

PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
FL-33458
USA

From outside US: +1
Tel: (561) 320-9162
Fax: (561) 320-9176
info@pce-americas.com

PCE Instruments UK Ltd.
Units 12/13
Southpoint Business Park
Ensign way
Hampshire / Southampton
United Kingdom, SO31 4RF
From outside UK: +44
Tel: (0) 2380 98703 0
Fax: (0) 2380 98703 9
info@pce-instruments.com

www.pce-instruments.com/english
www.pce-instruments.com

Manual

GPRS Data Logger PCE-GPRS 2



Version 1.0
Date of creation: 08.12.2015
Date of last change: 14.12.2015

Contents

1	Introduction	3
2	Safety notes	3
3	Specifications	4
4	System description	5
5	Setup	7
6	Contact.....	25
6.1	PCE Instruments UK	25
6.2	PCE Americas	25

1 Introduction

Thank you for purchasing a GPRS data logger PCE-GPRS 2 from PCE Instruments.

- 4 x analogue input (4 ... 20 mA or 0 ... 5 V)
- 4 x digital input (potential-free contact)
- 4 x temperature input (DS18B20)
- 4 x open collector output (max. 12 V / 0.5 A)
- quad band (900 / 1800 / 850 / 1900 MHz)
- data logger function via GPRS
- text messaging to up to 10 numbers
- internal data storage and battery

2 Safety notes

Please read this manual carefully and completely before you use the device for the first time. The device may only be used by qualified personnel and repaired by PCE Instruments personnel. There is no warranty of damages or injuries caused by non-observance of the manual.

- The device may only be used in the approved temperature and humidity range.
- Do not expose the device to extreme temperatures, direct sunlight, extreme air humidity or moisture.
- The case should only be opened by qualified personnel of PCE Instruments.
- The instrument should never be placed with the user interface facing an object (e.g. keyboard side on a table).
- You should not make any technical changes to the device.
- The appliance should only be cleaned with a damp cloth / use only pH-neutral cleaner.
- The device may only be used with PCE or equivalent accessories.
- Before each use, please inspect the instrument for visible damage. If you find any damage, please do not use the device.
- Do not use the device in explosive atmospheres.
- Before opening the case to replace the battery, please remove all test leads to avoid electric shock.
- When you do not use the device for a longer period of time, remove the batteries to prevent damage to battery leakage.

This user's handbook is published by PCE Instruments without any guarantee.

We expressly point to our general guarantee terms which can be found in our general terms of business.

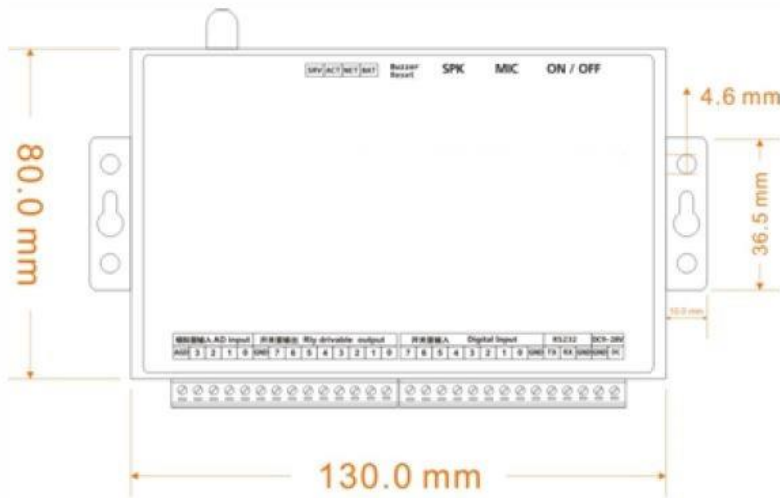
If you have any questions please contact PCE Instruments.

3 Specifications

DC power supply	9 ... 28 V DC (standard adaptor: DC 12 V / 1.5 A)
Power consumption	12 V input max. 150 mA / average 50 mA
Frequency range	dual-frequency 900 / 1800 / 850 / 1900 Mhz
SIM card	supporting 3 V SIM card
Antenna	50 Ω SMA antenna interface
Serial	RS 232
Temperature range	-30 °C ... +70 °C
Humidity range	relative humidity 95 %
Digital input	4 digital inputs (dry contact)
Output	4 controllable relay outputs (open-collector outputs)
Output control voltage	= input DC voltage
Output control power	control voltage ≤ 35 V, control current ≤ 500 mA
Analog input	4 analog inputs (4 ... 20 mA or 0 ... 5 V)
Temperature input	4 DS18B20 inputs (temperature range -55 °C ... +125 °C)
Memory	256K
Audio interface	3.5 mm audio in and audio out
Exterior dimensions	130 x 80 x 25 mm
Weight	370 g

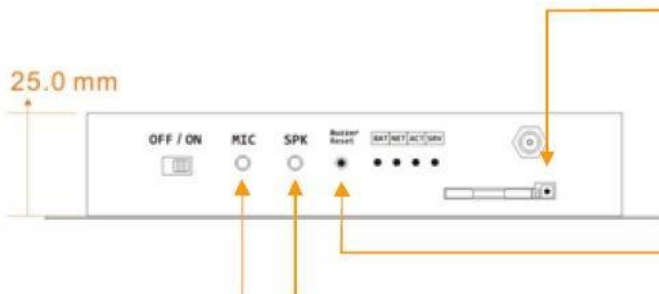
4 System description

Device



Install SIM card

Press the small yellow dot. The SIM card drawer will come out automatically. Take out the drawer, insert the SIM card in it in slot direction and move the drawer back.



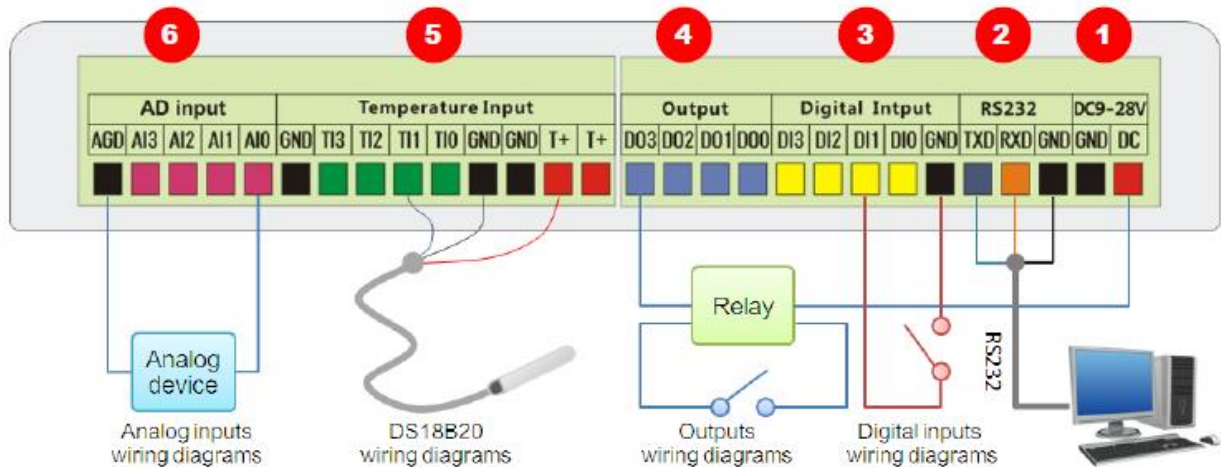
Buzzer Reset button: press the button to disable buzzer alarm sound

