related to the communicator's Ethernet channel also works correctly without inserting the SIM card.

For the communicator to work properly, use a SIM card of 32 kB or higher. You must disable the SIM card PIN before inserting it into the communicator.

It is recommended to disable call forwarding on the SIM card.

2.Configure the jumpers as required by the application (see "Jumper Descriptions" on page 11).

3.Make connections to the terminal block**19**as described in the "Connection example" paragraph on page 23.

4.For dual-version only, connect the Ethernet cable to the connector**31**, if necessary.

5.Turn on the communicator: all LEDs will light up for 1 second, then the LEDs  and  will remain

lit for a few seconds; finally the level 4, installer  will flash 4 times to indicate that the installer PINs and user LEDs are the factory set ones.

6.Use the console to change the PINs, as described in the chapter "PC PROGRAMMING" on page 43, and enable the communicator.

7.Check the signal strength: make sure at least the LED is on, if the LED is on the signal  is on, strength is excellent.

If the LEDs  and  are off, the signal strength will NOT be strong enough: reposition the communicator or try installing the optional antenna**ANTLTE-02**(only versions with housing) or**ANTLTE-10**, following the corresponding instructions.

- The communicator complies with the standard**EN 50136-2**For this reason, your access codes must be set when you turn it on for the first time, through the console, in this way the communicator functionality will be enabled.

If you do not need to comply with the standard**EN 50136-2**and you want to start working without the Console, follow this procedure:

1.Make sure the communicator settings are set to default (read "Restore Factory Settings" on page 46 to restore the default settings).

2.Insert the bridge**PST**.

3.Connect the communicator to power.

4.Wait until the LEDs  and  turn off, then remove the jumper**PST**.

- If you want to use the handover functionality, leave the jumper inserted**PST**.

Installation of the ANTLTE-02 antenna

The antenna**ANTLTE-02**It has higher gain than the communicator's built-in antenna in the housing version, and can be installed indoors within a 2-meter radius of the communicator, to improve cellular signal reception, as described below and shown in Figure 5.

- Position the antenna to optimize cellular signal reception.

1.Break the tab from the hole**37**.

2.Remove the electronic board: press the hooks**34**to release the card from the base.

3.Remove the nut**24**and the washer**38**from the adapter cable**23**.

4.Place the connector**39**of the adapter cable into the hole**37**, secure it with the nut**24**: washer not required**38**.

- 5.Connect the connector**40**from the adapter cable to the connector**43**.
 - 6.Replace the plate: first insert the left side under the hooks**31**, then gently press the right side down until it snaps into place.
- Make sure the adapter cable is positioned as shown in Figure 5.
- 7.Secure the metal bracket**28**as you wish through the holes**41**.
 - 8.Pass the connector**42**from the antenna through the hole**26**on the stand.
 - 9.Place the antenna**29**on the stand so that the magnetic base adheres to the surface.
 - 10.Connect the connector**42**from the antenna to the connector**39**from the adapter cable.

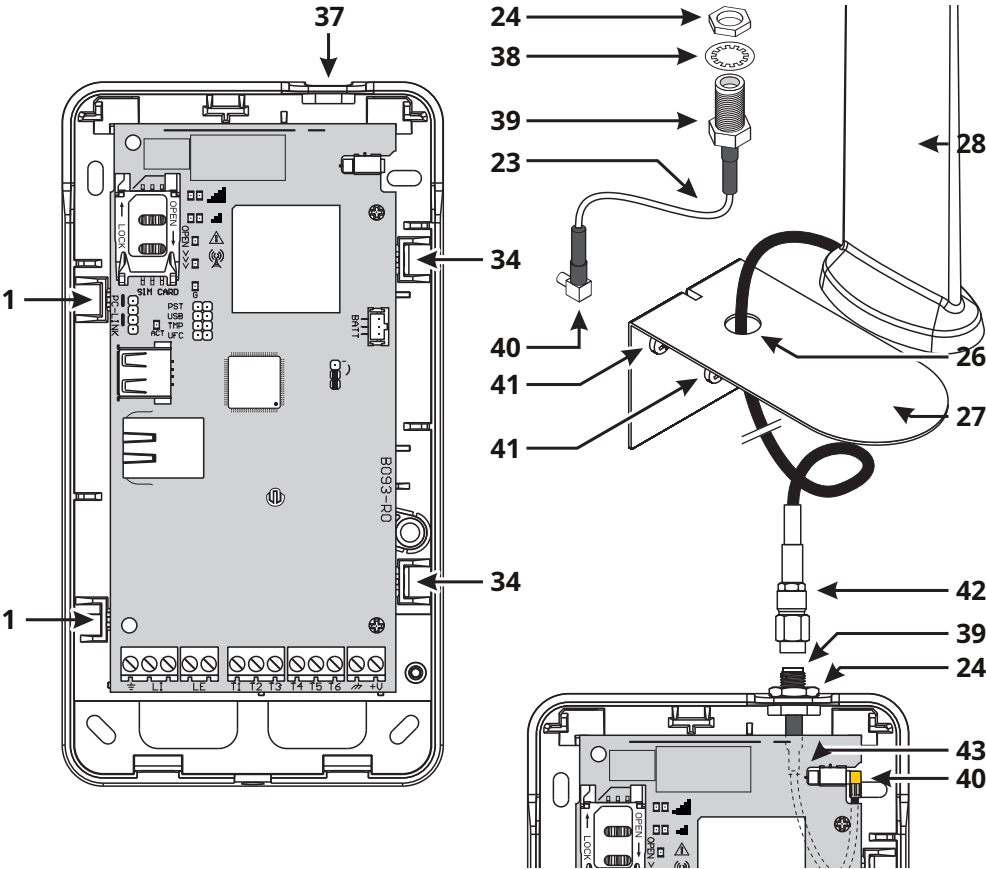


Figure 5 -Antenna installation**ANTLTE-02**.

Installation of the **ANTLTE-10** antenna

The antenna**ANTLTE-10**It has greater gain than the integrated antenna of the communicator in the version with housing, to can be installed indoors within a radius of 10 meters from the communicator, to improve the reception of the mobile signal. m

Please refer to the installation instructions included with the antenna**ANTLTE-10**.

Anti-tamper detection

The housing version of the communicator is equipped with a device that detects the opening of the cover and removal of the communicator from the wall (sabotage).

The event indicator of **Sabotage** reports the unblocking event, to which actions can be associated (activate outputs, send voice, SMS or digital messages) with the console: the factory configuration is that the terminal **T4** is floating (normally grounded) in case of sabotage.

Once you have programmed the function, close the lid and turn on the communicator.

After initialization, open the cover and verify that the communicator executes the programmed actions for tamper detection.

Connection example

!Incorrect connections may lead to FTC failure or improper operation. Check the wiring and Make sure connections are secure before connecting to power. DO NOT run wiring over printed circuit boards; maintain at least 1" (24.5 mm) clearance. A minimum 1/4" (6.4 mm) clearance must be maintained at all points between power-limited wiring and all other non-power-limited wiring.

- To ensure compliance with EN 50136-2, the communicator must be connected and programmed as described in the paragraph "Compliance with EN 50136-2:2013" on page 82.

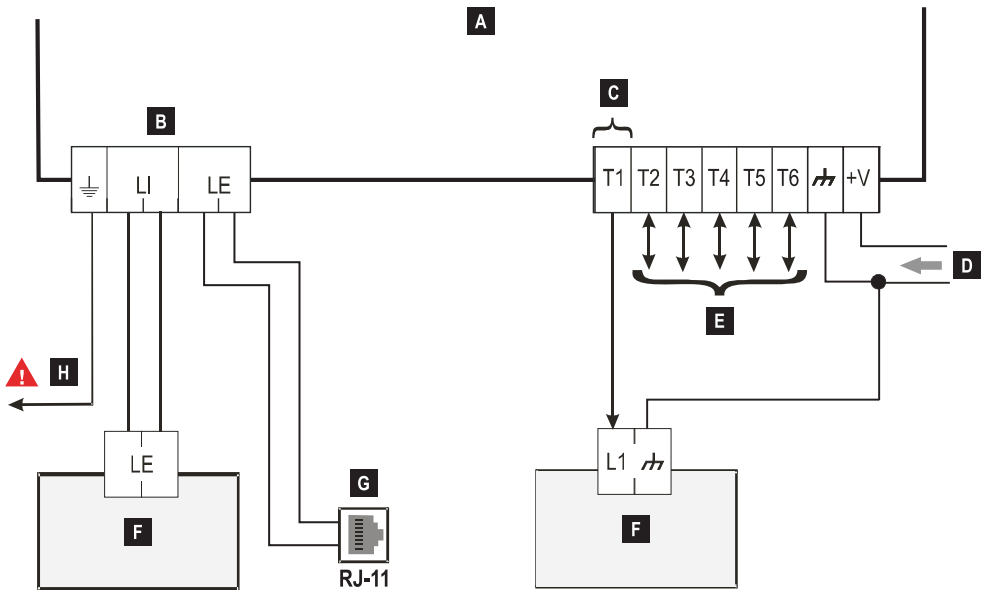


Figure 6 - Connection example: **T**O)communicator; **B**)disconnect the telephone line before servicing the unit; **C**)example of connection of terminal T1 programmed as open collector output; **D**)feeding; **A**ND) Terminals T1, T2, T3, T4, T5, and T6 can be programmed as open collector outputs or input lines; **F**) anti-theft alarm panel; **G**)connection to the telephone line (PSTN); **H**)grounding (mandatory).

OVERVIEW

The communicator can communicate with surveillance centres and send SMS and voice messages via the cellular network; it can also simulate a PSTN line in case of malfunction (telephone line failure) or completely replace it in areas with cellular coverage where PSTN calls are not available.

~ *CID and SIA messages may NOT be understood by PSTN receivers due to distortion in the cellular network.*

*Instead, it is recommended to forward the CID and SIA messages to the IP receivers, when the PSTN line fails, as indicated in "Phone book" on page 47 see option **IP receiver over GSM route**.*

~ *Due to the nature of the cellular network, the communicator must be used only for its intended purpose; it cannot be used as a modem for fax and data transmission or for remote assistance services.*

It can communicate alarm events via the cellular network, allowing for fast and reliable communication with monitoring centres equipped with compatible Sur-Gard system receivers. The performance of the communicator is highly dependent on coverage, so it should not be installed without first checking the position of the antenna to determine the best receiving location (at least the  must be on).

The dual-path versions have an Ethernet interface that can be used as a primary or backup communication channel with Sur-Gard receivers. The Ethernet interface also allows for an alternative, faster form of communication with console panels and software.

The communicator has terminals (**T**) that can be programmed as inputs or outputs (see "Inputs/Outputs" on page 57).

Access level

This paragraph describes how to access the functions of the communicators, according to EN50136.

If the option **EN50136** is enabled (factory default, see ""Options"(on page 50), the communicator can manage the four levels of user access to its functions. The access levels are as follows.

- **Level 1:** Access to display functions, indications (LEDs used to indicate faults, cellular network status and PSTN line status) and messages (SMS, voice, etc.) available to all users **without PIN**; this level does not allow any programming.
- **Level 2 (normal user):** access to information about the communicator's operating status (for example, using the console to view the status page, programming options, and event memory). This level requires a PIN. Factory setting: **000000**.
- **Level 3 (Installer):** access to configuration functions, including adding, removing, and replacing components and other operations that directly or indirectly affect the communicator's functions (for example, upload/download programming options using the console, viewing the page **State** and event memory). This level requires a PIN. Factory settings: **111111**.

*- If the option **EN50136** is enabled, the installer must be authorized by the normal user.*

- **Level 4 (Level 4 Installer):** access to update firmware and view page **State**. This level requires a PIN. Factory settings: **222222**.

- The level 4 installer must be authorized by the installer.

To ensure compliance with EN 50136-2:2013, PINs for accessing levels 2, 3 and 4 are 6-digit numbers.

USB connector functions

The communicator has a USB Type A connector to operate as a device, to connect to a PC, or as a host, to manage a USB drive (see "Jumper Descriptions" on page 11).

To connect the communicator to a PC, a USB cable with A connectors on each end (hub cable) is required.

The USB interface has the following characteristics.

- Compliance: USB 2.0.
- Full speed data: 12 Mbit/s.
- Max cable length: 5 m.
- Max current in host mode: 500 mA.
- Vout in host mode: 5V nominal.
- USB drive file system: FAT32.

USB device

The USB interface serves as an alternative to communications with the RS232 port (PC-Link). It has the same functions as the RS232 port and can be used with the console to:

- update firmware (only level 4 installer is authorized);
- upload/download communicator options and audio files (only the installer is authorized; normal user can only upload);
- load the communicator event memory (only the installer and normal user are authorized);
- Check the status of the communicator in real time (all users are authorized).

USB Host

Allows you to use a USB drive for the following operations:

- firmware update;
- load custom default configuration;
- upload/download configuration and audio files;
- export event memory;
- Exporting the communicator debug memory (for technical service only).

These functions are only available if the EN50136 option is disabled.

Feeding monitor

The device can be powered in the following ways:

1. using the anti-theft alarm panel, equipped with a backup battery.
2. via an external power supply; in this case, the power supply must recharge the communicator's optional backup battery (8 hours of operation after main power failure).

In both cases, the battery ensures the power supply and operation of the communicator in the event of a power failure.

The power and battery voltages are monitored so that the communicator can report the following events:

- Power failure/restore event.
- Power failure/restoration message (voice message/SMS to IP receivers).

Since the device can operate with or without an external backup battery (without an input current limit), the following two cases correspond to a power failure.

Checking the supply voltage

The supply voltage is monitored for problems. The voltage is checked every 100 ms. The following conditions apply to the device without external backup battery:

- Power Problem Event: When the voltage is lower than 10V (PSTN interface is off).
- Power problem restoration: when the voltage is higher than 12V.
- Enter power saving mode: when the voltage is lower than 9V (USB interface and radio module are off).
- Exit power saving mode: when the voltage is higher than 10.7V.

- When the communicator is in power saving mode, the current consumption does not exceed 175 mA. The consumption Maximum current in power saving mode with battery connected and no activity in progress is approximately 70 mA and is less than 150 mA during voice calls.

Checking the battery voltage

The battery voltage is monitored for faults and whether the battery has been inserted. The voltage is checked every 100 ms. The value is processed (averaged) to remove spikes. The following conditions apply for the device with external backup battery:

- Battery Problem Event: When the battery voltage is lower than 3.4V.
- Battery problem restoration: When the battery voltage is higher than 3.7V.
- Entering power saving mode: when the battery voltage is lower than 3.2V.
- Exit power saving mode: when the battery voltage is higher than 3.4V.
- Battery disconnected event: When the battery voltage is lower than 2.0V.
- Battery disconnected restore: When the battery voltage is higher than 2.0V.
- Battery Overcharge Event: When the battery voltage is higher than 4.4V.
- Battery overcharge restore: When the battery voltage is lower than 4.3V.

- When the communicator is powered ONLY by the battery, the USB port CANNOT be used.

Internal events

In addition to external events (panel events decoded using Contact ID or SIA protocols on simulated PSTN line), the communicator can send voice messages, SMS messages, and Contact ID or SIA messages for the events listed in Table 11, as indicated in "Communicator" on page 64.

Event	Description
Entry 1 Event	This occurs when terminal T1 is programmed as an input and the conditions for its activation are met (see "Inputs/Outputs" on page 57).
Entry 2 Event	As Entry 1 Event but for terminal T2.
Entry 3 Event	As Entry 1 Event but for terminal T3.
Entry 4 Event	As Entry 1 Event but for terminal T4.
Entry 5 Event	As Entry 1 Event but for terminal T5.
Entry 6 Event	As Entry 1 Event but for the T6 terminal.
Restoration of Entry 1	This occurs when terminal T1 is programmed as an input and returned to the standby state (see "Inputs/Outputs" on page 57).
Entrance Restoration 2	As Restoration of Entry 1 but for terminal T2.
Entrance Restoration 3	As Restoration of Entry 1 but for terminal T3.
Restoration of Entrance 4	As Restoration of Entry 1 but for terminal T4.
Restoration of Entrance 5	As Restoration of Entry 1 but for terminal T5.
Restoration of Entrance 6	As Restoration of Entry 1 but for the T6 terminal.
Power failure	It occurs when the supply voltage (+V terminal) is less than 10 V.
Power Failure Restore	It occurs when the supply voltage (+V terminal) is higher than 12 V.
Battery failure	It occurs when the battery voltage is lower than 3.4 V.
Battery restoration	It occurs when the battery voltage is higher than 3.7 V.
Interconnection panel failure	Occurs when the terminal programmed as input Interconnection present is activated (see "Inputs/Outputs" on page 57).
Restoration of the interconnection panel	Occurs when the terminal programmed as input Interconnection present is disabled (see "Inputs/Outputs" on page 57).
Cellular receptor failure 1	It occurs when the communicator CANNOT communicate with receiver 1, through the cellular channel: initialization fails, supervision fails, or the receiver does not respond (see "IP Receiver" on page 70).
Cellular receptor failure 2	As Cellular Receptor Failure 1 but for receiver 2.
Restoration of cell receptor 1	Occurs when the communicator can communicate with receiver 1, via the cellular channel: successful initialization, successful supervision, or the receiver responds (see "IP Receiver" on page 70).
Restoration of cell receptor 2	As Restoration of Cellular Receptor 1 but for receiver 2.
Ethernet Receiver 1 Fault	It occurs when the communicator is NOT able to communicate with receiver 1, via the Ethernet channel: initialization fails, supervision fails, or the receiver does not respond (see "IP Receiver" on page 70).
Ethernet Receiver 2 Fault	As Ethernet Receiver 1 Fault but for receiver 2.
Ethernet Receiver 1 Restore	Occurs when the communicator can communicate with receiver 1, via the Ethernet channel: initialization successful, supervision successful, or the receiver responds (see "IP Receiver" on page 70).

Table 11 –Description of the events managed by the communicator.

