IQtronic
Solutions to control and save energy

IQTD-GS440

User Guide

GSM gateway controlled by SMS, making a call, IVR self service and Bluetooth terminal, with universal inputs, M2M and PLC.

IQtronic

Acknowledgements

Thank you that you have purchased this IQTD-GS440 produced by IQtronic technologies Europe Ltd, the real manufacturer providing the unique and unrivalled products. Our company has produced IQ socket products for already 10 years and has delivered them throughout the world. Our products always offer you a lot more. But consider by yourself...

1 Product features

IQTD-GS440 is a highly sophisticated device intended to control electrical appliances connected to device's outputs by sending SMS messages and making calls to device's SIM card number by means of a mobile phone. IQTD-GS440 can be also controlled wirelessly via Bluetooth using IQcontrol software terminal. An interactive voice self service (IVR) is another way to control your device.
This product has also a universal input to connect external accessories: up to 8 temperature and humidity sensors. It incorporates almost 200 implemented SMS commands.

The output of the device is two **230V** AC switched power relay outputs with the maximum current capacity of **16A – resistance load and two** DC switched outputs with **5A/40V rating and PWM support.**

Among others, the product has the following interesting functions:
- Turning electrical appliances on and off by SMS messages or by making a call to device's internal SIM card number.
- Automatical control: turning electrical appliances on and off at predermined time by means of a scheduler or at a user-specific time.
- Sending automatically an alert on power failure and restore.
- Restarting appliances, such as servers.
- Monitoring the external input status: Two A/D inputs - monitoring electric fences and AC/DC voltages with autodetect, 2 digital inputs DIN1, DIN2 for DC voltage, 1 digital input DIN3 for AC/DC voltage.
  One universal bus for temperature and humidity sensors.
- Thermostat function.
- Alarm function: temperature alarm, humidity alarm, A/D, or change at digital inputs, power failure, power restore.
- Alarm in case of a GSM signal jamming.
- Optional internal back up battery for operating without AC or DC power.

- Up to 12 alarm numbers, each of the numbers can be set for a different event.
- Time scheduler function, up to 50 events with interval settings.
- Automatical logging of all events into the internal memory.
- **Interactive voice self service that can be customized by a user.**
- Configuration via Bluetooth with a professionally designed IQcontrol software terminal with an intuitive usage.
- Two Administrators and up to one thousand users.
- Texts of commands and responses can be customized by user.
- Option to save and restore of the configuration, to download event log file.
- User numbers can be uploaded from a text file.
- Upgradeable firmware.
- Possibility to change the rights of SMS commands.
- Supports control from Internet SMS gateways.
- Sending status of all inputs via GPRS (TCP) into cloud.
- **Advanced integrated navigation HELP.**
- Can be controled by means of ANDROID application.
- Connector for external antenna for areas with poor GSM signal.
- Option to insert more commands in one SMS message (160 characters).
- Two independent actions can be set for incoming call.
- Possibility of logging every event with action on SD card
- Implemented M2M for GET and SET (from XML file)
- Easy PLC (Programmable Logic controller) feature for setting outputs according to inputs status.
- Two independent power supply inputs – AC and DC, capable to generate alarm and usable with the PLC.

Upper terminal block with 230VAC input and power relay ouputs

Led indicators

SIM bay
SD card bay

SMA/f connector for external GSM antenna

Lower terminal block with low voltage
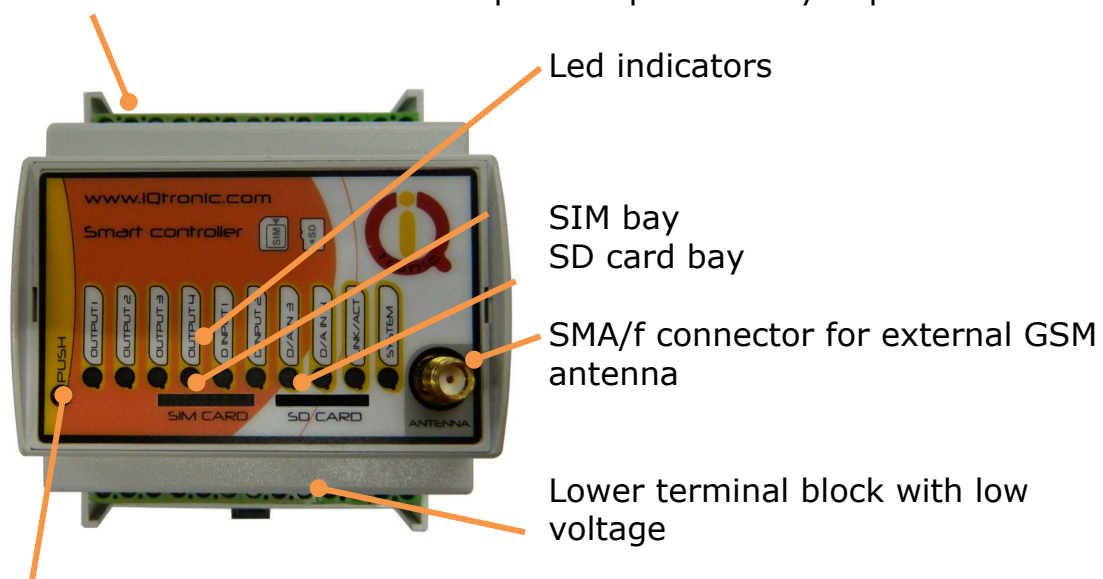
Push button for manual control
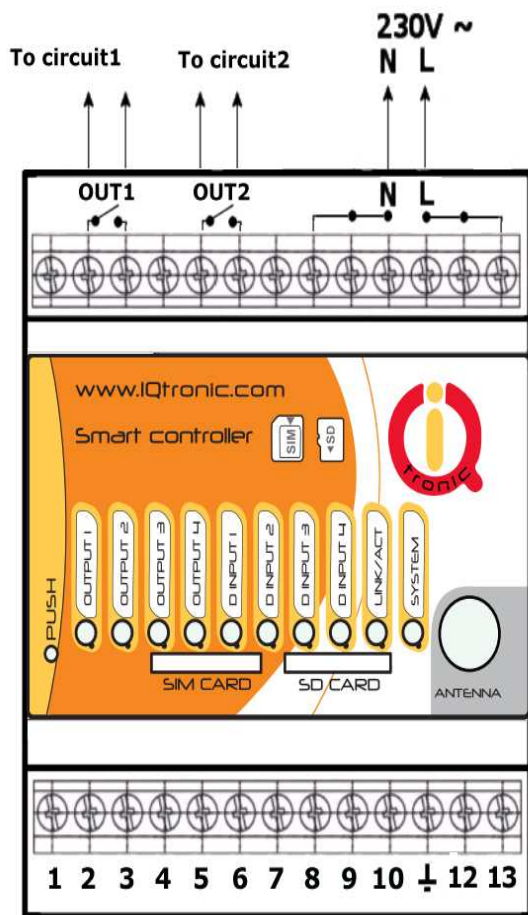
2. Wiring IQTD-GS440

OUT1 – switched output 1, 16A
OUT2 – switched output 2, 16A
L – phase (live) of mains connection
N – neutral wire of mains connection

Lower Terminal Block

1 – **OUT3** switched output 3, DC voltage max. 40V/5A with PWM.
2 – **OUT4** switched output 4, DC voltage max. 40V/5A with PWM.
3 – **ADIN1** analog input ADH for measuring voltage 0 – 30/50VAC, DC with autodetect. Resolution of 0.1V, 2%.
4 – **ADIN2** analog input ADL for measuring voltage 0 - 5 VDC, resolution of 0.1V, accuracy of 2%.

5 – **DIN1** digital input 1, two stage, 0 – 30 VDC,   S0, optocoupler
6 – **DIN2** digital input 2, two stage, 0 – 30 VDC,   S0, optocoupler
7 – **DIN3** digital input 3, two stage, 0 – 30 VDC,   S0, optocoupler
8 – **DIN4** digital input 4, two stage, 0 – 30 VDC,   S0, optocoupler
9 – **Vsys** Voltage ouput of system battery 4 VDC max, 100mA fuse
10 – **UIN** univeral input for connecting up to 8   temperature and humidity sensors.
11 – **GND**, Ground potencial of device.
12 – 13 Voltage input **12 -25 VDC/VAC**, can be also used as an input for external DC power supply. This power supply input is indenpendendt from, and can be used together with the 230VAC input with possibility of power alarm generation and and usability with the PLC.

Please note that all signals at the bottom terminal block are referenced to the **GND pin 11**. Be careful when using any from provided voltage outputs, it is not recommended to take a significant current from these pins.

WARNING!

Please respect maximum current rating of output1 and outpu2 - 16A for resistive load. Do not overload your IQTD-GS440, as this may damage or shorten life span of the internal switching relays, which is not covered by warranty. It is recommended to use external contactors in case the higher current is required and/or capacitive/inductive load is used.

3. Power supply wiring

Installation shall be performed by certrified installer qualified for local electric code

Your IQTD-GS440 is normally powered from 230V AC mains, but it is possible to power it also from external 12VDC power supply, e.g. a battery.

3.1 AC power wiring
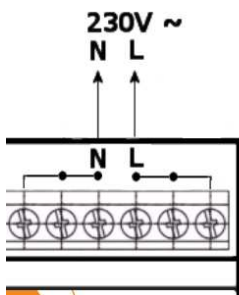
3.2 DC power wiring

The allowed input voltage range is from 12 to 25VDC or VAC, current consumption is about 40 mA in quiescent mode.
It can be used as back-up power supply to the AC mains voltage.
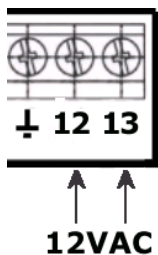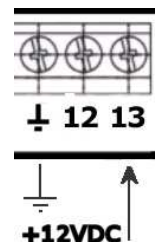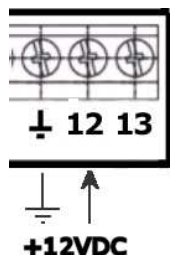
Instalation

4.1 Inserting SIM Card

Insert the SIM card into the GSM slot
of your IQTD-GS440.
Size must be uSIM, oriented by contacts
facing top and with the notch away from
the device – slide it into the slot and push
it in to lock it inside, and release it out by
pushing it in one more time – Push Push
system.

WARNING!

*PIN authorization should be turned off before the SIM card is
used in your IQTD-GS440.*

Authorization can be turned off by inserting the SIM card into your GSM phone
and disabling SIM PIN usage by using the appropriate command usually located
in 'Settings' phone menu. Now you can remove the SIM card from your phone
and insert it into your IQTD-GS440.

- Insert the SIM card with inactive PIN code authorization into the SIM
  socket bay, accessible from the lower side of your IQTD-GS440 box.

- Push the card into the bay until you feel a click so card is locked inside.

- To remove the card from your IQTD-GS440, gently push the card
  further into the bay until a click is felt, then card is unlocked and can
  be pulled out.

Note...

*It is highly recommended to delete all received SMS messages,
stored on the SIM card before using it in your IQTD-GS440.*

4.2 Powering IQTD-GS440 On

Once the SIM card has been inserted, you can switch on 230VAC mains (or external 12VDC power supply) to power your IQTD-GS440 on. Verify device is operating by observing status of the LEDs.

- Once AC power is connected, all eights LED indicators will blink shortly and if everything is ok, the **SYSTEM LED** will turn to solid Red.

- In case of active PIN authorization on the SIM card, **SYSTEM LED** starts blinking fast (approx. three times per second).

- **LINK/ACT LED** start to blink slowly (approx. every three seconds) blue, once device was successfully logged into a GSM network. If the LED blinks about every second, searching for a GSM network is in progress.

- The Ouput1/2/3/4 LEDs indicate state of switched outputs.

Your IQTD-GS440 is now ready to use.

*Please refer to chapter **13.2. Error conditions** in case of any other indications.*

5. Explanatory Notes to Commands

To control IQTD-GS440 in your language, please select the language version, as shown in chapter 8.1 IQControl subprogram. The device has been factory pre-configured for the English language.

Device contains built-in help system. If you send a message containing text **HELP** to the number of SIM inserted in your device, you will get in response the control commands, and in response to **CONFIG** you will get the configuration commands. If you need to know the syntax and description of any command, use the SMS message **HELP=<command>,** e.g. HELP=Restart and you will get description of a particular command.

All commands are sent in SMS messages to the SIM card number inserted in device. Commands have the following format:

pinCOMMAND - e.g. 1234Turn off – if the PIN protection was activated *(see chapter 0* 7.Advanced Settings*)*

COMMAND - e.g.   Turn off – *with unconfigured PIN (factory default)*

Command Nr.	01		
Text	TurnOn		
Function	It turns on the output power socket.		
Response	TurnedOn		
Access Rights	User/Admin	License	Base

Command Number: It is the system specification for a command that is fixed, and so it cannot be changed. You can only modify any text in your device; if you change for instance *TurnOn* to **MyCommand**, and you would like to make further changes of this command's name, you need to know the number of the original command in order to identify that command.

Text: A command in the form of a text string, in English as factory default language.

Function: It specifies the function of the particular command.

Response: The device will give a response if the command is entered in the correct form.

License: Base license is included in the price for the product, **Medium** and **Full** – for a license fee you will obtain a license key to be entered in your device by means of an SMS message or via BT IQcontrol terminal software and then the commands and functions of the particular license will be activated.

Access Rights: Admin, this command can be only used by the pre-configured Administrator; in case the Administrator has not been pre-configured, any number, i.e. anyone, can control and configure the device and is then considered to be the Administrator.

                User - this command can be also used by users from the user list - up to 1000 numbers.

Describtion of control and configuration of IQTD-GS440 is divided into three parts, each suitable for a specific user group.

1. Basic part is suitable especially for those users who wish to use the basic functions as quickly as possible. It is indicated by the green square located on the right side or at the top of the page.

2. Advanced part contains advanced functions such as security, GPRS, time intervals, alarms, etc. It is indicated by the yellow square on the right side and in the middle part of the page.

3. Expert part is particularly appropriate for those users who wish to get the maximum of the product. It presents control by the use of the smart application IQcontrol for Android and IQcontrol Suite for Windows. Furthermore, it provides information on the voice self service or how to create an own voice self service, how to edit the text of commands and responses, transfer of the product settings, how to save LOG evets into a file. Then it presents the Numbers Editor for security and saving the set in the product, firmware upgrade, and others. It is indicated by the red square on the right and in the middle part of the page.

Note...

Your device has built-in intelligent help system allowing faster control actions; if you send an incorrect command, your device will offer similar commands to you. You may also send more than one command consecutively in a single SMS. Your device will then reply by individual SMS messages. Please see an example from the terminal of IQcontrol Suite for Windows when sending the character 'a' and two commands TurnedOn and Status - separated by character #.
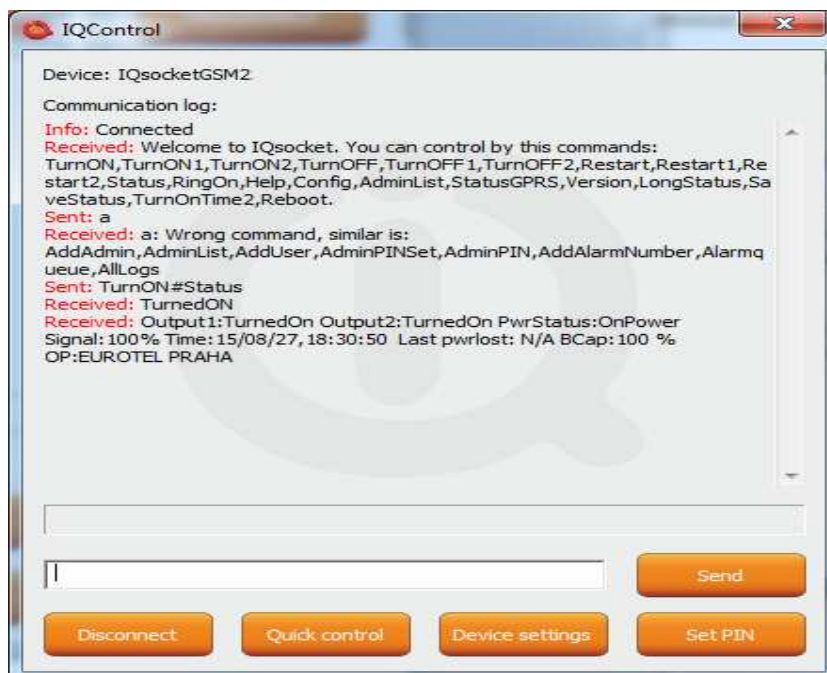
6.Basic Control

If you send a message containing text "HELP" to the telephone number of SIM in your device, the following control commands will be displayed:
These commands are displayed automatically in the welcome note after you have logged in by the IQcontrol software terminal via Bluetooth.

Command Nr.	01		
Text	**TurnOn**		
Function	It turns on the all outputs OUT1 and OUT2.		
Response	**TurnedOn**		
Access Rights	User/Admin	License	Base

Command Nr.	02		
Text	**TurnOn1**		
Function	It turns on the output OUT1.		
Response	**TurnedOn1**		
Access Rights	User/Admin	License	Base

Command Nr.	143		
Text	**TurnOnTime 1**		
Function	It turns on the output OUT1 only for a specified time in range of 1 to 2880 minutes. The text TurnONTime=10 turns on the output OUT2 for 10 minutes.		
Response	***TurnedOn***		
Access Rights	User/Admin	License	Base

Command Nr.	03		
Text	**TurnOn2**		
Function	It turns on the output OUT2.		
Response	**TurnedOn2**		
Access Rights	User/Admin	License	Base

Command Nr.	124		
Text	**TurnOnTime 2**		
Function	It turns on the output OUT2 only for a specified time in range of 1 to 2880 minutes. The text TurnONTime=10, it turns on the output OUT2 for 10 minutes.		
Response	***TurnedOn***		
Access Rights	User/Admin	License	Base

Command Nr.	132		
Text	**TurnOn3**		
Function	It turns on the output OUT3.		
Response	**TurnedOn**		
Access Rights	User/Admin	License	Base

Command Nr.	144		
Text	**TurnOnTime 3**		
Function	It turns on the output OUT4 only for a specified time in range of 1to 2880 minutes. The text TurnONTime=10, it turns on the output OUT2 for 10 minutes.		
Response	*TurnedOn*		
Access Rights	User/Admin	License	Base

Příkaz číslo	135		
Znění	**PWM3**	**PWM3**	
Funkce	PWM3=x, where x is the pulse width in range 0 – 100% (0 –turned off all the time, 100 -turned on all the time). Sets PWM modulation with 20kHz frequency on the OUT3 output. PWM3=50 sets 50% PWM on OUT3		
Odpověď	*TurnedPWM*	*ZapnutoPWM*	
Práva	User/Admin	Licence	Base

Command Nr.	136		
Text	**TurnOn4**		
Function	It turns on the output OUT4.		
Response	**TurnedOn**		
Access Rights	User/Admin	License	Base

Příkaz číslo	139		
Znění	**PWM4**	**PWM4**	
Funkce	PWM4=x, where x is the pulse width in range 0 – 100% (0 –turned off all the time, 100 -turned on all the time). Sets PWM modulation with 20kHz frequency on the OUT4 output. PWM4=50 sets 50% PWM on OUT4		
Odpověď	*TurnedPWM*	*ZapnutoPWM*	
Práva	User/Admin	Licence	Base

Command Nr.	04		
Text	**TurnOff**		
Function	It permanently turns off the output socket.		
Response	*TurnedOff*		
Access Rights	User/Admin	License	Base

Command Nr.	05		
Text	**TurnOff1**		
Function	It permanently turns off the output OUT1.		
Response	*TurnedOff*		
Access Rights	User/Admin	License	Base

Command Nr.	06		
Text	**TurnOff2**		
Function	It permanently turns off the output OUT2.		
Response	*TurnedOff*		
Access Rights	User/Admin	License	Base

Command Nr.	133		
Text	**TurnOff3**		
Function	It permanently turns off the output OUT3.		
Response	*TurnedOff*		
Access Rights	User/Admin	License	Base

Command Nr.	137		
Text	**TurnOff4**		
Function	It permanently turns off the output OUT4.		
Response	*TurnedOff*		
Access Rights	User/Admin	License	Base

Command Nr.	07		
Text	**Restart**		
Function	It changes the status of both outputs for a user specified time **RestartTime.**		
Response	**Restarted**		
Access Rights	User/Admin	License	Base

Command Nr.	08		
Text	**Restart1**		
Function	It changes the status of the output OUT1 for a user specified time **RestartTime1.**		
Response	**Restarted**		
Access Rights	User/Admin	License	Base