MIC: 3.5 mm audio in, connect MIC to monitor voice
SPK: 3.5 mm audio out, connect loudspeaker to speak

LED indicator

Indicator	Status	Description
SRV (Orange)	Light on during operation	will be on when the system sends short messages and switch off when operation is over
ACT (Yellow)	Flickering	will flicker periodically when the system is under operation, interval time is 6 s
NET (Red)	Flickering	GSM module signal indicator, will flicker slowly after the system is registered in GSM network
BAT (Green)	Light on during charging	will be on during interior battery is charging

Terminal



①. DC9-28V (power in)

DC positive terminal of the DC power supply (+)

GND negative terminal of the DC power supply (-)

Warning : Make sure that the polarity is correct. Otherwise, the output will be damaged.

②. RS232

RXD receive Data connect RS232 cable orange wire

TXD transmit Data connect RS232 cable blue wire

GND ground connect RS232 cable black wire

③. 4 digital inputs (NO or NC)

DI0~DI3 connect NO or NC

GND connect COM

④. 4 controllable relay outputs

DO0~DO3 negative pole of relay coil

DC positive pole of relay coil

⑤. 4 temperature inputs

T+ DS18B20 VDD

GND DS18B20 GND

TI0~TI3 DS18B20 DQ

⑥. 4 analog inputs

AIN0~AIN3 connect analog device output

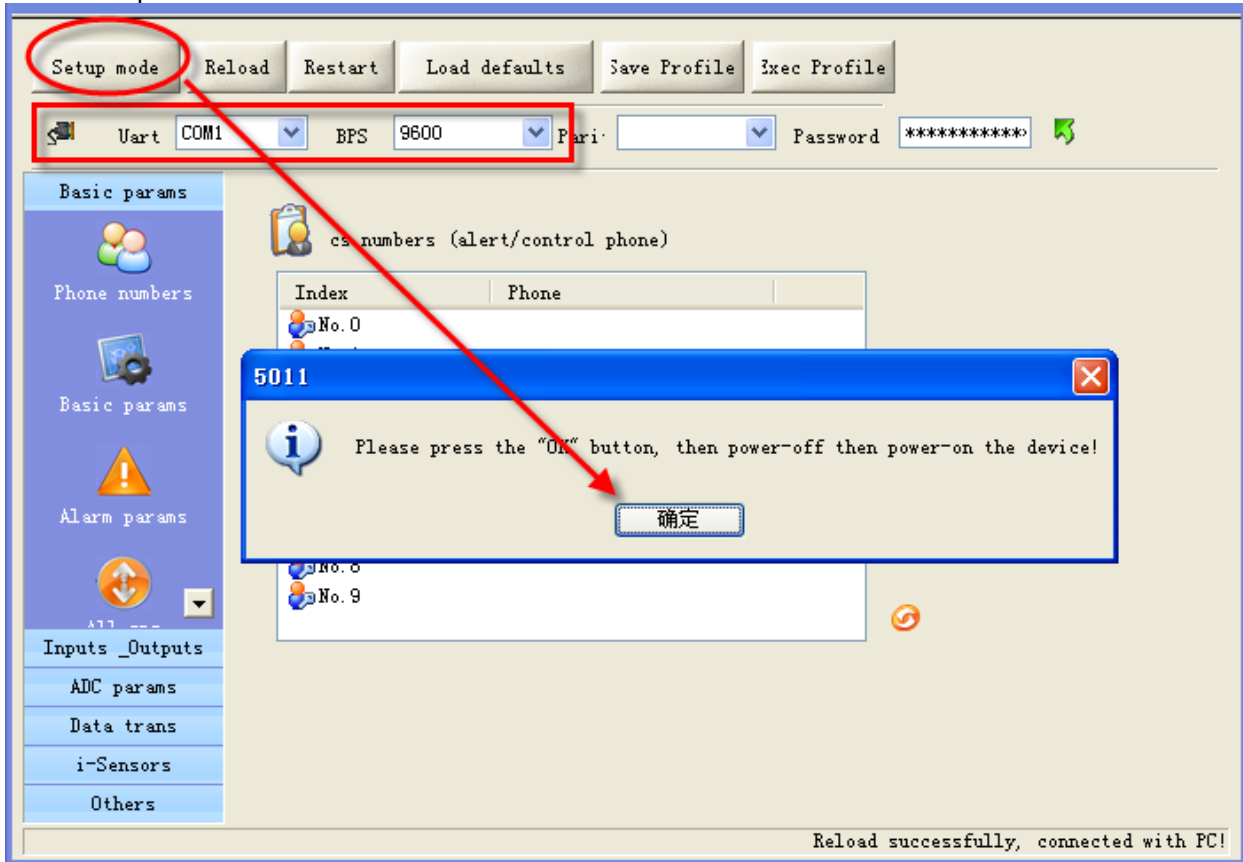
AGD GND

5 Setup

Access setup mode

Connect the PCE-GPRS 2 to the computer by means of the RS232 cable and open the configuration software. Make the PCE-GPRS 2 access setup mode according to the following figure.

Note: Please choose the serial port no. and rate correctly. The default communication rate is 9600 and the default password is "000000".



Working mode and setup mode

In setup mode, all functions are disabled as this mode is intended only to setup parameters.

The PCE-GPRS 2 must be restarted to enter working mode in which all functions are enabled. In this mode, the PCE-GPRS 2 can alarm and be controlled.

Note: In setup mode, the SIM card and the antenna is not needed, but in working mode, the SIM card and the antenna is necessary.