Event	Description
Ethernet Receiver 2 Restore	As Ethernet Receiver 1 Restore but for receiver 2.
RTC fault	It occurs when the voltage at the LE terminals is less than 2.5 V for the LE Timeout Failure (sec) established (see ""Out of time" on page 73).
RTC fault restoration	It occurs when the voltage at the LE terminals is higher than 2.5 V for the LE Timeout Restore (sec) established (see ""Out of time" on page 73).
GSM failure	It occurs when the cellular signal is not detected.
Cellular network failure	The communicator CANNOT connect to the cellular data network.
Restoring the cellular network	The communicator can connect to the cellular data network.
Sabotage event	Occurs when tamper detection is enabled (see "Jumper Descriptions" on page 11) and the communicator is opened or removed from the wall (housing versions only).
Anti-sabotage restoration	Occurs when tamper detection is enabled (see "Jumper Descriptions" on page 11) and the communicator is closed again or fixed to the wall (housing versions only).
FTC failure	It occurs when an action fails (voice call, SMS, digital message).
FTC Restoration	Occurs when the last action in the queue completes successfully.
Periodic call/SMS	Occurs when scheduled (see "Communicator Options" on page 64).
Transmission of Periodic Test	Occurs when scheduled (see "Communicator Options" on page 64).
Antenna Failure	Occurs when there is no antenna or when the antenna has limited function (ANTLTE-02 only).
Anti-jamming Detection	It occurs when the communicator detects an interference problem.
Ethernet DoS Detected Fault	It occurs when the communicator detects an attack to DoS on the Ethernet channel.
Ethernet DoS Detected Restore	It occurs when the communicator does NOT detect any DoS attack.
Ethernet Network Fault	It occurs when the communicator does NOT recognize the LAN network.
Ethernet Network Restore	It occurs when the communicator recognizes the LAN network.

Table 11 –Description of the events managed by the communicator.

a. In computing, a denial of service attack (DoS attack) is a cyberattack in which an attacker attempts to make a device or network resource unavailable to its intended users by temporarily or indefinitely disrupting the services of a host connected to the Internet.

The installer can choose the protocol to use: Contact ID or SIA.

*- The selected protocol also applies to events generated by the panel and sent to phone numbers with the option **IP receiver over GSM route** enabled (see table on page 47).*

For each event associated with the communicator inputs, a **User code** specific, while for status events a unique user code can be assigned.

The communicator manages a queue of 32 internal events. When the queue is full, subsequent events are ignored.

The priority between internal and external events can be programmed by the installer (see "Priorities" on page 51).

For internal events, the timing and sending methods are managed by the communicator: after sending a message, the unit must wait a maximum of 1.25 seconds for the acknowledgement (ACK) from the receiver. The unit will attempt to send a message up to 4 times.

Operating principles

The communicator allows the primary communication channel to be selected (factory setting is PSTN). It supplies the line and ringtone voltage for incoming calls and decodes ringtones (DTMF). The simulated PSTN line provides a backup line for the burglar alarm panel or other terminal in case the primary PSTN line fails. Calls **CANNOT** be switched between the cellular line and PSTN, or vice versa, while in progress. The operating priority (as programmed) determines how the communicator handles voice and SMS messages, and calls from devices connected to the terminals.**LI**(for example, an anti-theft alarm panel).

- *The communicator **CANNOT** decode pulse calls.*

To prevent unwanted use of the simulated line over the cellular network, the device generates a double beep during voice calls. It is emitted after 5 minutes at 30-second intervals.

PSTN Channel

If the voltage at the PSTN line terminals (**YOU**) is less than 2.5 Vdc ($\pm 20\%$) for 10 to 3600 seconds (programmable value), the devices connected to the terminals**LI**are switched to the cellular network.**When PSTN line service is restored**, the communicator switches, after a programmable time, to the PSTN line.

- *It is possible to force communication to the cellular data network, even when the PSTN line is present, by prefixing a programmable prefix (factory setting is "9999") to the telephone number dialed from the panel (for details, see**Dialing prefix**in "PSTN/PTM"on page 73).
If for any reason the device is on the simulated PSTN line, the prefix is removed from the number (if it exists).*

Number dialed by the panel	Telephone line	Number with the option IP Receiver over Route GSMenabled	Effect
0123456789	PSTN	None	PSTN voice call to number 0123456789.
99990123456789	PSTN	0123456789	Contact ID call over cellular data network.
99990123456789	PSTN	None	Contact ID call or voice call via cellular channel to the number 0123456789.
99990123456789	Simulated PSTN	0123456789	Contact ID call over cellular data network.
99990123456789	Simulated PSTN	None	Contact ID call or voice call via cellular channel to the number 0123456789.

- *The communicator makes independent calls only on the cellular channel, and not on the PSTN line. All communications made on the external PSTN line (terminals**YOU**) come from the line connected to the terminals**LI**, and cannot be modified. Consequently, the PSTN line connected to**YOU**NoIt is considered a communication channel according to EN 50136.*

Cellular channel

Provides devices connected to the terminals**LI**a simulated PSTN line if cellular reception is detected. If there is no cellular coverage, it switches to PSTN.

Ethernet Channel

If the communicator's Ethernet interface is connected to a LAN or WAN, you can:

- decode digital messages from the control panel connected to the communicator and forward them to an IP receiver via the Internet;
- send the communicator's digital messages to an IP receiver, via the Internet;
- download and upload communicator options locally via LAN and remotely via WAN.

Contact ID and SIA transmission sequence over cellular and Ethernet channels

If the PSTN line is not detected, or if PTM (Panel Transmission Monitoring) is enabled (see "PSTN/PTM"(on page 73), the communicator can forward Contact ID and SIA messages from the connected control panel to the terminalsLI from the communicator, to the PSTN receivers, through the cellular channel, or to the IP receiver, through the cellular or Ethernet channel, if **CID/SIA Event Conversion** is enabled (see ""Phonebook"(on page 47).

1. When an event occurs, the control panel activates the telephone line: the communicator simulates the ringtone.
2. The control panel dials the PSTN receiver number: Make sure the control panel inserts a pause of at least 1 second or checks the dial tone before dialing the number.
3. The communicator sends the handshake tone required for Contact ID or SIA.
4. The control panel transmits the message after receiving the handshake tone.
5. The communicator forwards the message over the cellular channel to the PSTN line receivers, if enabled, decodes and transforms the message into a data packet and sends it to the IP receivers over the cellular channel or Ethernet.
6. The receiver acknowledges the message and sends a confirmation of receipt (kiss-off) to the communicator, which forwards the kiss-off signal to the control panel.
7. Once the communicator has generated the kiss-off signal, if there are no other events to send, the control panel hangs up; otherwise, it sends the next event.

Sending SMS message

The communicator can send SMS messages (with a maximum length of 70 characters) to previously programmed numbers (up to 8 numbers in the communicator's address book) when the events listed in table 11 on page 28 occur and end.

-An SMS is sent when one of the events listed in table 11 on page 28 occurs, for which an SMS message has been scheduled and at least one telephone number has been assigned.

Sending voice message

The communicator can send up to 3 pre-recorded voice messages to pre-programmed numbers (up to 8 numbers in the communicator's phonebook) when the events listed in Table 11 on page 28 occur and end. Up to 150 voice messages can be recorded, up to 6 seconds each.

A voice call occurs when an event occurs for which a voice message and at least one telephone number have been programmed. In this case, the communicator executes the procedure indicated below.

1. The communicator dials the telephone number and makes the call through the cellular channel.

-The communicator can make a voice call using only the cellular channel. The communicator cannot make a voice call using the PSTN channel even if the communicator is connected to a PSTN line. The communicator cannot make voice calls if the cellular channel is not available

2. If there are no problems with the connection to the cellular network and the destination number is not busy, the communicator proceeds to the next step; otherwise, it ends the call and tries step 1 again, for the programmed number of times (**Call again** in the section "Communicator Options"(on page 64), once the maximum number has been reached, the call cycle is concluded. If the event has been programmed to call several telephone numbers, they are called in sequence. This prevents the system from calling a busy number several times within a few seconds.
3. The communicator waits up to 60 seconds for the called number to answer. If the number answers, it goes to step 4; otherwise, it hangs up and tries step 1 again, for the programmed number of times (**Call again** in the section "Communicator Options"(on page 64), once the maximum number is reached, the call cycle is concluded.
4. The communicator plays the message for the event: the call ends only after the message has been received, or if the called user presses-on your phone, if the option **Call confirmation** is enabled (see "Communicator Options" on page 64).

If multiple events have occurred that cause different messages to be sent to the same number, the messages are played in sequence, each for the programmed number. **Repetitions**(see "Communicator Options" on page 64), during a single call, to avoid calling the same number multiple times.

At the end of the call cycle, if the event that activated the communicator is still active, the above procedure is not repeated. It is necessary to first restore the event that activated the call cycle before activating a new call cycle.

Managing priorities

Table 12 lists the actions the communicator can perform and the factory setting of priorities.
The priorities of the communicator actions can be configured in the console (see "Priorities"on page 51).

Action	Priority	Programmable in the console
Sending confirmation tone for communicator output activation.	1	Yeah
Sending Contact ID or SIA messages from the communicator to PSTN receivers via the cellular channel.	2	Yeah
Sending voice messages from the communicator through the cellular channel.	3	Yeah
Sending SMS messages from the communicator through the cellular channel.	4	Yeah
Sending Contact ID or SIA messages from the communicator to PSTN receivers via the cellular or Ethernet channel.	5	Yeah
Sending notifications from the communicator to the application.	6	Yeah
Forwarding voice messages, Contact ID or SIA messages from the control panel connected to the terminalsLI, via cellular or Ethernet channel.	7	Yeah
Management of incoming SMS messages.	8	No
Monitoring via cellular data network	9	No

Table 12 –Factory setting of action priorities.

Grades

- If the communicator is transmitting an action and another higher priority action comes along, the communicator interrupts the lower priority action and queues it.
- Once the highest priority action is completed, the communicator attempts to transmit the interrupted (queued) action again.
- If multiple actions of the same priority occur simultaneously, they are queued and executed in sequence.
- Communicator voice messages have a lower priority than panel messages, if a panel message occurs while the communicator is transmitting a voice message, the communicator hangs up and the panel takes over the line (answered call detected); after the panel message has completed (hang-up call detected), the communicator attempts to transmit the interrupted message again (queued).
- If communicator voice messages have a higher priority and a panel event occurs while a communicator voice message is being sent, the communicator must provide the busy signal to the panel and continue transmitting the messages.
- Communicator SMS messages have a lower priority than control panel messages and communicator voice messages; however, an SMS cannot be interrupted while it is being sent.
- Sending data packets for monitoring communication with IP receivers has the lowest priority.

Checking the balance of the prepaid card

If this option has been programmed via the console (see ""Prepaid card balance"(on page 52), you can check the balance on the prepaid SIM card. Once enabled, the system can check the balance of the prepaid card in three ways:

1. Using the console (on page **State**, only via PC-Link or USB connection).
2. By sending an SMS to request a response to the sender's number. The command must include the normal user's PIN.
3. Sent periodically **to the first number in the phone book** an SMS containing the balance information provided by the service provider. For all service providers that support checking the prepaid card balance using network commands, it is possible to enter the query string using the console.

-At the discretion of the service provider, the prepaid SIM card balance checking service may be suspended.

Transmission Monitoring with the Dashboard (PTM)

Constant monitoring of communications with the panel (PTM function) allows the communicator to send Contact ID or SIA messages over a cellular or Ethernet channel in the event of a failure in communications between the panel and the central station over the PSTN line. If programmed (using the console, on page **PSTN/PTM**), this feature is only enabled when the PSTN line is present and connected to the terminals **YOU**.

– *Touch dial detection is not supported.*

When the PTM function is activated, the PSTN line failure event occurs.

The communicator checks the LE line and, once it detects that the line is occupied by the panel, it executes the following procedure:

- decodes the dialed number (DTMF);
- If the decoded number has the PTM option enabled, the communicator will check for the Kiss-Off signal (acknowledges receipt of the event sent from the panel to the central station).

The panel must make the call immediately: the time between picking up and making the call, programmed in the panel, must be at least 2 seconds.

If the option **PTM For All Numbers** is enabled (see "PSTN/PTM" (on page 73) the communicator will check if kiss-off is detected for all calls.

Activating the outputs

The communicator has terminals (T1, T2, T3, T4, T5 and T6) that can be programmed as inputs or outputs. The outputs can be activated automatically, when certain programmed events occur (see "Inputs/Outputs" on page 57), or remotely, by sending an SMS message to the communicator, using call recognition from pre-programmed numbers (see ""Phonebook" on page 47), or by a mobile device running the application **ConnectAlarm** (consult "Application Exit Type" on page 59).

Remote output activation and deactivation

- *Cellular or Ethernet connection must be detected for outputs to be turned on or off remotely.*

*To enable this feature, the output must be configured as a **Reserved Departure**.*

*When the terminals **T1, T2, T3, T4, T5** and **T6** they are programmed as outputs, they can be controlled remotely via SMS and caller ID.*

The SMS message is never saved on the device, and can be deleted by running the command.

The number used to activate outputs using caller ID must NOT be hidden (must NOT be a private number).

*To prevent calls from being diverted to devices connected to the terminals **LI**, it is recommended to program the communicator with the **Blacklist** enabled (**Options>Marking options**) and the **Whitelist** disabled (**Agenda**) for the numbers you wish to use in this feature, this will reject the calls.*

Open collector outputs can be programmed as **Bistable** either **Monostable**:

- The exit **Bistable** is activated and deactivated with two separate commands;
- The exits **Monostable** remain active during the **Monostable On Time** scheduled, after which they return to standby state or until deactivated by SMS.

Each output can be programmed to provide a confirmation signal:

- A previously programmed SMS, if the output was activated or deactivated by SMS;
- A confirmation ringtone, if caller ID was used.

- *If Caller ID is used, the call is automatically ended 12 seconds after the output is activated.*

*For more details on the options **Chain Control** and **User Code** used in the following sections, see the sections "Inputs/Outputs" on page 57 and ""Options" on page 50.*

Bistable outputs

Open collector outputs configured as bistable can be activated in two ways:

1. By sending an SMS containing the number (#), the User Code, the **Chain Control** (no white spaces at the beginning of the **Chain Control**) and the characters **=ON***, using the following syntax:

User Code*Chain Control=ON* (example: #123456*HOMELIGHT=ON*)

2. Via Caller ID: In this case, the output is activated free of charge, since once the device recognizes the caller, it rejects the call and activates the output.

- *The open collector output configured as bistable can only be deactivated by SMS containing the numeral (#), the User Code, the **Chain Control** and the following characters **=OFF*** using the following syntax:*

User code*Chain Control=OFF* (example: #123456*HOMELIGHT=OFF*)

- *The factory programmed 6-digit user code is **000000**; to change it, see "Changing the user code" on page 38.*

Monostable Outputs

Open collector outputs configured as monostable can be activated in two ways: BySMSandCaller ID.

SMS

By sending an SMS containing the number (#), the User Code, theChain Control(no white spaces at the beginning of theChain Control) and the characters=ON*,=ON*TonU*either=OFF*using the following syntax:

User Code*Chain Control=ON*

User Code*Chain Control=ON*TonU*

User Code*Chain Control=OFF*

The parameter=ON*TonU*allows you to program theON timefrom 1 second to 86400 seconds, with a resolution of 1 second. TheON timecan be set via the Communicator Console software. The syntaxTonUrepresents the required value and ORis the unit in hours (H), minutes (M) and seconds (S), as shown in the following example:

SMS example	Effect
#123456*HOMELIGHT=ON*	Bistable activation.
#123456*HOMELIGHT=ON**	Activated according to schedule.
#123456*HOMELIGHT=ON*3600S*	Active for 3600 seconds.
#123456*HOMELIGHT=ON*50M*	Active for 50 minutes.
#123456*HOMELIGHT=ON*3600*	Activated according to schedule, invalid ON time will be ignored.
#123456*HOMELIGHT=ON*000S*	Activated according to schedule, invalid ON time will be ignored.
#123456*HOMELIGHT=OFF*	Disabled.

- To activate the output via SMS using the programmed settings, delete the parameterTonUand leave the characters**. (Example: #9876*HOMELIGHT=ON**).
If the monostable output is programmed incorrectly, it will activate for theMonostable On Timeprogrammed in the console.

Caller ID

The output is activated free of charge, since once the caller is recognized, the device activates the output without answering the call.

- Monostable outputs return to the standby state after theMonostable On Timeprogrammed.
HeMonostable On TimeIt can be programmed from 1 second to 86400 seconds, with a resolution of 1 second.

In addition to the process described in the section "Remote output activation and deactivation" on page 36, it is also possible to perform other remote procedures by transmitting several SMS messages.

Modifying the user code

The default user code is **000000**; to change it, send an SMS containing the characters **#CUC** followed by the user code current and of the new user code between the characters*, according to the following syntax:

CUC*User Code*New User Code*

The device will send an SMS to confirm that the user code has been changed.

- The new user code must contain 6 digits (0-9).

Enable or disable remote scheduling

Remote programming allows you to use the console over the network. To configure the communicator parameters remotely, you must enable remote programming, using the Console (see "Network Configuration" on page 54), or by SMS containing the characters **#WAS** followed by the User Code and **ON** between*, according to the following syntax:

WAS*User Code*ON*

To disable remote programming, send the following SMS:

WAS*User Code*OFF*

The device will confirm with an SMS whether the programming has been done successfully.

Modifying the installer code

The 6-digit installation code is used to access the remote programming interface (see "Installer Authentication" on page 50). The default installer code is **111111**; to change it, send an SMS containing the characters **#CIC** followed by the installer code current and of the new installer code between the characters*, according to the following syntax:

CIC*Installer Code*New User Code*

- The new installer code must contain 6 digits (0-9).

*If the option **EN50136** is enabled, the installer must be authorized by the normal user for the installer code change to take effect.*

The device will send an SMS to confirm that the installer code has been changed.

Modifying the level 4 installer code

The default level 4 installer code is **222222**; to change it, send an SMS containing the characters **#CMC** followed by the level 4 installer code current and of the new level 4 installer code between the characters*, according to the following syntax:

CMC*Level 4 Installer Code*New Level 4 Installer Code*

- The new level 4 installer code must contain 6 digits (0-9).