Command Nr.	09		
Text	**Restart2**		
Function	It changes the status of the output OUT2 for a user specified time **RestartTime2.**		
Response	**Restarted**		
Access Rights	User/Admin	License	Base

Command Nr.	134		
Text	**Restart3**		
Function	It changes the status of the output OUT3 for a user specified time **RestartTime3.**		
Response	**Restarted**		
Access Rights	User/Admin	License	Base

Command Nr.	138		
Text	**Restart4**		
Function	It changes the status of the output OUT4 for a user specified time **RestartTime4.**		
Response	**Restarted**		
Access Rights	User/Admin	License	Base

Command Nr.	177		
Text	**OUTLock1**		
Function	It locks any changes (manual, scheduler, PLC) at output OUT1.		
Response	**OUTPUT locked!**		
Access Rights	Admin	License	Base

Command Nr.	178		
Text	**OUTUnLock1**		
Function	It unlocks (manual, scheduler, PLC) output OUT1 for any changes.		
Response	**Ouptut unlocked**		
Access Rights	Admin	License	Base

Command Nr.	179		
Text	**OUTLock2**		
Function	It locks any changes (manual, scheduler, PLC) at output OUT2.		
Response	**OUTPUT locked!**		
Access Rights	Admin	License	Base

Command Nr.	180		
Text	**OUTUnLock2**		
Function	It unlocks (manual, scheduler, PLC) output OUT2 for any changes.		
Response	**Ouptut unlocked**		
Access Rights	Admin	License	Base

Command Nr.	181		
Text	**OUTLock3**		
Function	It locks any changes (manual, scheduler, PLC) at output OUT3.		
Response	**OUTPUT locked!**		
Access Rights	Admin	License	Base

Command Nr.	182		
Text	**OUTUnLock3**		
Function	It unlocks (manual, scheduler, PLC) output OUT3 for any changes.		
Response	**Ouptut unlocked**		
Access Rights	Admin	License	Base

Command Nr.	183		
Text	**OUTLock4**		
Function	It locks any changes (manual, scheduler, PLC) at output OUT4.		
Response	**OUTPUT locked!**		
Access Rights	Admin	License	Base

Command Nr.	184		
Text	**OUTUnLock4**		
Function	It unlocks (manual, scheduler, PLC) output OUT4 for any changes.		
Response	**Ouptut unlocked**		
Access Rights	Admin	License	Base

Command Nr.	10		
Text	**Status**		
Function	It displays a short SMS message about the status of the outputs and inputs of this device.		
Response	Output1: TurnedOff Output2: TurnedOff, Output3: Restarted Output4: PWM, PWrStatus PowerAC, Signal:61% , Bcap: 100%, Last pwrlost: 15/04/23,18:40:01		
Access Rights	User/Admin	License	Base

Command Nr.	97		
Text	**LongStatus**		
Function	It displays a detailed SMS message about the status of the outputs and inputs of this device.		
Response	Output1: TurnedOff Output2: TurnedOff, Output3: Restarted		

	Output4: PWM, BCap: 100% OnPower, DIN1: 0 DIN2: 0 DIN3: 0 DIN4: 0 ADL: 0 ADH: 0 Pulses: 0 SDcard:No Signal:61% S1: N/A S2: N/A S3: N/A S4: N/A S5: N/A S6: N/A S7: N/A S8: N/A N/A Gauge: 0d 0h 0m 0s Batstat: Charged Time: 15/04/23,19:47:30 Last pwrlost: 15/04/23,18:40:01 OP: EUROTEL PRAHA		
Access Rights	User/Admin	License	Base

Command Nr.	98		
Text	**SaveStatus**		
Function	It saves the status of your device at a given time in the internal device LOG that can be displayed. Internally and on SDcard (Full license)		
Response	**SaveStatus – OK**		
Access Rights	User/Admin	License	Base

Command Nr.	11		
Text	**RingOn**		
Function	It makes a call back for time specified by RingOnTime		
Response	***No response***		
Access Rights	User/Admin	License	Base

Command Nr.	12		
Text	**Help**		
Function	It displays all control commands – In case of the USER access rights, the command HELP will give a description of the command syntax.		
Response	***See description***		
Access Rights	User/Admin	License	Base

Command Nr.	13		
Text	**Config**		
Function	It displays configuration commands – in case of ADMIN access rights Config=50 will display commands starting from the 50th command, since a list can contain more characters than a maximum of 4x160 (4 SMS messages), and then each undisplayed command is listed as a character '.'		
Response	***See description***		
Access Rights	User/Admin	License	Base

Command Nr.	20		
Text	**AdminList**		
Function	It displays the Administrator number.		
Response	***AdminList=42012345678***		
Access Rights	User/Admin	License	Base

Command Nr.	131		
Text	**AdminList2**		
Function	It displays the second Administrator number.		
Response	***AdminList2=42012345678***		
Access Rights	User/Admin	License	Base

Command Nr.	42		
Text	**SendGPRS**		
Function	It sends device status including state of inputs and outputs via GPRS in HTTP GET format, for example if api.thingspeak.com is configured, it will read XML file and will set outputs per values in it. It is required from the user to have configured GPRS parameters and have GPRS Internet service on the SIM card.		
Response	**SendGPRS – OK**		
Access Rights	User/Admin	License	Full

Command Nr.	88		
Text	**Version**		
Function	It displays the internal software version.		
Response	***Ver. 1.0.0.***		
Access Rights	User/Admin	License	Base

Note…

*You can assign the **ADMIN/USER Access Rights** for each command in the COMMANDS EDITOR of the IQcontrol SUITE. This guide presents only commands as used in factory default settings.*

7.Advanced Settings

If you send a message containing text "CONFIG" to the telephone number of your device, the configuration commands will be displayed.

These commands can be used only by the specified ADMIN, if it is defined. In factory default settings any user is considered to be ADMIN. You can set the User or ADMIN access rights in the Commands Editor of the IQcontrol Suite software.

Since the list of configuration commands can be longer than maximum allowed size of 4 SMS messages (4x160 characters), each undisplayed command is listed as a character '.' If you wish to see the full list, for example to display commands starting from the 50th command, you need to use the suffix "=50".

If you send any configuration command correctly, you will get in response confirmation in the form of the suffix "-OK". You will get the current settings for parameters of any command when you add the character '?' following the particular command. As an illustration, in order to know the settings for the **Output** command, you will send a message **Output?** and your device will send to you the settings **Output=(Remeber),On,Off,** where the parameter in parentheses is currently configured. If you wish to change the active parameter, select the particular parameter as follows: **Output=On** .

Illustration of using the **Config** command:

RestartTime,RingactionAdmin,RingactionUser,NCactionAdmin,NCactionUser,AddAdmin,AddUser,DelUser,DelAllUsers,UserList,UserAList,RingTimes,RingOnTime,SMSPerDay,Output,AdminPINSet,AdminPIN,UserPINSet,UserPIN,BTPIN,PINIVR,ScheduleAdd,ScheduleDel,ScheduleDeLAll,SchedulerLIST,SchedulerOptions,DeviceName,TempUnit,Counter,DelCounter,PwrFailTime,TriggerTime1,TriggerTime2,TriggerTime3,Voltalarm,VLevelMin,VLevelMax,PulseAlarm,MinPulses,MaxPulses,TAlarm1,TAlarm2,TAlarm3,BatCapLevel,TempAlarm,PwrAlarm,AddAlarmNumber,DelAlarmNumber,DelAllAlarmNum,ListAlarmNum,Alarmqueue,StopAllAlarms,JammAlarm,Tp1Max,Tp1Min,Tp2Max,Tp2Min,Tp3Max,Tp3Min,Tp4Max,......................

Illustration of using the **Config=50** command:

Alarmqueue,StopAllAlarms,JammAlarm,Tp1Max,Tp1Min,Tp2Max,Tp2Min,Tp3Max,Tp3Min,Tp4Max,Tp4Min,Tp5Max,Tp5Min,Tp6Max,Tp6Min,Tp7Max,Tp7Min,Tp8Max,Tp8Min,TControlMax1,TControlMin1,OutputControl,Version,PinLimitsIVR,PinLimitsBT,UserTypeIVR,AllLogs,SystemLog,ControlLog,ConfigLog,EraseSensors,LongStatus,SaveStatus,Default,GPRS,GPRSAPN,GPRShost,GPRSport,LEDoption,CntDiv1,CntDiv2,CntDiv3,NextTime1,NextTime2,NextTime3,SeparApply,Separators,Bluetooth,License,IMEI,IVRSoundDelay,TurnOnTime2,HoursCounter,RingActionBlock,Reboot.

Command Nr.	14		
Text	**RestartTime1**		
Function	It sets the restart time for output OUT1 in seconds, allowed range is 1 up to 3600.		
Settings with '?'	***RestartTime1=30***		
Settings Change	**RestartTime1=10**		
Access Rights	Admin	License	Base

Command Nr.	153		
Text	**RestartTime2**		
Function	It sets the restart time for output OUT2 in seconds, allowed range is 1 up to 3600.		
Settings with '?'	***RestartTime2=30***		
Settings Change	**RestartTime2=10**		
Access Rights	Admin	License	Base

Command Nr.	154	
Text	**RestartTime3**	
Function	It sets the restart time for output OUT3 in seconds, allowed range is 1 up to 3600.	
Settings with '?'	*RestartTime3=30*	
Settings Change	**RestartTime3=10**	
Access Rights	Admin	License	Base

Command Nr.	155	
Text	**RestartTime4**	
Function	It sets the restart time for output OUT4 in seconds, allowed range is 1 up to 3600.	
Settings with '?'	*RestartTime4=30*	
Settings Change	**RestartTime4=10**	
Access Rights	Admin	License	Base

Command Nr.	125	
Text	**Reboot**	
Function	It executes the restart of the device itself, BT connection will be terminated.	
Response	*Reboot – OK*	
Access Rights	Admin	License	Base

Command Nr.	15
Text	**RingActionAdmin**
Function	Action after confirmed incoming call to the Admin number if the number is set. If not, any number is considered to be Admin.
Settings with '?'	*(NoAction),HangUP,Restart,Reswitch, Restart1,Reswitch1, Restart2,Reswitch2, Restart3,Reswitch3, Restart4,Reswitch4,IVR*
RingActionAdmin=NoAction	The device gives no response to an incoming call, however, the information on time of the call and the calling number, including the number of rings, are saved in the internal LOG.
RingActionAdmin=HangUp	The device hangs up and makes no action to an incoming call longer than one ring*. A record with time of the call and the calling number, including the number of rings, will be saved in the internal LOG.

RingActionAdmin=Restart	The device hangs up the incoming call* and performs the RESTART of both outputs. **Restart1** – OUT1 only. **Restart2** - OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
RingActionAdmin=Reswitch	The device hangs up the incoming call* and makes a permanent change of the status (TurnOff/TurnOn, TurnOn/TurnOff) of both outputst. **Reswitch1** – OUT1 only. **Reswitch2**– OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
RingActionAdmin=IVR	The device answers the incoming call* and activates the voice selfservice. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG. It is required that a voice file is recorded and the MEDIUM license is activated.		
Access Rights	Admin	License	Base

Command Nr.	16
Text	**RingActionUser**
Function	Action for confirmed incoming call to a user number if the number is set. Otherwise, it will be ignored.
Settings with '?'	*(NoAction),HangUP,Restart,Reswitch, Restart1,Reswitch1, Restart2,Reswitch2, Restart3,Reswitch3, Restart4,Reswitch4,IVR*
RingActionUser=NoAction	The device gives no response to an incoming call, however, the information on time of the call and the calling number, including the number of rings, are saved in the internal LOG.
RingActionUser=HangUp	The device hangs up and makes no action to an incoming call longer than one ring*. A record with time of the call and the calling number, including the number of rings, will be saved in the internal LOG.
RingActionUser=Restart	The device hangs up the incoming call* and performs the RESTART of both outputs socket. **Restart1** – OUT1 only. **Restart2** - OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.
RingActionAdmin=Reswitch	The device hangs up the incoming call* and makes a permanent change of the status (TurnOff/TurnOn, TurnOn/TurnOff) of both outputs. **Reswitch1**– OUT1 only. **Reswitch2** – OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.

RingActionAdmin=IVR	The device answers the incoming call* and activates the voice selfservice. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG. It is required that a voice file is recorded and the MEDIUM license is activated.		
Access Rights	Admin	License	Medium

Command Nr.	17		
Text	**NCActionAdmin**		
F	Action for an incoming call to the Admin number if the number is set. The action will be made unless the number of rings exceed a user-specified limit. And thus the Admin can perform two actions by making calls. If no Admin number is set, any number is considered to be Admin.		
Settings with '?'	*(NoAction),HangUP,Restart,Reswitch, Restart1,Reswitch1, Restart2,Reswitch2, Restart3,Reswitch3,Restart4,Reswitch4*		
NCActionAdmin =NoAction	The device gives no response to an incoming call, however, the information on time of the call and the calling number, including the number of rings, are saved in the internal LOG.		
NCActionAdmin =Restart	The device will perform the RESTART of both output sockets when an incoming call is shorter than the specified number of rings. . **Restart1** – OUT1 only. **Restart2** - OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
NCActionAdmin =Reswitch	The device will make a permanent change of the status (TurnOff/TurnOn, TurnOn/TurnOff) of the output socket when an incoming call is shorter than the specified number of rings. . **Reswitch1**– OUT1 only. **Reswitch2**– OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
Access Rights	Admin	License	Medium

Note…

*You can define the **number of rings** by the **RingTimes** command.*

Command Nr.	18		
Text	**NCActionUser**		
Function	Action for an incoming call to a User number if the number is set. The action will be made unless the number of rings exceeds a user-specified limit. And thus the User can perform two actions by making calls. If no User number is defined, an option will be ignored.		
Settings with '?'	***(NoAction),HangUP,Restart,Reswitch, Restart1,Reswitch1, Restart2,Reswitch2, Restart3,Reswitch3,Restart4,Reswitch4***		
NCActionUser= NoAction	The device gives no response to an incoming call, however, the information on time of the call and the calling number, including the number of rings, are saved in the internal LOG.		
NCActionUser= Restart	The device will perform the RESTART of the output socket when an incoming call is shorter than the specified number of rings. **Restart1** – OUT1 only. **Restart2** - OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
NCActionUser= Reswitch	The device will make a permanent change of the status (TurnOff/TurnOn, TurnOn/TurnOff) of the output socket when an incoming call is shorter than the specified number of rings. **Reswitch1**– OUT1 only. **Reswitch2**– OUT2 only. A record with time of the call and the calling number, including the number of rings and the performed action, will be saved in the internal LOG.		
Access Rights	Admin	License	Medium

Command Nr.	19		
Text	**AddAdmin**		
Function	It adds the Administrator number; this number is allowed to edit all parameters of the device.		
Settings with '?'	***N/A, use AdminList***		
AddAdmin	This command will save the number from which a SMS message was sent. The device will confirm whether number has been added for the first time or if it has been overwritten.		
AddAdmin=42012345 6789	*You can also select a different number than the one from which a SMS message was sent. By this command you can add the Admin number via BT terminal.*		
Access Rights	Admin	License	Base

Command Nr.	130		
Text	**AddAdmin2**		
Function	It adds second Administrator number; this number is allowed to edit all parameters of the device.		
Settings with '?'	*N/A, use AdminList2*		
AddAdmin	This command will save the number from which a SMS message was sent. The device will confirm whether the number has been added for the first time or if it has been overwritten.		
AddAdmin=42012345 6789	*You can also select a different number than the one from which a SMS message was sent. By this command you can add the Admin number via BT terminal.*		
Access Rights	Admin	License	Base

Command Nr.	21		
Text	**AddUser**		
Function	It adds a User number for which the device can only be used in a limited way – only control commands. There may be up to one thousand User numbers.		
Settings with '?'	*N/A, use UserList or UserAList*		
AddUser=420123456 789,alias	*It adds the User number. The alias serves for better orientation and for the user identification.* **There may be several possible records!** *You can add a number with no alias and several numbers following each other as well, e.g.* **AddUser=420123456789;4201111111** *or:* **AddUser=420123456789,alias1;4201111111,alias2** *or a combination up to the size of one SMS (160 characters).*		
Access Rights	Admin	License	Base

Note...

*It is possible to upload **a text file containing user numbers** using IQcontrol suite. Text file can be generated by the user manually by a text editor, or by the Numbers Editor (full license is needed).*

The **Base license** supports **100** user numbers. The **Medium license** supports **500** user numbers and the **Full license** supports **1000** user numbers.

Command Nr.	22
Text	**DelUser**
Function	It deletes a User number for which the device can only be used in a limited way – only control commands. There may be up to one thousand User numbers.
Settings with '?'	*N/A, use UserList or UserAList*
DelUser=42012345678 9	*It deletes the User number. The alias serves for better orientation and for the user identification. You can delete one or several numbers following each other:* **DelUser**=*420123456789;420111111* *up to the size of one SMS (160 characters).*
Access Rights	Admin	License	Base

Command Nr.	23
Text	**DelAllUsers**
Function	It deletes all user numbers. It is confirmed by the suffix - OK.
Settings with '?'	*N/A, use UserList or UserAList*
Access Rights	Admin	License	Base

Command Nr.\	24
Text	**UserList**
Function	It displays numbers of all added users. It displays a list of numbers with no aliases.
Settings with '?'	*N/A*
UserList=1	*It displays a list from the first number. You can display the whole list by changing the number.* *The size of the reply text is limited up to the size of 4 SMS messages (4x160 characters).*
Access Rights	Admin	License	Base

Command Nr.\	25		
Text	**UserAList**		
Function	It displays numbers of all added users. It displays a list of numbers with its aliases.		
Settings with '?'	***N/A***		
UserAList=1	*It displays a list from the first number. You can display the whole list by changing the number.* *The size of the reply text is limited up to the size of 4 SMS messages (4x160 characters).*		
Access Rights	Admin	License	Base

Command Nr.	26		
Text	**RingTimes**		
Function	It configures the limit of ring times based on which actions to incoming calls are evaluated, range of 1 to 6. If the user hangs up before the specified number, an action will be made based on the defined commands **NCActionxxx/NCAkcexxx**		
Settings with '?'	***Restarttime=1***		
Change of settings	**RestartTime=6**		
Access Rights	Admin	License	Base

Command Nr.	122		
Text	**RingActionBlock**		
Function	It configures the time of blocking action of incoming call from last processed ringaction, range of 0 to 250. 0 – unblocked.		
Settings with '?'	***RingActionBlock =0***		
Change of settings	***RingActionBlock =20***		
Access Rights	Admin	License	Base

Command Nr.	27		
Text	**RingOnTime**		
Function	It configures the time of call backs in seconds, range of 5 to 30. For example: In case of an alarm or when the **RingON** command is used.		
Settings with '?'	***RingOnTime =15***		
Change of settings	**RingOnTime =20**		
Access Rights	Admin	License	Base

Command Nr.	28		
Text	**SMSPerDay**		
Function	Number of sent SMS messages from the device per day. Range of 0 to 250. 0 is unlimited number of SMS. The clear of this limit block is possible by push button.		
Settings with '?'	***SMSPerDay =50***		
Change of settings	**SMSPerDay =10**		
Access Rights	Admin	License	Base

Command Nr.	29		
Text	**Output**		
Function	Settings of the status of the output socket after plugging into power supply.		
Settings with '?'	***(Remeber),On,Off***		
Output=Remember	The output socket will be configured to have the status in which it was before the own power supply loss.		
Output=On	The output socket will be always configured to have the status TurnedOn after plugging into power supply.		
Output=Off	The output socket will be always configured to have the status TurnedOff after plugging into power supply.		
Access Rights	Admin	License	Base

Command Nr.	30		
Text	**AdminPINSet**		
Function	PIN Activation/PIN deactivation for the Administrator number if specified.		
Settings with '?'	***(No),Yes***		
AdminPINSet=No	PIN is not activated in an incoming SMS.		
AdminPINSet=Yes	PIN is activated in an incoming SMS.		
Access Rights	Admin	License	Base

Command Nr.	31		
Text	**AdminPIN**		
Function	A PIN option for the security of incoming SMS messages from the Administrator number. This PIN always contains 4 digits and if this option is activated, then this PIN must be inserted before the command text. For example: To turn off **0000TurnOff**		
Settings with '?'	***0000***		
AdminPIN=1234	*It modifies PIN to 1234.*		
Access Rights	Admin	License	Base