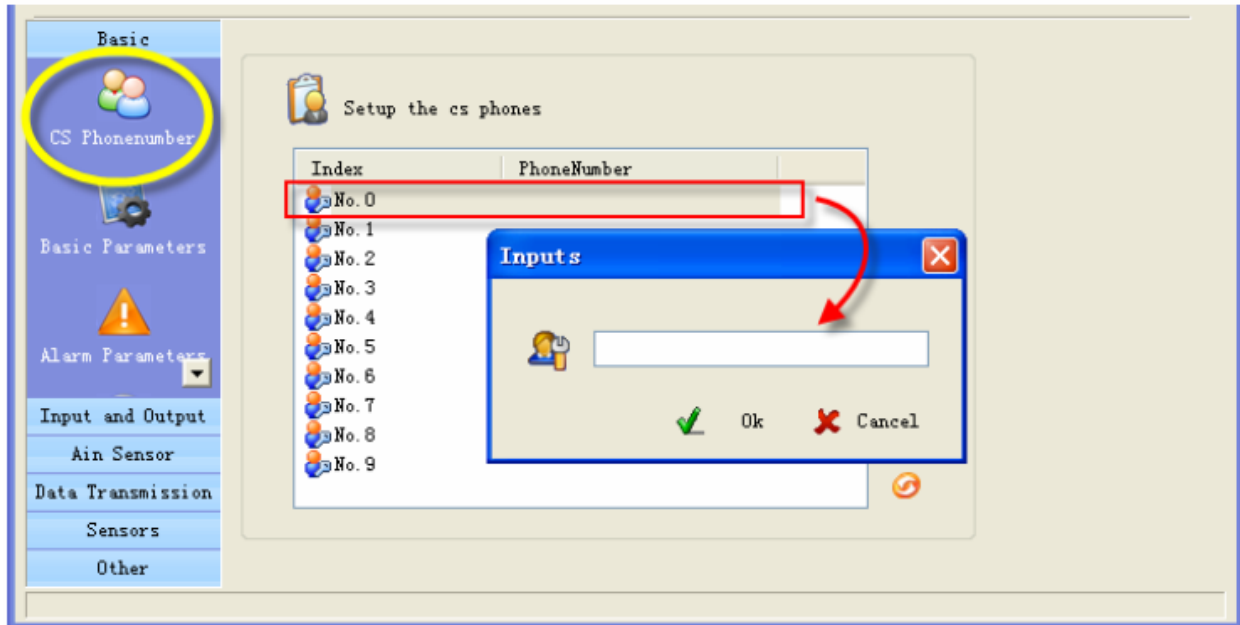
How to know current mode:

Method 1: Check the ACT light. If the ACT light flickers twice per second, this means it is in setup mode. In working mode, the flicker period of the ACT light can be up to 6 s.

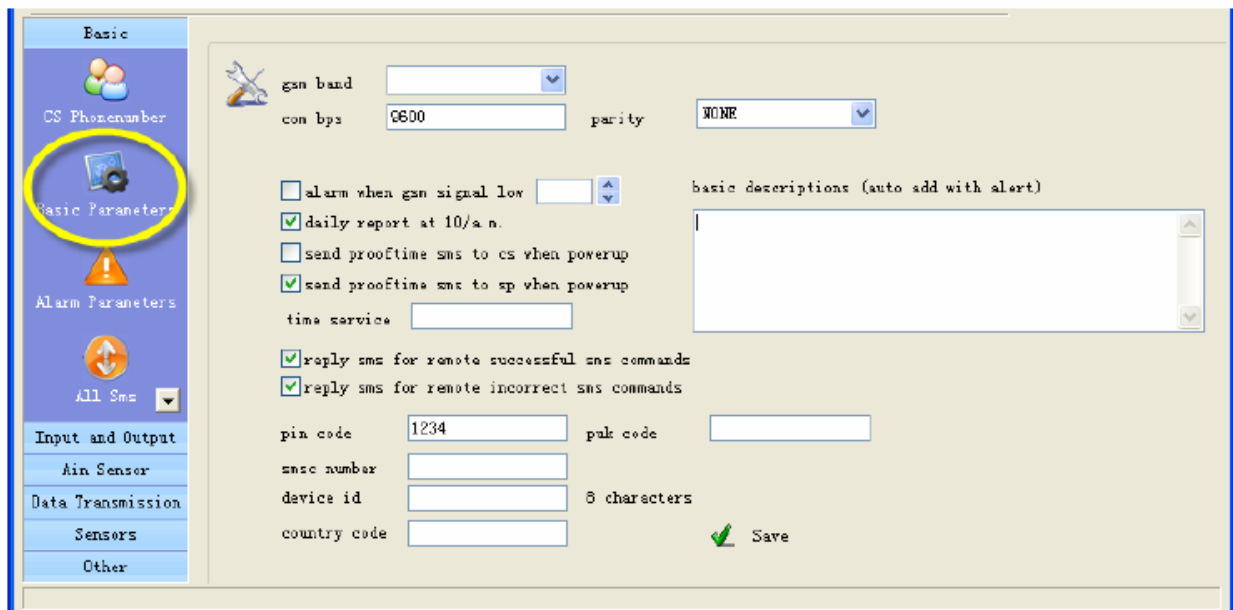
Method 2: Check the information from the serial port. If the character string of "dtu come in setup mode" occurs, it means that the PCE-GPRS 2 is in setup mode.

Setup "CS numbers"

When the PCE-GPRS 2 is in working mode, "CS numbers" can be assigned to send SMS commands from to control the PCE-GPRS 2 and to receive SMS (including alarm SMS, report SMS, etc.) The user can set up to 10 CS numbers, CS0-CS9.



Setup basic parameters



Attention: for gsm band, com bps, uart, pin code and country code, please use the default values.

- Alarm for GSM signal low

The normal range for the GSM signal is 18 ... 32. The PCE-GPRS 2 sends an alarm SMS to the CS number when the PCE-GPRS 2's GSM signal value is below the preset threshold. The default value is 11.

- Daily report

If you enable this option, the PCE-GPRS 2 will send a report SMS to the CS number at 10:00 every morning to report the current state, which enables the user to ensure normal operation of the PCE-GPRS 2.

- Proof time

The proof time is to make sure that the PCE-GPRS 2's OS (operation system) works in real time. The PCE-GPRS 2 can make daily reports and indicate the timing output in real time.

Send proof time SMS to CS when powered on

When the PCE-GPRS 2 is powered on, it sends an SMS to CS0 to request the proof time, CS0 can reply "999" to the PCE-GPRS 2 to complete the proof time.

Send proof time SMS to SP when powered on

The SP phone number is a number that can automatically reply to any incoming SMS. The PCE-GPRS 2 uses this SMS to update the internal clock by means of the time stamp of the SMS. The content of the SMS is not important.