The Level 4 installer must be authorized by the normal user for the Level 4 installer code change to take effect.

The device will send an SMS to confirm that the level 4 installer code has been changed.

Checking the balance of the prepaid card

To check the balance of the prepaid card via SMS, you can use the Console (see "Prepaid card balance" on page 52) or send an SMS containing the characters **#CCC** followed by ***** and the user code, according to the following syntax:

CCC*User Code*

either **#ICCC** followed by ***** and the installer code, according to the following syntax:

#ICCC*Installer Code*

- You will receive an SMS with the balance of the prepaid card.

*At the discretion of the mobile service provider, the prepaid SIM card balance check service may be suspended. If the option **EN50136** is enabled, the installer must be authorized by the normal user for the command to work.*

Checking the expiration date

To find out the expiration date of the SIM card via SMS, send an SMS containing the characters **#EDC** followed by ***** and the user code, according to the following syntax:

#EDC*User Code*

You will receive an SMS with the expiration date.

Expiration date update

To update the SIM card expiration date via SMS, send an SMS containing the characters **#EDU** followed by *****, and the user code, according to the following syntax:

EDU*User Code*new date*

The date must be in the format **DD/MM/YYYY**.

- If an expiration date has NOT been scheduled in the Console, the expiration time will be 10:00 AM.

*If an expiration date and time has been set using the Console and then the expiration date has been modified via SMS using the command **#EDU**, the expiration time will not be changed.*

Verifying the serial number

This command is used to verify the serial number of the communicator using SMS containing the characters **#RID** followed by ***** and the user code, according to the following syntax:

RID*User Code*

either **#IRID** followed by ***** and the user code, according to the following syntax:

#IRID*Installer Code*

The device will respond with **RID:01234567**.

Enable the installer

To enable the installer to use the device, the user must send an SMS containing the characters **#ENI** followed by the User Code, according to the following syntax:

ENI*User Code*

The device will confirm with an SMS whether the programming has been done successfully.

*- Enabling the installer is required only if the option **EN 50136** is enabled, otherwise the installer will always be enabled.*

Disable the installer

To disable the installer from using the device, the user must send an SMS containing the characters **#DSI** followed by the User Code, according to the following syntax:

DSI*User Code*

The device will confirm with an SMS whether the programming has been done successfully.

- The installer is automatically disabled 12 hours after being enabled.

Disabling the installer will also automatically disable the level 4 installer.

Enable level 4 installer

To enable the level 4 installer to not use the device, the installer must send an SMS containing the characters **# ENM** followed by **Installer Code**, according to the following syntax:

ENM*Installer Code*

The device will confirm with an SMS whether the programming has been done successfully.

The level 4 installer is automatically disabled after 12 hours.

Start a remote session

To start a remote communication session, send an SMS containing the characters **#MR** followed by **Console IP** and **Console Port** between *, according to the following syntax:

MR*Console IP* Console Port*

where:

- the **Console IP** is the public IP address of the PC in the format "AAA.BBB.CCC.DDD" (e.g. 37.207.123.181) or in the format of a host name and domain (Fully Qualified Domain Name, e.g. "my_name.dyndns.org");
- the **Console Port** is the IP port in the format "NNNNN" (a 5-digit number in the range 1 to 65535).

*- It is required to configure the router to which the Console PC is connected to enable port forwarding from the **Port***

***Console** to **TCP port 51004** (port used locally by the Console, NOT modifiable); consult your network administrator or read the router instructions.*

The APN specified on the page will be used **Network Configuration**, or the one programmed for Receiver 1 (page **IP Receivers**).

If no APN has been programmed (neither on the page **Network Configuration** not even on the page **IP Receivers**), the SMS must specify the connection as follows:

MR*Console IP*Console Port*Access Point Name APN*

In some cases, if APN USERNAME (max 32 characters) and PASSWORD (max 32 characters) are set, the above string will be sufficient to log in, otherwise the string will need to be modified as follows:

MR*Console IP*Console Port*Access Point Name APN*Username*Password*

Modify the account number of the cell phone receiver

To change the account number sent to the cell phone receiver, send an SMS containing the characters **#ACNC** followed by the **Installer Code** and of the **Account number** between *, according to the following syntax:

#ACNC*Installer Code*Account Number*

where:

- He **Account number** It is a number with a maximum of 10 digits.

Modify the Ethernet receiver account number

To change the account number sent to the Ethernet receiver, send an SMS containing the characters **#ACNE** followed by the **Installer Code** and of the **Account number** between *, according to the following syntax:

#ACNE*Installer Code*Account Number*

where:

Account number It is a number with a maximum of 10 digits.

ConnectAlarmapplication

Using the application **ConnectAlarm** On an Android/iOS mobile device, it allows you to:

- Enable or disable the communicator outputs (see "Application output type" on page 59);
 - Display the status of the communicator input (see "App Type Input" on page 61);
 - Display text messages when communicator events occur and end (see **SMS Push / Notifications** in "Tickets and events" on page 65);
 - Display the communicator's Contact ID messages (see **Calls to the central station** in "Tickets and events" on page 65);
 - Display text messages for Contact ID and SIA messages from the control panel connected to the terminals **LI** of the communicator (see **SMS Push / Notifications** in "CID/SIA converter" on page 66);
 - Display Contact ID messages from the control panel connected to the terminals **LI** of the communicator (see **All CID Events to App Server** in "Application server" on page 55).
- *The app removes all event notifications related to a category (alarm, tamper, fault) when an event of that category is restored. You can view active events via the event view button.*

Application SettingsConnectAlarm

1. On your mobile device, download the app **ConnectAlarm** from the Play Store or Apple Store.
2. Open the application **ConnectAlarm**. If you open the application **ConnectAlarm** for the first time you must read and accept the **End User License Agreement** and the **Privacy Notice**.
3. Enter the **Server Address**, **connect.tycomonitor.com**, and click on **OK**.
4. Click on **Sign up**.
5. Enter an address of **E-mail** and click on **SIGN UP**.
6. Enter the **E-mail code** received at the email address you entered in the previous step and click **PROCEED**.
7. Enter your account password and click **PROCEED**.
8. In the option **Panel name**, enter a name for the system that the communicator is part of.
9. In the option **Serial Panel** Enter the communicator serial number on the communicator electronic card.
10. In the option **Master User Code** Enter the communicator user code **Options>User authentication>User Code** On the console: The factory default code is 000000.
11. Click on **CONNECT**.
12. In the **PANELS LIST**, select the newly added system.
13. Enter the communicator user code (see **Options>User authentication>User Code** in the console) and click **PROCEED**: The factory default code is 000000.

At this point the end user can manage the system, according to the installer's configuration.

PROGRAMMING FROM PC

You can program the communicator using the latest console software **DLS 5** which can be downloaded from the website www.dsc.com.

- To install and run the console, you must have PC administrator rights; it is recommended to check your firewall settings if you encounter problems during the installation procedure.

Proceed as follows.

1. Install the console.
2. Run the console.
3. Select the user name and enter the password to log in: the factory user name is **admin** and the password is **1234**.
4. Open the menu **Archive** and click on **New account** to create a new account, or open an account in the list of **Home Page**: Double-click the account to open it.
5. Configure the options (see the respective sections for instructions).
6. Download the options to the Communicator (see "Uploading and Downloading" on page 78).

- To change the console language, click **Tools > Edit current user**; select the language on the next page.

Description of the menus

-Menu **Archive**

- **New account**: allows you to create a new account and assign factory values to all parameters.
- **Account Group Maintenance**: allows you to group multiple accounts into one group.
- **Recent Archives**: allows you to select an existing file.
- **Exit**: allows you to exit the program. You will be prompted to save any modified data from the current installation.

-Menu **View**

- **Home page**: is equivalent to clicking on the tab **Home Page**.
- **Toolbar**: the field opens **Account Group Maintenance**.
- **Online Users**: list of connected users.
- **Open accounts**: list of saved accounts.
- **Communication works**: list of communication sessions; you can also click on .
- **Recent activity**: list of recent activities.

-Menu **Tools**

- **Language Manager**: allows you to modify, import/export, create new languages.
- **DLS 5 Operator Maintenance v1.50**: In this window, the administrator can modify and configure a user's password (with possible functional restrictions—**Edit operator function**) for the Console.
- **Modem Configuration Manager**: allows you to configure the connection type: PCLINK or COM port.
- **Edit current user**: allows you to view the previous page to change the Console language.
- **Database Backup and Restore**: allows you to configure the options for managing the database.
- **Recycle Bin**: allows you to select an account and delete it.

-Menu **Window**

- **Close all tabs**: allows you to close all open account tabs.
- **Home page**: is equivalent to clicking on the tab **Home Page**.

-Menu **Aid**

- **About DLS**: allows you to view the Console version.
- **End User License Agreement**: allows you to view the text of the license agreement.

- **Updates: Check for updates—Show installed updates—Install updates manually.**
- **Submit comment:**allows you to send a comment to the manufacturer

Description of icons



Global load:displays the communicator settings on the PC.



Global download:Once a new account has been programmed (or an existing account has been modified), it sends the new settings to the communicator.



Keep:If you modify the settings of the existing account, click**Keep**to save the new settings.



Just connect.



Communicate labels.



Load event memory.



Delete all tags.



Disconnect when finished.



Import/Export Programming/Audio.



Select user:allows you to see only the information related to the**Regular user**,**InstallereitherInstaller level 4**.



Name search option:enter the name of the option to the left of the icon.

Icons appear on all programming pages.



Delete all tags for this group.



Export.



Restore all options to their default value.



Restore all options to their original state.



Tag all to upload:select all page options for loading.



Tag all for download:select all options on the page for download.

The following pages are available in the programming section.



Phonebook:phonebook page.



Options:options page.



Firmware Update:The icon only appears when the is enabled **Installer level 4** and the firmware is being updated on this page (see icon **Select user**).



Network Configuration:connection parameters page.



Inputs/Outputs:allows you to program the communicator's inputs and outputs.



Communicator:communicator programming page.



IP Receivers:allows you to program all the options of the IP receiver.



Voice messages:voice message management page.



PSTN/PTM:allows you to configure the PTM function.



Event memory:allows you to configure the event memory.



State:communicator monitoring page.

If you want to set up a new account, go to **Archive>New account**.

To view the list of accounts in the database, select **View>Home Page** or click on **Home Page**. In this section you can delete or recover the settings of a particular account as follows:

1.Right-click the account name.

2.Select **Open** to load data from the database or **Eliminate** to delete the account and all its settings from the database.

To load an account, just double-click on the account name.

You can also sort the list alphabetically or by code by clicking on the appropriate column header.

All settings are available on the following pages. This chapter describes the application pages in detail.

- Depending on the access level selected (Regular User, Installer, or Installer Level 4), the configuration pages will be different.

Import/Export programming/audio



The button opens a window with the following functions.



Exporting programming:Click this button to export the current settings from the Console to a USB flash drive.



Import schedule:Click this button to import a communicator configuration from a USB flash drive to the Console; the configuration can be one previously exported from a Console installed on another PC or from a communicator.



Export audio: Click this button to export voice messages from the Console to a USB flash drive.



Import audio: Click this button to import voice messages from a USB flash drive to the Console; the messages can be those previously exported from a Console installed on another PC or from a communicator.

Restore factory settings

To restore the communicator to factory settings, follow these steps:

1. Disconnect power from the communicator.
2. Short the pins **1** and **4** from the PC LINK connector **15** and restore power.
3. All LEDs will light up, and after a few seconds the green LEDs will turn off to indicate that the factory settings are being restored.
4. Now you can remove the short between the pins **1** and **4** from the connector **15**.

5. Once the procedure is complete, the factory  will flash to indicate that the PINs have been restored to their values LEDs; the other LEDs will remain off.

- Recorded voice messages are NOT deleted by the factory reset procedure. Voice messages can be deleted on the Console's Voice Messages page.

The factory reset procedure will NOT be executed if the communicator is powered ONLY by the backup battery. Reconnection of the main power supply is required.

Phonebook

You can save up to 32 phone numbers on this page.

- *If the periodic prepaid card balance function has been programmed for the communicator's SIM card (see page **Options**), the reply SMS will be sent to phone number #1.*
- **Label:**Enter an alphanumeric string of up to 16 characters.
- **Phone number:**Enter a phone number preceded by the international prefix in the format "+xxx" (e.g. +39 for Italy). Up to 16 digits are allowed (the "+" counts as one character).
- *The numbers in the phone book are used to activate the outputs, for the SMS communicator, for the voice communicator, for the IP receiver and for the PTM (Panel Transmission Monitoring).*
- **Whitelist:**If the option is enabled**Blacklist enabled**(consult**Options>Marking options**), the communicator will forward to the devices connected to the terminals**LI**(e.g. an anti-theft alarm panel or telephone device) will block calls from numbers with this option enabled and will block calls from all other numbers as described in the following table.

Blacklist enabled	Whitelist	Mode of operation
Disabled	Disabled	Incoming calls from any number are forwarded to LI .
Disabled	Enabled	Incoming calls from any number are forwarded to LI .
Enabled	Disabled	Incoming calls from any number are blocked.
Enabled	Enabled	ONLY incoming calls from numbers with the option Whitelist enabled are diverted to LI ; incoming calls from any other numbers are blocked.

- *This option ONLY affects calls made through the cellular channel; incoming calls to terminals**YOU**from the communicator are ALWAYS diverted to the terminals**LI**.*
- *Numbers with the option**Whitelist**enabled must have caller ID enabled, otherwise the communicator will block the call.*
- **Output activation:**Click on**[+]**to select the outputs (1 = T1, 2 = T2, 3 = T3, 4 = T4, 5 = T5 and 6 = T6) that will be activated when the communicator receives a call from the corresponding number. This function does not depend on the settings of the**Whitelist**and**Blacklist enabled**in**Options>Marking options**. To activate the output, Caller ID must be enabled for the corresponding number.
- *To activate the output, set terminals T1, T2, T3, T4, T5, or T6 as**Exit**and enable the option**Departure reserved** (see page**Inputs/Outputs**).*
- **Output Activation Confirmation:**Check this box to receive a ringtone to confirm output activation.
- *The ringtone will sound 1 minute after the output has been activated.*
If the communicator is busy performing another operation (e.g. the cellular channel is busy in a voice communication), the ringtone will not be sent.

- **PTM:**Enable this option to activate the "PTM" feature for the corresponding number. Use this option to monitor calls from the panel to a PSTN receiver (central station) number. Factory setting: disabled.
- **CID/SIA Event Conversion:**allows the sending of messages by voice or SMS, by decoding the CID/SIA packets of the panel (see table 13 on page 48).
- **Virtual receiver over GSM route:**if the function is enabled **CID/SIA Event Conversion** and the option **IP receiver over GSM route** If disabled, this feature forces the communicator to simulate a receiver (the communicator sends a handshake and kissoff to the panel).
- **IP Receiver over GSM Route:**allows decoding of events transmitted by the panel to the telephone number and transmission of events over the cellular network to IP receivers (central station).

Channel ¹	Protocol of communication ²	Conversion of events CID/SIA	Receiver virtual about GSM route	Receiver IP over GSM route	Effects
PSTN	Without effect	Disabled	Without effect	Without effect	Panel voice and digital messages (SIA and CID) are sent over PSTN.
PSTN	SIA/Contact ID	Enabled	Without effect	Without effect	Voice and digital messages from the panel are sent over PSTN. Digital messages are converted to voice or SMS messages (depending on the settings on the page Communicator>CID/SIA converter) and is sent through the cellular channel ³ .
Cellular	Without effect	Disabled	Disabled	Disabled	Voice messages are sent via the cellular channel ⁴ .
Cellular	Contact ID	Enabled	Disabled	Disabled	Voice and digital panel messages (CID) are sent through the cellular channel ⁴ . Digital messages (CID) are converted to voice messages or SMS (depending on the settings on the page Communicator>Converter CID/SIA) and are sent through the cellular channel ³ .
Cellular	SIA/Contact ID	Enabled	Enabled	Disabled	Digital messages (CID or SIA) are converted to voice or SMS messages (depending on the settings on the page Communicator>CID converter/ SIA) and are sent through the cellular channel ³ . The communicator simulates the behavior of a receiver by supplying the handshake and kissoff messages.
Cellphone Ethernet	SIA/Contact ID	Disabled	Disabled	Enabled	Digital messages (CID or SIA) are decoded and sent over the cellular or Ethernet channel to IP receivers. The communicator simulates the behavior of a receiver by supplying the handshake and kissoff messages.

Table 13 –Effects of options **CID/SIA Event Conversion, **Virtual receiver over GSM route** and **IP Receiver on GSM route** in the operation of the communicator.**

1)It refers to the communications channel used by the communicator.

2)See page **Options**.

3)Only if the panel's communication protocol is compatible with that of the communicator.

4)CID and SIA messages may not be understood by receivers due to distortion in 2G and 3G cellular networks. In this case, on LTE communicators, enable the option **Voice and SMS over LTE** For more information see "Generic" on page 51.

Channel1	Protocol of communication2	Conversion of events CID/SIA	Receiver virtual about GSM route	Receiver IP over GSM route	Effects
Cellphone Ethernet	SIA/Contact ID	Enabled	Disabled	Enabled	Digital messages (CID or SIA) are decoded and sent over the cellular or Ethernet channel to IP receivers. The communicator simulates the behavior of a receiver by supplying the handshake and kissoff messages. Digital messages (CID or SIA) are converted to voice or SMS messages (depending on the settings on the pageCommunicator>CID converter/ SIA) and are sent through the cellular channel3.

Table 13 –Effects of optionsCID/SIA Event Conversion,Virtual receiver over GSM routeandIP Receiver on GSM route*in the operation of the communicator.*

1)It refers to the communications channel used by the communicator.

2)See pageOptions.

3)Only if the panel's communication protocol is compatible with that of the communicator.

*4)CID and SIA messages may not be understood by receivers due to distortion in 2G and 3G cellular networks. In this case, on LTE communicators, enable the option**Voice and SMS over LTE**For more information see "Generic"on page 51.*

Options

- This page will change depending on the user's access level: regular user, installer, installer level 4.