Command Nr.	32		
Text	**UserPINSet**		
Function	PIN Activation/PIN deactivation for user numbers if specified.		
Settings with '?'	***(No),Yes***		
UserPINSet=No	PIN is not activated in an incoming SMS.		
UserPINSet=Yes	PIN is activated in an incoming SMS.		
Access Rights	Admin	License	Base

Command Nr.	33		
Text	**UserPIN**		
Function	A PIN option for the security of incoming SMS messages from the user numbers. This PIN always contains 4 digits and if this option is activated, then this PIN must be inserted before the command text. For example: To turn off **0000TurnOff**		
Settings with '?'	***0000***		
UserPIN=1234	*It modifies PIN to 1234.*		
Access Rights	Admin	License	Base

Command Nr.	34		
Text	**BTPIN**		
Function	A PIN option for the security of a Bluetooth terminal. This PIN always contains 4 digits.		
Settings with '?'	***0000***		
BTPIN=1234	*It modifies PIN to 1234.*		
Access Rights	Admin	License	Base

Command Nr.	35		
Text	**PINIVR**		
Function	A PIN option for a voice selfservice requesting the user to enter this PIN. This PIN always contains 4 digits.		
Výpis nastavení s '?'	***0000***		
PINIVR=1234	*It modifies PIN to 1234.*		
Access Rights	Admin	License	Base

Command Nr.	36
Text	**ScheduleAdd**
Function	It adds an event for the Scheduler. Syntax is **ScheduleAdd=hh:mm,*,Action.** Where hh means hours, mm means minutes, * means every day; numbers 1 to 7, Monday to Sunday can be used instead. Action means a Scheduler event that can be displayed (e.g. if the user changes the control commands by the **ScheduleOptions** command), for more information, please refer to its desciption. Maximum number of the time records is 50. Two special cases of syntax are available: **@@:10,Mo,Restart1** – which means that at every 10th minute on Monday will be performed reboot of the output OUT1; ****:20,*,Restart1** – Restart of the output OUT1 will be performed every 20th minute of all hours every day. There are two special commands added especiall for the Scheduler: **UNLockx and Lockx,** which allow to block outputs for a time needed – a feature useful especially for blocing of scroll gates control during a particular time.
Settings with '?'	*N/A*
ScheduleAdd=10:31, 7,TurnOn	It adds a time schedule for turning the output socket on at 10:31 a.m. always on Sunday.
ScheduleAdd=14:20, *,Status	It adds a time schedule for sending SMS on the status of the socket at 2:20 p.m. every day. SMS messages will be sent to selected or all alarm numbers specified by the user.
Access Rights	Admin	License	Medium

Command Nr.	37
Text	**ScheduleDel**
Function	It deletes an event for the Scheduler. Syntax is **ScheduleDel=hh:mm** Where hh means hours, mm means minutes.
Settings with '?'	*N/A*
ScheduleDel=10:31	It deletes a time schedule for 10:31 a.m.
Access Rights	Admin	License	Medium

Command Nr.	38		
Text	**ScheduleDelAll**		
Function	It deletes all events for the Scheduler.		
Settings with '?'	***N/A***		
ScheduleDelAll	It deletes all Scheduler records.		
Access Rights	Admin	License	Medium

Command Nr.	39		
Text	**SchedulerList**		
Function	It displays all added Scheduler records.		
Settings with '?'	***N/A***	***N/A***	
SchedulerList=1	It displays the Scheduler records starting from the first record.		
Access Rights	Admin	License	Medium

Command Nr.	40		
Text	**SchedulerOptions**		
Function	It displays all potential Scheduler events that can be added into a time schedule. These events are the particular commands for controlling the device. In case of their modification the text of events will be also modified.		
Settings with '?'	***N/A***		
SchedulerOptions	Turnon, Turnon1, Turnon2, Turnon3, Turnon4,TurnOff, TurnOff1, TurnOff2, TurnOff3, TurnOff4,Restart, Restart1, Restart2, Restart3,Restart4,Status,SendGPRS, OUTlock1,OUTUnLock1, OUTlock2,OUTUnLock2,OUTlock3, OUTUnLock3,OUTlock4,OUTUnLock4,SaveStatus		
Access Rights	Admin	License	Medium

Command Nr.	41		
Text	**DeviceName**		
Function	It configures the device name which can be identified in this way via a Bluetoth terminal, and this name is also used in alarm SMS messages. The size is up to a maximum of 18 characters.		
Settings with '?'	***Devicename=IQsocket***		
DeviceName=NewName	*It configures a new device name to NewName.*		
Access Rights	Admin	License	Base

Command Nr.	43		
Text	**TempUnit**		
Function	It configures temperature units for temperature sensors, based upon option they will be displayed according to selected conversion.		
Settings with '?'	***TempUnit=(DegC),DegF***		
TempUnit=F	*It configures Fahrenheit temperature units.*		
Access Rights	Admin	License	Base

Command Nr.	45		
Text	**DelCounter**		
Function	It sets the numbers of changes in the particular counter to zero.		
Settings with '?'	***N/A***		
DelCounter=1	*It deletes the numbers of changes in the output socket.*		
DelCounter=X	*It deletes the counter number X, see command number 44*		
Access Rights	Admin	License	Base

Command Nr.	121		
Text	**HoursCounter**		
Function	It activates the counting of hours at DIN3 input if LOG1 is present. The resulution 1secons. Step 1 ms. The value is shown in v LongStatus: **0d 0h 0m 0s**, in system - parameter $T.		
Settings with '?'	**HoursCounter =(No),Yes**		
HoursCounter =No	*It deactivates the hoursecounter.*		
HoursCounter =Yes	*It activates the hoursecounter.*		
Access Rights	Admin	License	Full

Command Nr.	44		
Text	**Counter**		
Function	It displays the numbers of changes of inputs and outputs.		
Settings with '?'	*N/A*		
Counter=1	*It displays the number of changes of the output1 – OUT1*		
Counter=2	*It displays the number of changes of the output2 – OUT2*		
Counter=3	*It displays the number of changes of the output3 – OUT3*		
Counter=4	*It displays the number of changes of the output4 – OUT4*		
Counter=5	*It displays the numbers of changes of the digital input DIN1 in case it is defined as digital.*		
Counter=6	*It displays the numbers of changes of the digital input DIN2 in case it is defined as digital.*		
Counter=7	*It displays the numbers of changes of the digital input DIN3 in case it is defined as digital.*		
Counter=8	*It displays the numbers of changes of the digital input DIN4 in case it is defined as digital.*		
Counter=9	*It displays the number of pressing the manual control push button.*		
Counter=10	*It displays the number of power failures AC main input.*		
Counter=11	*It displays the number of power failures on DC power input.*		
Counter=12	*It displays the number of network failures.*		
Counter=13	*It displays the number of received SMS.*		
Counter=14	*It displays the number of declined SMS throught security settings.*		
Counter=15	*It displays the number of processed SMS.*		
Counter=16	*It displays the number of sent SMS by device.*		
Counter=17	*It displays the numbers of all incoming calls.*		
Counter=18	*It displays the numbers of allowed incoming calls.*		
Access Rights	Admin	License	Base

Command Nr.	101		
Text	**PwrFailTime**		
Function	It configures the time in miliseconds that is the minimum for evaluating the power failure if configured. It is not recommended to be lower than 100ms because of interference from the GSM network. Range of 10 to 30000 ms. It is valid for AC and DC power inputs.		
Settings with '?'	**PwrFailTime =2000**		
Change of settings	**PwrFailTime =2000**		
Access Rights	Admin	License	Base

Command Nr.	102		
Text	**TriggerTime1**		
Function	It configures the time in miliseconds that is the minimum for evaluating the digital input level DIN1 if configured. It is not recommended to be lower than 100ms because of interference from the GSM network. Range of 10 to 30000 ms.		
Settings with '?'	*TriggerTime1 =100*		
Change of settings	**TriggerTime1 =100**		
Access Rights	Admin	License	Full

Command Nr.	103		
Text	**TriggerTime2**		
Function	It configures the time in miliseconds that is the minimum for evaluating the digital input level DIN2 if configured. It is not recommended to be lower than 100ms because of interference from the GSM network. Range of 10 to 30000 ms.		
Settings with '?'	*TriggerTime2 =100*		
Change of settings	**TriggerTime2 =100**		
Access Rights	Admin	License	Full

Command Nr.	104		
Text	**TriggerTime3**		
Function	It configures the time in miliseconds that is the minimum for evaluating the digital input level DIN3 if configured. It is not recommended to be lower than 100ms because of interference from the GSM network. Range of 10 to 30000 ms.		
Settings with '?'	*TriggerTime3 =100*		
Change of settings	**TriggerTime3 =100**		
Access Rights	Admin	License	Full

Command Nr.	105		
Text	**TriggerTime4**		
Function	It configures the time in miliseconds that is the minimum for evaluating the digital input level DIN4 if configured. It is not recommended to be lower than 100ms because of interference from the GSM network. Range of 10 to 30000 ms.		
Settings with '?'	*TriggerTime4 =100*		
Change of settings	**TriggerTime4 =100**		
Access Rights	Admin	License	Full

Command Nr.	50		
Text	**VoltAlarm**		
Function	Configuration of the voltage detection alarm at the ADH input.		
Settings with '?'	*VoltAlarm=(No),Min,Max,Mix*		
Voltalarm=Min	*It activates the voltage monitor alarm at the A/D input to the minimum specified level.*		
Voltalarm=Max	*It activates the voltage monitor alarm at the A/D input to the maximum specified level.*		
Voltalarm=MiX	*It activates the voltage monitor alarm at the A/D input to the minimum and the maximum specified levels.*		
Voltalarm=No	*It deactivates the voltage monitor alarm.*		
Access Rights	Admin	License	Full

Command Nr.	51		
Text	**VLevelMinHI**		
Function	It configures the minimum voltage level in tenths of volts. The maximum value is 500 decivolts. The configured level of 10 actually corresponds to 1 volt.		
Settings with '?'	*VLevelMinHI =10*		
Change of settings	**VLevelMinHI =20**		
Access Rights	Admin	License	Full

Command Nr.	52		
Text	**VLevelMaxHI**		
Function	It configures the maximum voltage level in tenths of volts.The configured level of 20 actually corresponds to 2 volts. The maximum value is 500 decivolts.		
Settings with '?'	***VLevelMaxHI =20***		
Change of settings	**VLevelMaxHI =20**		
Access Rights	Admin	License	Full

Command Nr.	53		
Text	**PulseAlarm**		
Function	It configures the pulse monitor alarm per one minute. You can configure it for an analog input ADL only (electric fence and its voltage level monitoring) with defined VLevelMinLO and VLevelMaxLO limits for detection.		
Settings with '?''	***PulseAlarm=(No),Min,Max,Mix***		
Pulsealarm=Min	*It activates the impulse monitor alarm to the minimum specified level.*		
Pulsealarm=Max	*It activates the impulse monitor alarm to the maximum specified level.*		
Pulsealarm=MiX	*It activates the impulse monitor alarm to the maximum and the minimum specified levels.*		
Pulsealarm=No	*It deactivates the pulse alarm.*		
Access Rights	Admin	License	Full

Command Nr.	54		
Text	**MinPulses**		
Function	Configuration of the minimum limit for the number of pulses per one minute, range of 1 to 240.		
Settings with '?'	***MinPulses =10***		
Change of settings	**MinPulses =30**		
Access Rights	Admin	License	Full

Command Nr.	55		
Text	**MaxPulses**		
Function	Configuration of the maximum limit for the number of pulses per one minute, range of 10 to 240.		
Settings with '?'	***MaxPulses =10***		
Change of settings	**MaxPulses =30**		
Access Rights	Admin	License	Full

Command Nr.	123		
Text	**VLevelMinLO**		
Function	It configures the minimum voltage level in tenths of volts. The maximum value is 50 decivolts. The configured level of 10 actually corresponds to 1 volt.		
Settings with '?'	*VLevelMinLO =10*		
Change of settings	**VLevelMinLO =20**		
Access Rights	Admin	License	Full

Command Nr.	124		
Text	**VLevelMaxHI**		
Function	It configures the maximum voltage level in tenths of volts.The configured level of 20 actually corresponds to 2 volts. The maximum value is 50 decivolts.		
Settings with '?'	*VLevelMaxLO =20*		
Change of settings	**VLevelMaxLO =30**		
Access Rights	Admin	License	Full

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Command Nr.	56		
Text	**DAlarm1**		
Function	It configures the digital input change monitor alarm. The universal input must be set as digital.		
Settings with '?'	***DAlarm1=(No),Low,High,Both,Limit***		
Dalarm1=Low	*It activates the alarm at the low level at the digital input GND, 0 volts.*		
Dalarm1=High	*It activates the alarm at the high level at the digital input of 2-30 volts.*		
Dalarm1=Both	*It activates the alarm at both levels.*		
Dalarm1=No	*It deactivates the digital input monitor alarm.*		
Dalarm1=Limit	*It activates alarm if the limit of changes on this input was met. To set the count of changes - see cmnd, No. 111. Command **Delcounter** reactivates the alarm again.*		
Access Rights	Admin	License	Full

Command Nr.	57		
Text	**DAlarm2**		
Function	It configures the digital input change monitor alarm. The universal input must be set as digital.		
Settings with '?'	***DAlarm2=(No),Low,High,Both,Limit***		
Dalarm2=Low	*It activates the alarm at the low level at the digital input GND, 0 volts.*		
Dalarm2=High	*It activates the alarm at the high level at the digital input of 2-30 volts.*		
Dalarm2=Both	*It activates the alarm at both levels.*		
Dalarm2=No	*It deactivates the digital input monitor alarm.*		
Dalarm2=Limit	*It activates alarm if the limit of changes on this input was met. To set the count of changes - see cmnd, No. 112. Command **Delcounter** reactivates the alarm again.*		
Access Rights	Admin	License	Full

Command Nr.	58		
Text	**DAlarm3**		
Function	It configures the digital input change monitor alarm. The universal input must be set as digital.		
Settings with '?'	***DAlarm3=(No),Low,High,Both,Limit***		
Dalarm3=Low	*It activates the alarm at the low level at the digital input GND, 0 volts.*		
Dalarm3=High	*It activates the alarm at the high level at the digital input of 2-30 volts.*		
Dalarm3=Both	*It activates the alarm at both levels.*		
Dalarm3=No	*It deactivates the digital input monitor alarm.*		
Dalarm3=Limit	*It activates alarm if the limit of changes on this input was met. To set the count of changes - see cmnd, No. 113. Command **Delcounter** reactivates the alarm again.*		
Access Rights	Admin	License	Full

Command Nr.	186		
Text	**DAlarm4**		
Function	It configures the digital input change monitor alarm. The universal input must be set as digital.		
Settings with '?'	***DAlarm4=(No),Low,High,Both,Limit***		
Dalarm4=Low	*It activates the alarm at the low level at the digital input GND, 0 volts.*		
Dalarm4=High	*It activates the alarm at the high level at the digital input of 2-30 volts.*		
Dalarm3=Both	*It activates the alarm at both levels.*		
Dalarm4=No	*It deactivates the digital input monitor alarm.*		
Dalarm4=Limit	*It activates alarm if the limit of number of changes on this input was met. To set the count of changes - see cmnd Command **Delcounter** reactivates the alarm again.*		
Access Rights	Admin	License	Full

Command Nr.	114		
Text	**CounterLimitDIn1**		
Function	Configuration of the maximum limit for the number of changes on digital input DIN1, range of 0 to 30000. If this limit is met, then it generate alarm event.		
Settings with '?'	***CounterLimitDIn1=0***		
CounterLimitDIn1=1 000	*The set of new value of changes on digital input 1 for alarm event.*		
Access Rights	Admin	License	Full

Command Nr.	115		
Text	**CounterLimitDIn2**		
Function	Configuration of the maximum limit for the number of changes on digital input DIN2, range of 0 to 30000. If this limit is met, then it generate alarm event.		
Settings with '?'	***CounterLimitDIn2=0***		
CounterLimitDIn2=1 000	*The set of new value of changes on digital input 2 for alarm event.*		
Access Rights	Admin	License	Full

Command Nr.	116		
Text	**CounterLimitDIn3**		
Function	Configuration of the maximum limit for the number of changes on digital input DIN3, range of 0 to 300 00. If this limit is met, then it generate alarm event.		
Settings with '?'	*CounterLimitDIn3=0*		
CounterLimitDIn3=1 000	*The set of new value of changes on digital input 3 for alarm event.*		
Access Rights	Admin	License	Full

Command Nr.	117		
Text	**CounterLimitDIn4**		
Function	Configuration of the maximum limit for the number of changes on digital input DIN4, range of 0 to 300 00. If this limit is met, then it generate alarm event.		
Settings with '?'	*CounterLimitDIn4=0*		
CounterLimitDIn4=1 000	*The set of new value of changes on digital input 3 for alarm event.*		
Access Rights	Admin	License	Full

Command Nr.	59		
Text	**BatCapLevel**		
Function	It configures the minimum level of internal battery voltage for sending an alarm SMS message and turning the device off. If no SMS number has been defined for the alarm, the device will be automatically turned off. Range of 20 – 90 %, 0 – alarm is not activated, the device will be turned off in case of power failure.		
Settings with '?'	**BatCapLevel =0**		
Change of settings	**BatCapLevel =30**		
Access Rights	Admin	License	Base

Command Nr.	60		
Text	**TempAlarm**		
Function	It configures the temperature/humidity monitor alarm for up to 8 sensors connected to the universal input. An alarm alert is always sent when temperature exceeds the upper limit or falls below the lower limit specified by the user.		
Settings with '?'	***TempAlarm=(No),Yes***		
Tempalarm=Yes	*It activates the temperature alarm.*		
Tempalarm=No	*It deactivates the temperature alarm.*		
Access Rights	Admin	License	Medium

Command Nr.	61		
Text	**PwrAlarm**		
Function	It configures the power failure and power recovery monitoring alarm.		
Settings with '?'	***PwrAlarm=(No),Yes***		
Pwrpalarm=Yes	*It activates the power failure and power recovery alarm.*		
Pwrpalarm=No	*It deactivates the alarm.*		
Access Rights	Admin	License	Base

Command Nr.	62		
Text	**AddAlarmNumber**		
Function	It adds the number to which an alarm alert should be sent. There can be up to a maximum of 12 alarm numbers.		
Settings with '?'	***N/A***		
AddAlarmnuber= 420123456789,S,*	*It adds the number 420123456789 to which an alarm alert should be sent in the form of SMS message; each alarm event will be sent to this number (character *). The character * can be replaced with the given alarm number and each alarm number can be assigned to another alarm.*		
AddAlarmnuber= 420123456789,C,1	*It adds the number 420123456789 to make a call only in case of a power recovery - character **1**, if this alarm is activated.*		
AddAlarmnuber= 420123456789,D,1	*This cause activation of the **SendGPRS** command in case of an alarm event – sending/receiving data to/from cloud: Server/URL specified in the GPRS settings; the number will be ignored in this case.*		
Access Rights	Admin	License	Base

Command Nr.	63		
Text	**DelAlarmNumber**		
Function	It deletes the alarm number.		
Settings with '?'	*N/A*		
DelAlarmNumber= 421023456789,C,1	*It deletes the number 420123456789 from the list.*		
Access Rights	Admin	License	Base

Meaning of alarms.

* - Each alarm event causes notifications to be sent via SMS or calling.
*1 - **Power recovery alarm***
*2 – **Power failure alarm on both AC and DC power inputs***
*3 - **GSM jamming alarm***
*4 – **Falling below the minimum level of pulses per minute alarm (ADL input)***
*5 - **Exceeding the maximum level of pulses per minute alarm (ADL input)***
*6 – **Falling bellow the minimum voltage level alarm (ADH input)***
*7 - **Exceeding the maximum voltage level alarm (ADH input)***
*8 – **Reaching the lower level at the digital input1 DIN1 , GND, 0 volts, alarm***
*9 - **Reaching the upper level at the digital input1 DIN1 , 2-5 volts, alarm***
*10 – **Reaching the lower level at the digital input2 DIN2 , GND, 0 volts, alarm***
*11 - **Reaching the upper level at the digital input2 DIN2 , 2-5 volts, alarm***
*12 – **Reaching the lower level at the digital input3 DIN3 , GND, 0 volts, alarm***
*13 - **Reaching the upper level at the digital input3 DIN3 , 2-5 volts, alarm***
*14 – **Reaching the lower level at the digital input4 DIN4 , GND, 0 volts, alarm***
*15 - **Reaching the upper level at the digital input4 DIN4 , 2-5 volts, alarm***
*16 - **Temperature/Humidity alarm on the sensor 1.***
*17 - **Temperature/Humidity alarm on the sensor 2.***
*18 - **Temperature/Humidity alarm on the sensor 3.***
*19 - **Temperature/Humidity alarm on the sensor 4.***
*20 - **Temperature/Humidity alarm on the sensor 5.***
*21 - **Temperature/Humidity alarm on the sensor 6.***
*22 - **Temperature/Humidity alarm on the sensor 7.***
*23 - **Temperature/Humidity alarm on the sensor 8.***
*24 - **Limit of changes on the digital input DIN1.***
*25 - **Limit of changes on the digital input DIN2.***
*26 - **Limit of changes on the digital input DIN3.***
*27 - **Limit of changes on the digital input DIN4.***

Other values will be ignored. Value 1 does have the highest processing priority.