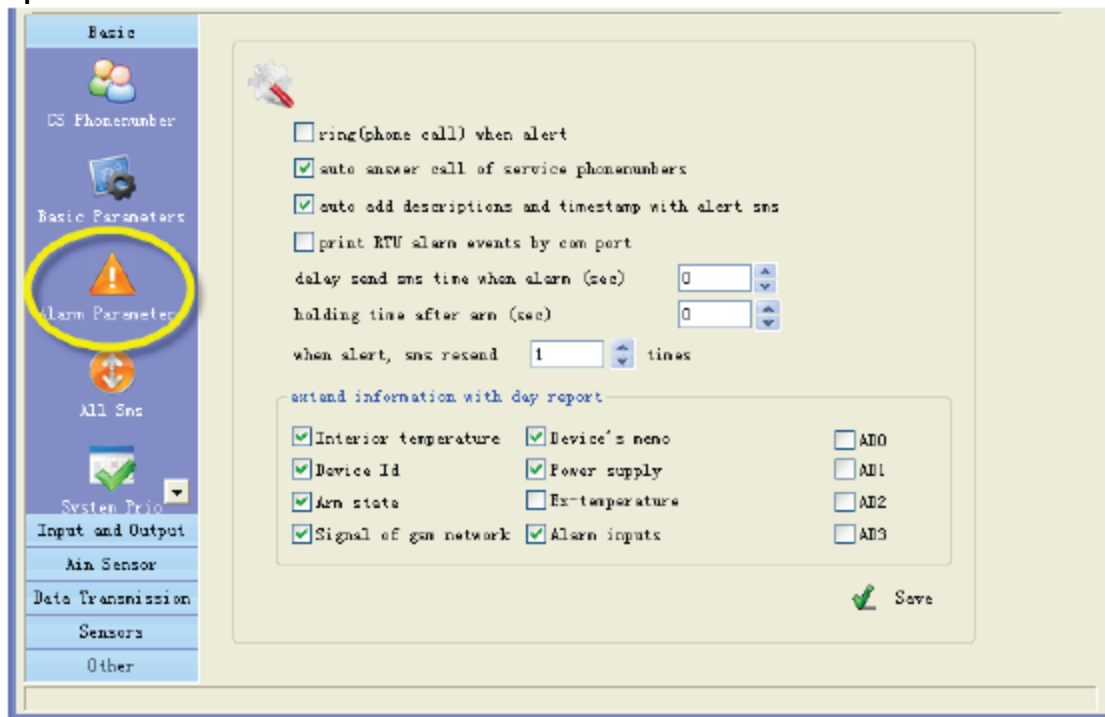
- Device description

You can add descriptions with PCE-GPRS 2 (such as location, user information, etc.). These descriptions are shown in a PCE-GPRS 2 alarm SMS.

- Device ID

The device ID is an 8-byte ASCII character which is shown in a PCE-GPRS 2 state SMS.

Alarm parameters



- Ring when alert

When you enable this option, the PCE-GPRS 2 will give the CS number a phone call and send an SMS when an error / alarm / deviation occurs.

- Auto callback of service phone number

Attention: This option is valid for the data logger models that have an audio interface.

If MIC and speaker are connected; the PCE-GPRS 2 will reply automatically when a CS number calls it, so that the user can monitor voice and speaking from remote.

- Auto add basic description with alert SMS

When you enable this option, descriptions (such as location, user information) that have been defined by the user will be shown in alarm SMS and daily report SMS.

- Print RTU alarm events via com port

When you enable this option, any alarm data will be sent to the com port in CWT_IO data format.

- Delay time SMS alarm

Define the time in a way that gives you enough time to disable the alarm when you enter the monitor area.

- Holding time SMS alarm

Define the time in a way that gives you enough time to enable the alarm when you leave the monitor area.

- Extend information with report

The data logger can send a report per SMS to CS phones on a time basis or on the user's inquiry by SMS command. This function is designed to let the user know the PCE-GPRS 2 is working properly and its status enables or disables the following information to be shown in the report.

extend information with day report		
<input checked="" type="checkbox"/> Interior temperature	<input checked="" type="checkbox"/> Device's memo	<input type="checkbox"/> AD0
<input checked="" type="checkbox"/> Device Id	<input checked="" type="checkbox"/> Power supply	<input type="checkbox"/> AD1
<input checked="" type="checkbox"/> Arm state	<input type="checkbox"/> Ex-temperature	<input type="checkbox"/> AD2
<input checked="" type="checkbox"/> Signal of gsm network	<input checked="" type="checkbox"/> Alarm inputs	<input type="checkbox"/> AD3

- **Interior temperature:** The internal temperature sensor is optional. If it is included, the temperature value will be included in the daily report.

Attention: A standard PCE-GPRS 2 does not have an internal temperature sensor.

- **Device Id:** If you enable this option, the ID will be shown in the daily report.

- **Arm state:** If you enable this option, the alarm status will be shown in the daily report.

- **Signal of gsm network:** If you enable this option, GSM signal value will be shown in the daily report.

- **Device's memo:** If you enable this option, the device description will be shown in the daily report.

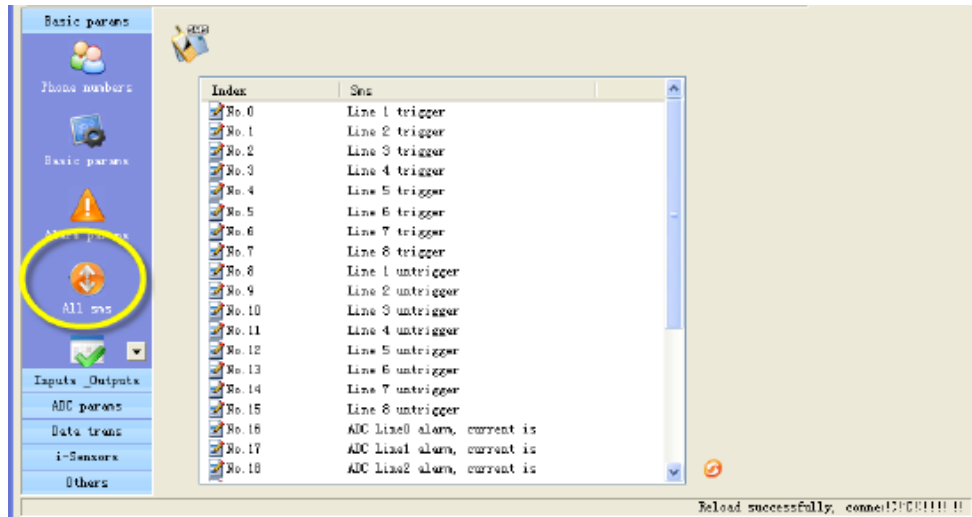
- **Power supply:** If you enable this option, the daily report will include the power supply status.