User authentication

- **Installer code enabled:**The normal user can use this option to allow the installer to program the communicator.
- *The installer should be enabled ONLY if the option **EN50136** is enabled.
The installer is automatically disabled 12 hours after being enabled.
Disabling the installer will also automatically disable the level 4 installer.*
- **User code:**Enter the normal user code here (6 digits maximum); it is used for remote activation of the outputs. Factory setting:**000000**.

Installer Authentication

- **Installer code:**Enter the installer code here (6 digits). Factory settings:**111111**. **Level 4 Installer Code**
- **Enabled:**In this box the installer can enable the level 4 installer code for communicator firmware updates.
- *This option is disabled if the option **EN50136** is disabled.*
- **EN50136:**In this box the installer can enable and disable the option **EN50136**.
- *To ensure compliance with EN 50136-2, the option **EN50136** must be enabled.*

Installer authentication level 4

- **Level 4 Installer Code:**Enter the level 4 installer code (6 digits) here. This code provides access to firmware updates and viewing of the page **State**. Factory settings:**222222**.

Marking options

This section configures certain aspects of phone numbers.

- **Dialing prefix:**The number entered in this box is placed before any number dialed by the communicator via the cellular channel. Enter the prefix (1 to 8 digits) or leave the field empty if not used.
- **Digits to remove:**If the communicator is connected to a telephone exchange, the telephone numbers (programmed in the panel) must be preceded by the telephone exchange number (usually a single digit). Since the telephone exchange extension number is not needed when making calls over the GSM network, it must be removed from the telephone number. Enter the number of digits that make up the telephone exchange number (e.g. if the telephone exchange number is 01, enter 2 in the option **Digits to remove**, since the telephone exchange number is made up of 2 numbers).
- *The phone number must contain at least two more digits than the number entered in **Digits to remove**; otherwise, the error will be generated busy tone.*

Example:

- 1.Configure **Dialing prefix**=9999 and set **Digits to remove** a 2 on the communicator.
- 2.Set up a voice call on the panel using the number 999901**1234567890**.
- 3.Activate the call on the panel.

4.The communicator will send the call to the number**1234567890**.

- If the option is enabled**Digits to remove**and the panel calls a telephone number that has been enabled**Conversion of CID/SIA events**(consult**Phonebook**), the telephone number in the phone book must match the one programmed in the panel (including the prefix), for the communicator to perform the conversion.
 - **Blacklist enabled**:If enabled, the communicator forwards to the devices connected to the terminals**LI**, ONLY calls from phone numbers with the option**Whitelist**enabled (see ""Phonebook"on page 47).
 - This option ONLY affects calls through the cellular channel; incoming calls to the terminals**YOU**from the communicator are ALWAYS diverted to the terminals**LI**.
 - The function**Blacklist**COMBINED with the function**Output activation**on the caller ID causes the call removal with a few seconds delay. The confirmation ringtone associated with the**Output activation**on the caller ID causes the call to be dropped with a delay of a few seconds. If the call is rejected immediately, the output activation will not be performed.
 - **Tones**:Select the country where the communicator will be installed; the selected country will appropriately establish a series of parameters for the correct operation of the simulated telephone line.
 - **Roaming enabled**:allows the communicator to connect to another mobile service provider when the communicator's SIM is not available.
- Additional charges may apply.

Priorities

This option allows you to configure the priority of the communicator's actions.

- **Line/Marker Priority**:defines the priority of the communicator's actions (see**Dialing Event Priority**) and LI (messages transmitted by devices connected to the terminals**LI**, such as an anti-theft alarm panel).

Factory settings:**High score, low LI**.

-**Dialing Event Priority**:Sets the priority of the communicator actions described below.

- **Digital Calls**:Sending Contact ID or SIA messages from the communicator to PSTN receivers via the cellular channel.
- **Push Application**:Sending notifications from the communicator to the application.
- **Ring**:Sending confirmation tone for communicator output activation.
- **Rx**:Sending Contact ID or SIA messages from the communicator to PSTN receivers via the cellular or Ethernet channel.
- **SMS**:Sending SMS messages from the communicator through the cellular channel.
- **Voice Calls**:Sending voice messages from the communicator through the cellular channel.

Factory settings:**1:Ring; 2:Digital Calls; 3:Voice Calls; 4:SMS; 5:Rx; 6:Push Application**.

Generic

This section allows you to configure the volume of the communicator's speaker and microphone.

- **Speaker Volume**:allows you to set the volume of the communicator speaker: modify this option if the panel connected to the terminals**LI**The communicator cannot decode DTMF commands.
- **Microphone Volume**:Allows you to set the volume of the communicator microphone: modify this option if the user cannot understand the voice messages sent by the panel connected to the terminals**LI**of the communicator or by the communicator himself.

- *High microphone volume may distort DTMF tones from devices connected to the terminals. **LI**, and make them incomprehensible.*

- **Enable antenna clipping detection:** If enabled, the event **Antenna failure** It is triggered when the antenna is absent or shorted.
- **Enable battery detection:** If enabled, the event **Battery failure** It is triggered when battery faults are detected.
- **SIM phone number:** Enter the phone number of the SIM card into the communicator (up to 16 digits). **Voice and SMS over LTE:** If enabled, the communicator uses the LTE network for Voice and SMS communications. If disabled, the communicator uses the 2G or 3G networks for Voice and SMS communications. Factory setting: Disabled.

- *The quality of voice communications over LTE is better than over 2G or 3G. If the cellular service provider of the SIM card supports the voice over LTE standard, in the area where you have installed the communicator, enable the option **Voice and SMS over LTE**.*

- *If you have problems with Voice and SMS over LTE, load the configuration file to support Voice and SMS over LTE, as detailed in "USB Memory Operations" on page 84.*

Setting the automatic clock

The options in this section allow automatic synchronization of the communicator clock.

- **Automatic SMS:** If enabled, the communicator updates the system date and time by sending an SMS to the number specified in the option **SIM phone number**. Factory setting: Enabled. **Setting the clock by IP:** If enabled, the communicator obtains the date and time from the IP receiver 1, when it is configured and connected. Factory setting: Enabled.

- *To ensure compliance with EN 50136-2, the options must be enabled **Automatic SMS** and **Setting the clock by IP**.*

Prepaid card balance

- *At the discretion of the service provider, the prepaid SIM card balance checking service may be suspended.*

This section allows you to configure the system to periodically send an SMS containing the prepaid card balance information provided by the service provider to the first number in the phone book. Program the following options to receive a correct request for the prepaid card balance, depending on the corresponding service provider.

- *Please check with your SIM card provider for available balance request methods and fees.*

- **Type of query:** Select the type of query you want (**none**, **SMS**, **Call**, **Service command**).

- **Query number:** phone number to call or to which you can send an SMS to request information about your credit balance.

- **Balance message:** string used in SMS message to request balance using network commands. **Consultation interval:**
- Enter the interval within which the periodic SMS message with balance information will be sent (if managed by the operator). The interval consists of the following values:
 - **Days**, next send day: Select to send the next periodic SMS message. The value range is from 0 to 364;
 - **Hours**, next send time: Select to send the next periodic SMS message. The value range is from 0 to 23;

SIM expiration

- **SIM expiration message:** allows you to send an SMS message (programmable by the user) with the expiration data to the first number in the phone book.

- **SIM expiration date:** Once the expiration date is scheduled, the message is sent 30, 15, 7, 6, 5, 4, 3, 2, and 1 days before the corresponding expiration date. Click **Now** to set the PC time.
- *The SMS message is sent once every scheduled day; if the sending fails, no further attempts are made.*

Protocol Configuration

- **Handshake Repetition:** Set the number of handshakes generated by the communicator and sent to the panel connected to the terminals **LI**. Range: 1 to 4.
 - **Communication protocol:** select protocol: **Contact ID** either **SIA**.
- *Depending on this setting, the communicator will decode CID or SIA events from the panel connected to the LI line; The configuration must be the same for all numbers managed by the communicator.
The installer must verify that the mobile service provider works reliably with Contact ID on the cellular network, due to transmission quality issues.*

Network Configuration

The page **Network Configuration** allows you to configure the communicator to communicate via the cellular network or via Ethernet, with the console or the application, as indicated below.

- **Device ID:** Enter the serial number of the communicator found on the electronic board.

Cellular Data

The options in the section **Cellular Data** allow you to configure the communicator for communication via the cellular network.

To establish cellular communication, the user must specify an APN, optionally a username and password, provided by the network operator, as follows.

- **Remote Access:** Check this box to enable remote scheduling.
- **APN Remote Access:** Access point name, up to 32 characters. It is usually provided by the cellular network operator.
- **Remote Access Username:** Some operators require user authentication; enter the username in this field.
- **Remote Access Password:** enter the password in this field.

- See *"Starting a remote session" on page 40.*

Ethernet

The options in the section **Ethernet** allow you to configure the communicator for communication via Ethernet, as follows.

- **Obtain an IP address automatically:** If this option is ENABLED, the server or router to which the communicator connects provides the information necessary to connect to the subnet of which it is part: **IP Address, Subnet Mask, Default Gateway, DNS server address.**
If this option is disabled, the connection options must be set manually as described in the following sections. Factory setting: Enabled.
- **IP Address:** Enter the IP address¹ to be assigned to the communicator: the network administrator will provide this information. Factory setting: 192.168.0.101

- *This option is blocked if the option is enabled. **Obtain an IP address automatically.***

- **Subnet Mask:** Enter the subnet mask² For the local subnet: Your network administrator will provide this information. Factory setting: 255.255.255.0.

- *This option is blocked if the option is enabled. **Obtain an IP address automatically.***

-
1. One **Internet Protocol (IP) address** is a numerical label that uniquely identifies a device (host) connected to a computer network that uses the Internet Protocol as a communication protocol. An IP address basically performs two main functions: it identifies a device on the network and, consequently, provides the route for it to reach another device on the network.
 2. The **subnet mask** indicates the method used to define the given range for a host within an IP subnet, to reduce network traffic and help find and reach a given host with a relevant subnet IP address.
-

- **Default Gateway:** Enter the IP address of the local gateway which the communicator will use to connect to a PC outside the LAN (Ethernet): the network administrator will provide this information. Factory setting: 192.168.0.1.
- *This option is blocked if the option is enabled. **Obtain an IP address automatically.***
- **DNS Server Address:** Enter the DNS server IP address - your network administrator will provide this information. Factory setting: 8.8.8.8 (google).
- *This option is blocked if the option is enabled. **Obtain an IP address automatically.***
- **Ethernet speed configuration:** Select the Ethernet interface speed for the communicator.
 - Automatic (factory setting);
 - 10 Mbps, Half Duplex;
 - 100 Mbps, Half Duplex;
 - 10 Mbps, Full Duplex;
 - 100 Mbps, Full Duplex.

Application Server

The options in the section **Application Server** allow you to configure the communicator to communicate with the application via the cellular or Ethernet channel, as indicated below.

- **IP address:** This is the factory-configured IP address of the application server. Change this IP address if necessary. It can be a numeric or literal value.
- **Ethernet Remote Port:** This is the listening port used by the application server over the Ethernet channel. Change this port only if required by the application server. In any case, it must be different from the remote ports of the receivers and the server. **Cellular Remote Port.** Factory setting: 1303.
- **Cellular Remote Port:** This is the listening port used by the application server over the cellular channel. Change this port only if required by the application server. In any case, it must be different from the remote ports of the receivers and the **Ethernet Remote Port.** Factory setting: 1304.
- **Eth/Cellular Local Outgoing Port:** This is the outbound port used by the communicator to communicate with the application server. Zero means that the communicator will set this value automatically. Enter a fixed value if local network rules block any outbound port. If you enter a non-zero value, it must be different from the default value. **Eth/Cellular Local Outgoing Port** established for **DLS.** Factory setting: 0.
- **Channel Priority:** Select the channel used by the communicator to communicate with the application server.
- **Cellular Only:** The communicator uses the cellular channel for communication with the application server.
- **Ethernet Only:** The communicator uses the Ethernet channel for communication with the application server.
- **Ethernet Primary, Cellular Backup:** The communicator uses the Ethernet channel for communication with the application server, and the cellular channel when Ethernet communication is absent.

Factory settings: **Cellular Only.**

- **All CID Events to App Server:** If enabled, all CID events from the panel connected to the communicator are forwarded to the app. Factory setting: disabled.
- **Ethernet Init encryption key:** This is the encryption key used for the first communication with the application server, on the Ethernet channel. Change this encryption key only if required by the application server. Factory setting: 12345678123456781234567812345678.
- **Cellular Init encryption key:** This is the encryption key used in the first communication made with the application server, on the cellular channel. Change this encryption key only if required by the application server. Factory setting: 12345678123456781234567812345678.

*1. **Onegateway** is a network device whose primary function is to transport network data packets outside a local area network (LAN); typically the hardware device that performs this task is a router.*

DLS

Section options **DLS** allow you to configure the communicator for communication with the console, as indicated below.

- **Ethernet Local Incoming Port:** Enter the input port on the communicator for the console that connects as a client. Factory setting: 3062.
- **Eth/Cellular Local Outgoing Port:** This is the outgoing port used by the communicator to communicate with the console. Zero means that the communicator will set this value automatically. Enter a fixed value if local network rules block any outgoing ports. If you enter a non-zero value, it must be different from the default value. **Eth/Cellular Local Outgoing Port** established for the **App Server**. Factory setting: 0.
- **Outgoing connection. Return to cellular:** If this option is enabled, the communicator will attempt to connect via the cellular network if the Ethernet connection fails. Factory setting: disabled.

Inputs/Outputs

This page is used to configure input/output modes, output trigger events, standby polarity (NC or NO), reserved outputs, and remote trigger SMS message strings for reserved outputs.

- **Template:**allows you to configure the communicator's inputs and outputs to manage control panels or devices, through the application**ConnectAlarm**(see "Application output type"on page 59 and "App Type Input" (on page 61). This menu has a list of presets suitable for managing specific control panels.
- **Personalized:**allows you to configure all input and output options as desired.
- **PowerSeries:**Input and output options are configured to manage the control panel**PowerSeries**.
- **PowerNeo:**Input and output options are configured to manage the control panel**PowerNeo**.
- **Kyo32G:**Input and output options are configured to manage the control panel**Kyo32G**.
- **Kyo320:**Input and output options are configured to manage the control panel**Kyo320**. The control panel can be connected to the communicator as shown in figure 7.

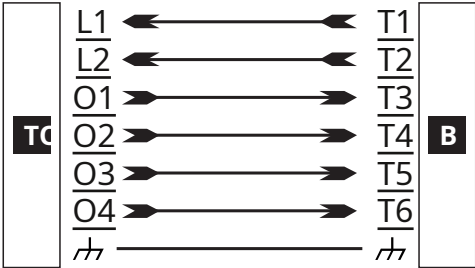


Figure 7 – Wiring diagram example for managing the control panel**Kyo320**through the application**ConnectAlarm**. **Note:**During installation, the control panel terminals may be different.

Call	Description
TC	Control Panel.
B	Communicator.
L1	Input that arms the control panel when connected to negative.
L2	Input that disarms the control panel when connected to negative.
O1	Floating output when control panel is disarmed, connected to negative when control panel is armed.
O2	Output connected to negative when the control panel is in alarm state.
O3	Output connected to negative when the control panel is in sabotage state.
O4	Output connected to negative when the control panel is in fault state.
	Negative terminal.

- **Input/Output:**Double click on the input/output number to view the schedules.
- **Label:**Enter an alphanumeric string of up to 16 characters.
- **Types of inputs/outputs:**In this column you can program terminals T1, T2, T3, T4, T5 and T6 for the following modes:
 - **Entrance**, select this mode to configure the terminal as an input line;
 - **Exit**, select this mode to configure the terminal as an open collector output;
- **Polarity:**This option is used to program the input/output standby state:
 - **Normally closed:**The terminal is connected to ground (negative) when the input/output is at rest;
 - **Normally open:**The terminal is floating when the input/output is at rest.

- **Exit:**If set as output, double click[+]to display the column relating to the event to be scheduled for the output. The check mark indicates that the corresponding output will be activated when the event occurs. Click the boxes to select or clear them.
- *An output returns to rest when all the causes that activated it are resolved, except the **FTC failure**, in which case it returns to standby after a programmed delay (ON time).*
- *Scheduling events for an output means that some checkboxes related to the output will be disabled.*
- **Interconnection panel failure:**If selected, the output is activated when the panel is absent.
- **Detecting jams:**If selected, the output is activated if the device is subjected to radio interference (factory setting: terminalT6).
- **Antenna failure:**If selected, the output is activated if the antenna is absent or has a limited function (only with ANTLTE-02).
- **Sabotage:**If selected, the output is activated when a tamper is detected: cover opening, wall removal (factory setting: terminalT4).
- **RTC fault:**If selected, the output is activated if the external telephone line, connected to the terminalsYOU fault (factory setting: terminalT1).
- **GSM fault:**If selected, the output is activated if cellular network coverage fails (factory setting: terminalT5).
- **Without cellular network:**If selected, the output is activated when problems occur with the cellular network connection (factory setting: terminalT2).
- **IP Receiver Failure:**If selected, the output is activated when a problem occurs with the IP receiver.
- **FTC Failure:**If selected, the output is activated when a phone action is NOT executed successfully and returns to idle when the most recent phone action is executed successfully.
- **Ethernet DoS Detected Fault:**If selected, the communicator activates the output when it detects a DoS attack on the Ethernet channel.
- **Ethernet Network Fault:**If selected, the communicator activates the output when it does NOT detect the LAN network.
- **Power failure:**If selected, the output is activated when a power problem is detected.
- **Booked departure:**If selected, the output can be triggered by caller ID or SMS message.
- *If the option is enabled **Departure reserved**, all other options are disabled.*
- **Chain control:**In this option, enter the string (maximum 16 alphanumeric characters) that will be sent by SMS when you want to activate or deactivate the corresponding output remotely. This function is available even if Caller ID is not enabled.
- **Activation confirmation:**Select the type of confirmation you want to receive when the output is activated: **none**, **Ring**, **SMS**(NOT available when the option **Chain control** left blank) and **Doorbell + SMS**. If the output is activated via SMS, activation confirmation will be sent via SMS (see table below).