Command Nr.	64		
Text	**DelAllAlarmNum**		
Function	It deletes all alarm numbers from the list.		
Settings with '?'	*N/A*		
DelAllAlarmNum	It deletes all numbers from the list.		
Access Rights	Admin	License	Base

Command Nr.	65		
Text	**ListAlarmNum**		
Function	It displays all added numbers for alarms, or: no record.		
Settings with '?'	*N/A*		
ListAlarmNum	*It displays added numbers, including events.*		
Access Rights	Admin	License	Base

Command Nr.	66		
Text	**AlarmQueue**		
Function	Here it is configured whether alarms will be sent to all defined numbers, or whether no other potential alarm numbers will be activated after answering the call in case of calling. Answering the call, neither denying the call, is considered to be activation.		
Settings with '?'	*AlarmQueue=(Always), Terminate*		
AlarmQueue=Always	*In case of an alarm event, a SMS message is always sent/a call is always made to all added numbers for selected alarm event.*		
AlarmQueue=Terminate	*In case of an alarm event, a SMS message is sent/a call is made to all added numbers for selected alarm event* *In case of calling and answering the call by the user, no SMS message will be sent/no more calls will be made to another alarm number for the particular alarm event.*		
Access Rights	Admin	License	Base

Command Nr.	67		
Text	**StopAllAlarms**		
Function	If the command is sent once, it will temporarily stop all alarms, after reboot/restart of the device the alarms selected by the user will be activated and the user will be notified of this by SMS. If the command is sent again, all active alarms will be stopped permanently.		
Settings with '?'	***N/A***		
StopAllAlarms	*All alarms were stopped temporarily!*		
StopAllAlarms	*All alarms were stopped permanently!*		
Access Rights	Admin	License	Base

Command Nr.	68		
Text	**JammAlarm**		
Function	It configures the GSM jamming monitoring alarm. A SMS message will be sent after the connection has been restored, in such a way as in case of the other alarms. The device will send SMS information whether jamming comes from a GSM jammer, or is caused by increased noise.		
Settings with '?'	***JammAlarm=(No),Yes***		
JammAlarm=Yes	*It activates the GSM jamming alarm.*		
JammAlarm=Yes	*It deactivates the alarm.*		
Access Rights	Admin	License	Base

Command Nr.	69		
Text	**Tp1Max**		
Function	It configurates the maximum level for temperature/humidity sensor 1. Range of -200 up to +1300°.		
Settings with '?'	**Tp1Max=*30***		
Change of settings	**Tp1Max=-30**		
Access Rights	Admin	License	Medium

Command Nr.	70		
Text	**Tp1Min**		
Function	It configures the minimum level for temperature/humidity sensor 1. Range of -200 up to +1300°.		
Settings with '?'	**Tp1Min=20**		
Change of settings	**Tp1Min=-30**		
Access Rights	Admin	License	Medium

Note...

You can add the limits for all 8 sensors.
Analog commands are the following: Tp2Min to TP8Min and Tp2Max to Tp8Max. Command numbers start from 71 up to 84.

Command Nr.	85		
Text	**TControl1Max**		
Function	It configures the maximum threshold for the thermostat - automatic output 1 – OUT1 switching. Range of -200 up to +1300°. Either turning the output off or turning the output on can be realised by value substitution <> in case of exceeding temperature/humidity limits.		
Settings with '?'	**TControl1Max =30**		
Change of settings	**TControl1Max =-30**		
Access Rights	Admin	License	Medium

Command Nr.	86		
Text	**TControl1Min**		
Function	It configures the minimum threshold for the thermostat – automatic output1 – OUT1 switching. Range of -200 up to +1300°.		
Settings with '?'	**TControl1Min =20**		
Change of settings	**TControl1Min =-30**		
Access Rights	Admin	License	Medium

Command Nr.	87
Text	**Output1Control**
Function	Activation of the thermostat1 - automatic control of the output1 based on temperature/humidity sensor. Thermostat can be assigned only to one temperature/humidity sensor. The number is assigned to the sensor during activation, please refer to chapter on sensor activation.
Settings with '?'	***Output1Control=(Off),S1,S2,S3,S4,S5,S6,S7,S8***
Output1Control=S3	*It activates the thermostat on sensor 3.*
Output1Control=Off	*It deactivates the thermostat.*
Access Rights	Admin	License	Medium

Command Nr.	156
Text	**TControl2Max**
Function	It configurates the maximum threshold for the thermostat - automatic output 2 – OUT2 switching. Range of -200 up to +1300°. Either turning the output off or turning the socket on can be realised by value substitution <> in case of exceeding temperature/humidity limits.
Settings with '?'	**TControl2Max =30**
Change of settings	**TControl2Max =-30**
Access Rights	Admin	License	Medium

Command Nr.	157
Text	**TControl2Min**
Function	It configurates the minimum threshold for the thermostat – automatic output2 – OUT2 switching. Range of -200 up to +1300°.
Settings with '?'	**TControl2Min =20**
Change of settings	**TControl2Min =-30**
Access Rights	Admin	License	Medium

Command Nr.	158		
Text	**Output2Control**		
Function	Activation of the thermostat2 - automatic control of the output2 based on temperature/humidity sensor. Thermostat can be assigned only to one temperature/humidity sensor. The number is assigned to the sensor during activation, please refer to chapter on sensor activation.		
Settings with '?'	***Output2Control=(Off),S1,S2,S3,S4,S5,S6,S7,S8***		
Output2Control=S3	*It activates the thermostat2 on sensor 3.*		
Output2Control=Off	*It deactivates the thermostat2.*		
Access Rights	Admin	License	Medium

Command Nr.	159		
Text	**TControl3Max**		
Function	It configurates the maximum threshold for the thermostat - automatic output 3 – OUT3 switching. Range of -200 up to +1300°. Either turning the output off or turning the socket on can be realised by value substitution <> in case of exceeding temperature/humidity limits.		
Settings with '?'	***TControl3Max =30***		
Change of settings	**TControl3Max =-30**		
Access Rights	Admin	License	Medium

Command Nr.	160		
Text	**TControl3Min**		
Function	It configurates the minimum threshold for the thermostat – automatic output3 – OUT3 switching. Range of -200 up to +1300°.		
Settings with '?'	***TControl3Min =20***		
Change of settings	**TControl3Min =-30**		
Access Rights	Admin	License	Medium

Command Nr.	161		
Text	**Output3Control**		
Function	Activation of the thermostat3 - automatic control of the output2 based on temperature/humidity sensor. Thermostat can be assigned only to one temperature/humidity sensor. The number is assigned to the sensor during activation, please refer to chapter on sensor activation.		
Settings with '?'	***Output3Control=(Off),S1,S2,S3,S4,S5,S6,S7,S8***		
Output3Control=S3	*It activates the thermostat3 on sensor 3.*		
Output3Control=Off	*It deactivates the thermostat3.*		
Access Rights	Admin	License	Medium

Command Nr.	162		
Text	**TControl4Max**		
Function	It configurates the maximum threshold for the thermostat - automatic output4 – OUT4 switching. Range of -200 up to +1300°. Either turning the output off or turning the socket on can be realised by value substitution <> in case of exceeding temperature/humidity limits.		
Settings with '?'	**TControl4Max =30**		
Change of settings	**TControl4Max =-30**		
Access Rights	Admin	License	Medium

Command Nr.	163		
Text	**TControl4Min**		
Function	It configurates the minimum threshold for the thermostat – automatic output4 – OUT4 switching. Range of -200 up to +1300°.		
Settings with '?'	**TControl4Min =20**		
Change of settings	**TControl4Min =-30**		
Access Rights	Admin	License	Medium

Command Nr.	164
Text	**Output4Control**
Function	Activation of the thermostat4 - automatic control of the output2 based on temperature/humidity sensor. Thermostat can be assigned only to one temperature/humidity sensor. The number is assigned to the sensor during activation, please refer to chapter on sensor activation.
Settings with '?'	***Output4Control=(Off),S1,S2,S3,S4,S5,S6,S7,S8***
Output4Control=S3	*It activates the thermostat4 on sensor 3.*
Output4Control=Off	*It deactivates the thermostat4.*
Access Rights	Admin	License	Medium

Command Nr.	88
Text	**Version**
Function	It displays the current internal software version of the device.
Settings with '?'	***N/A***
Version	*Ver. 1.0.0*
Access Rights	Admin	License	Base

Command Nr.	89
Text	**PINLimitsIVR**
Function	A number of wrong pins entered for the voice selfservice. If this number has been set and exceeded, the user will be notified by voice that the limit has been exceeded. It is set to zero every day at 0:00, or by reboot/restart of the device. Range of 0 up to 20. 0 is set for unlimited tries.
Settings with '?'	**PINLimitsIVR =0**
PINLimitsIVR=0	Unlimited number of wrong pins entered.
PINLimitsIVR=3	A number of wrong pins entered one after another - 3.
Access Rights	Admin	License	Base

Command Nr.	90		
Text	**PINLimitsBT**		
Function	A number of wrong pins entered for the IQcontrol terminal via Bluetooth. If this number has been set and exceeded, the user will be notified by voice that the limit has been exceeded. It is set to zero every day at 0:00, or by reboot/restart of the device. Range of 0 up to 20.		
Settings with '?'	**PINLimitsBT=0**		
PINLimitsBT=0	Unlimited number of wrong pins entered.		
PINLimitsBT=3	A number of wrong pins entered one after another - 3.		
Access Rights	Admin	License	Base

Command Nr.	91		
Text	**UserTypeIVR**		
Function	It configures a range of the voice selfservice.		
Settings with '?'	**UserTypeIVR=(Long),Short**		
UserTypeIVR=Short	After the correct PIN has been entered in the voice selfservice, the output1 – OUT1 will be restarted and then the call will be hung up.		
UserTypeIVR=Long	After the correct PIN has been entered in the voice selfservice, the full menu will be offered to the user.		
Access Rights	Admin	License	Medium

Command Nr.	92		
Text	**AllLogs**		
Function	It displays the last 250(max) records of all event types.		
Settings with '?'	**N/A**		
AllLogs=1	It provides a list of events starting from the first record.		
Access Rights	Admin	License	Medium

Command Nr.	93		
Text	**SystemLog**		
Function	It displays the last 250(max) records of system events log.		
Settings with '?'	*N/A*		
SystemLog=1	It provides a list of system events starting from the first record.		
Access Rights	Admin	License	Base

System events can be the following:

Power
Power refresh
Firmware upgrade
IVR uploaded
Configuration uploaded
Commands uploaded
Manual button used
Scheduler event: Status
SMS limit over
Event
Disconnect from Network
Set to default
GSM jamming by GSM Jammer

Each record also contains the current time when the event occurred.
Any of these texts can be customized by the user.

Command Nr.	94		
Text	**ControlLog**		
Function	It displays the last 250(max) device control log records.		
Settings with '?'	*N/A*		
ControlLog=1	It provides a list of device control events starting from the first record.		
Access Rights	Admin	License	Base

Control events can be the following:

Call from (ANSWERED): 420123456789, Restart
Call from (NO CARRIER) : ? , NoAction *, ? means an unlisted number*
Call denied: 420123456789
SMS Denied: 420123456789

Furthermore all incoming SMS notifications of control commands for the SMS scheduler.

Each log record also contains the current time when the event occurred.
Any of these texts can be customized by the user.

Command Nr.	95		
Text	**ConfigLog**		
Function	It displays the last 250(max) device configuration event log records.		
Settings with '?'	***N/A***		
ConfigLog=1	It provides a list of the device configuration event log records starting from the first record.		
Access Rights	Admin	License	Base

Configuration events are all SMS messages intended to configure the device.

Each log record also contains the current time when the event occurred.

Command Nr.	96		
Text	**EraseSensors**		
Function	It deletes all universal input sensors that have been added.		
Settings with '?'	***N/A***		
EraseSensors	It deletes all added temperature/humidity sensors.		
Access Rights	Admin	License	Base

Command Nr.	99		
Text	**Default**		
Function	Factory default settings.		
Settings with '?'	***N/A***		
Default=321563254567895	The device will be set to default after a correct IMEI number has been entered.		
Access Rights	Admin	License	Base

Command Nr.	46		
Text	**GPRSTYPE**		
Function	Activation of sending the device information by GPRS.		
Settings with '?'	***GPRSTYPE=(No),GET,SET,BOTH***		
GPRSTYPE=No	*GPRS is not active.*		
GPRSTYPE=GET	*Data will be sent in GET format, connection will be terminated after data are sent.*		
GPRSTYPE =SET	*Device will download file from the given URL and will set the outputs per content of the file.*		
GPRSTYPE =BOTH	*Simultaneous GET and SET within a single connection.*		
Access Rights	Admin	License	Full

Command Nr.	47		
Text	**GPRSAPN**		
Function	A name of internet access point.		
Settings with '?'	***GPRSAPN=internet***		
GPRSHOST=internet.S	*Adding of the access point name.*		
Access Rights	Admin	License	Full

Command Nr.	49		
Text	**GPRSPORT**		
Function	Target port for GPRS connection.		
Settings with '?'	***GPRSPORT=0***		
GPRSPORT=40000	*Adding of cport for GPRS connection.*		
Access Rights	Admin	License	Full

Command Nr.	185		
Text	**GPRSSERVER**		
Function	A destination IP address or a domain name to which data will be sent.		
Settings with '?'	***GPRSSERVER=www.domain.com***		
GPRSSERVER=111.22.33.44	*Adding of the destination IP address. Max 30 characters.*		
Access Rights	Admin	License	Full

Command Nr.	48		
Text	**GPRSUrl**		
Function	URL onthi which will be data sent – GET; or xml file to be read - SET–.		
Settings with '?'	***GPRSUrl=file.xml***		
GPRSUrl=file.xml	*Specifies target file.xml. Max name length is 39 characters.*		
Access Rights	Admin	License	Full

Example for sending data to thingspeak.com.
GPRSTYPE=GET
GPRSUrl=update?api_key=0GO0GEZ00ABCDEFG
GPRSSERVER=api.thingspeak.com
GPRSPORT=80

Data can be sent by using the Scheduler or manually by command **SENDGPRS.**

Structure of the URL data of the GET request to the server is following::

update?api_key=0GO0GEZ00ABCDEFG&field1=temp1&field2=temp2&field3=OUT1&field4=OUT3&field5=DIN1&field6=CNT1&field7=PWRAC&&field8=ADIN1&field9=OUT2&field10=OUT4&field11=DIN2&field12=CNT2&field13=DIN3&field14=CNT3&field15=DIN4&field16=CNT4&field17=PWRDC&field18=CNTDC&field19=CNTAC&field20=ADIN2&field21=temp3&field22=temp4&field23=temp5&field24=temp6&field25=temp7&field26=temp8&field27=Bcap&field28=Signal

Where **0GO0GEZ00ABCDEFG** is the unique Thingspeak user account identifier
Temp1 to Temp8– Temperature values of sensors 1 – 8   in format X.X or –XX.X, [float]
OUT1 and OUT2 – State of the outputs 1 and 2, values 0 (off) or 1 (on)
OUT3 and OUT4 – State of the outputs 3 and 4, values in range 0 - 100 (off/PWM/on)
CNT1 and CNT2 – Values of digital inputs counters
CNTAC and CNTDC – Values of power input counters
PWRDC and PWRAC – State of power inputs 0 (off) or 1 (on)
ADIN1 and ADIN2 – Voltage values at the A/D inputs in decivolts, 100 = 10V
Bcap – charge capacity of the battery, 0 – 100
Signal – level of signal in %

The structure is optimized for Thingspeak, which is free of charge for up to 8 sensors .
GET request can be also processed by any other suitable means.

Example of graphical result of processing by Thingspeak, it is a test of sending two values of Temperature1 withing 10 days interval:
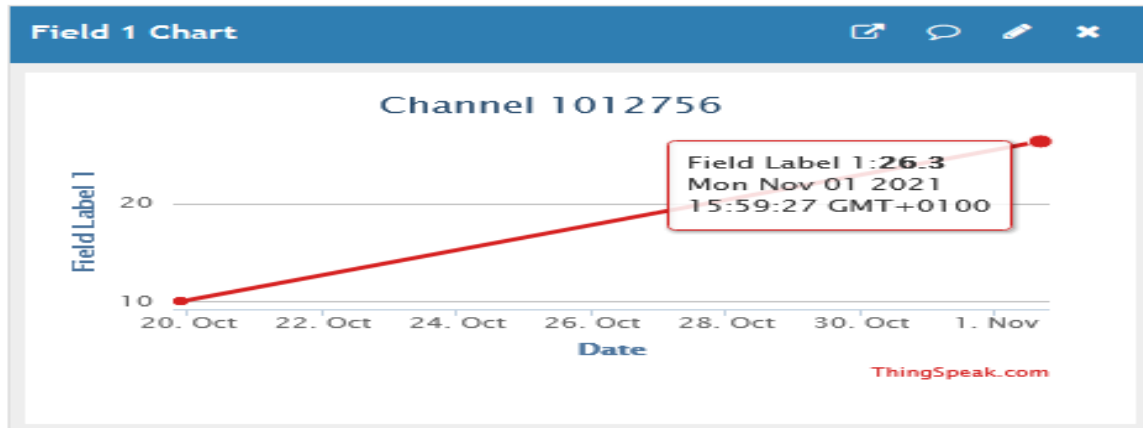
Example of settins to receive XML file with desired values of device's outputs:
GPRSTYPE=SET
GPRSUrl=outputs.xml
GPRSSERVER=myserver.com
GPRSPORT=80

The xml file outputs.xml available on the server must have following structure:
<IO>
<O1>0</O1>
<O2>1</O2>
<O3>0</O3>
<O4>50</O4>
<C1>110</C1>
<C2>0</C2>
<C3>0</C3>
<C4>0</C4>
</IO>

Structue can be also incomplete and can also be without separators /r/n, for example:
<IO><O1>0</O1></IO>

O1 tp O4 – outputs OUT1 to OUT4, 0 – turned off, 1 – turned on
C1 to C4 – values of the counters of OUT1 – OUT4 outputs

In case of GPRSTYPE=BOTH, data will be sent on the URL and if the server answer to the received URL contains XML structure, device output settins per the XML data will be performed. Size of the URL data of a single relation is in range of 300-500 bytes, answer from the Thingspeak is cca 1KB long.