- **Ex-temperature:** If you enable this option, all the values of the extended temperature sensor will be included in the daily report.

- **Alarm inputs:** If you enable this option, the inputs that are in alarm status will be shown in the daily report.

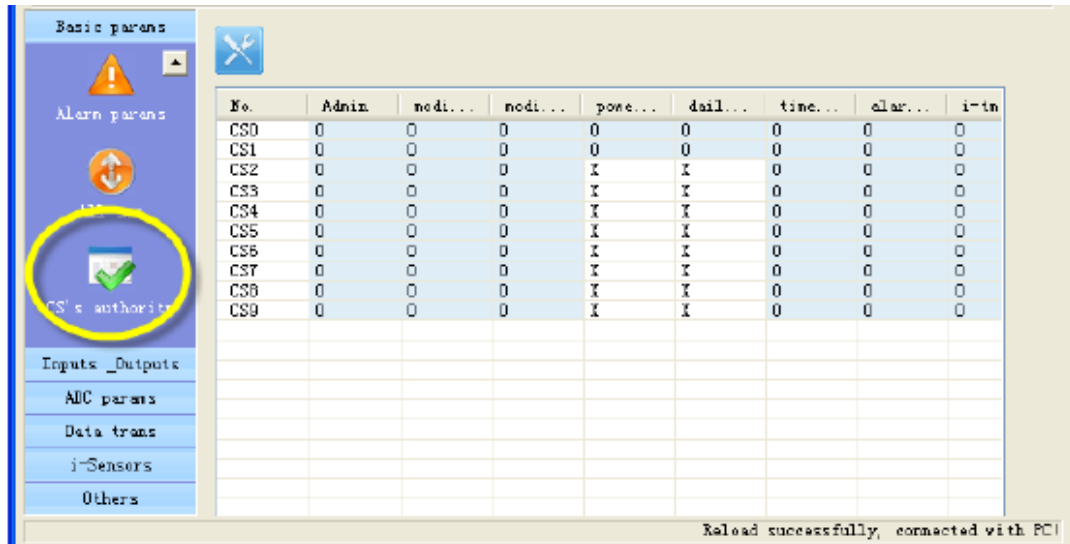
- **AD0 ... AD3:** If you enable those options, all the values of the AD input will be included in the daily report.

All SMS



On this page, you can see all SMS contents that you have defined, including digital input alarm / recover SMS, AD input alarm/recover SMS, etc. You can double-click them to modify.

System Prio

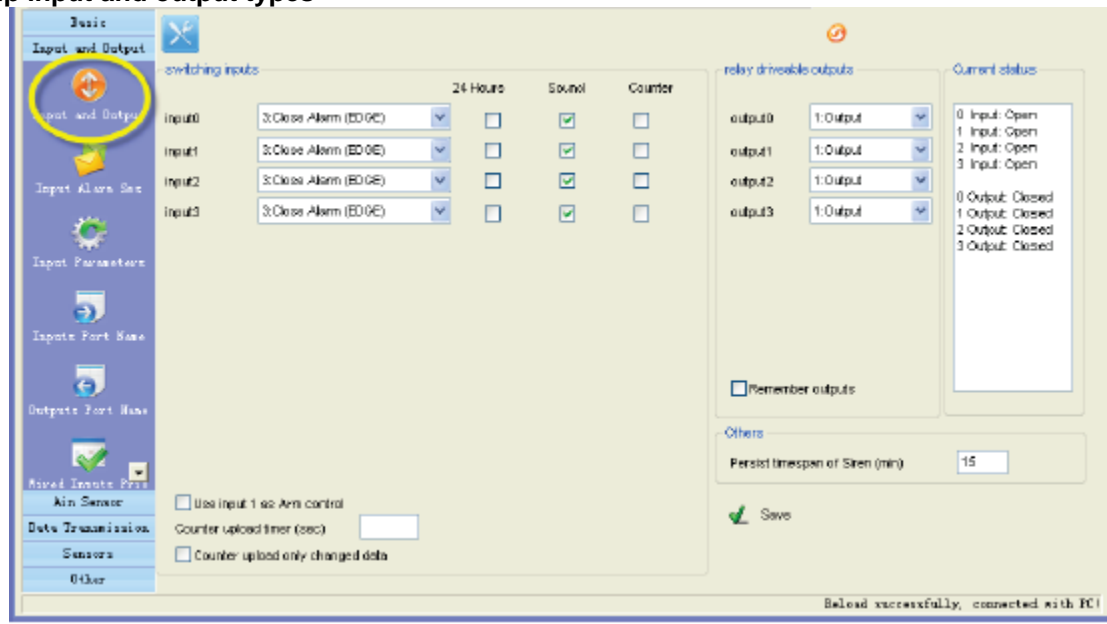


On this page, you can set authorizations for CS numbers.
 "O" means enable authorization; "X" means disable authorization.

Authorization	Explanation
Admin	can enable / disable alarm or not
Modify by sms	this CS number can modify by SMS command or not
Change cs phones	this CS number can modify other CS numbers by SMS command or not
Powerup sms	can receive the status SMS or not when device is restarted by SMS command
Daily report sms	can receive the daily report or not
Timer mms	-
Alarm mms	-
I-tmp alarm sms	can receive alarm SMS or not when internal temperature sensor alarm is triggered
I-tmp alarm ring	can receive alarm phone call or not when internal temperature sensor alarm is triggered
Power fail sms	can receive alarm SMS for power failure or not
Power fail ring	can receive alarm phone call for power failure or not
Signal low alarm	-
Sample sms	-
M2M svr	PCE-GPRS 2 sends SMS to CS number with CWT_IO protocol
Arm notify	can receive SMS when alarm is enabled or disabled