PROGRAMMING			EFFECTS	
Blacklist enabled	List white	Confirmation activation	Call forwarded (only if the communicator is set to the cellular channel)	Stamp of confirmation
Disabled	Disabled	None	YEAH	NO
Disabled	Disabled	Ring	NO	YEAH
Disabled	Enabled	None	YEAH	NO
Disabled	Enabled	Ring	NO	YEAH
Enabled	Disabled	None	NO	NO
Enabled	Disabled	Ring	NO	YEAH
Enabled	Enabled	None	YEAH	NO
Enabled	Enabled	Ring	NO	YEAH

- **Guy:** Normally when outputs are activated, they remain active until a deactivation command is received (**Bistable**), once the output is received it will return to its idle state. If you want the output to return to the idle state automatically after a certain period of time, select the option **Monostable** and set the time in the adjacent option **Monostable ON time**.
- **Monostable ON time:** Enter a value in seconds (1 to 86400 in 1 second steps) to indicate the length of time the output, if monostable, remains active before returning to the idle state.

Entrance

When a terminal T1, T2, T3, T4, T5 or T6 is configured as an input, it can be programmed as **Normally open** either **Normally closed** (consult **Polarity**). The input is monitored every 30 ms and if its state remains stable for more than 300 ms, the **Entry 1 Event** (for the terminal T1).

The following options are available for scheduling entries:

- **Interconnection present:** If enabled, deactivating the input generates the event **Interconnection panel failure** and the activation of the input generates the event **Restoration of the interconnection panel**.
- **Bookmark Lock:** If enabled, activating the input locks the communicator and clears the queue.
- **Force simulated online communication:** If enabled, the input activation switches from PSTN to cellular channel.

Application output type

Allows you to activate or deactivate the communicator outputs through the application **ConnectAlarm**.

Use this menu to configure how the application turns outputs on or off.

- **Not used:** the app cannot turn the output on or off.
- **Arm/Disarm:** The buttons **ARM**  and **DISARM**  can be used to turn the output on and off.

The output is configured as **Bistable** and must be connected to the input of a control panel that arms the control panel when activated, and disarms it when idle:

A communicator input is required to receive the arming status of the control panel: see **Arm / Disarm. Status**.

- **Partial Arm 1:** The exit  is used to activate the output. The button  will have the same label that you set for button.

The output is configured as **Monostable** and must be connected to the input of a control panel that performs a partial arming every time it is activated.

A communicator input is required to receive the partial arm status: see **Partial Arm / Dis. St 1**.

- **Partial Arm 2:** similar to **Partial Arm 1** but for partial assembly 2.
- **Partial Arm 3:** similar to **Partial Arm 1** but for partial assembly 3.
- **Partial Arm 4:** similar to **Partial Arm 1** but for partial assembly 4.

- **Assemble only:** the button **ARM**  It is used to activate the output.

The output is configured as **Monostable** and must be connected to the input of a control panel that arms it every time it is activated.

A communicator input is required to receive the arming status of the control panel: see **Arm / Disarm. Status**.

- **Disarm Only:** the button **DISARM**  It is used to activate the output.

The output is configured as **Monostable** and must be connected to the input of a control panel that disarms it every time it is activated.

A communicator input is required to receive the arming status of the control panel: see **Arm / Disarm. Status**.

- **Automation Btn.:**If there is no input configured as**Automation input**, with the same label as the corresponding output, the application will have buttons to activate or deactivate the output as in the following example, on the page **Exit**.



Element	Description
	Exit icon.
PGM 3	Departure terminal.
Exit 3	Output label that is set in the option Label .

The output is configured as**Bistable**and must be wired to turn the required device on or off: the output is activated when  ; the output returns to the standby state when the button is pressed  .

-*The status of the output is unknown.*

If you want to know the status of the outputs, configure a terminal as**Automation input**and assign it the same label as the output you want to control. In this case the application will have a button to activate or deactivate the output as in the following example, on the page**Exit**.



Element	Description
	Exit icon.
PGM 1	Departure terminal.
Exit 1	Output label and input label set in option Label .
Off	Output status.

The output is activated when the button is clicked  : the button changes to  , the status changes to**On**, and the exit icon changes to  .

The output returns to idle state when the button is clicked  : the button changes to  , the status changes to**Off**, and the exit icon changes to  .

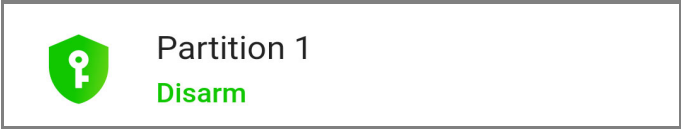
App Type Input

Allows you to display the input status of the communicator in the application**ConnectAlarm**.

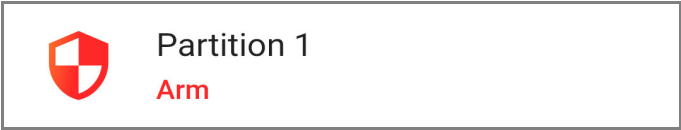
This menu is used to configure how the application displays the input status.

- **Not used:**the app does not show the input status.
- **Arm / Disarm. Status:**This input type can be used to display the arming status of the control panel in the application.

When the input is at rest, and there is no active input,**partial arm/disarm status**, the application displays the following information:



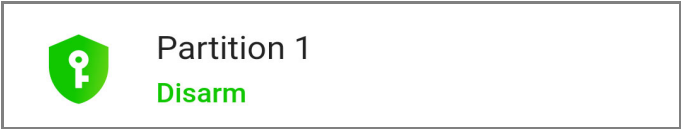
When the input is active, the application displays the following information:



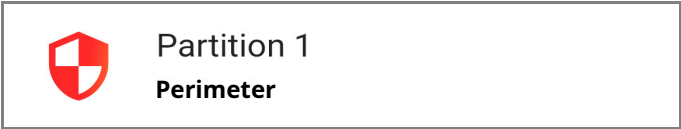
Connect this type of input to the control panel output that signals the armed status.

- **Partial Arm / Dis. St 1:**This input type can be used to display the partial arming status of the control panel in the application.

When the input is at rest, and there is no active input,**partial arm/disarm status**, and**armed/disarmed status**, the application displays the following information:



When the input is active, the application displays the following information:

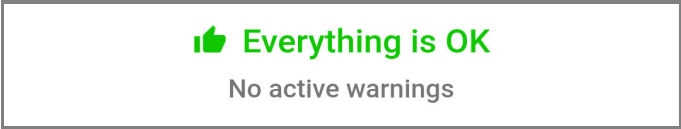


In the example above,**Perimeter**is the input label set in the option**Label**.

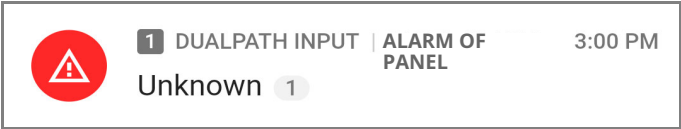
Connect this type of input to the control panel output that signals the partial arm status.

- **Partial Arm / Dis. St 2:**similar to**Partial Arm / Dis. St 1**but for the partial armed state 2
- **Partial Arm / Dis. St 3:**similar to**Partial Arm / Dis. St 1**but for the partial armed state 3.
- **Partial Arm / Dis. St 4:**similar to**Partial Arm / Dis. St 1**but for the partial armed state 4.
- **Alarm Status:**This input type can be used to display the alarm status of the control panel.

When the input is at rest, and there is no active input, **state of sabotage** and **fault state**, the application displays the following information:



When the input is active, the application displays the following information:

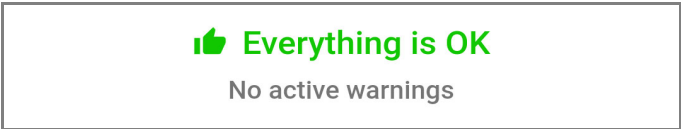


In the example above, **PANEL ALARM** is the input label set in the option **Label**.

Connect this type of input to the control panel output that signals the alarm status.

- **Tamper Status:** This input type can be used to display the tamper status of the control panel.

When the input is at rest, and there is no active input, **state of alarm** and **fault state**, the application displays the following information:



When the input is active, the application displays the following information:

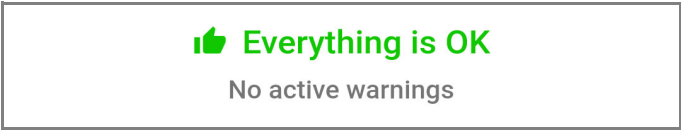


In the example above, **PANEL SABOTAGE** is the input label set in the option **Label**.

Connect this type of input to the control panel output that signals the tamper status.

- **Fault Status:** This input type can be used to display the fault status of the control panel in the application.

When the input is at rest, and there is no active input, **state of alarm** and **state of sabotage**, the application displays the following information:



When the input is active, the application displays the following information:



In the example above, **PANEL FAILURE** is the input label set in the option **Label**.

Connect this type of input to the control panel output that signals the fault status.

- **Automation input:**This input can be used to monitor the status of a device.

If there is no output configured as**Automation Btn.**, with the same label as the corresponding entry, the application will display the entry status, on the page**Exit**, as shown in the following example:



Element	Description
	Input icon when the input is idle.
PGM 4	Entry terminal.
Entry 4	Input label set to option Label
Off	Input state when the input is idle

When the input is active, the state is**On**and the input icon is  .

Connect this input type to monitor the status of the required device.

This page configures the events transmitted by the communicator.

Communicator Options

Call options

- **Call all numbers:**Select this option to call all numbers scheduled for a given event.

You can select:**Voice Calls,CID: About GSM,Voice Calls and CID: About GSM**and**Disabled**. If this option is not selected, the communicator ends the call cycle when one of the calls is executed successfully. **Call**

- **confirmation:**Select this option to have the dialer wait for the remote user to confirm receipt of the voice message, otherwise the dialer will attempt to send the voice message again; the user

Remote can send confirmation by pressing-on your phone (touch-tone phones only).

- *While listening to the voice message, pressing- On the phone keypad, both the current call and the any call on hold.*

*In some cases the dialer may incorrectly interpret the response from answering machines, courtesy messages from the mobile service operator, etc., so it is recommended to enable the option**Call confirmation**.*

- **Call again:**This option is used to enter the number of attempts to make (up to a maximum of 8 times) if the call is unsuccessful.
- **Repetitions:**Enter the number of times the voice message will be repeated (up to 8 times) when the called number answers.
- **Voice message header:**Select the voice message that the communicator will play at the beginning of each voice call.

Periodic voice message and SMS

- **Sending call/SMS interval:**set the interval (**Days**and**Hours**) between two events of**Periodic call/SMS**.

Range: 0 to 365 days and 0 to 23 hours.

- **First periodic call/SMS:**Select the date and time for sending the first event.**Periodic call/SMS**.

The button**24 hr/12 hr**allows you to select the time display format: 12 hours or 24 hours. The button**Now**adjusts the current time of the PC.

- *To ensure compliance with EN 50136-2, the time of the**First periodic call/SMS sending**has to set to 1 day, and this function cannot be modified. Factory setting: 1 day.*

*To configure the options of the**First periodic call/SMS sending**, enter the**SIM phone number**and enable the options of**Automatic clock setting**on the page**Options**.*

- **Ringtone only for recurring events:**If you enable this option, the system sends a 5-second ringtone instead of a periodic voice message.

Periodic call

- **Periodic test transmission interval:**set the interval (**Days**and**Hours**) between two events of **Periodic test transmission**. Range: 0 to 365 days and 0 to 23 hours.
- **First Periodic Test Transmission Send:**Set the date and time of the first event**Periodic test transmission**.

The button**24 hr/12 hr**allows you to select the time display format: 12 hours or 24 hours. The button**Now**adjusts the current time of the PC.

SIA

-**Date and time in SIA packets:**If enabled, the SIA packet will include the date and time.

Tickets and events

SMS / Push Notifications

This table specifies, for each event managed by the communicator, the SMS message that will be sent to the numbers specified in the column**SMS to phone number**, already the application.

- **Event:**This column lists the events for which you will send an SMS message: see "Internal Events" on page 28 for a description of the events.
- **Telephone numbers:**select the phone numbers to which you will send an SMS.
Double click on [+] to expand the column: a table will be displayed to select up to 8 numbers from the **Phonebook**.
Check this checkbox to enable or disable sending a message to the corresponding phone number, for required events.
Double-click [-] to collapse the column: a list of the selected phone numbers will be displayed. **Push Notification:**If enabled, the event sends the message set in the option to the application**SMS / Push Notification Text**.
- **SMS / Push Notification Text:**Enter the text to be sent when the event occurs (up to 70 characters).

Voice Calls

This table specifies, for each event managed by the communicator, the SMS message that will be sent to the numbers specified in the column**Telephone numbers**.

- **Telephone numbers:**Select the phone numbers to which the event will send a voice message.
Double click on [+] to expand the column: a table will be displayed to select up to 8 numbers from the **Phonebook**.
Check this checkbox to enable or disable sending a message to the corresponding phone number, for required events.
Double-click [-] to collapse the column: a list of the selected phone numbers will be displayed. **Voice messages:**Select the voice messages to be sent in response to the event: You can select up to three voice messages per event (**First message,Second messageandThird message**); click on[...]to navigate the list of messages; select a pre-recorded message (see**Voice messages**) or record a new one, or open a file**wav**on the PC. The column**Header**displays the selected message in**Call options> Voice message header**.

Calls to the central station

This table specifies, for each event managed by the communicator, the digital messages that will be sent to the numbers specified in the column**Telephone numbers**.

The communicator sends Contact ID messages to the app when the options**Customer code**and**Contact ID Identifier** are different from zero, and the option**Event Enabled**It is different from**Disabled**.

- **Event:**This column lists the events for which a digital message will be sent.
 - **Telephone numbers:**Select the phone numbers to which the event will send the digital message, once you have selected the**Channel type,CID: About GSM**.
Double-click [+] to expand the column: a table will be displayed to specify which numbers in the **Phonebook**They will be used to send digital messages (up to 8 numbers can be set).
Check this checkbox to enable or disable sending a message to the corresponding phone number, for required events.
Double-click [-] to collapse the column: a list of the selected phone numbers will be displayed.
- *When you select the**Channel type,CID/SIA: over data network**, events are transmitted to the IP receivers indicated on the page**IP Receivers**.*

-**Customer code:**Enter the user code (4 hexadecimal characters).

- You can set a **Customer code** different for each **Entry event**, or a single **Customer code** for everyone other events.

DO NOT use the "A" character for Contact ID.

-**Contact ID Identifier:**Enter the Contact ID that the communicator will send for the event.

- The communicator also sends qualifier 1 when the event occurs and qualifier 3 when the event ends, as provided by the Contact ID protocol.

- The communicator also sends the input number that triggered the event (the zone number): 01 for input 1, 02 for input 2, 03 for input 3, 04 for input 4, 05 for input 5, 06 for input 6.

- **SIA Event Identifier:**Enter the SIA code that the communicator will send when the event occurs. **SIA**
- **Restoration Identifier:**Enter the SIA code that the communicator will send when the event ends.
- **Event enabled:**select **Disabled** to NOT send the event; select **Send activation** To send ONLY the occurrence of the event; select **Send restoration** To send ONLY the event restore; select **Send activation and restore** to send both.
- **Channel Type:**select **CID: About GSM** To send the event with the Contact ID protocol using a voice call over a cellular channel; select **CID/SIA: over data network** to send the event with the Contact ID or SIA protocol via cellular or Ethernet channel (the protocol will be the one selected in the option **Communication protocol** on the page **Options**).

- *Contact ID messages may NOT be understood by PSTN line recipients due to distortion of the signals. 2G and 3G cellular networks. In this case, on 2G and 3G communicators, select **CID/SIA: over data network**. On LTE communicators, enable the option **Voice and SMS over LTE**. For more information, see "Generic" on page 51.*

CID/SIA converter

If the communicator detects that the panel connected to the terminals **LI** is dialing a number from the **Phonebook** with the option **CID/SIA Event Conversion** enabled, will convert the panel's Contact ID or SIA message into a voice or SMS message, as described on this page.

The following tables show how the subgroup options **CID/SIA converter** coincide in the preparation of voice and SMS messages.

1	Tags / Messages	SMS / Push Notifications	Tags / Messages (5)			
2	Header SMS for event	ActivationeitherAdvanced > ActivationeitherRestorationeitherAdvanced > Restoration	Header SMS for area	Partitions > Label	Header of SMS for usereitherHeader of SMS for area	Users > LabeleitherAreas > Label
3	7	16	7	16	7	16
4	My system	Alarm	Partition	Store	Area	Entrance
	My system	End of alarm	Partition	Store	Area	Entrance
	My system	Armando	Partition	Store	User	Brown
	My system	Disarming	Partition	Store	User	Brown

Table 14 –Converting Contact ID and SIA messages to SMS:**1**)option subgroup;**2**)option;**3**)maximum SMS length;**4**)examples;**5**)Contact ID only.

1	Options of the communicator	Voice Calls	Tags / Messages (5)	
2	Header of voice message	ActivationeitherAdvanced > ActivationeitherRestorationeitherAdvanced > Restoration	Partitions > Voicemail	Users > Voicemaileither Zones > Voicemail
3	6 seconds	6 seconds	6 seconds	6 seconds
4	My system	Alarm	Warehouse Partition	Entrance area
	My system	End of alarm	Warehouse Partition	Entrance area
	My system	Armando	Warehouse Partition	User Brown
	My system	Disarming	Warehouse Partition	User Brown

Table 15 –Converting Contact ID and SIA messages to voice messages:**1**)option subgroup;**2**)option;**3**)maximum length of voice message;**4**)examples;**5**)Contact ID only.

There are two configuration modes:

- Basic settings allow you to convert digital messages into voice or SMS messages by setting a small number of options: messages will only signal trigger and restore events.
- Advanced settings allow you to convert digital message details such as the event description and, for the Contact ID protocol, the partition, zone and user involved.

SMS / Push NotificationsandVoice Calls

Basic settings allow you to define general messages for event categories.**Alarms,Sabotage,Openings and closingsandSystem problems**, as described below.