Command Nr.	100		
Text	**LEDOption**		
Function	Option for LED3 indication at the front panel of your device.		
Settings with '?'	*(DIn),AnalogL,AnalogH*		
LEDOption=DIn	*LED3 indicates the status at the digital input DIN3.*		
LEDOption =AnalogL	*LED3 indicates the status at the analog input ADL.*		
LEDOption =AnalogH	*LED3 indicates the status at the analog input ADH.*		
Access Rights	Admin	License	Base

Command Nr.	106		
Text	**CntDiv1**		
Function	A divisive constant (conversion factor) for impulse counting of DIN1 input. After the number of this constant has been reached, the final impulse counter will be increased by 1. Allowed range is 1 to 30000.		
Settings with '?'	***CntDiv1=0***		
CntDiv1=1000	*The counter value will be increased by 1 after reaching a thousand impulses.*		
Access Rights	Admin	License	Full

Command Nr.	107		
Text	**CntDiv2**		
Function	A divisive constant (conversion factor) for impulse counting of DIN2 input. After the number of this constant has been reached, the final impulse counter will be increased by 1. Allowed range is 1 to 30000.		
Settings with '?'	***CntDiv2=0***		
CntDiv2=1000	*The counter value will be increased by 1 after reaching a thousand impulses.*		
Access Rights	Admin	License	Full

Command Nr.	108		
Text	**CntDiv3**		
Function	A divisive constant (conversion factor) for impulse counting of DIN3 input. After the number of this constant has been reached, the final impulse counter will be increased by 1. Allowed range is 1 to 30000.		
Settings with '?'	***CntDiv3=0***		
CntDiv3=1000	*The counter value will be increased by 1 after reaching a thousand impulses.*		
Access Rights	Admin	License	Full

Command Nr.	109		
Text	**CntDiv4**		
Function	A divisive constant (conversion factor) for impulse counting of DIN4 input. After the number of this constant has been reached, the final impulse counter will be increased by 1. Allowed range is 1 to 30000.		
Settings with '?'	***CntDiv4=0***		
CntDiv4=1000	*The counter value will be increased by 1 after reaching a thousand impulses.*		
Access Rights	Admin	License	Full

Command Nr.	110		
Text	**NextTime1**		
Function	Time of the next test at the digital input1 DIN1, if the alarm has been activated, range 0 to 3600 seconds.		
Settings with '?'	***NextTime1=0***		
NextTime1=60	*A digital input test will be postponed by 60 seconds.*		
Access Rights	Admin	License	Full

Command Nr.	111		
Text	**NextTime2**		
Function	Time of the next test at the digital input2 DIN2, if the alarm has been activated, range 0 to 3600 seconds.		
Settings with '?'	***NextTime2=0***		
NextTime2=60	*A digital input test will be postponed by 60 seconds.*		
Access Rights	Admin	License	Full

Command Nr.	112		
Text	**NextTime3**		
Function	Time of the next test at the digital input3 DIN3, if the alarm has been activated, range 0 to 3600 seconds.		
Settings with '?'	***NextTime3=0***		
NextTime3=60	*A digital input test will be postponed by 60 seconds.*		
Access Rights	Admin	License	Full

Command Nr.	113		
Text	**NextTime4**		
Function	Time of the next test at the digital input4 DIN4, if the alarm has been activated, range 0 to 3600 seconds.		
Settings with '?'	***NextTime4=0***		
NextTime4=60	*A digital input test will be postponed by 60 seconds.*		
Access Rights	Admin	License	Full

Command Nr.	114		
Text	**SeparApply**		
Function	Text from internet gateway between separators will applied to all commands		
Settings with '?'	***SeparApply=(No),Yes***		
SeparAplpy=No	*It deactivates the separators for SMS.*		
SeparAplpy =Yes	*It activates the separators for SMS.*		
Práva	Admin	License	Base

Command Nr.	115
Text	**Separators**
Function	Configuration of starting and ending separators. A text in an incoming SMS message will be separated from the message, and for subsequent processing only the text between these separators will be used. If these separators are not found in the SMS message, the message will be ignored. It is applicable e.g. for GOOGLE Calendar and other Internet SMS gateways.
Settings with '?'	**Separators=:.**
Separators=;*	The following characters will be used as separators: **;** for the start and ***** for the end of the text.
Access Rights	Admin	License	Base

Command Nr.	116
Text	**Bluetooth**
Function	Activation and deactivation of the Bluetooth interface used for wireless configuration by the IQcontrol terminal (Windows/Android/IOS). Reboot is needed for activate.
Settings with '?'	***Bluetooth=No,(Yes)***
Bluetooth =Yes	*It activates the Bluetooth interface.*
Bluetooth =No	*It deactivates the Bluetooth interface.*
Access Rights	Admin	License	Base

Command Nr.	117
Text	**License**
Function	It adds a license key to unblock the licensed commands and functions. The license is not transferable.
Settings with '?'	***License=Base***
License= 8E49-9IJKS6-3J2XNN-TJ50CD-S87JDV-NIHT	*It activates the license per the specified key **8E49-9IJKS6-3J2XNN-TJ50CD-S87JDV-NIHT**, which you will obtain from the manufacturer or your distributor.*
Access Rights	Admin	License	Base

Command Nr.	118
Text	**IMEI**
Function	It sends back the IMEI device number.
Settings with '?'	***N/A***
IMEI	*IMEI 251236598745125*
Access Rights	Admin	License	Base

Command Nr.	119		
Text	**IVRSoundDelay**		
Function	Delay in playing the individual menus in the voice selfservice centre, interval of 0 to 10 seconds.		
Settings with '?'	**IVRSoundDelay=2**		
IVRSoundDelay=0	*Sounds are played immediately.*		
Access Rights	Admin	License	Medium

Command Nr.	146		
Text	**DATE**		
Function	**Will set the system date and time.**		
Settings with '?'	**N/A**		
DATE=YY/MM/DD,HH:MM:SS	*Will set the system time and date in case it haven't been received automatically from the GSM network.*		
Access Rights			*Base*

Command Nr.	142		
Text	**SMSAnswer**		
Function	Enabling/disabling SMS answers to incoming SMS.		
Settings with '?'	**SMSAnswer =No,(Yes)**		
SMSAnswer =Yes	*SMS answers are enabled.*		
SMSAnswer =No	*SMS answers are disabled.*		
Access Rights	Admin	License	Base

7.1 Control of PWM of outputs 3 and 4 based on values of temperature and other sensors

DC outputs OUT3 and OUT4 can be controlled by PWM modulation in range 0 to 100% for applications like control of LED light intensity, heating, motors etc. Control can be manual or automatic based on minimal or maximal threshold values of sensors connected to the device, i.e temperature sensors. PWM frequency is fixed to 20kHz.

Command Nr.	147		
Text	**PWMControl3**		
Function	Enabling/disabling of PWM control of the otput OUT3		
Settings with '?'	**PWMControl3 =(Off),S1,S2,S3,S4,S5,S6,S7,S8**		
PWMControl3 =S1	*PWM control of the output OUT3 is enabled per sensor S1*		
PWMControl3 =Off	*PWM control of the output OUT3 is disabled*		
Access Rights	Admin	License	Medium

Command Nr.	150		
Text	**PWMTp3Max**		
Function	The maximum threshold value of OUT3 PWM control for temperature/humidity sensor 1. Range -200 to +1300°		
Settings with '?'	**PWMTp3Max =*30***		
PWMTp3Max =-30	Sets max temperature threshold to teplotní hranici pro Max na value -30		
Access Rights	Admin	License	Medium

Command Nr.	149		
Text	**PWMTp3Min**		
Function	The minimum threshold value of OUT3 PWM control for temperature/humidity sensor 1. Range -200 to +1300°		
Settings with '?'	**PWMTp3Min =*20***		
PWMTp3Min =-20	Sets min temperature threshold to value -20		
Access Rights	Admin	License	Medium

Command Nr.	148		
Text	**PWMControl4**		
Function	Enabling/disabling of PWM control of the otput OUT4		
Settings with '?'	**PWMControl4 =(Off),S1,S2,S3,S4,S5,S6,S7,S8**		
PWMControl4 =S1	*PWM control of the output OUT4 is enabled per sensor S1*		
PWMControl4 =Off	*PWM control of the IOutput OUT4 is disabled*		
Access Rights	Admin	License	Medium

Command Nr.	152		
Text	**PWMTp4Max**		
Function	The maximum threshold value of OUT4 PWM control for temperature/humidity sensor 1. Range		
Settings with '?'	**PWMTp4Max =*30***		
PWMTp4Max =-30	Sets max temperature threshold to value -30		
Access Rights	Admin	License	Medium

Command Nr.	151		
Text	**PWMTp4Min**		
Function	The minimum threshold value of OUT4 PWM control for temperature/humidity sensor 1. Range -200 to +1300°		
Settings with '?'	**PWMTp4Min =*20***		
PWMTp4Min =-20	Sets min temperature threshold to value -20		
Access Rights	Admin	License	Medium

7.2 PLC control of outputs OUT1 - 4 based on states of digital inputs DIN1-4 and PWRACIN/ PWRDCIN.

Outputs OUT1 to OUT4 can be controlled by changes of the digital inputs, changes of AC/DC power inputs or by alarm events – exceeding of counters values, values of DIN1-4 and A/D alarm.

Command Nr.	165
Text	**PLCOUT1**
Function	Enabling of PLC automatic control for output OUT1
Settings with '?'	**PLCOUT1=*(No),DIN1,DIN2,DIN3,DIN4,PWR1,PWR2, AMINPS,AMAXPS,AVMIN,AVMAX,COUNT1,COUNT2,COUNT3,COUNT4***
PLCOUT1 =DIN1	*Control of the output OUT1 by input DIN1*
PLCOUT1 =PWR1	*Control of the output OUT1 by presence of the 230V AC power*
PLCOUT1 =AMINPS	*Control of the output OUT1 by activation of pulse alarm by minimal value threshold for input ADIN1/ADH*

PLCOUT1 =AVMAX	*Control of the output OUT1 by activation of voltage alarm by maximal value threshold for input ADIN1/ADH*		
PLCOUT1 =COUNT1	*Control of the output OUT1 by activation of counter alarm by exceeding counter of the DIN1 input*		
Access Rights	Admin	License	Full

Command Nr.	166		
Text	**PLCIN1**		
Function	Settings of detection type of the selected input		
Settings with '?'	**PLCIN1=(RE),FE,FF**		
PLCIN1 =RE	*The input selected by PLCOUT command reacts only to **R**ising **E**dge,so to change from Log0 to LOG1 – from 0V to 2–30 V*		
PLCIN1 =FE	*The input selected by PLCOUT command reacts only to **F**alling **E**dge,so to change from Log1 to LOG0 – from 2-30V to 0 V*		
PLCIN1 =FF	*The input selected by PLCOUT command reacts only to impulse –going from rising edge to falling edge. FF – **F**lip **F**lop*		
Access Rights	Admin	License	Full

Note...

PLCIN command is valid only for digital inputs DIN1 – 4 and PWRIN1 -2, Not for alarm events.

Command Nr.	167		
Text	**PLCTIMEOUT1**		
Function	Sets time delay for reaction to the selected input. Range 0 -3600 seconds		
Settings with '?'	**PLCTIMEOUT1=0**		
PLCTIMEOUT1 =30	*Time delay set to 30 seconds.*		
Access Rights	Admin	License	Full

Note...

If PLCtimeout is set to 0, evaluation is performed immediately. If a non-zero delay is set, device waits for a next change, which allows to create for example time relay function .

Note...

Analogical commands apply for outputs OUT2, OUT3 and OUT4.

Note...

To suspend possible transients and to improve reliability of detection of states of inputs and reliability of the PLC itself, you can use protection time delay by commands TRIGGERTIME1-4.

Example #1

Turn on the DC lamp (output OUT4) by the first pressing of the push button (input DIN1), turn it off by the second pressing.
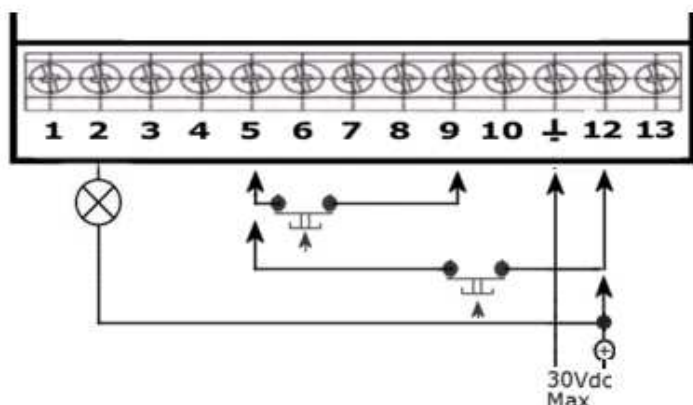
Settings:
PLCOUT4=DIN1
PLCTIMEOUT4=0 (TIMEOUT does not apply if PLCIN is set to FF – flip flop)
PLCIN4=FF   (*does apply for the output OUT4, hence why PLCIN4 and not PLCIN1, digital input is defined only in PLCOUT4=DIN1*)

Example #2

Turn on the DC lamp (output OUT4) with delayed turning off after 10 seconds – time relay function with delayed off. The timeout period begins from release of the push button. Every further pressing of the push button while lamp is turned on will prolong the period by the time set – 10 seconds.

Nastavení:
PLCOUT4=DIN1
PLCTIMEOUT4=10 (time delay 10 seconds)

PLCIN4=RE   (*does apply for the output OUT4, hence why PLCIN4 and not PLCIN1, digital input is defined only in PLCOUT4=DIN1*)

Example #3
Turn on the DC lamp (output OUT4), when the push button is not pressed, turn it off when the push button is pressed.

Settings:
PLCOUT4=DIN1
PLCTIMEOUT4=0
PLCIN4=FE   (does apply for the output *OUT4, hence PLCIN4 and not PLCIN1, digitl input is defined only in PLCOUT4=DIN1)*

Example #4
Turn on the DC lamp (output OUT4), when there is more than 10 changes on the input DIN1.

Settings:
CounterLimitDIn1=10 (number of changes, RE with following FE are two changes)
PLCOUT4=CPOUNT1
PLCTIMEOUT4=0
PLCIN4=RE   (RE – the lamp will be turned on once the number of changes is exceeded FE – lamp will turn off, useful to turn off the output after number of changes/pulses is exceeded)

*Note...

Time configured by PLCTIMEOUTx disables alarm event once it expires. If it is set to 0, alarm events are disabled by command StopAllalarms

8 Control by IQcontrol Suite for WINDOWS

For a maximum comfort and easy operation, a program package IQcontrol Suite for WINDOWS has been developed. You can start to use IQcontrol Suite after its downloading from the source www.iqtronic.com/download and its installation. A Bluetooth adapter is necessary only for communication with the device. It is not required for making a list of authorised numbers, developing your own voice selfservice centre and your own texts of commands, responses and other texts in the device.
After correct installation the following icon (selected as standard) will be displayed on the desktop:

After clicking on this icon the IQcontrol Suite programs folder will start up:

When clicking the [Connect] button a window appears in which there are displayed all searched devices with pre-defined device names (devicename).

Since all devices have been configured by factory default to have the identical name IQSocket, for a better orientation the last 4 digits from the device's IMEI are attached to this name. After you have clicked on your chosen device, you can click the orange button "Connect to device", and then you will be required to enter the security pin (set by the **BTPIN** command), which is "0000" as default.

IQControl - Select device

Select Bluetooth device from list:

IQsocketGSM6252 (77:01:32:A7:62:60)

Connect to device

IQControl

Bluetooth device PIN:

0000

OK   Cancel

IQControl

Device: IQsocketGSM6

Communication log:

Info: Connected
Received: Welcome to IQsocket. You can control by this commands:
TurnON,TurnOFF,Restart,AddSocket,DelSocket,DellAllSockets,RFsocketstatus,SocketList,Status,RingOn,Help,Config,MasterList,StatusGPRS,Version,LongStatus,SaveStatus,Reboot.

Send

Disconnect   Quick control   Device settings   Set PIN

After the PIN has been accepted, connection with your chosen device will be activated. If you have been successfully logged in, the device will automatically display the welcome text and provide a list of control commands.

After 2 minutes of inactivity, the terminal will automatically disconnect, and you will hear the sound of falling cartridge. In case of a failure, when the following message will appear: Info: Can not connect to Bluetooth device, please repeat the procedure, check whether the device has not been turned off, restart a BT adapter and run again the IQcontrol application. If the adapter has not been connected/installed, the following message will appear: Info: Can not find Bluetooth adapter.

All software buttons will be activated.

You can control the device using commands which you are required to enter in the text window (here e.g. the command for restart of the socket) and send them by this button:

If the command is correct, then the device will perform the given action and give back a response (in this example: Restarted.)
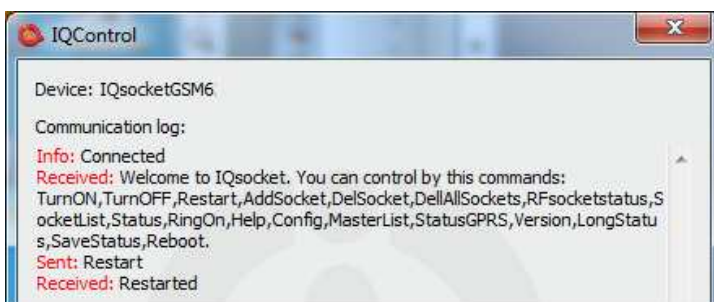
Now, we show you the speciality of internal parser processing.

We assume that the user does not know commands and in case of control by SMS no welcome SMS how to control the device is available. However, he/she remembers vaguely that the command starts with the letter "R".

He/she will send only the letter "R".

The device will send back a list of commands starting with the letter "R":

```
Sent: r
Received: r: Wrong command, similar is:
Restart,RFsocketstatus,RingOn,RestartTime,RingactionMASTER,RingactionUSE
R,RingTimes,RingOnTime,Reboot
```

We have made a further strong simplification, namely sending a full range of commands in one SMS message up to the size of SMS, i.e. 160 characters. Commands must be separated by the symbol "#"; here, as an example, we send the status command, restart command and again the status command:

```
Sent: status#restart#status
Received: Output1:TurnedOn Output2:TurnedOff Signal:51%
Time:15/04/25,21:49:59  Last pwrlost: N/A BCap:94 % OP:EUROTEL PRAHA
Received: Restarted
Received: Output1:Restarted Output2:TurnedOff Signal:51%
Time:15/04/25,21:49:59  Last pwrlost: N/A BCap:94 % OP:EUROTEL PRAHA
```

One response/SMS message is sent to each command (according to the size of response there can be also more SMS messages).

In case of an incorrect parameter (parameter command with the symbol =) or the parameter value is out of limit, the device will send a response on an error parameter (text of the command is correct) and/or incorrect limits; here e.g. the **RestartTime** command:

```
Sent: config
Received:
Inputtype,RestartTime,RingactionMASTER,RingactionUSER,NCactionMASTER,N
CactionUSER,AddMaster,Adduser,DelUser,DelAllUsers,UserList,UserAList,RingTi
mes,RingOnTime,MaxSMS,Output,MasterPINSet,MasterPIN,UserPINSet,UserPI
N,BTPIN,PINIVR,ScheduleAdd,ScheduleDel,ScheduleDeLAll,SchedulerLIST,Sche
dulerOptions,DeviceName,Inputunit,Counter,DelCounter,Triggertime1,Voltalarm
,VLevelMin,VLevelMax,PulseAlarm,MinPulses,MaxPulses,TAlarm,TempAlarm,Pwr
Alarm,AddAlarmNumber,DelAlarmNumber,DelAllAlarmNum,ListAlarmNum,Alarmqu
eue,StopAllAlarms,JammAlarm,Tp1Max,Tp1Min,Tp2Max,Tp2Min,Tp3Max,Tp3Min
,Tp4Max,Tp4Min,Tp5Max,Tp5Min,Tp6Max,Tp6Min,Tp7Max,Tp7Min,Tp8Max,.....
...........
Sent: restarttime=600
Received: restarttime=600 - parameter is out of limit!
Sent: restarttime
Received: restarttime Incorrect parameters, please check the command and try
again.
```

If you wish to know the correct limits without using the user guide, you can use the HELP=RestartTime command.

```
Sent: help=restarttime
Received: RestartTime - User defined time from reswitch output 1-300 seconds.
```
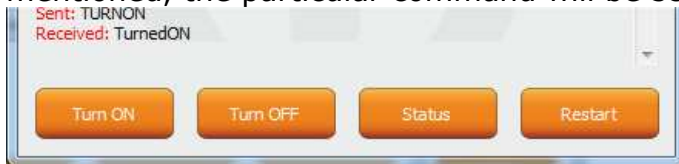
*Note...

Neither the system time nor the signal quality are updated in case of the IQcontrol terminal connection via Bluetooth, all GSM functions is blocked also for this time.

Quick Control Buttons

Quick control

The program includes the quick control features in order to control commands in a simple and fast way.

After clicking "Quick control", there will appear four buttons with the most used commands: TurnOni, TurnOff, Status, Restart; after just clicking one of the above-mentioned, the particular command will be sent to the device.
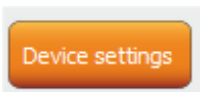
Sent: TURNON
Received: TurnedON

| Turn ON | Turn OFF | Status | Restart |

IQControl - Set command

Set new command string:

TURNON

OK   Cancel

You can customize text of any command by using a right-click. Click the X button to close the Quick Control window and you will get back to the IQ control main menu.

Button

Set PIN

IQControl

Bluetooth device PIN:

0000

OK   Cancel

It allows the user to set a PIN code that will be saved and used for next login.

Button

Device settings

After a click, a window with push buttons which have an important function will open.

Upgrading the internal firmware.

Uploading a new voice selfservice file into the device.

Uploading a set of user numbers into the device. It is necessary to have **Medium license!**

Uploading the device configuration file.

Downloading the configuration from the device into the file.

Uploading commands/responses, e.g. another language; for own set of commands it is necessary to have **Medium license!**

Downloading commands from the device into the file.

Downloading all log events from the device's internal log into a text file.