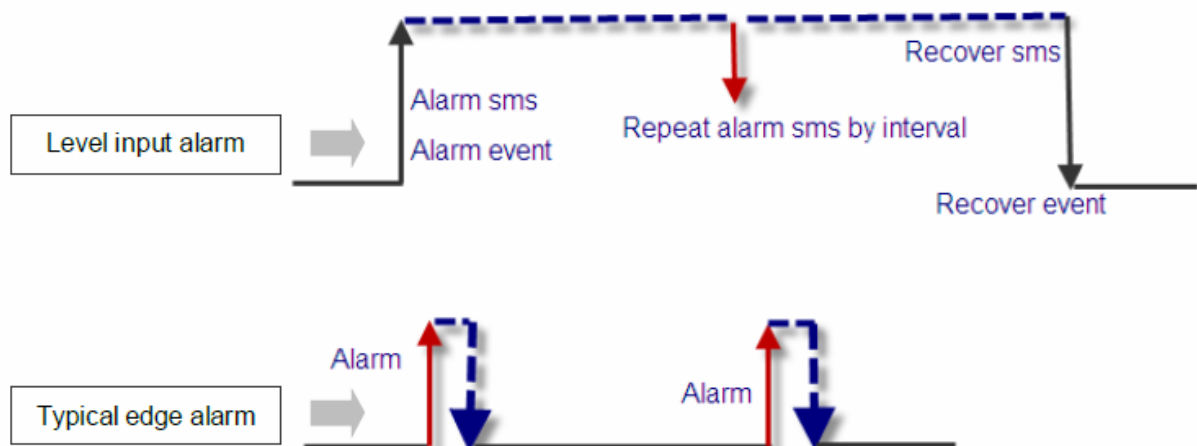
Input and output

Setup input and output types



Input signals have two types, EDGE_IN (edge triggering) and LEVEL_IN (state triggering).

Attention: The key difference between level and edge is that a level input can send recovery SMS messages and a level input can repeat alarm status SMS messages after a certain interval.



- 24 Hours

If you enable this option, the digital input will carry out alarm action (send alarm SMS, interlock, etc.) when it is triggered, even when the alarm is disabled.

- Sound

When a channel input alarm occurs, the internal buzzer or the siren is triggered if you enable this function.

- Use digital input 1 as alarm control

When this option is enabled, the PCE-GPRS 2 is in alarm mode if digital input 1 is opened and is in alarm disabled mode if digital input 1 is closed, so that the user can connect a button to switch between alarm enabled and disabled.

Attention: When you use digital input 1 as alarm control, you must select "TO CLOSE ALARM (LEVEL)" as type of input 1 and delete the alarm / recover SMS of input 1.

- Counter

Enable or disable this channel input as counter input which recognizes even values above 100 ms.

- Counter upload timer

Setup the counter GPRS upload interval.

- Counter upload only changed data

Automatic counter upload mode is a mode to save GPRS, not to report data if the value has not changed.

Output types

0	disabled	
1	controllable relay output	control relay, control electricity <0.2A output control relay, voltage = input DC voltage output power: control voltage ≤35V, control current ≤200mA
2	Buzzer	this line's actions will synchronize with internal buzzer
3	SNAPSHOT	this line will be activated shortly after any alarm occurs
4	SIREN	this line is continuously activated; the siren interval can be user defined; 1 minute is set as default

Others

Persist timespan of Siren (min)

15

- Remember output status

The default setting for the device's output status is open. It can also be closed closed during operation. After restarting, the outputs will be reset, so that the status is open. If you enable this option, the output can recover the status that applied before restarting.

Define alarm and recover SMS of digital input

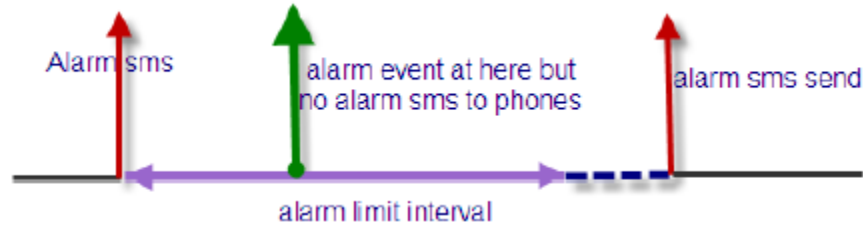
All input line SMS can be modified. An SMS can contain up to 60 characters.

Setup input timeouts

This page is designed to setup input timeout properties. There are 3 intervals related with inputs:

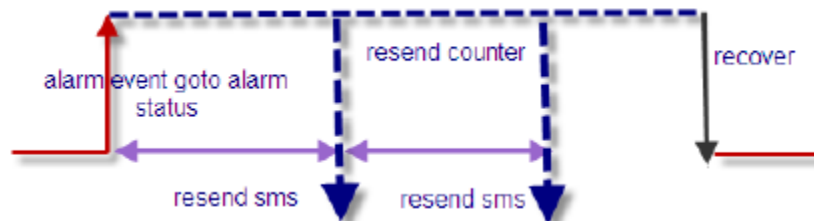
1. Alarm SMS limit interval

This interval is to avoid too many alarm / recover SMS within a very short time.



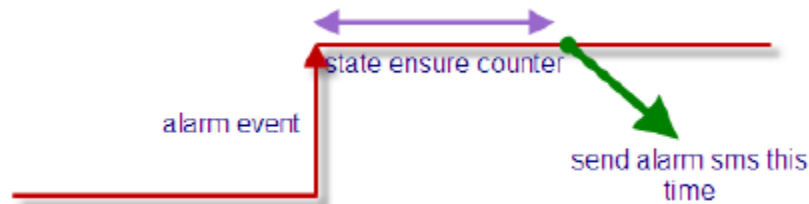
2. Alarm SMS resend interval

This interval is meant to set how frequently alarm status notification messages are sent to phones. If you select 0, the notification will not be repeated.

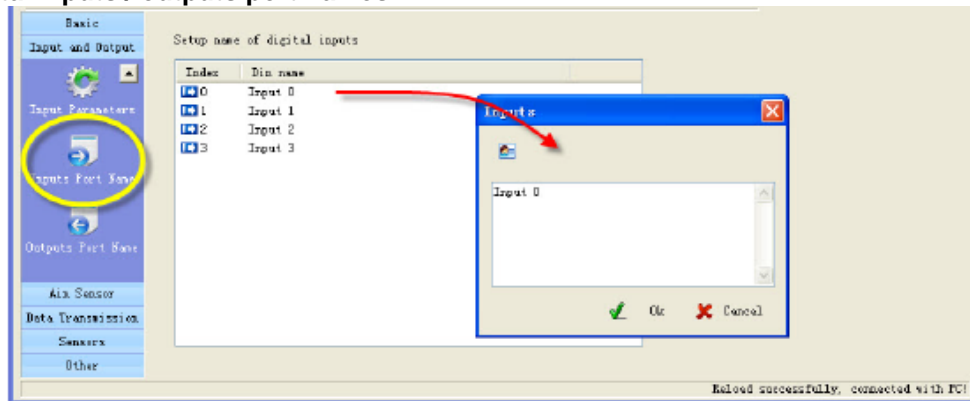


3. Alarm state ensure intervals

This function is used to avoid errors due to shaking. If you select 0, the counter will be disabled.