- **Category:**displays the event categories. The settings set for one category will be automatically copied to all event categories in the group**Advanced**.

-If different settings are required for each event, the following options should be empty and the required settings will be made in the group**Advanced**.

- **Telephone numbers:**select the numbers to which the event will send a message.
Double click on [+] to expand the column: a table will be displayed to select up to 8 numbers from the **Phonebook**.
Check this checkbox to enable or disable sending a message to the corresponding phone number, for required events.
Double-click [-] to collapse the column: a list of the selected phone numbers will be displayed. **Automatic notification:**If enabled, the event sends the text message set in the options to the application **Activation and Restoration**.

Header:displays the selected voice message in **Communicator Options>Voice message header**. The communicator will play this message at the start of each voice call. It is usually used to identify the system.

- *This option is only available in the group **Voice calls**.*

- **Activation:**configures the message that the communicator sends when an event in that category occurs.
- **Restoration:**configures the message that the communicator sends when an event in that category ends.

Advanced

This group of options allows the configuration of different options for each event, over those explained in the basic configuration, as described below.

- **Event:**shows the events that the communicator can convert.
 - **Contact ID Identifier:**Displays the default Contact ID code for the event. This option cannot be modified.
- *This option is only considered if selected **Contact ID as Communication protocol** on the page **Options**.*
- *If your Contact ID codes differ from the default, you can set up to 10 custom event codes for the events in the group. **Personalized** which is located at the bottom of the event group list.*
- **SIA Event Identifier:**Enter the SIA event code that is required to be converted for event verification.
 - **SIA Restoration Identifier:**Enter the SIA event code that is required to be converted for event restoration.
- *The options **SIA Event Identifier** and **SIA restoration identifier** have default values that require verification. Enter 00 if conversion is not required.*
- *The options **SIA Event Identifier** and **SIA restoration identifier** are only considered if selected **SIA as Communication protocol** on the page **Options**.*

Tags / Messages

The Contact ID protocol sends information about users, zones, and event partitions.

The options in this group allow you to assign each user, zone and partition number an SMS message or a voice message used for message creation during conversion.

- *Up to 128 user/zone/partition numbers can be converted in total.*
- *The SIA protocol also sends information about users, zones and partitions but they are NOT converted by it. communicator. If selected **SIA as Communication protocol** in the group **Options**, You can ONLY set the option **SMS header for event**.*

- **SMS header for event:**Enter the text you want at the beginning of each SMS. It is usually used to identify the system.
Valid entries: up to 7 characters. Default: empty.
- **SMS header for user:**Enter the text you want before the message set for user identification.

Valid entries: up to 7 characters.
Default: one comma.
- **SMS header for area:**Enter the text you want before the message set for the zone identification.

Valid entries: up to 7 characters.
Default: one comma.
- **SMS header for area:**Enter the text you want before the message set for partition identification.

Valid entries: up to 7 characters.
Default: one comma.

Users/Zones/Partitions

- **Send only if user is defined/Send only if zone is defined/Send only if area is defined:**If disabled (default), a digital message is converted even if its user/zone/partition number is NOT present in the conversion tables. In this case the user/zone/partition information will be absent. If enabled, digital messages without user/zone/partition information in the conversion tables will NOT be converted.
- **Add:**Select this button to add a user/zone/partition number you want to convert. **User**
- **number/Zone number/Partition number:**Enter the number you want to convert. Valid entries: 0 to 999; 65535 to disable.
Default: 65535.
- **Label:**Enter a valid text for the user/zone/partition ID. Valid entries: up to 16 characters.
Default: empty.
- **Voice message:**Select a valid voice message for user/zone/partition ID. Default: **(none)**.
- : Select this button to delete the corresponding row.

IP Receiver

This page sets the options relating to the connection of the communicator to compatible Sur-Gard system IP receivers.

- *Due to possible delays in cellular data network transmission, depending on the activity of the network operator, It is recommended to schedule as many call attempts as possible into the panel, as well as configure a backup phone number that will send alarms to a PSTN receiver.*

- *The communicator does NOT support the command **shutdown** of the Sur-Gard receivers.*

Receiver Options

- **Receiver Channel Priority:** Select the channel and priority that the communicator uses to communicate with receivers. Factory settings: **Cellular Only**.
- **Fibro Account # (Cellular):** Enter the account number for the Fibro protocol over the cellular channel: When transmitting events to IP receivers, Contact ID and SIA are encapsulated in the Fibro protocol so this protocol requires its own account number to identify the account transmitting the events. Please contact the central station for more details. Factory setting: 0000FFFFFF.

- *A different account number must be assigned to each communicator that transmits events to a specific receiver.*

- **Fibro Account # (Ethernet):** similar to **Fibro Account # (Cellular)** but for Ethernet channel. Please contact the central station for details. Factory setting: 0000FFFFFF. **DNIS:** The communicator transmits the DNIS code inside the Fibro packet to allow the receiver to identify the device (hexadecimal numbers from 00000 to FFFFF).
- **Enable encryption:** If enabled, the communicator encrypts all communications with IP receivers to increase the security of data transmissions.
- **Keep ACK in memory timeout:** Set the time to keep an ACK (acknowledgement of receipt) from the IP receiver in memory. If within this time period the communicator tries again to transmit a message previously sent to the IP receiver and acknowledged by it (ACK), the communicator confirms receipt directly to the control panel by generating the kiss-off signal, without sending the message to the IP receiver again. If the value is set to 0 (factory default), the received ACKs are not kept in memory. A value greater than 0 is required when the control panel tries to transmit each call only once and fails to receive the ACK from the IP receiver in time. Range: 0 to 15 minutes. Factory setting: 0.

Receiver 1

- **Functionality mode:** select **Major** (Receiver 1 is enabled) or **Not used** (Receiver 1 is disabled, programming of receiver 2 will be ignored, CID/SIA event transmission is disabled).
- **IP Address:** Enter the IP address of the receiver. The address can be entered in numeric format (e.g. 192.168.0.101) or in host and domain format (Fully Qualified Domain Name, e.g. host_name.domain_name.com). **Remote Port:** Enter the UDP port that Receiver 1 is listening on. Range: 1 to 65535. Factory setting: 3061.
- **Local receiving port 1:** The communicator uses a different UDP port for each receiver. Range: 0 to 65535. If the local port is 0, the communicator uses a random port number in the range of 1-65535. Factory setting: 3060 (3065 for receiver 2).
- **APN (Cellular):** Enter the name from the Access Point. It is usually provided by the cellular network operator.

- *Please make sure the APN is correct to access the cellular data network, otherwise certain functions may be limited (contact your telephone operator for details).*

- **APN User Name (Cellular):**Some operators require communication authentication; enter the username in this field if necessary.
- **APN Password (Cellular):**Some operators require communication authentication; enter the password in this field if necessary.
- **Supervision Enabled:**If enabled, the communicator monitors communications with the receiver.

- *Supervision messages are not sent during voice calls (on the cellular channel).*

- **Supervision Time (Cellular):**Set the monitoring time for the cellular channel. Range: 60 to 65535 sec, in 1 sec steps.

- *To ensure compliance with EN 50136-2, monitoring must be enabled and the **Supervision time** should not exceed 3 minutes.*

- **Supervision Time (Ethernet):**similar to **Supervision Time (Cellular)** but for the Ethernet channel.

Receiver 2

The options of the **Receiver 2** They are the same as those of the **Receiver 1**, except for the differences described below.

- *If the **Mode of operation** for receiver 1 is in **Not used**, You cannot configure options for receiver 2: transmission of CID/SIA events to the central station will be disabled.*

- **Functionality mode:**if the **Functionality mode** for receiver 1 is in **Major**, receiver 2 can be in:

- **Not used**, Receiver 2 is disabled, the communicator sends CID/SIA messages only to Receiver 1 (this mode is called "single mode");
- **Back**, the communicator sends CID/SIA messages to receiver 1 and, if receiver 1 is not working or inaccessible, it sends the messages to receiver 2 (this mode is called "Primary + Backup");
- **Redundant**, the communicator sends CID/SIA messages simultaneously to receiver 1 and receiver 2, and sends ACK (acknowledgement) to the panel only if it gets acknowledgement from both receivers (this mode is called "Redundant").

Voice messages

This page allows you to record and play back voice messages: see "Tickets and events" on page 65, to learn how to associate messages with events.

Voice messages can be recorded with a microphone connected to the PC, you can load pre-recorded messages from the PC (hard disk, LAN, USB, etc.) or you can import voice messages from another communicator, as described in the section " Import/Export programming/audio" on page 45.

- The console can import all types of audio files in WAVE (.WAV) format.



Button**Reproduce**: Press this button to play a voice message.



Button**Engrave**: Press this button to start recording a new voice message.



Button**Arrest**: Press this button to stop playing or recording the current voice message.



Button**Pause**: Press this button to pause playback or recording of the current voice message.



Button**Eliminate**: Press this button to delete a voice message saved in the communicator.



Button**Open**: Press this button to upload a voice message from a PC resource (hard disk, LAN, etc.).



Button**Keep**: Press this button to save a voice message to a PC resource (hard disk, LAN, etc.).

- While recording your message, a progress bar will indicate the elapsed time.

This page refers to the PSTN line and the PTM (Panel Transmission Monitoring) feature. The PTM feature allows the communicator to resend calls on the cellular channel if communications between the panel and the receiver on the PSTN line fail.

-After 5 minutes of being on the cellular channel, the communicator will start using the PSTN line again to forward panel calls.

The function **PTM** considers that communication has failed in the following cases:

- does not detect the dialing, if the option **Check dialing** is enabled (checks that a phone number is actually dialed);
- does not detect the kiss-off (signal sent by the receiver upon successful completion of a communication)

if the option **PTM for all numbers** is enabled, PTM is executed when the panel dials any phone number; otherwise, only the dialing of numbers that have the option are monitored. **PTM** enabled in the **Phonebook**.

Calls are diverted to the cellular channel when the maximum number of calls is reached. **Max PTM errors before acquisition**.

Main communication route

- **Main communication route:** if you set **PSTN**, the communicator uses the PSTN line as the primary communication channel and switches to cellular channel and Ethernet only when the PSTN line fails or when the PTM function is triggered; if you select **Cellular and Ethernet**, the communicator ONLY uses the cellular and Ethernet channels.

Out of time

- **LE fault waiting time (sec.):** Enter a time (10 to 3600 seconds) during which the telephone line on the terminals **YOU** may be absent before the event occurs **RTC fault**.

*-If a telephone device is connected to the terminals **LI**, the time can increase up to 60 seconds, maximum.*

- **LE Restore Timeout (sec.):** Enter a time (10 to 3600 seconds) during which the telephone line on the terminals **YOU** may be present before the event occurs **RTC fault restoration**.

*-To ensure compliance with EN 50136-2, the option **LE Restore Timeout (sec)** should not be modified.
Factory setting: 10 sec.*

PTM

- **Max PTM errors before acquisition:** The communicator switches to the cellular channel when it detects this number of failed attempts. Range: 1 to 4, 0 disables the option. Factory setting: 0 (disabled)
- **PTM for all numbers:** If enabled, PTM runs when the panel dials any phone number; otherwise, only dialing of numbers that have the option is monitored. **PTM** enabled in the **Phonebook**.

*-The option **Max PTM errors before acquisition** must be non-zero before modifying the option **PTM for all numbers**.*

- **Check dialing:** If enabled, the communicator considers as a failure the pick-up of a call followed by a hang-up without the device connected to the terminals **LI** dial no numbers. Factory setting: disabled.

*-The option **Max PTM errors before acquisition** must be non-zero before modifying the option **Check dialing**.*

Generic

- **Dialing prefix:** When the communicator detects the dialing of a telephone number with the prefix configured in this option, it sends the call via the cellular channel to the telephone number without the prefix indicated in this option even if the PSTN line is available. Factory setting: 9999.

Event memory

The page**Event memory**displays the events recorded by the communicator.

The communicator can store up to 2048 events: when the memory is full, each new event overwrites the oldest event, which is deleted.

Each event indicates the date and time it occurred.

Meaning of symbols in the event memory bar

 Click this icon to load new events the next time the program is run.**Global load**either**Communicate labels**.

 Click this icon to deselect events in the event buffer.

 Click this icon to open a window to save a file.**.XML**of the events loaded on the page **Event memory**.

- *The .XML file can be viewed using Excel or a compatible application.*

 Click this icon to view events related to the criteria indicated in the options**Event Entry** and**Context**.

- **Event Entry:**Select the events you want to view:**All events,Today,Last 7 days,Last 14 days,Last 30 days,Last year**either**Personalized**. Select**Personalized**to set a specific period of time. **Context:**Only events that contain the specified text are displayed.
-

Firmware Update

!Updating firmware from revisions 1.00 and 1.10 to revision 1.20 and higher results in loss of CID/SIA conversion related settings.

- Only level 4 installer, previously enabled by the installer, can run the firmware update.

The page **Firmware Update** updates the communicator firmware, both locally (PC-Link or USB) and remotely (cellular data network).

Click on **Select firmware file** to select the update file.

If the firmware update is not executed successfully, the communicator will continue using the previous version.

The firmware file name is in the format **FWxxyyzz.bin** where:

- **FW** identifies the file as firmware;
 - **xx** is the top revision number;
 - **yy** is the lower revision number;
 - **zz** is the test revision number;
- . **bin** is the extension for a binary file.

State

This page provides information about the communicator as follows.

If you select the page**State**, the console automatically displays the window**Communicate label**to establish communication with the communicator; once the connection is established, the page**State**updated every 5 seconds.

Device information

The box**Device details**displays information that may be requested by technical support.

The box**Network status**Displays cellular network information as follows.

- **GSM Provider Name**:indicates the name of the mobile operator. **GM signal strength**:provides the strength of the cellular signal. **Cellular**:indicates the type of network.
- **Last credit received**:shows the SIM card credit updated to the last request made using the button **Prepaid card balance requestor** as scheduled in the section**Prepaid card balance**from the page **Options**.
- **Date and time of last credit**:Displays the date and time of the last credit update.
- **Prepaid card balance request**:Press this button to display the remaining credit on the communicator's SIM card.

- *This function is only available with local connection (PC-LINK or USB) and if the options have been configured correctly. **Prepaid card balance**on the page**Options**.*

GSM

LED	Normal operation	Malfunction
GSM ready	Green: The cellular network is available and the communicator is working properly.	Red: The communicator is not ready yet.
Radio ON	Green: The radio module is on.	Red: The radio module is off.
SIM OK	Green: SIM is working properly.	Red: There is a problem with the SIM card: SIM missing, SIM expired, PIN enabled on SIM.
Operator OK	Green: The operator is connected.	Red: The operator is offline.
OK signal	Green: The signal strength is higher than the minimum required.	Red: The signal is too low or there is no signal.

Main card

LED	Normal operation	Malfunction
OK food	Green: the main power supply (terminal+V) exceeds the minimum.	Red: the main power supply (terminal+V) is less than 10 V.
Battery OK	Green: The communicator battery (if present) is charged.	Red: The battery voltage is less than 3.4V.
PSTN OK	Green: PSTN line (connected to the terminals) YOU of the communicator) is available.	Red: voltage at the terminals YOU is less than 2.5 V.
Without interference	Green: No interference.	Red: There is interference that prevents the communicator from working (sabotage).
Antenna OK	Green: The ANTLTE-02 antenna is connected and working properly.	Red: ANTLTE-02 antenna is connected but not working properly (cut conductor).

Call

- **Incoming call:**If it is orange, it indicates that the communicator is receiving a call. **Call in progress:**If it is green, it indicates that the communicator is busy on a call.
- **Outgoing call:**If it is orange, it indicates that the communicator is making a call.
- **Radio Initialization:**If it is green, it indicates that the radio is initializing. **Transfer:** If it is green, it indicates that the communicator is in transfer mode.

Application Server

- **Cellular Status:**like the**Cellular Status**of the**Receiver 1**but for the connection status with the application server through the cellular channel.
- **Ethernet Status:**like the**Cellular Status**of the**Receiver 1**but for the connection status with the application server through the Ethernet channel.

Receiver 1

- **Cellular Status:**This LED shows the status of the connection with Receiver 1 via the cellular channel as shown below.
 - grey: no options have been programmed for receiver 1;
 - orange: receiver 1 is connected but has not been initialized;
 - Red: Receiver 1 options have been programmed but the receiver is not initialized, has been disconnected due to a problem, cannot connect, or initialization has failed;
 - Green: Receiver 1 is initialized and connected.
- Ethernet Status:**like the**Cellular Status**but for the connection status with receiver 1 via the Ethernet channel.

Receiver 2

-Like the**Receiver 1**but for receiver 2.

Tickets

Displays the input status: grey, input waiting; green, input active.

Departures

Displays the output status: grey, output standby; green, output active.

Once the options have been configured, they must be downloaded to the corresponding communicator, as follows.

To upload and download, the communicator must be connected to the PC on which the console is installed.

- Uploading and downloading of options can also be performed using a USB memory stick as described in "USB Memory Operations" on page 84.

Connecting the communicator to the PC

You can connect the communicator to a PC:

- locally, via the PC-LINK serial port;
- locally, via the USB serial port;
- locally, via LAN (requires Ethernet interface);
- remotely, via the Internet, through a cellular channel or Ethernet (Ethernet channel requires Ethernet interface);
- Connection via PC-LINK serial port

1. Connect the PC-LINK serial port of the communicator to an RS232 serial port on the PC using the PC-LINK cable (accessory item), as shown in Figure 8.