In case of uploading the security list into the device, you can upload a text file generated by using either the **Numbers Editor**, a part of IQcontrol Suite software, or generated by the user himself/herself.

It is a common text file in which each number is added into one individual line and without spaces. The file must have a file extension ***.sec**

Here's an example of the modified file "mynumbers.sec":

420123456789,alias2
420111111111
420123333333,alias3

Syntax is identical to the SMS command **AddUserNumber.**
If a line is not entered correctly, it will be ignored and the number will not be uploaded.
.

Note...

The transfer speed is 115200 bps.
It can take several minutes to upload larger files e.g. IVR. The status of the upload is indicated by a progress bar, and if the file has been successfully uploaded, the text ***succesfully*** *will be displayed, in other cases the file is not correct.*

Info: Uploading file cmdcodedV6_saved.cmd

58 %
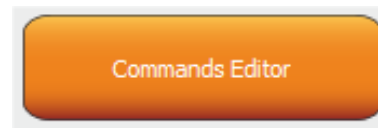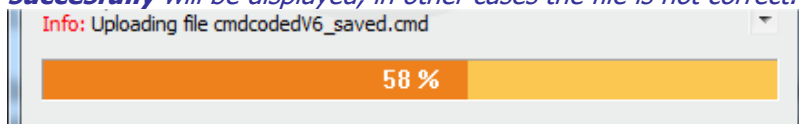
Commands Editor

8.2 Commands editor subprogram

It is the most interesting subprogram which allows the user to edit not only any text in the device, i.e. text of commands and responses to them, but also the texts that are recorded in the internal log of the device, texts of alarms and in case of responses the syntax and configuration location as well. You can draw up your own response to the **STATUS** command including all device parameters.

You can also modify the authorisation of the Admin/User commands.

To modify the above-mentioned, first of all, you need to get source data, which can be downloaded by using the **Device settings** button described above, then the Download Commands button, and the file name can be e.g. test1.cmd.

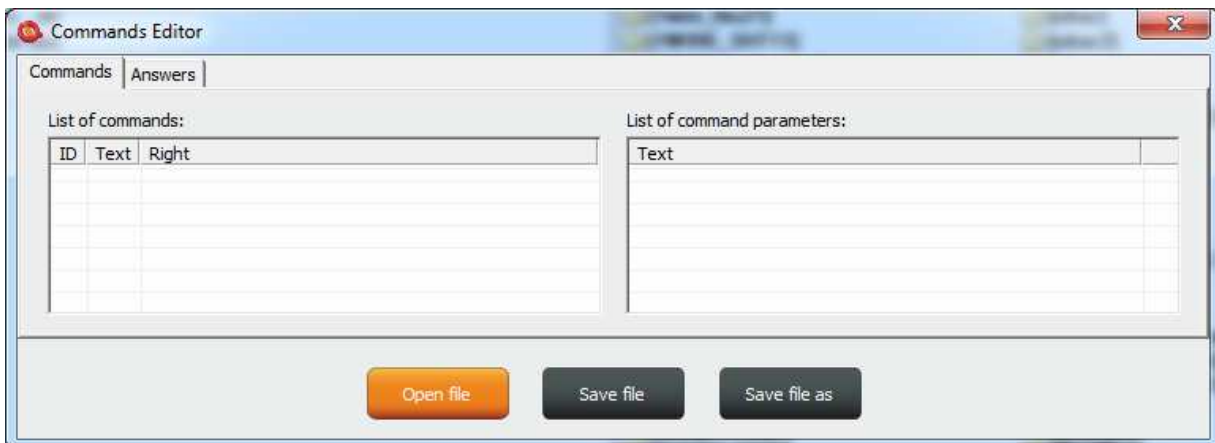Info: Downloading file test1.cmd

Packet 11

If downloading from the device, only the number of packets will be displayed, because files are short, and so transfer takes a few seconds.

You can open the downloaded file in the Commands Editor.

Note...

It is necessary to have activated the MEDIUM license.

If you wish to read the file, use the Open File button and upload the file test1.cmd. If the file is correct, it will be displayed, in other cases an eror message will appear. The software is made again very intuitive, the **Commands** tab consists of two windows: **List of commands,** where control commands are displayed, and **List of command parameters**, where potential command parameters are displayed, those that are selected by the symbol "=". You can change only single texts, it is not possible to add or delete commands. After the file has been uploaded, the commands will be displayed and arranged in the table according to their number.
If you wish to modify a command, click the given command and edit it, and the change will be made after clicking **ENTER** button.
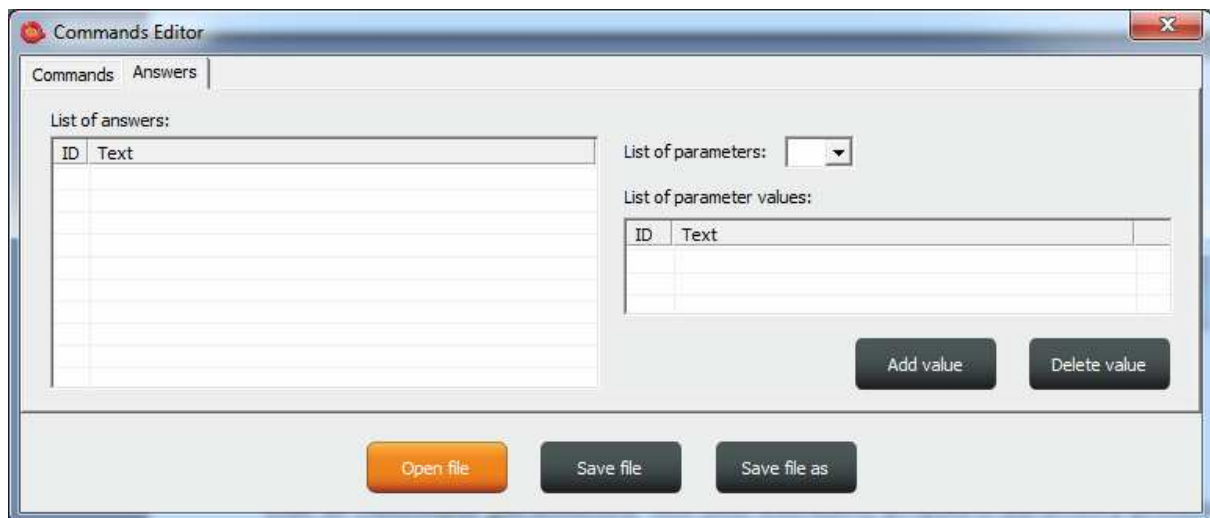
If you select the command containing text parameters, for example temperature units **InputUnit**, the text of parameters will be displayed n the right window, and these parameters can also be modified.

The column **Right** means access rights, if **A** - Admin is assigned, only the Administrator is allowed to use the commands, in case this number has been selected, if not, then any user can use them.

The symbol "**U**" means users, if these are set as authorised user numbers. It is possible to edit them and specify which commands will be made available to users.

The **Answers** tab is similar, texts of responses can be modified in the left window **List of asnwers,** and parameters, if existing, will be displayed in the right window. You can delete, edit and add new parameters. You may also edit answers provided by the intelligent help, but it is not recommended to do that, since this would result in chaos in the file.

Parameter in the response is always indicated by the symbol $ and the following symbols 0-9,A-Z, which can be modified manually. Here, this is an example of editing the response to the command "License: $R".

"$R" is fixed parameter of the device response, instead of which internal device parser will add a numerical value. However, if a text equivalent for the given number has been defined in the left window, then the selected text will appear instead.

Therefore, the answer can be "License: Basic", "License: Medium", or "License: Full".

For each **numerical** parameter in any answer, a text equivalent, that will be displayed instead of this numerical value, can be assigned.

The **List of parameters** option presents valid parameters for answers in the right window.

If a parameter does not exist, the device will insert the text UDEF (undefined).

If a text equivalent is out of limit, the device will add N/A (not applicable).

The following is the specification and meaning of the applicable parameters:

$1 -	Output1 status ,0, 1 and 2 (restarted)	; *numerical parameter*
$2 -	Output2 status ,0, 1 and 2 (restarted)	; *numerical parameter*
$3 -	Digital input DIN1 status 0 and 1	; *numerical parameter*
$4 -	Digital input DIN2 status 0 and 1	; *numerical parameter*
$5 -	Digital input DIN3 status 0 and 1	; *numerical parameter*
$5 -	ADL input voltage value 0 - 50	; *numerical parameter*
$6 -	ADH input voltage value 0 - 500	; *numerical parameter*
$7 -	Signal, *numerical* 0 up to 100	; *numerical parameter*
$8 -	Last power lost time	; *text parameter*
$9 -	Device name	; *text parameter*
$A -	Temperature unit 0 and 1	; *numerical parameter*
$B -	System time	; *text parameter*
$E -	Backup status 0 – 1 (Battery/Power)	; *numerical parameter*
$F -	Pulse counter	; *numerical parameter*
$G -	Network operator	; *text parameter*
$H -	Temperature sensor 1	; *numerical parameter*
$I -	Temperature sensor 2	; *numerical parameter*
$J -	Temperature sensor 3	; *numerical parameter*
$K -	Temperature sensor 4	; *numerical parameter*
$L -	Temperature sensor 5	; *numerical parameter*
$M -	Temperature sensor 6	; *numerical parameter*
$N -	Temperature sensor 7	; *numerical parameter*
$O -	Temperature sensor 8	; *numerical parameter*
$P -	Jamming Detected 1 and 2	; *numerical parameter*
$Q -	Batery capacity 20 - 100	; *numerical parameter*
$R -	License 0, 1 and 2	; *numerical parameter*
$S -	IMEI	; *text parameter*
$T -	Hours counter	; *text parameter*
$U -	Requested License 0, 1 and 2	; *numerical parameter*
$V -	Battery status	; *text parameter*
$W -	Output3 status ,0 1,2(restarted),3(PWM)	; *numerical parameter*
$X -	Output4 status ,0 1,2(restarted),3(PWM)	; *numerical parameter*
$Y -	Digital input DIN4 status 0 and 1	; *numerical parameter*
$Z -	SD card status 0 and 1	; *numerical parameter*

Example

In order to make a simple response to the **STATUS** command with only one parameter about the output socket status, we can edit a text on the position ID54 in the **List of answers** window to "Output socket status: $1".

This parameter can only have the following values: 0 – turned off, 1 – turned on, 2 – restarted.

If we do not insert text aliases, the following response will be sent back:

Output socket status: 0

Then we add text aliases into the right window by using the button:

[Add value]

The result will be as follows

And the device will send back a response with the substituted text: **Output socket status: Turned off.**

We will save the final file into a PC and upload it by using the **Upload Commands** button as described above. After a restart, the device will then operate with new commands.
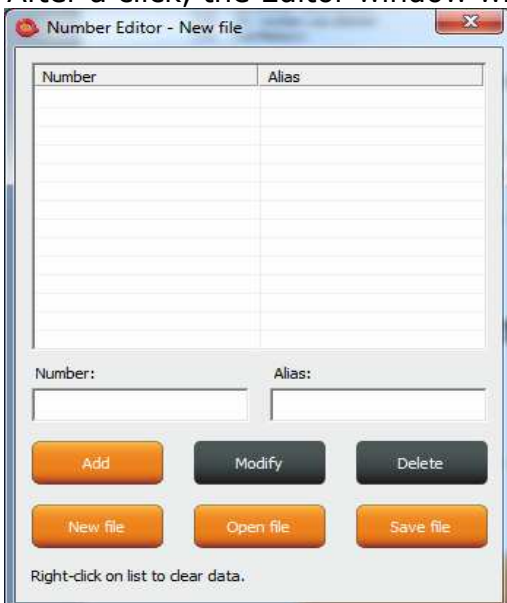
[Numbers Editor]

8.3 Numbers Editor Subprogram

A software for making lists of user numbers to be used for authorization, security. The user can make such a file manually using a text editor.

For instance, as said above, if the user does not want to risk mistakes when making a list, then this subprogram for making lists and editing provides a full comfort to the user.

After a click, the Editor window will be displayed:

Number is designed to enter a user's telephone number, **Alias** is optional and is used for a better orientation in the user numbers.

Add button, after a click, the syntax will be checked, and if it is correct, the given number will be added into the list. You can upload up to 1000 numbers into the device; subsequent numbers will be ignored.

Modify button, after a click in the line with a number and then clicking the Modify button, it will be activated and displayed orange and you can edit the record.

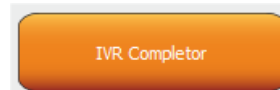**Delete** button will delete the given number from the list.

New file – it will save it as a new file with a new name.
Open file – it will open the existing file.
Save file – it will save the opened file with the identical name.

The file will have a file extension *.sec and then you can upload the file into the
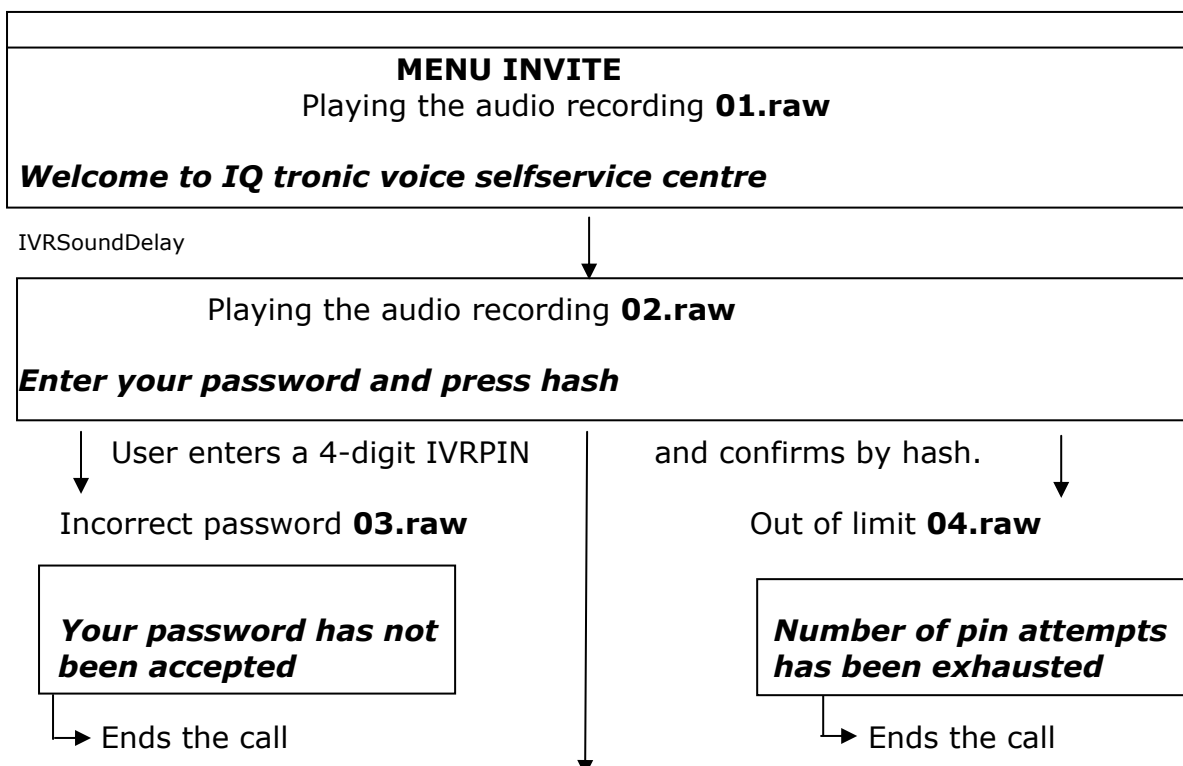
8.4 IVR Completor subprogram

By using this subprogram, the user can create an own voice help.
It is a simple subprogram that can complete individual audio recordings into a file that is to be uploaded into the device. You are required to record sounds either by means of a professional sound studio, doing your own sampling, or by using a voice synthesizer.
Here you can see the structure applied for voice control.

1. After an action to an incoming call to IVR (Interactive Voice Response) has been configured, the device will answer this call and start to play gradually audio recordings; it is required that recordings are numbered correctly from 01.raw up to xx.raw. The format of recordings is RAW (i.e. uncompressed data with no header information) MONO, 8 bits and sampling frequency of 11 025Hz, i.e. 11KHz. It is important that you do not forget to use the digit "0" before digits "1" to "9", and hence 01.raw is the number of the first recording.

And now, the structure of IVR menu will be described below in order to understand interaction.

MENU INVITE
Playing the audio recording **01.raw**

Welcome to IQ tronic voice selfservice centre

IVRSoundDelay

Playing the audio recording **02.raw**

Enter your password and press hash

User enters a 4-digit IVRPIN   and confirms by hash.

Incorrect password **03.raw**   Out of limit **04.raw**

Your password has not been accepted   *Number of pin attempts has been exhausted*

↳ Ends the call   ↳ Ends the call

MENU START
In case of **UserTypeIVR=SHORT** the device will be
restarted and will end the call – suitable to be used as a door opener.
In case of **UserTypeIVR=LONG** we continue to
Playing the audio recording **05.raw**

MENU START
To controll this device, press one -> *MENU CONTROL*
IVRSoundDelay
Playing the audio recording **06.raw**

To get status of this device, press two -> *MENU STATUS*
IVRSoundDelay
Playing the audio recording **07.raw**

To setup security settings, press three -> *MENU SECURITY*

IVRSoundDelay
Playing the audio recording **08.raw**
To send controll commands to your number by SMS, press four -> *MENU SMSHELP*

IVRSoundDelay
Playing the audio recording **09.raw**
To send status of device to your number, press five -> *MENU SMSSTATUS*

IVRSoundDelay
Playing the audio recording **10.raw**
To end this session, press hash or end call

MENU CONTROL
IVRSoundDelay
Playing the audio recording **11.raw**

Device output is
Playing the audio recording **12.raw**   **or**   Playing the audio recording **13.raw**

Turned on   **Turned off**
IVRSoundDelay
Playing the audio recording **14.raw**

To turn off, press zero
IVRSoundDelay
Playing the audio recording **15.raw**

To turn on, press one
IVRSoundDelay
Playing the audio recording **16.raw**

To return to main menu, press hash   **#** -> **MENU START**

MENU STATUS

IVRSoundDelay

Playing the audio recording **11.raw**

Device output is

   Playing the audio recording **12.raw**   **or**   Playing the audio recording **13.raw**

Turned on   **Turned off**

To automatically return to the **MENU START**

MENU SMSHELP

IVRSoundDelay

Playing the audio recording **17.raw**

SMS will be sent after end of this session

To automatically return to the **MENU START**

MENU SMSSTATUS

IVRSoundDelay

Playing the audio recording **17.raw**

SMS will be sent after end of this session

To automatically return to the **MENU START**

MENU SECURITY

IVRSoundDelay

Playing the audio recording **18.raw**

To change your password, press one   **-> MENU PASSWORD**

IVRSoundDelay/IVRprodleva

Playing the audio recording **19.raw**

To change list of authorized numbers, press two   **-> MENU NUMBER**

IVRSoundDelay/IVRprodleva

Playing the audio recording **16.raw**

To return to main menu, press hash   **#** -> **MENU START**

MENU PASSWORD

IVRSoundDelay

Playing the audio recording **20.raw**

Your password is: *Your PIN will be played back, file names for digits are provided at the end of IVRmenu.

IVRSoundDelay

Playing the audio recording **21.raw**

Enter your new password and press hash

Waiting for new PIN confirmed by key #

IVRSoundDelay

Playing the audio recording **22.raw**

Your new password is: *Your PIN will be played back, file names for digits are provided at the end of IVRmenu.

MENU PASSWORD

IVRSoundDelay

Playing the audio recording **23.raw**

To confirm and return to main menu, press hash, to activate all passwords press zero, to enter new value press star

Key # to save the entered PIN only for IVRMENU and return to **MENU START**

Key 0 to save the entered PIN for PINIVR, PINBT and USERPIN and return to **MENU START**

Key * -> MENU PASSWORD

MENU NUMBER

IVRSoundDelay

Playing the audio recording **24.raw**

Enter new number and press hash

Waiting for entering a phone number and the key #

IVRSoundDelay

Playing the audio recording **25.raw**

You have entered number: *Your PIN will be played back, file names for digits are provided at the end of IVRmenu.