Setup digital inputs / outputs port names



When you send an SMS command to retrieve the inputs status, you will see

from: +8613480165874
 High voltage: normal
 Low voltage: alarm
 High water level: normal
 Low water level: normal

from: +8613480165874
 Input 0 : normal
 Input 1 : alarm
 Input 2 : normal
 Input 3 : normal

If you have set up the input names
 The same applies to the output names.

if you have not set up the input names

CS DIN authorizations

On this page, you can set up whether a CS phone can receive digital input alarm SMS and calls. "O" means yes, "X" means no.

Din	0	1	2	3
CS0	0	0	0	0
CS1	0	0	0	0
CS2	0	0	0	0
CS3	0	0	0	0
CS4	0	0	0	0
CS5	0	0	0	0
CS6	0	0	0	0
CS7	0	0	0	0
CS8	0	0	0	0
CS9	0	0	0	0

Din	0	1	2	3
CS0	0	0	0	0
CS1	0	0	0	0
CS2	0	0	0	0
CS3	0	0	0	0
CS4	0	0	0	0
CS5	0	0	0	0
CS6	0	0	0	0
CS7	0	0	0	0
CS8	0	0	0	0
CS9	0	0	0	0

Example:

Din	0	1	2	3
CS0	X	0	0	0
CS1	0	X	0	0
CS2	X	0	0	0
CS3	0	0	0	0
CS4	0	0	0	0
CS5	0	0	0	0
CS6	0	0	0	0
CS7	0	0	0	0
CS8	0	0	0	0
CS9	0	0	0	0

This setting means that CS0 does not receive any alarm SMS from input 0, CS1 does not receive input 1 alarm SMS and CS3 does not receive any alarm messages from input 0.

Setup Ain parameters

The analog input is designed to receive 0 ... 20 mA or 0 ... 5 V signals from an analog sensor. You can preset a high and a low limit for every AD input. Whenever the current value is above the high limit or below the low limit, an alarm is triggered. You also can send an SMS command to the data logger to get the current value.

Example:

A temperature transmitter is connected to the GRPS data logger, its analog output range is 4 ... 20 mA, with a monitor temperature range of 0 ... 50 °C and you want to be alerted when the current temperature value is above 40 °C or below 10 °C.

No.	Low	High	Offset	Current	Scale	Base	Urgent	Sound alarm	Upload step
AIN0	10	40	0.00		19.8400	12.500	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0.00
AIN1	0.0	0.0	0.00		02.00	0.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0.00
					02.00	0.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0.00
					02.00	0.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0.00

Minimum time of twice AD alarm sms (min): 0

Interval of resend AD alarm state sms (min): 0

Time span of ensure AD alarm (sec): 5

- Urgent

If ticked, the PCE-GPRS 2 will carry out alarm action in any case (send alarm SMS, interlock, etc.) when the AD input exceeds the normal range, even when the alarm is disabled.

- Sound alarm

An alarm event in connection with this line will trigger the internal buzzer or siren action if this function is activated.

- Upload step

If the change of the AD input exceeds the value entered under "upload step", the data logger will upload the current value to the server per GPRS.

- Minimum time between two AD alarm SMS (AINAS time)

After an alarm action (alarm SMS, interlock, etc.), when AD inputs exceed the normal range within the AINAS time, the PCE-GPRS 2 will not carry out any alarm action (send alarm SMS, interlock, etc.) even if AD inputs exceed the normal range frequently. The purpose of setting an AINAS time is to make sure that user does not receive excessive alarm SMS when the AIN value fluctuates around the low or high value. You can disable this function by entering "0".

- Interval of resending AD alarm state SMS (AINLS time)

After an alarm action has been carried out (alarm SMS, interlock, etc.), when AD inputs exceed the normal range and the duration of the alarm signal exceeds the AINLS time, the GPRS data logger will carry out another alarm action (send alarm SMS, interlock, etc.). The purpose of setting an AINLS time is to alert the user repeatedly at regular intervals during the AD input exceeds the normal range. "0" means that the function is disabled.

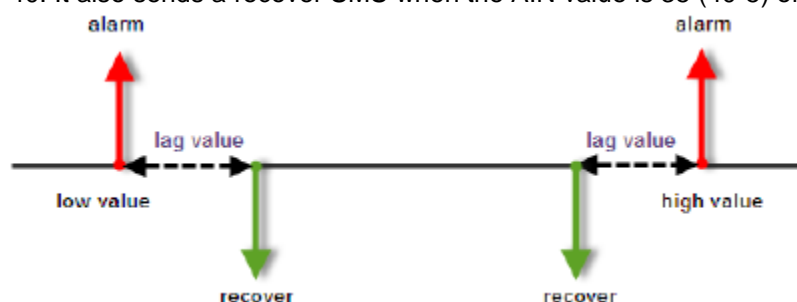
- Timespan of ensure AD alarm (AINDLY time)

The data logger will not execute any alarm action (send alarm SMS, interlock, etc.) during the AINDLY time, even when AD inputs exceed the normal range. If the duration of the alarm signal exceeds the AINDLY time, the PCE-GPRS 2 will carry out alarm action (send alarm SMS, interlock, etc.). "0" means that the function is disabled.

- Setup lag

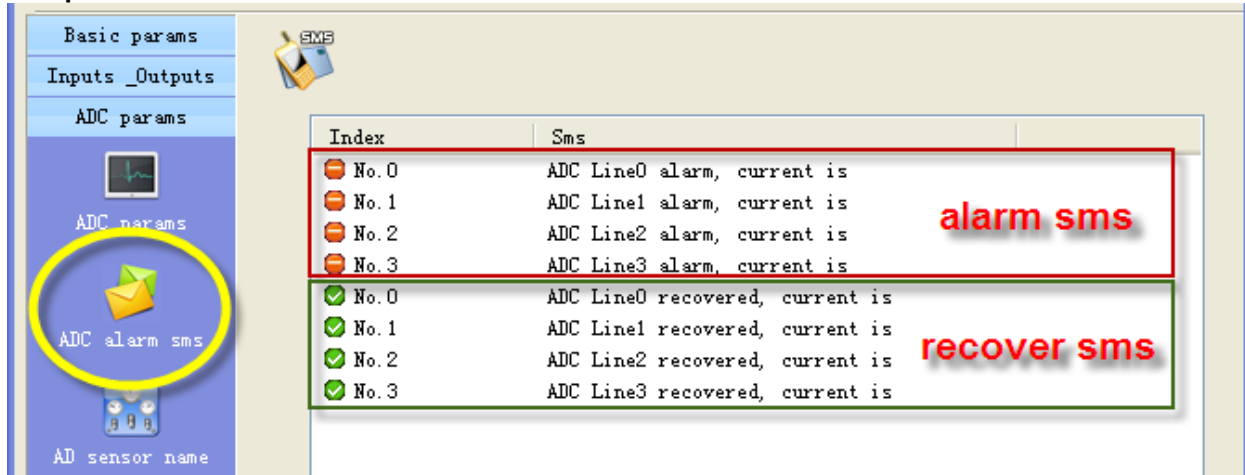
When AD inputs exceed the normal range, the GPRS data logger will ring the alarm and will not return to normal state before the AIN returns to a value within the range between high value -lag and the low value +lag.