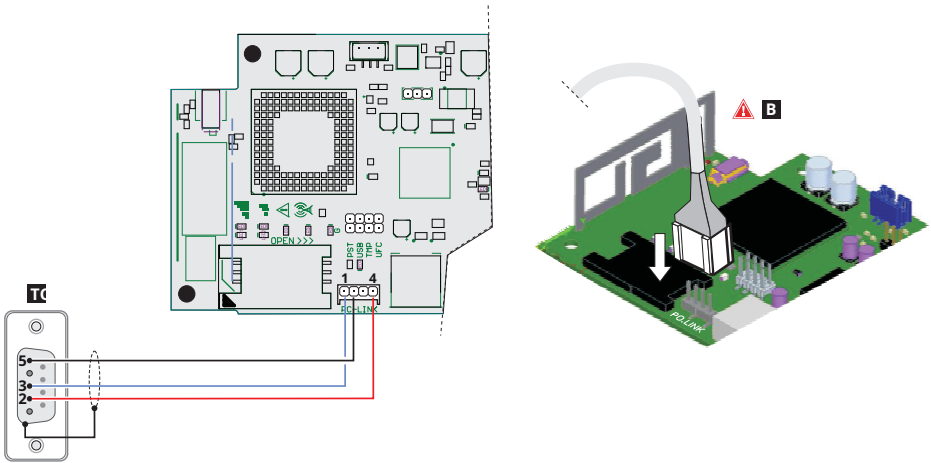


Figure 8 - PC-LINK cable connection: **TO**) RS-232 female connector, solder side **B**) Insert the PC-Link cable correctly.

2. Select the PC serial port used for connection to the communicator, as follows:

- select **Modem Configuration Manager** on the menu **Tools**;
- select the connection **PCLINK - COM1**;
- Select the PC serial port to which the communicator is connected, in the menu **Port**;
- Click on **OK**.
- Connection via USB serial port

*- Make sure the bridge **PSTD** is NOT present, otherwise communicator programming and status viewing will NOT be possible.*

1. Connect the communicator's USB serial port (17 in Figure 2) to a free USB serial port on the PC using the cable **USB-5M** (optional) or equivalent USB cable (USB AA cable).
2. Select the PC serial port used for connection to the communicator, as follows:
 - select **Modem Configuration Manager** on the menu **Tools**;
 - select the connection **PCLINK - COM1**;
 - Select the PC serial port to which the communicator is connected, in the menu **Port**;
 - Click on **OK**.
- Connection via Internet (cellular or Ethernet)

To establish the connection via the Internet (cellular or Ethernet), please note the following.

- If an Ethernet connection is available, the cellular channel is used only to initiate the connection, then communication continues on the Ethernet channel.

1. Select the client account properties (right-click the client account name, then click **Properties**).
2. To the left of the window **Account Name**, select the communicator in the option **Panels/Modules**.
3. If you haven't already done so, enter the **Device ID**¹ from the communicator, and configure the option **EN50136** as needed.
4. Select **Cellular (Remote IP)** on the menu **Connection type** and then click on **Add**.
5. Select **Cellular (Remote IP)** in the communicator option and then enter the communicator's phone number in the field **Panel phone number**, select the **Connection timeout**³ required and click on **Keep**.
6. Open the customer account and select **Global download** , **Global load** , either **Communicate labels** .
7. Select **Cellular (Remote IP)** on the menu **Connection type**, and enter the **Access code** for the **User type** indicated.

*- You can disable the option **Automatically hang up when finished** to keep the connection active until*

*to click the button **Disconnect immediately**  on the menu **Disconnect when finished** .*

8. Click on **OK**: the window is displayed **SMS Message Generator**.
9. Enter the public IP address of the router to which the PC is connected in the option **Public IP address** and the console access port (**DLS port**): ask your network administrator or refer to the router's instructions.
10. If this is your first installation, press **APN Settings** and set the **APN Name**, **User name**, and **Password** for mobile data services (check with your mobile data service operator).

- Make sure to enter the correct APN to access WAP, otherwise some functions may be limited.

11. Prepare an SMS message as indicated in the window **SMS Message Generator** or scan the QR code displayed in the same window, then click **OK**: The console is waiting for an incoming connection.
12. Send the SMS to the communicator number before the time expires. **Connection timeout**.

-
1. Enter the serial number of the communicator located on the electronic card: you will find the same option in the options group **Network Configuration**.
 2. When you press **Keep**, the option **Cellular (Remote IP)** is replaced by the number entered in the **Panel phone number**.
 3. The **Connection timeout** is the time that the communicator waits for a configuration SMS.

After receiving the SMS message, if it is correct, the communicator opens a remote connection with the console via cellular or Ethernet channel: at this point, the options can be uploaded or downloaded, as indicated in the section "How to upload and download the options" on page 80, and the communicator can be managed via the page **State**.

*- On the router connected to the console PC, port forwarding must be configured from the console's external port to port **51004** (CANNOT change internal console port): Ask your network administrator for instructions on your router.*

-Connection via LAN (IP)

To set up the connection via LAN (IP), proceed as described below.

1. Connect the communicator's Ethernet port (31 in Figure 1) to the LAN where the PC with the console is connected, or directly to the PC with the console.
2. Select the client account properties (right-click the client account name, then click **Properties**).
3. To the left of the window **Account Name**, select the communicator in the option **Panels/Modules**.
4. Select **IP** on the menu **Connection type** and then click on **Add**.
5. To the left of the window **Account Name**, select **IP** in the communicator option.
6. Click on **AUTO Discovery**: the table in the section **IP detected** will display the communicators that are on the LAN.
7. Select the required communicator from the table **IP Detected**, the **IP address** of the selected communicator is copied to the file **IP**.
8. Align the option **Port** with the option **Ethernet Local Incoming Port** in **Network Configuration > DLS**, if you have changed the factory setting 3062.
9. Click on **Keep**.

At this point it is possible to upload and download options as indicated in the section "How to upload and download options" on page 80, and manage the communicator through the page **State**.

-Notes for Internet connection (cellular or Ethernet)

To upload and download options via the Internet (cellular or Ethernet):

- The PC on which the console is installed must be connected to the Internet;
- The PC must have a public IP address and public port for incoming connections to the console;
- The firewall and router must allow the connection from the PC's public port to the port **51004** from the console;
- The communicator options must be set as described in "Network Configuration" on page 54;
- A SIM card must be inserted into the communicator and the SIM card credit must be sufficient for cellular data services.

How to upload and download options

Once the connection has been established, you can upload and download options as follows.

- Download is the operation that transfers data from the PC to the communicator. Upload is the operation that transfers data from the communicator to the PC.

1. You can select upload and download options by enabling the tabs  corresponding loading or unloading or Skip to next step to upload or download ALL options (global upload or download):
 - the label () means that the corresponding option will not be loaded or unloaded;
 - the blue label () means that the corresponding option will be loaded;

- the red label () means the corresponding option will be downloaded;

- *Modified options are automatically marked for loading.*

You can enable all group options to be uploaded or unloaded by clicking



or in the icon



You can remove all option labels from all groups by clicking the group icon.



in the toolbar of the

You can remove option labels from all groups by clicking the icon



in the main toolbar-

2. You can click on the icon



to start uploading and downloading the selected options or click on



or in the



to upload or download ALL options.

- *Global download does not download voice messages or voice message labels. Global upload does not upload voice messages or voice message labels or the event buffer.1.*

The application displays the window **Communicate labels**, **Global download** either **Global load**.

3. Select the **Connection type**.

4. Make sure that the **Access code** be the same as the **User code**, **Installer code** either **Level 4 Installer Code** established in the group **Options** (factory settings, respectively 000000, 111111 and 222222) and that the **Device ID** is correct (see ""Network Configuration" on page 54).

5. Click on **OK**.

1. The event memory can be loaded from the page **Event memory**.

APPENDIX

Compliance with EN 50136-2:2013

To comply with EN50136-2:2013, the communicator must be configured and connected to a burglar alarm panel in only one of the following two ways (**T0** and **B**):

A) PSTN connection (the panel monitors the receiver's response directly through the PSTN line)

- PSTN: Terminals **L1** of the communicator connected to the external telephone line terminals of the panel.
- Terminal **T4**, configured as output of **Sabotage**, connected to a panel input (plastic housing models only).
- Terminal **T5**, configured as output of **GSM failure**, connected to a panel input.
- Terminal **T3**, configured as input of **Interconnection present**, connected to the panel signal, to report that the panel or telephone line signal is present.
- Terminal **T6**, configured as **IP receiver failure**, connected to the panel interference input.

- *On the communicator's programming page **IP Receivers**, an IP receiver configuration is required.*

B) without PSTN connection

- Terminal **T4**, configured as output of **Sabotage** further **Detecting jams**, connected to the panel input (only models with plastic housing).
- Terminal **T5**, configured as output of **GSM failure**, connected to a panel input.
- Terminal **T1**, configured as alarm/tamper input, connected to the panel's intrusion/tamper alarm output.

- ***Entry 1 Event** It is used to send the intrusion alarm code.*

- Terminal **T2**, configured as input, connected to the panel fault output.

- ***Entry 2 Event** It is used to send the fault code.*

- Terminal **T6**, configured as output of **IP receiver failure**, connected to the panel input.
- Terminal **T3**, configured as input of **Interconnection present**, connected to the panel signal, to report that the panel is present.
- The ground terminal of the communicator must be connected to a panel input, to detect the connection between the panel and the communicator.

- *On the communicator's page **Calls from central station**, for both events **Entry 1 Event** and **Of***

***Entry 2 Event**, set the **Customer code** and the **Channel type** for **CID/SIA: over data network**. On the page **IP Receivers**, specify an IP receiver.*

See the tables below.

	Communicator		Panel
	L1	--	YOU
	T1: Output of RTC fault		
	T2: Departure of Without cellular network		

Table 16 - Connection diagram A: Simulated PSTN connection.

	Communicator		Panel
Factory settings	T3: Input of Interconnection present	-	LE detection output
	T4: Departure of Sabotage	-	Communicator sabotage input
	T5: Departure of GSM failure	-	Cell failure input
	T6: Output of IP receiver failure	-	IP Receiver Communication Failure Input

Table 16 –Connection diagram A: Simulated PSTN connection.

	Communicator		Panel
Factory settings	T1: Alarm/tamper input	-	Alarm/tamper output
	T2: Fault input	-	Fault output
	T3: Input of Interconnection present	-	Interconnection output present
	T4: Departure of Sabotage further Detecting jams	-	Communicator sabotage input
	T5: Departure of GSM failure	-	Cell failure input
	T6: Output of IP receiver failure	-	IP Receiver Communication Failure Input
	Ground terminal	-	Ground terminal

Table 17 –Connection scheme B: without simulated PSTN connection.

- You must configure: an event for sending "alarm/sabotage" Contact ID, in case of activation of input 1, and an event for sending "fault" Contact ID, in case of activation of input 2.

Operations with USB memory

- The USB flash drive can be used **ONLY** if the communicator is operating in USB Host mode (see "Jumper Descriptions" on page 11) and the option **EN50136** is disabled (see ""Options" on page 50).

The USB flash drive allows:

- update the communicator firmware
- export/import communicator settings
- export/import communicator voice messages
- export the communicator event memory
- load custom defaults into the communicator
- Load configuration file to support Voice and SMS over LTE

When a USB flash drive is inserted into the communicator's USB port, a folder structure is created as shown in Figure 9 (marked with the symbol .

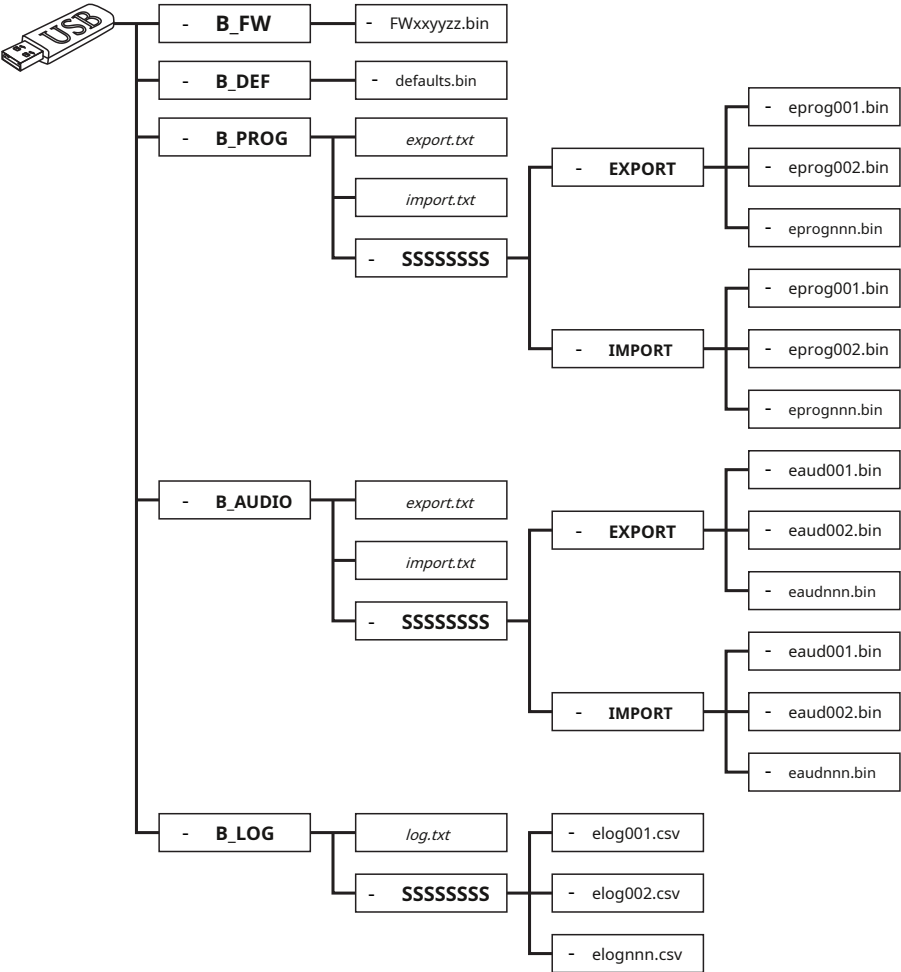


Figure 9 – Structure of the folders of a USB flash drive used with the communicator.

SSSSSSS represents the serial number of the communicator (8 hexadecimal digits), so that a single USB stick can contain the data of several different communicators: each communicator will read/write its information into its own folder.

When a USB flash drive is inserted into the communicator, the following procedure is executed:

1. Firmware update, if there is a valid firmware in the folder **B_FW**;
2. Communicator configured with custom defaults, if **defaults.bin** is located in the folder **B_DEF** (See "Loading Custom Defaults" on page 85 for more details.)
3. Exporting the communicator configuration file, if the file **export.txt** is located in the folder **B_PROG**;
4. Importing the communicator configuration file, if the file **import.txt** is located in the folder **B_PROG**;
5. Exporting the communicator's voice message, if the file **export.txt** is located in the folder **B_AUDIO**;
6. Importing the voice message from the communicator, if the file **import.txt** is located in the folder **B_AUDIO**;
7. Exporting the communicator's event memory, if the file **log.txt** is located in the folder **B_LOG**;

Firmware Update

This operation updates the communicator firmware from a USB flash drive.

1. Download the firmware from the website www.dsc.com.

The firmware file name is in the format **FWxyyz.bin** where:

- **FW** identifies the file as firmware;
- **xx** is the top revision number;
- **yy** is the lower revision number;
- **zz** is the test revision number;
- **.bin** is the extension for a binary file.

- DO NOT change the name of the firmware file, otherwise the communicator will not recognize it.

2. Copy the firmware to the folder **B_FW** from the USB memory stick.
3. Insert the USB flash drive into the USB port on the communicator.

If the communicator finds an invalid firmware in the folder **B_FW**, the LED **ACT** will flash slowly and the event will be recorded in the event memory **Firmware Update Error - System**.

If the communicator finds in the folder **B_FW**, a valid firmware different from the current one, will install the new firmware.

*- If there is more than one firmware file in the folder **B_FW**, the communicator will install the one with the highest revision number.*

*If the folder **B_FW** contains a firmware that is less recent than the one currently installed on the communicator, it is installed anyway: firmware updates allow you to install a more recent firmware or restore an older one than the one currently installed on the communicator.*

At the end of the process, the communicator restarts and records the event **FW Update Completed - System** in the memory of events.

Loading custom defaults

To load custom presets from a USB flash drive, complete the following steps.

1. Create the folder **B_DEF** on the USB flash drive, if it does not exist.
2. Copy the configuration file to the folder **B_DEF**: The configuration file can be created as described in the export procedure or in the console.

*- The export procedure and the console generate the file **prognnn.bin**, where **nnnn** is an index from 001 to 999. Rename the file to **defaults.bin** before copying it to the folder **B_DEF**.*

3. Delete the file **B_PROG/import.txt**, if it exists.
4. Insert the USB flash drive into the USB port on the communicator.

5. Close the bridges **PST** and **USB**.

6. Perform factory reset as instructed in "Restore Factory Settings" on page 46.

The communicator is programmed as specified in the file **defaults.bin**; then it restarts.

- Do not remove the USB flash drive until the communicator restarts.

Once the communicator has rebooted, configure the jumpers **PST** and **USB** as needed.

*- You can import the default settings into any communicator because the **defaults.bin** file does not depend on the communicator that generated it.*

Exporting configuration

This operation exports the communicator configuration from a USB memory stick.

1. Create the folder **B_PROG** on the USB flash drive, if it does not exist.

2. Create a new text file in the folder **B_PROG** and name it **export.txt**.

3. Insert the USB flash drive into the USB port on the communicator.

The communicator will export the configuration to **B_PROG\SSSSSSS\EXPORT\eprognnn.bin**, where:

- **SSSSSSS** is the serial number of the communicator;
- **eprog** is the prefix for a communicator configuration file;
- **nnn** is an index from 001 to 999;
- **.bin** is the extension of a binary file.

The communicator will search the folder **EXPORT** the configuration file with the highest index and will create a configuration file with that index incremented.

If the folder **EXPORT** already has a configuration file with index 999, the file will not be exported: the LED **ACT** will flash slowly and the event will be recorded in the event memory **Programming export error to USB**

- System.

Importing configuration

This operation imports the communicator configuration from a USB memory stick.

1. Create the folder **B_PROG** on the USB flash drive, if it does not exist.

2. Create a new text file in the folder **B_PROG** and name it **import.txt**.

3. Create the folder **SSSSSSS** in **B_PROG**, where **SSSSSSS** is the serial number of the communicator to which you want to import the configuration.

4. Create the folder **MATTER** in the folder **SSSSSSS**.

5. Copy the configuration file to the folder **MATTER**: The configuration file can be created as described in the import procedure or in the console.