Waiting for entering a phone number and the key #

IVRSoundDelay/IVRprodleva

Playing the audio recording **26.raw**

To setup administrator rights, press one

IVRSoundDelay

Playing the audio recording **27.raw**

To setup user rights, press two

IVRSoundDelay

Playing the audio recording **28.raw**

MENU NUMBER

To delete from list, press three

IVRSoundDelay

Playing the audio recording **29.raw**

To get type of rights, press four

IVRSoundDelay

Playing the audio recording **30.raw**

To delete all users, press eight

IVRSoundDelay

Playing the audio recording **31.raw**

To enter new value, press star   *** -> MENU NUMBER**

IVRSoundDelay

Playing the audio recording **16.raw**

Key **1** saves/overwrites the number as Administrator number and plays the sound file **32.raw**

Number has been saved
Key **2** saves the number as User number and plays the sound file **32.raw**

Number has been saved
*If the number cannot be saved, it plays the sound file **37.raw***

Number cannot be saved
Key **3** deletes the number from the list and plays the sound file **33.raw**

Number has been deleted
*If the number is not included in the list, it plays the sound file **36.raw***

Number is not in list
Key **4** finds out the rights of the given number and plays the sound files:
36.raw see above.
34.raw

Number have administrator rights
35.raw

Number have user right
Key **8** deletes all user numbers and plays the sound file **38.raw**

**All numbers have been deleted**

* File names for digits:

39.raw - 0 , zero   **40.raw - 1 , one**   **41.raw - 2 , two**
42.raw - 3 , three   **43.raw - 4 , four**   **44.raw - 5 , five**
45.raw - 6 , six   **46.raw - 7 , seven**   **47.raw - 8 , eight**
48.raw - 9 , nine

Note...

In case of the SHORT IVR option – for instance for an intelligent door opener, you can record only a welcome text/melody and potential error messages. If some recordings are missing, the device will not play these, but voice selfservice will stay active. SHORT IVR option is active only for USER numbers, a full voice selfservice is always available to the ADMINISTRATOR number.

Accordingly, we have completed the files.
We will run the **IVR Completor subroutine.**
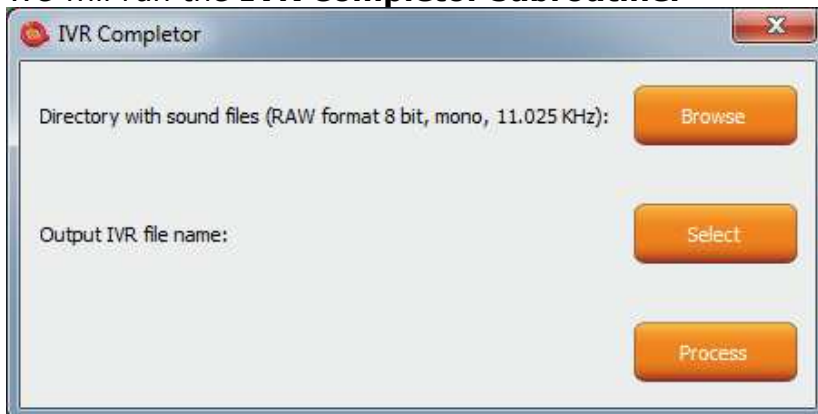
The **Browse** button – we select a folder in which the files are located.
The **Select** button – we select a location and name of the final file which always has an extension *.ivr.
By using the **Procces** button, the completion of the sound files will start.

Note...

The maximum size of all files cannot exceed 1,5Mbyte, when uploading a longer file, an error message will be displayed. No IVR file is uploaded into the device in factory default settings, in this case the device will not answer a call.

You can then upload the final file by using the **UPLOAD New IVR** button.
You are required to have the MEDIUM license!

9. Control by IQcontrol Smart Application for OS Android

You can download the application from our site: www.iqtronic.com/download, or on the Google Play store, our company IQtronic technologies Europe s.r.o. offers the application FOR FREE.

Or, you can use the QR code to download by means of your mobile phone; this QR code is also included in the label with the IMEI number on each device.
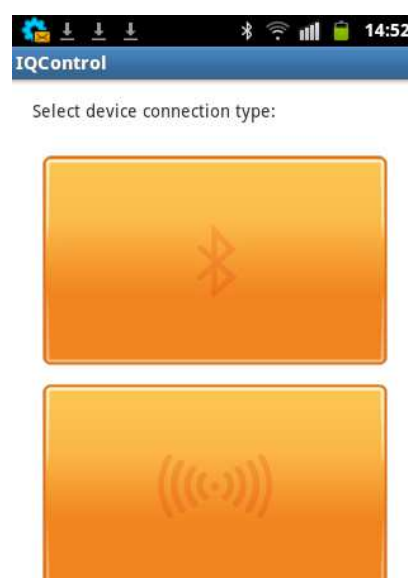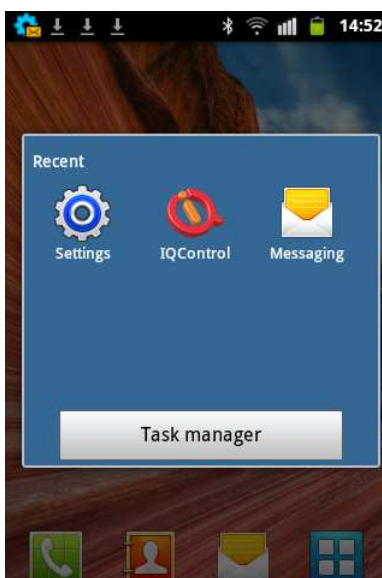
The software can be also used on the ANDROID tablets with a Bluetooth interface. Control by SMS messages will not be available; however, you are allowed to use a more comprehensive control via a Bluetooth terminal.

After the application has been successfully installed, you will find the following icon on your desktop:

Click that icon to launch the application.

The button with a Bluetooth logo is used to control the device via wireless Bluetooth interface that needs to be turned on in your mobile phone.

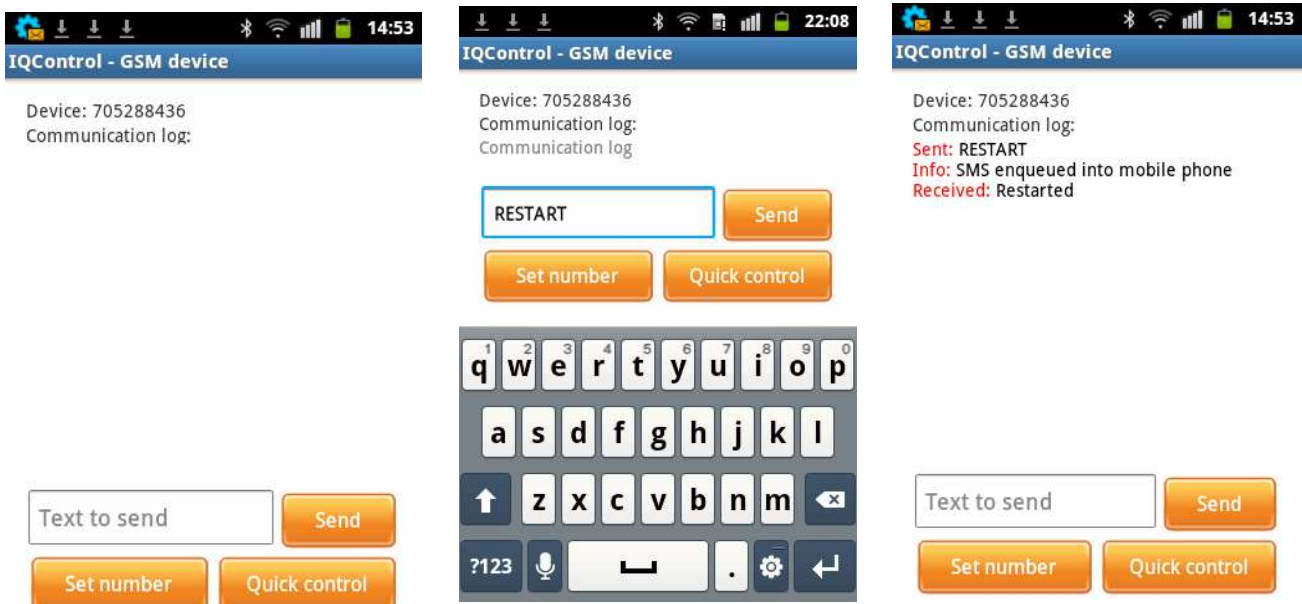The button for control and configuration by SMS messages.

> **_Note..._**
>
> _**IQControl for OS Android software is identical to IQControl for OS Windows, except for missing control by SMS.**_
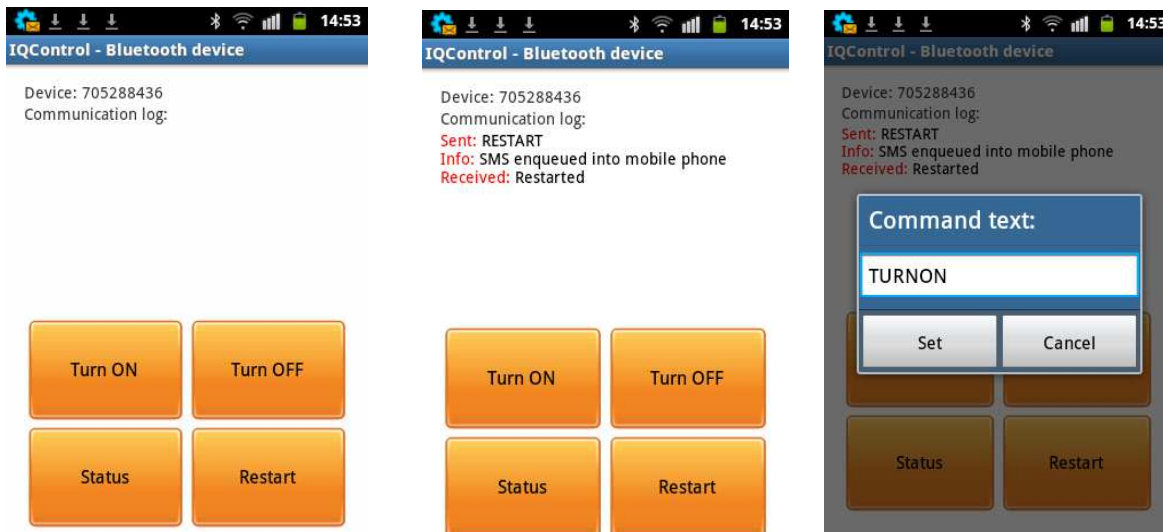
9.1 Control by SMS

Click this button:

You enter the text of any command, e.g. **RESTART**, in the **Text to send** window. A SMS message will be sent and after receiving a response from the device it will be displayed in the Communication log window.
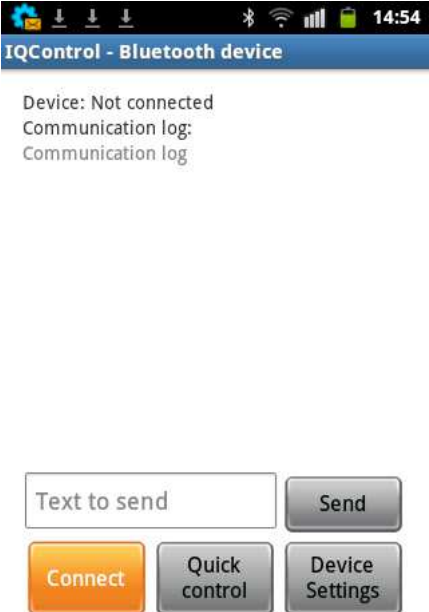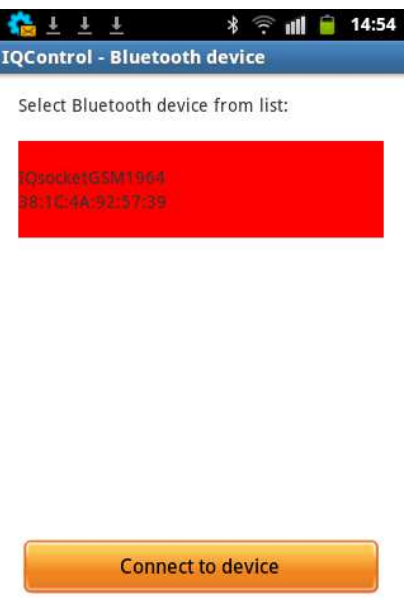
The **Quick Control** buttons are quick control keys, explained above in the IQControl Suite/IQcontrol software. They allow the users to make actions by a single click, and to edit received text by a long click.
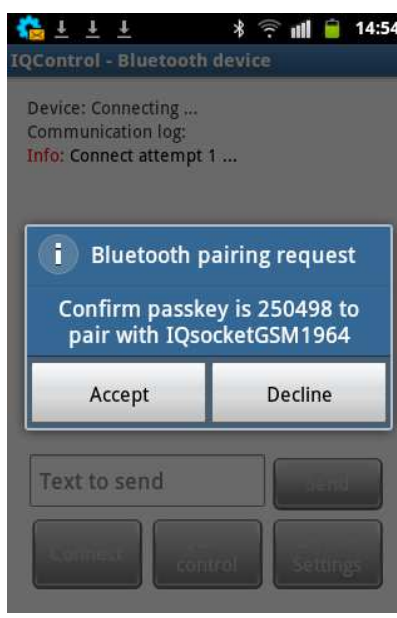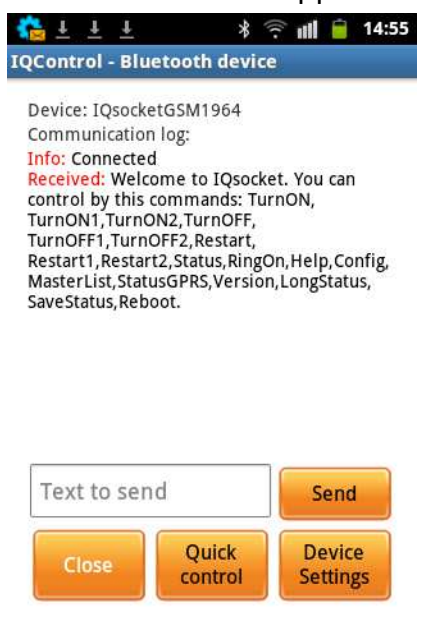.

## 9.2 Control by terminal via wireless Bluetooth connection

Click the buton

After a communications terminal appears, click **Connect.**	The following window displays the IQSocket device that has been found.	Click the selected device and press the **Connect to device** buton.

Enter the PIN code "0000" which is a factory default value	The following window will display a Bluetooth pairing request.	If the correct PIN has been entered, a communication window containing the welcome text will appear.

Further, control is the same as in IQControl software for OS Windows.

10. Meaning of integrated button
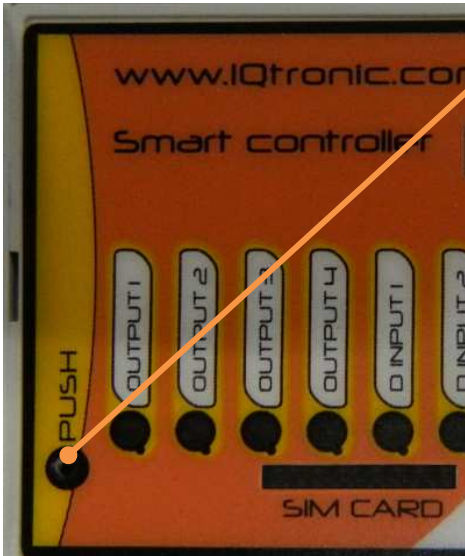
An integrated micro push button is located in the device, can be accessible through a round hole of 2 mm named with the text "PUSH".

The push button can be used to change (toggle) state of outpus, to restore factory default settings, to activate connected sensors and to turn off the device if it is powered from the internal backup battery.

To change (toggle) outputs, press and hold the push button pressed till LED OUTPUT1 start blinking, then short pressing selects the next output, OUTPUT2 in this case, up to OUTPUT4. By holding of the push button while selected output LED blinks is peformed toggle of the selected output and afterwards is new output state indicated for about 1 second by the particular output LED.

When device runs from the battery it is possible to turn it off by short pressing of the push button.

If you connect temperature/humidity and other sensors for the first time, the LED **SYSTEM** shortly and evenly dims red after running your device. The number of blinks means the number of found sensors. After a longer press of the push button for more than 5 seconds, the ID of sensors will be saved into your device and the LED SYSTEM will light up permanently red.
In this way you can save up to 8 sensors or adapters.

11. Inserting SD card
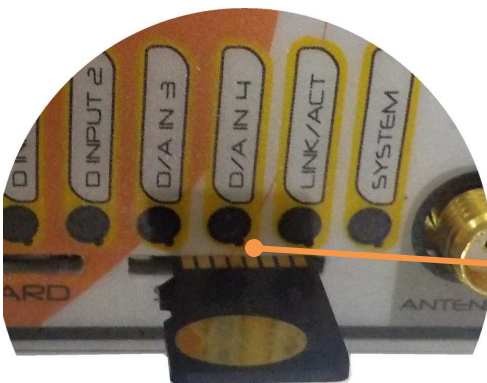
Your IQTD-GS440 offers an option to save all log events at the given time in detail into the SD card inserted into SD card bay. The SD card must be formatted on FAT32 before using. The **FULL license** is required.
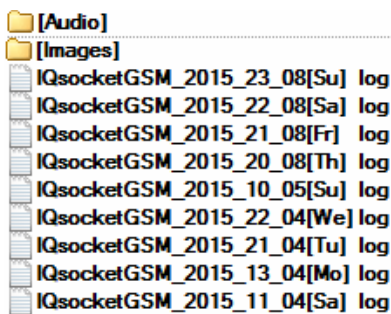
Bay for inserting SD card is at the front side of your device. Insert it in and by gently pushing lock it in - system PUSH/PUSH, with next push will be card released and can be pulled out of the slot.

For each day a file with the device name – **DeviceName**, date, day of the week, is created and this file consists of a text with the event.

```
[Audio]
[Images]
IQsocketGSM_2015_23_08[Su] log
IQsocketGSM_2015_22_08[Sa] log
IQsocketGSM_2015_21_08[Fr]  log
IQsocketGSM_2015_20_08[Th] log
IQsocketGSM_2015_10_05[Su] log
IQsocketGSM_2015_22_04[We] log
IQsocketGSM_2015_21_04[Tu] log
IQsocketGSM_2015_13_04[Mo] log
IQsocketGSM_2015_11_04[Sa] log
```

By viewing the file of the particular day you can find out any incoming call and SMS message and also how your device responded to that call/SMS message.

```
15/04/10,23:27:51 Call from (NO  CARRIER) : 420705286855, 4x : NoAction Sig: 93 %
15/04/10,23:52:31 SMS from: 420705286855 : Restart Sig: 100 %
```

12. Factory default settings

12.1 Manual configuration of factory default values

To restore the factory default configuration settings, push the button and hold it down for more than 5 seconds. Once you release the button, all LED indicators start blinking for a period of 10 seconds.

Pressing the button one more time will reset all device settings to their factory default values.

Note...

By this step you will not delete the activated sensors, LOG events, user numbers, uploaded set of commands and voice selfservice centre.

12.2. Factory default settings

SMS command	Value	License
LEDOption	DIn	Base
RestartTime	30	Base
RingActionAdmin	NoAction	Base
RingActionUser	NoAction	Base
NCActionAdmin	NoAction	Base
NCActionUser	NoAction	Base
RingTimes	1	Base
RingOnTime	15	Base
RingActionBlock	0	Base
SMSPerDay	50	Base
Output	Remember	Base
AdminPINSet	Off	Base
AdminPIN	0000	Base
UserPINSet	Off	Base
UserPIN	0000	Base
BTPIN	0000	Base
PINIVR	0000	Base
TempUnit	C	Base
TriggerTime1	100	Full
TriggerTime2	100	Full
TriggerTime3	100	Full
PwrFailTime	1000	Base
VoltAlarm	No	Full
VLevelMInH	10	Full
VLevelMaxH	20	Full
VLevelMInL	10	Full
VLevelMaxL	20	Full
PulseAlarm	No	Full
MinPulses	10	Full
MaxPulses	10	Full
DAlarm1	No	Full
DAlarm2	No	Full
DAlarm3	No	Full
TempAlarm	No	Medium
PwrAlarm	No	Base
AlarmQueue	Always	Base
JammAlarm	No	Base
Tp1Min	20	Medium
Tp1Max	30	Medium
Tp2Min	21	Medium
Tp2Max	31	Medium
Tp3Min	22	Medium
Tp3Max	32	Medium
Tp4Min	23	Medium
Tp4Max	33	Medium
Tp5Min	24	Medium
Tp5Max	34	Medium
Tp6Min	25	Medium
Tp6Max	35	Medium
Tp7Min	26	Medium

Tp7Max	36	Medium
Tp8Min	27	Medium
Tp8Max	37	Medium
TControlMin	20	Medium
TControlMax	30	Medium
OutputControl	No	Medium
PINLimitsIVR	0	Base
PINLimitsBT	0	Base
UserTypeIVR	Long	Medium
GRPS	No	Full
GPRSHOST	www.domain.com	Full
GPRSPORT	0	Full
CntDiv1	1	Full
CntDiv2	1	Full
CntDiv3	1	Full
NextTime1	0	Full
NextTime2	0	Full
NextTime3	0	Full
Separators	:.	Base
SeparApply	No	Base
Bluetooth	Yes	Base
CounterLimitDIn1	0	Full
CounterLimitDIn2	0	Full
CounterLimitDIn3	0	Full
HoursCounter	No	Full

13. LED indicators

13.1. Functional indication

Your IQTD-GM400 has the following colour LED indicators on its main panel:

SYSTEM – steady red light indicates presence of AC 230V or DC power supply voltage. If it dims shortly and periodically, it indicate presence of newly connected sensors, and number of dims is equal to number of found sensors.

 LINK/ACT- blue color, indicates GSM network, long blinking cca once per second when searching for a GSM network, short blinking when successfully

connected to a network. Fast and short blinking indicates GSM activity, outgoing SMS, incoming or outgoing calls and GPRS data.
Steady light – a terminal is connected via Bluetooth. Dimming when there is a Bluetooth activity – data to terminal transmitted.

OUT1/OUT2/OUT3/OUT4 – yellow, steady light indicates status of particular output OUT1-4 - turned on or PWM 1-100% is active, off indicates turned off output or PWM set to 0. Blinking indicates waiting to toggle state by the push button.

DINPUT1/DINPUT2/DAIN3/DAIN4 – indicate presence of voltage 2 – 30 VDC at the digital inputs 1-4. DAIN3 and 4 can be also assigned for AD inputs: *LEDoption=DIN*: assigned to DIN3 and DIN4.

LEDoption=Analog: assigned to ADH/ADL, and indicates presence of voltage 2 – 5 VDC at the analog input ADL on DAIN4 and presence of voltage 2 – 50 VDC, 2 – 30 VAC/VDC at the analog input ADH on DAIN3

13.2. Error conditions
SYSTEM - red, blinks 2x per second, lighted and then fades out, a SIM card is not inserted.

14. Error messages

Wrong command, similar is:

A wrong command has been entered, your device does not know such a command; however, similar commands will be listed.

Incorrect parameters, please check the command and try again.

A correct command with an incorrect parameter has been entered. You can get a list of correct parameters after adding the "?" character. This applies to text parameters.

parameter is out of limit!

A correct command containing an out-of-limit parameter has been entered. This applies to numerical parameters. Correct limits are given in this guide, or you can use the HELP command, implemented in your device, for the particular command.

Commands file is corrupted!

The commands file is missing in the internal memory, or has been corrupted, for example as a result of overvoltage. Please upload the commands file again into your device

15. Technical Specification

Model	IQTD-GS440
Mains power, consumption quiescent, maximum	230Vst 30mA max (range of 90V – 240VAC), **or** 12-25VDC/VAC **50mA** quiescent without charging the battery, switched relays and transmission, **160mA max** at transmission + **200mA max** charging of battery + **40mA** Output1 - ON + **40mA** Output2 – ON
Output	2x230Vst/16A - resisitive load, 2xDC 5A any load
Operating temperature and relative humidity	-10 up to 50 °C , max 80 %
Outputs	Output 1: relay, 230V/16A, Output 2: relay, 230V/16A Output3: Mosfet 40VDC/5A as maximum, PWM available Output4: Mosfet 40VDC/5A as maximum,PWM available
Inputs	4 x 0 up to 30VDC , treshold of detection 2V S0 compatible, 1 UNI 8x temperature/humidity 1x ADH 0 – 50VDC, 30VAC, 1xADL 0- 5 VDC, 1x 12- 25VDC/VAC.
Working conditions	Normal 25°C
Backup Battery	Not included, as option only, any LI-Ion, LI-Pol 3.7V cell in 14500 size
GSM	Quad band 850 / 900 / 1800 /1900 MHz 2G SIM Plug-in 3V
Instalation category	Class II., overvoltage of max. 3000V
Features	Home appliances control by SMS, making a call, IVR, automatically, or manually, M2M as GET or SET XML. Monitoring of the input and sensors status Alarm activation
Dimensions	W x h x depth 72x92x64 mm 4units
Weight	180g
Antenna connector	SMA(f)
Antenna	1dBi , VSWR 2,2 included in the package

16. Instalation rules for dual radio device

You are obliged to follow the following rules during instalation of any radio device working in duplex mode.

- Use an antenna with a higher gain and lower SVR in case of low signal level.
- Do not instal your antenna near metal objects.
- Do not instal your device in the environment which can limit the signal level, not in metal boxes!

- Your antenna cannot be directed towards the internal device electronics. Otherwise, we cannot guarantee that your device will work properly.
- **In case of low signal level <70%, use an external antenna with a higher gain and VSWR <2**

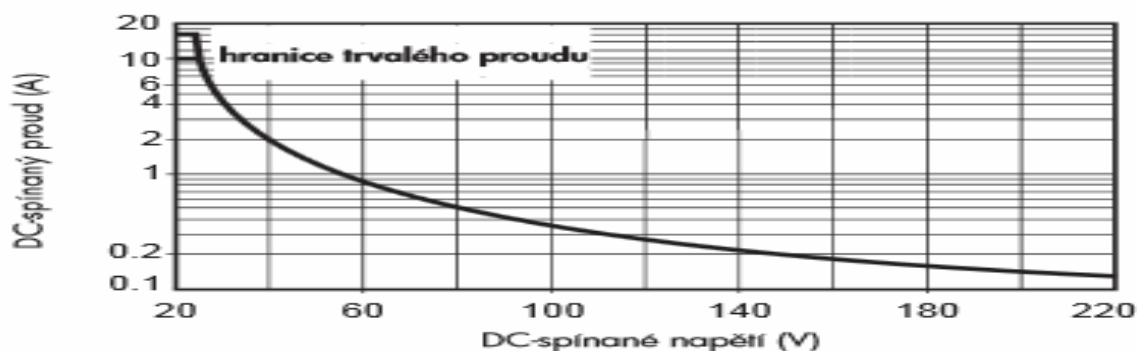In order to place your antenna properly, please use the grey area indicated at the front panel of your device.

17. Features and connection of switching elements

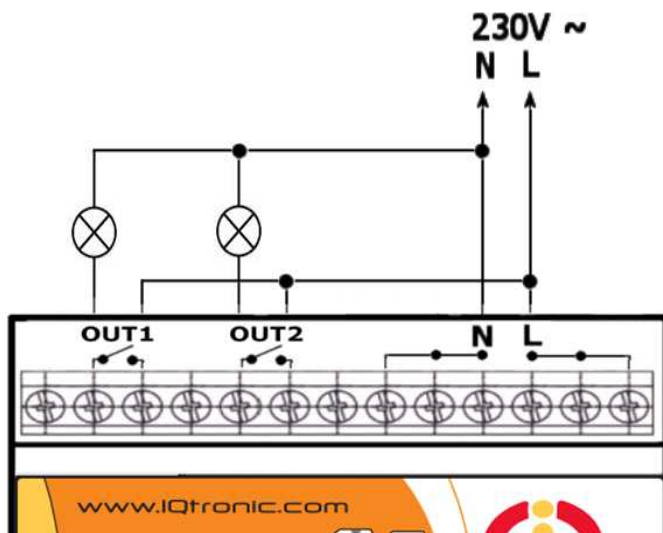## 17.1 Lifetime for using AC voltage

17.2 Lifetime for using DC voltage

The output stage is using a mosfet driver with a zener diode so that a relay anchor could drop out in a fast way, in order to reduce contact burning in case of inductive load.

17.3 Load connection to the device output

Your device has two independent non-potential NO outputs with the maximum load of **16A** (resistive) for 230VAC voltage, which are the output contacts for the internal relays.

The electrical strength according to EN 50178 is **6kV** (1,2/50 us).

The following scheme shows how two lamps are connected to these outputs on your device.

Note...

If the charging voltage on terminals L and N is lost, the output contacts will disconnect. If your device is also powered by 12V-25V – pin 8 and 9, then they will remain in the pre-defined status.

17.4 Connection by use of a contactor

Outputs are designed for a resistive load. If capacitive/inductive load is used, you are required to use a contactor. The following schemes show how to connect a heating element to single phase and how to connect a motor to 3 phases by use of the contactor. Coil terminals of the contactor are indicated commonly as A1 and A2. The contactor must be dimensioned for target load and its coil for the respective voltage (in this example, to 230V AC).
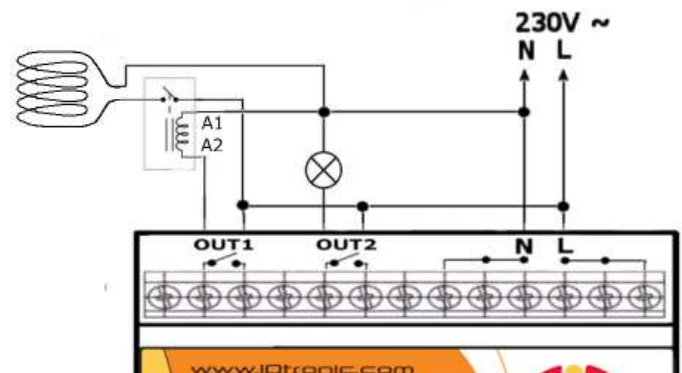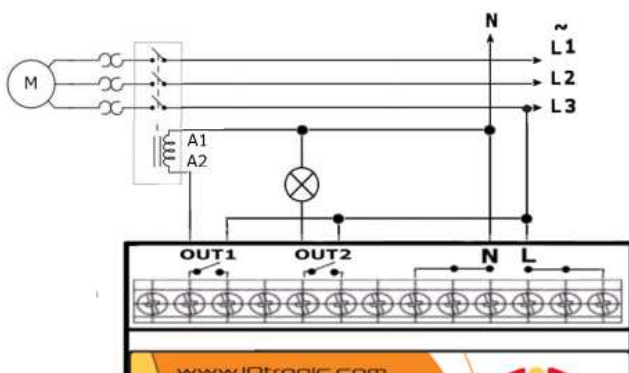
18. Input specification

18.1 Analog input 1 and 2 - ADH and ADL

Input impedance and internal connection is displayed on the block scheme. IQTD-GS440 is equipped with two analog inputs for voltage measurement.
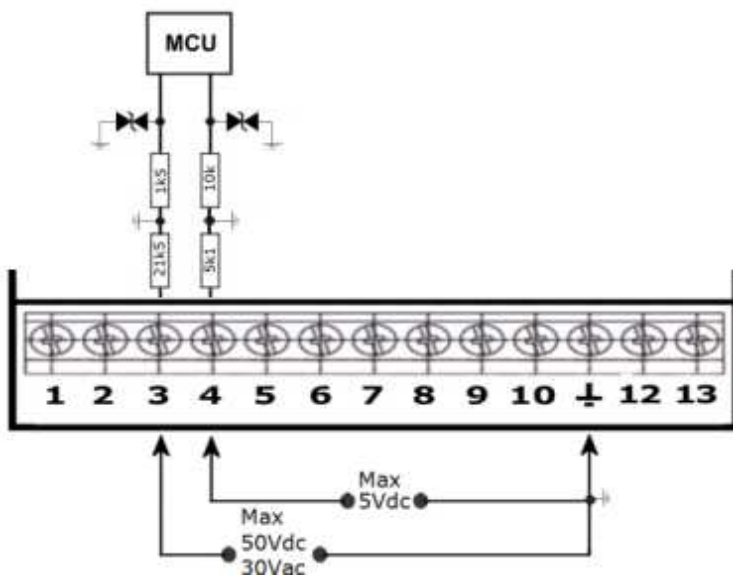

1 – ADIN1 ADH pin3 ranging from 0 to 50VDC, or 0 to 30 VAC, resolution of 0.1V and impedance of 21k5, you can set an alarm for monitoring the voltage level for one or both limits.

2 – ADIN2 ADL pin4 ranging from 0 to 5VDc, resolution of 0.1V and impedance of 5k1, you can set an alarm for monitoring the number of impulses (min/ max) defining the limits (min/ max) for voltage within the respective input. An impulse is detected when the voltage within the defined range of limits is present. An alarm SMS message will also contain the level of such voltage. It is convenient for example for monitoring voltage in electric fences in case you use an adapter from the set of accessories.

The presence of this voltage can be indicated on the front panel of your device if the following option is configured - LEDOption=Analog. limit **0.2 V.**

The mechanism of impulse detection at the ADL input with defined limits ADminLO/maxLO is shown in the following diagram.
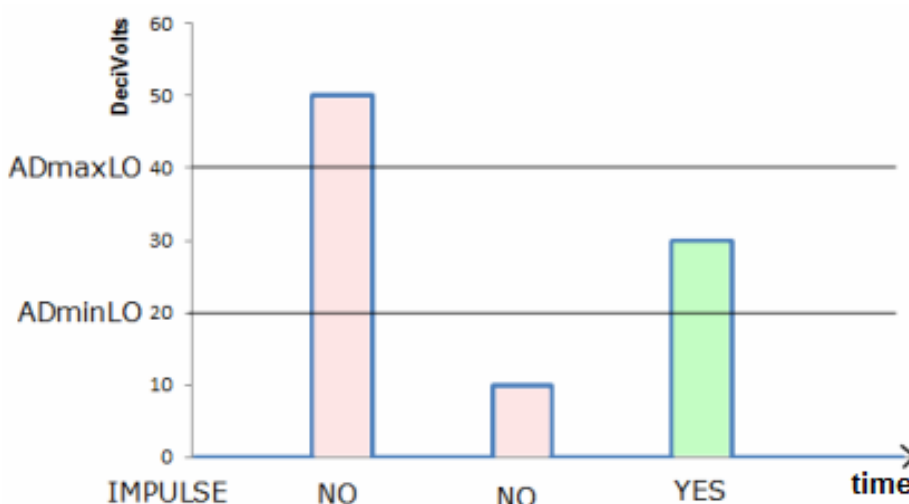
As illustrated in the picture, only impulse with voltage between 2 and 4 Volts will be detected.

18.2 Digital inputs DIN1, DIN2, DIN3 and DIN4

Internal connection of the digital inputs is shown in the block scheme. GSM antijamming filters are not illustrated.
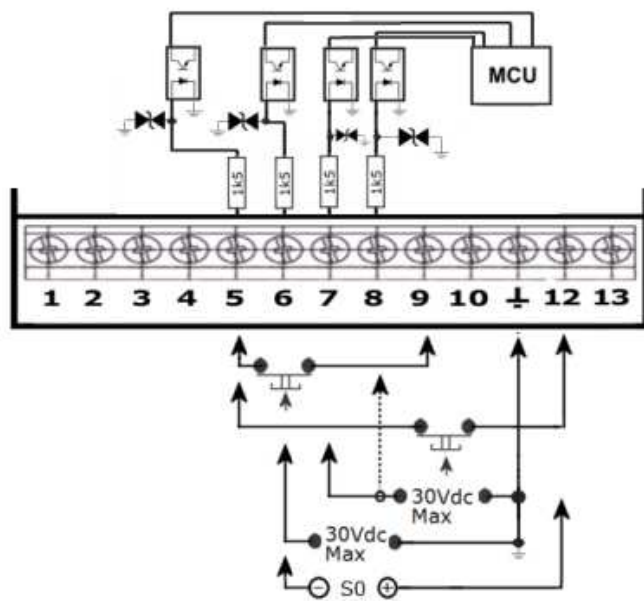
Each of the inputs is separated by an optocoupler up to voltage of max 30VDC.
DINx – pin5 up pin8 – can be activated by DC >2V. All inputs have built-in overvoltage protection.
In order to activate the selected input, voltage higher than 2V must be present at that input.

Pin 9 is a back-up battery voltage, thanks to which you can watch over the input also during mains voltage failure. On Pin 12 is present the power supply voltage 12-25V, when it is connected to device.

If activated, the respective indicator will light up on the front panel of your device.

19. Installation of the backup battery.

Device can work fully without the bckup battery. When you need backup power supply for purposes of power lost alarms, sending of data, checking of device status during outtages of both AC and DC power supplies and storage of counter values into log, it is recommended to install a backup battery into device. To install the battery, remove the top cover of device – the antenna must be detached first.
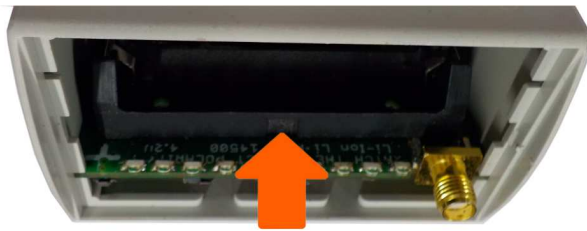
Then instert the battery into the battery bay using the proper polarity, + pole is on the left side farther from the SMA antenna connector, marked on the battery bay. Replace the cover onto the device after battery is successfully

installed

Warning...

Device must be disconnected from the AC power supply prior to removing of the cover!!!
Beware to correct battery polarity – wrong polarity will cause permanent damage of the charging circuit, which is not covered by warranty!!!

SMS command LONGStatus shows information about battery charge:
N/A – battery is not present or it is not OK, service life expired.
FULL – battery is fully charged
CHRG – battery is charging
BCKP – battery provides energy to power the device during outage of both AC and DC power supplies.
UNKW – battery state was not possible to detect.
Battery type: Lithium iont/polymer 3.7V max 4.2V, size 14500, capacity 300 to 1500mAh.

20. Accessories

Optional accessories offered by the producer can be connected to this product. For example, antennas, BlueTooth/USB adapters, temperature sensors, humidity sensors, water level detector, flooding detector, flow detector, temperature sensor within the range from -100 up to +500 degrees, RF adapter, etc.

21. Configuration of original English set of commands

If you change and upload an incorrect set of commands in another language into your device, you are allowed to get back to the original set of commands in English. Firstly, disconnect your device from the power supply, press the push button and hold it down. Then connect it to the power again and release the push button. By this way the original set of commands will be configured into your device.

22. Operation, maintenance and security safety recommendations

- The product is not intended to be a security device, it provides this service only as supplementary.
- The product was designed only to indoor use, such as homes, offices, etc. Do not expose the device to liquid, moisture, or aggressive environment. Do not expose the product to an excessive vibration or shock, high temperature, and prevent it from falling as this may damage it. If you use the product in other conditions than the **standard 25°C**, you will shorten the life span of the internal battery and other components.
- Before use, please check, if mobile phones can be used in the area, where you wish to install the device. If not, please do not put the product into operation, as it can have negative influence on other electronic systems!
- Please connect appliances with the maximum current bellow 16A. If you need to switch higher current load, please use an external contractor rated for target load. Switching higher than nominal rating currents and/or loads with severe inductive/capacitive character with high startup currents can cause permanent damage of switching elements.
- Before using a SIM card, please delete all received SMS messages from your SIM card.
- The product is not a toy for children; a SIM card represets a small part that can be easily ingested.

23. Warranty

The supplier provides warranty for IQTD-GS440 for up to 24 months starting from the purchase date. This warranty does not apply to damage resulting from abnormal use, and from breaking the operation recommendations as listed above in the user guide. Further, the warranty does not apply to mechanical and electric damage in the antenna input, universal input and internal switching element in case of switching appliances with improper load (inductive/ capacitive).

Serial number	Purchase date	Supplier's signature and stamp

No guarantee can be given if the product's serial number is not identical to the number stated in the warranty certificate, if it has been modified, deleted, or is illegible, if defects have been caused by mechanical damage, improper use (installation in unsuitable, humid environment, caustics poured over the product and others). Further, this warranty does not cover situations if defects have been caused by any outside event (overvoltage in network, electromagnetic field, improper range of work temperatures, disaster, and others), if incorrect voltage has been used in the product, in case of intervention of an unauthorized person, if the product has been modified or repaired.
This warranty becomes void if any person has made modifications or adapted the product in such a way that it will have more functions, or to operate the product in different country than the country it was designed for, manufactured and approved for. This warranty does not affect any rights, which the consumer may have according to valid legal regulations.

Warning for customers: We strongly advise you to keep your receipt of purchase, let the seller fill out a warranty certificate and keep this certificate as well.
In case of any warranty claim you are required to present a warranty certificate filled out accurately and clearly.

If this warranty certificate is not filled out accurately and clearly, then the warranty period begins from the purchase date as stated on your receipt of purchase.