6. Insert the USB flash drive into the USB port of the communicator with the serial number **SSSSSSS**.

The communicator will delete the file **import.txt** and will be scheduled as specified in the imported configuration file: it will reboot after this process is done.

*- You can import configuration files **ONLY** if the source communicator has the same installation code.*

*- If the folder **B_PROG** contains the files **export.txt** and **import.txt**, the communicator will first export the current configuration (backup) and then import the new configuration.*

Exporting voice messages

This operation exports the voice messages from the communicator to a USB memory stick.

- 1.Create the folder **B_AUDIO** on the USB flash drive, if it does not exist.
- 2.Create a new text file in the folder **B_AUDIO** and name it **export.txt**.
- 3.Insert the USB flash drive into the USB port on the communicator.

The communicator will export the voice messages to **B_AUDIO\SSSSSSS\EXPORT\eaudnnn.bin**, where:

- **SSSSSSS** is the serial number of the communicator;
- **eaud** identifies the file containing the voice messages;
- **nnn** is an index from 001 to 999;
- **.bin** is the extension for a binary file.

The communicator will search the folder **EXPORT** the voice message file with the highest index and will create a new one with that index increased; if the folder **EXPORT** already contains a file with index 999, the file will not be exported: the LED **ACT** will flash slowly and the event will be recorded in the event memory **Error exporting audio messages to USB - System**.

Importing voice messages

This operation imports voice messages from a USB memory stick.

- 1.Create the folder **B_AUDIO** on the USB flash drive, if it does not exist.
- 2.Create a new text file in the folder **B_AUDIO** and name it **import.txt**.
- 3.Create the folder **SSSSSSS** in **B_AUDIO**, where **SSSSSSS** is the serial number of the communicator to which you want to import the messages.
- 4.Create the folder **MATTER** in the folder **SSSSSSS**.
- 5.Copy the configuration file to the folder **MATTER**: The configuration file can be created as described in the export procedure or in the console.
- 6.Insert the USB flash drive into the USB port of the communicator with the serial number **SSSSSSS**.

The communicator will import the voice messages.

*- If the folder **B_AUDIO** contains the files **export.txt** and **import.txt**, the communicator will first export the current audio (backup) and then import the new messages.*

Exporting the event memory

This operation exports the communicator's event memory to a text file in CSV (Comma Separated Value) format on the USB stick: the CVS file can be viewed with **Excel** and **Noteblock**.

- 1.Create the folder **B_LOG** on the USB flash drive, if it does not exist.
- 2.Create a new text file in the folder **B_LOG** and name it **log.txt**.
- 3.Insert the USB flash drive into the USB port on the communicator.

The communicator will export the event memory to **B_LOG\SSSSSSS\EXPORT\elognnn.csv**, where:

- **SSSSSSS** is the serial number of the communicator;
- **Elog** identifies the file as an event memory;
- **nnn** is an index from 001 to 999;
- **.csv** is the file extension.

The communicator will search the folder **SSSSSSS** the event memory file with the highest index and will create a new one with that index incremented; if the folder **SSSSSSS** already contains a file with index 999, the file will not be exported: the LED **ACT** will flash slowly and the event will be recorded in the event memory **Event memory export error to USB - System**.

Loading the configuration file

This operation loads the configuration file into the radio module so that voice and SMS work properly over LTE networks, with the mobile operator of the provisioned SIM card.

- 1.Download the required configuration file from www.dsc.com.
- 2.Copy the configuration file to the folder **MBN_FW** on the USB key.
- 3.Insert the USB key into the USB port.

The communicator begins to load the configuration file.

At the end of the operation, the communicator is reset.

After the communicator reboots, it may take two to five minutes to complete the radio module configuration.

Transfer

This feature allows panels to **PowerSeries Neov1.2** or higher, and the panels **PowerSeries v4.1** or higher, be programmed remotely via a cellular or Ethernet channel using the communicator and the latest version of the console. You can download the latest version of the console at www.dsc.com, as illustrated in Figure 10.

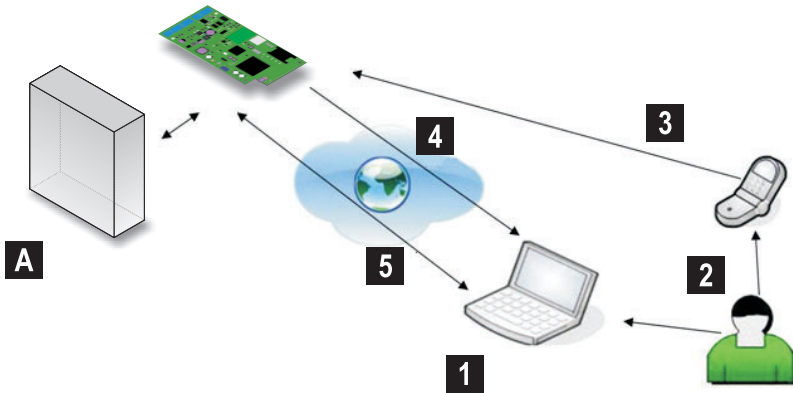


Figure 10 –Remote programming with the console: **TO**) panel; **1**) The operator starts a communication session on the console selecting the connection type **Cellular (Remote IP)**; the console displays the information required for sending the SMS message; **2**) The operator sends the SMS message by phone, using the information shown; **3**) The SMS message containing the console's public IP and port is sent to the communicator; **4**) The communicator connects to the console via cellular or Ethernet channel; **5**) The console communicates with the panel (upload/download options) through the communicator.

The communicator must be programmed correctly before connecting it to the panel.

– Serial communications via the PC-LINK connector are interrupted when operating with USB memory, so the panel may report an error.

Programming the communicator

To program the communicator, refer to the "PC PROGRAMMING" section on page 43. Proceed as follows, using the console.

1. Enable **Remote Access** on the communicator (see page **Network Configuration**).
2. If you want to use the cellular network, schedule a **Remote Access APN** on the communicator (see page **Network Configuration**).

– Make sure the bridge **PST** is in place: when the bridge is inserted **PST**, the USB port is disabled for programming the communicator using the console (USB device mode), and is only enabled for USB memory sticks (USB Host mode).

Connecting the communicator to the panel

To connect the panel to the communicator, use the PCLINK cable supplied with the communicator, connected to the PC-LINK 15 connector on the communicator and to the PC-LINK connector on the panel (**CON4** on PowerSeries panels; **CON5** on PowerSeries Neo panels); make sure to insert it in the correct orientation (see Figure 11).

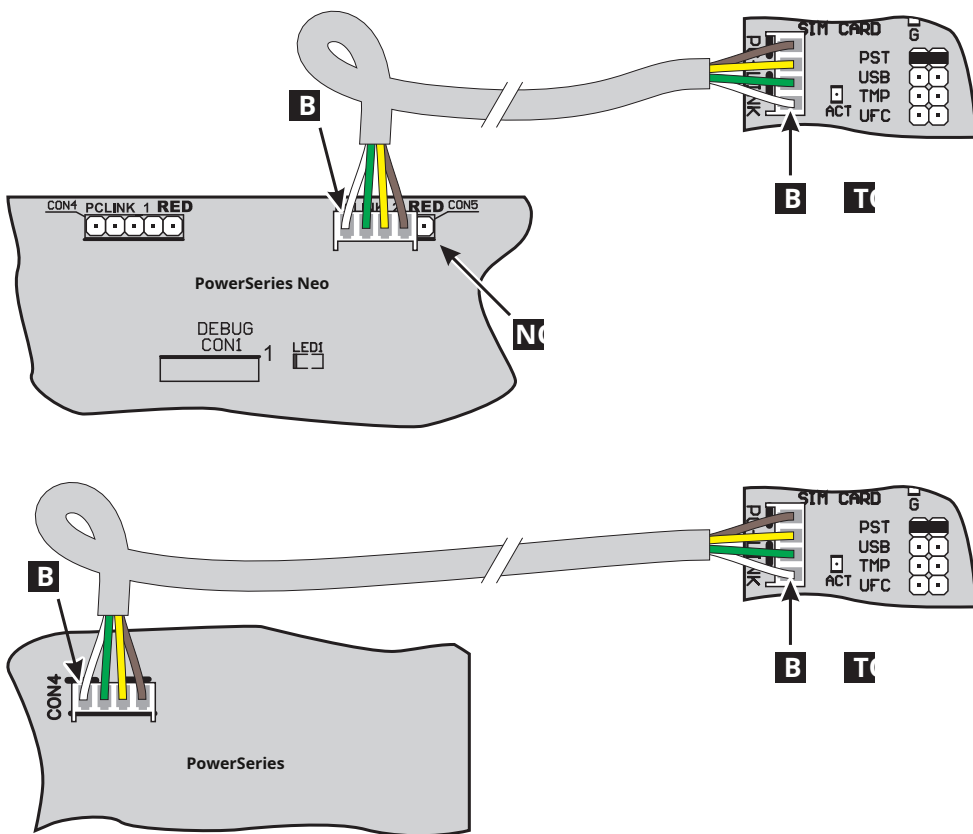


Figure 11 –Connecting the communicator to the panel using PCLINK cable: **TO**) Communicator; **B**) white cable.

Procedure on the panel

Perform the following checks on the panel.

1. Check section 382 of the panel: option 5 should be ON.
2. NO faults are allowed, the GREEN LED on the panel must be ON: this indicates that the panel is detecting the communicator as connected and valid.

Procedure on PC

Proceed as follows on the PC before programming via the console.

- 1.The PC must have a public IP address and public port for incoming connections to the console.
- 2.The firewall and router must allow the connection from the PC's public port to the port**51004**from the console.
- 3.Make sure the router's public port is accessible from another PC to verify that the device can access the console.

Existing Account Setup

- 1.Launch the console on your PC.
- 2.Right click on the account you want and select**Properties**.
- 3.To the left of the window**Account Name**, select the control panel in the option**Panels / Modules**.
- 4.On the menu**Module**, select the communicator connected to the control panel and click**Add**.

*- When adding a communicator to an account, you will see the communicator options with the control panel options within the console (see the options group**GS / IP**).*
- 5.To the left of the window**Account Name**, select the added communicator in the control panel option.
- 6.Enter the**Device ID**from the communicator, and configure the option**EN50136**as needed: the**Device ID** The communicator is located in the process control block (PCB).
- 7.On the menu**Connection type**, select**Cellular (Remote IP)**if you want to enable handover via the communicator's cellular channel, or select**IP**if you want to enable passthrough over the communicator's Ethernet channel, then click **Add**.

*- You can select**IP**if you selected a two-way communicator in step 4, the communicator is connected to a LAN or WAN via the Ethernet interface and you know the public IP address of the communicator.*
- If you select**Cellular (Remote IP)**, the handover is executed through the Ethernet channel if the control panel is connected to a two-way communicator and the communicator is connected to a WAN network through the Ethernet interface.*

Connection typeCellular (Remote IP)	Connection typeIP
8.To the left of the window Account Name , select Cellular (Remote IP) in the communicator option.	To the left of the window Account Name , select IP in the communicator option.
9.Enter the communicator's phone number in the option Panel phone number and select the time the communicator waits for SMS connection in the menu Connection timeout .	Enter the public IP address of the communicator in the option IP . If you do not know the IP address of the communicator, and the communicator is connected to the same LAN network as the PC, proceed to step 10.
10.Click on Keep .	Click on AUTO Discovery and wait for the console to identify the communicators connected to the LAN network.
11.	Select the required communicator: the option IP is automatically filled in with the IP address of the selected communicator.
12.	Click on Keep .

You can now communicate remotely with the control panel via cellular or Ethernet network, as described in "Upload and Download Options" on page 92.

Setting up a new account

- 1.Launch the console on your PC.
- 2.Select**New account**and choose the**Panel type**.
- 3.On the menu**Connection type**, select one of the GPRS or IP items, depending on the communicator connected to the control panel.

- For dual-way communicators there are GPRS and IP options: you can select the IP option if the communicator is connected to a LAN or WAN network via the Ethernet interface, and you know the public IP address of the communicator.
- 4.Enter the**Device ID**from the communicator, and configure the option**EN50136**as needed: the**Device ID** The communicator is located in the process control block (PCB).
- 5.Set the other options as indicated in the control panel instructions.

GPRS connection type	IP connection type
6.Enter the communicator's phone number in the option Panel phone number and select the time the communicator waits for SMS connection in the menu Connection timeout .	Enter the public IP address of the communicator in the option IP . If you do not know the IP address of the communicator, and the communicator is connected to the same LAN network as the PC, proceed to step 7.
7.Click on Create .	Click the button Advanced , the window opens Account Name .
8.	To the left of the window Account Name , select IP in the communicator option.
9.	Click on AUTO Discovery : the table in the section IP detected will display the communicators that are on the LAN.
10.	Select the required communicator from the table IP Detected , the IP address of the selected communicator will be copied to the file IP .
11.	Align the option Port with the option Ethernet Local Incoming Port in Network Configuration>DLS , if you have changed the factory setting 3062.
12.	Click on Create .

You can now communicate remotely with the control panel via cellular or Ethernet network, as described in "Upload and Download Options" on page 92.

Loading and unloading options

- 1.Open the account.
- 2.Select the required upload or download operation:**Global load,Global download,Communicate labels**: The connection window displays either the communicator or the control panel, depending on the upload and download options.
- 3.Select the device's upload and download options in the column**Selected**, and choose the connection type for the control panel and communicator.

4. On the menu **Connection type**, select the type of connection you want: you can select **Cellular (Remote IP)** and **IP** depending on the type of connection established (see "Setting up an existing account" on page 91 and "Setting up a new account" on page 92).

- You can disable the option **Automatically hang up when finished** to keep the connection active until
to click the button **Disconnect immediately**  on the menu **Disconnect when finished** .

Connection Type Cellular (Remote IP)	IP connection type
5. Click on OK : the window is displayed SMS Message Generator	Click on OK : The console adds the job to the queue.
6. Enter the public IP address of the router to which the PC is connected in the option Public IP address and the console access port (DLS port): ask your network administrator or refer to the router's instructions.	
7. If this is your first installation, press APN Settings and set the APN Name , User name , and Password for mobile data services (check with your mobile data service operator).	
- Make sure to enter the correct APN for WAP access, otherwise some functions may be limited.	
8. Prepare an SMS message as indicated in the window SMS Message Generator or scan the QR code displayed in the same window, then click OK : the console is waiting for incoming connection.	
9. Send the SMS to the communicator number before the time expires. Connection timeout .	

FCC Compliance Statement

CAUTION: Changes or modifications not expressly approved by Tyco Safety Products Canada Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/Television Interference Problems." This booklet is available from the US Government Printing Office, Washington, DC 20402, Stock # 004-000-00345-4.

Wireless Notice

This equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Antenna gain must be below:

	Band	2G	HSPA+	LTE FDD	Max. Antenna Gain (dBi)
TL405LE-LAU	B1 (2100)		X	X	2.15
	B2 (1900)	X	X	X	2.15
	B3 (1800)	X		X	2.15
	B4 (1700)		X	X	2.15
	B5 (850)	X	X	X	2.15
	B7 (2600)			X	1.8
	B8 (900)	X	X	X	2.15
	B28 (700)			X	2.15
3G4005	B40 (2300)			X	2.15
	B1 (2100)		X		2.15
	B2 (1900)	X	X		2.15
	B3 (1800)	X			2.15
	B5 (850)	X	X		2.15
	B6 (850)		X		2.15
	B8 (900)	X	X		2.15

IMPORTANT INFORMATION

This equipment complies with Part 68 of the FCC Rules. On the side of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this number must be provided to the Telephone Company.

TL405LE-LAU Product Identifier US:F53MO00ATL405LEQ

3G4005 Product Identifier US:F53MO00A3G4005Q

REN:0.0A

USOC Jack:RJ-31X

Telephone Connection Requirements

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

Ringer Equivalence Number (REN)

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call.

In most but not all areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local Telephone Company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format. US: AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (eg, 03 is a REN of 0.3). For earlier products, the REN is separately shown on the label.

Incidence of Harm

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the Telephone Company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

Changes in Telephone Company Equipment or Facilities

The Telephone Company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens the Telephone Company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

Equipment Maintenance Facility

If trouble is experienced with this equipment for repair or warranty information, please contact the facility indicated below. If the equipment is causing harm to the telephone network, the Telephone Company may request that you disconnect the equipment until the problem is solved. This equipment is of a type that is not intended to be repaired by the end user.

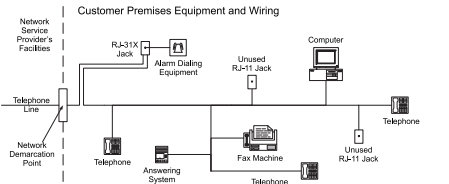
Tyco Atlanta Distribution Center, 2600 West Pointe Dr., Lithia Springs, GA 30122

Additional Information

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

Alarm dialing equipment must be able to seize the telephone line and place a call in an emergency situation. It must be able to do this even if other equipment (telephone, answering system, computer modem, etc.) already has the telephone line in use. To do so, alarm dialing equipment must be connected to a properly installed RJ-31X jack that is electrically in series with and ahead of all other equipment attached to the same telephone line.

Proper installation is depicted in the figure below. If you have any questions concerning these instructions, you should consult your telephone company or a qualified installer about installing the RJ-31X jack and alarm dialing equipment for you.



GS4005/3G4005/TL405LE

#	Chain of control	Calling number	Deactivation*
1			
2			
3			
4			
5			
6			

* Enter the "Text Message" to activate the bistable output or the activation time of the monostable outputs.

Enable bistable output: #User code* Chain of control=ON*

Enable monostable output: #User code* Chain of control=ON*TonU* Ton = On time; U = S for seconds, M for minutes, H for hours

Disable output: #User code* Chain of control=OFF*

Change user code: #CUC* User code* New user code* **Enable installer:** #ENI* User code* **Disable installer:** #DSI* User code*

Enable remote scheduling: #WAS* User code* ON*

Disable remote scheduling: #WAS* User code* OFF*

Check SIM card balance: #CCC* User code*

Check SIM card expiration date: #EDC* User code*

Change SIM card expiration date: #EDU* User code* DD/MM/YYYY*

Show serial number: #RID* User code*