For example: the normal range is 10 ... 40, the lag is 5, the data logger sends an alarm SMS when the AIN value is 10 or 40. It also sends a recover SMS when the AIN value is 35 (40-5) or 15 (10+5).



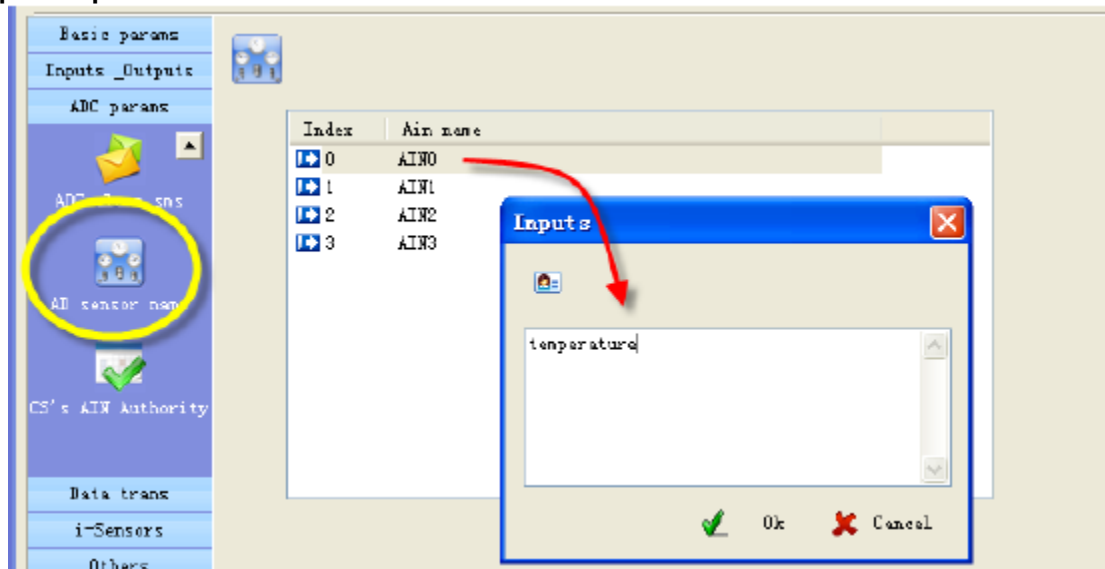
The purpose of setting a lag is to make sure that the user does not receive too many alarms when the AIN value fluctuates around the low or high value. By entering "0", you can disable the function.

Setup AIN alarm and recover SMS



The current value is shown at the end of the alarm or recover SMS. An SMS will be composed of up to 60 characters.

Setup AD inputs name



If you send an SMS command to retrieve an AD input value, the AD input name will be shown in the SMS.

For example, when the AD input 0 channel name is “temperature”, the SMS will be:

```

From: +8613480165874
Temperature current value : 21.33
AD input 1 current value: 60
AD input 2 current value: 0
AD input 3 current value: 0
  
```

The name will not contain more than 24 characters.

CS AIN authorizations

On this page, you can set up whether a CS phone can receive AD input line alarms. "O" means yes, "X" means no.

No.	0	1	2	3
CS0	0	0	0	0
CS1	0	0	0	0
CS2	0	0	0	0
CS3	0	0	0	0
CS4	0	0	0	0
CS5	0	0	0	0
CS6	0	0	0	0
CS7	0	0	0	0
CS8	0	0	0	0
CS9	0	0	0	0

GPRS parameters

On this page, you can set up the GPRS parameters.

Index	Svr addr	Svr Port	Tcp/Udp	Protocol	Idle To	Respons.
Svr0						
Svr1						
Svr2						
Svr3						

Via "APN, user, password, DNS addr", you can consult the GSM operation.

- GPRS idle time

When the GPRS data logger has not transferred any data during that time, GPRS will be disabled. If you set the time to 0, this means that GPRS will always be enabled.

- Modbus TCP unit ID

for data transfer with Modbus TCP protocol

- Enable com data to be sent to GPRS server

The GPRS data logger supports transparent transmission via RS232.

- Set parameters of servers

Four servers can be added which can all receive data from the GPRS data logger at the same time. You can set parameters for every server.

- Server address

This is the IP of a server or domain names. The IP must be a static and public IP address.

- Service port

This is a TCP/IP port for applications on the server.

- TCP/UDP

You can select TCP/UDP transport protocols for the sever.

- Service protocol

You can select the following protocols for communication between the GPRS data logger and the server: Modbus TCP, CWT_IO and RS232 bidirectional transparent transmission.

Important : CWT_IO and GRPS DTU protocols can support TCP or UDP; but MODBUS TCP protocols only support TCP.

- Idle timeout

This function refers to the TCP server, which means that if no data is transferred during the preset time, the server will be disconnected. Set the time to 0 to disable this function.

- Response timeout

This function refers to the CWT_IO and Modbus TCP communication protocols and means that if after the PCE-GPRS 2 sends data messages to the server and does not receive any response data from the server during that time, it will resend the data. Set the time to 0 to disable the function.

- Heart timeout

Reserve

Setup I sensors

Buzzer

The buzzer can be activated when an alarm is triggered.

On this page, you can enable or disable the buzzer and set alarm interval times.

Tmp100 sensor (optional)

Attention: This setting is only valid for models that have an interior temperature sensor. The tmp100 temperature sensor is optional. A standard PCE-GPRS 2 does not have an internal temperature sensor.

Basic params
Inputs _Outputs
ADC params
Data trans
i-Sensors
Buzzer
Tmp100 sensor
Internal battery
Others

interior temperature sensor

high alert 0 centigrade
low alert 0 centigrade
Adjust 0 centigrade
current centigrade

Timespan of twice alarm sms(min) 0
Timespan of resend alarm sms (min) 0
Time of ensure alarm (sec) 60

☒ Enable temperature sensor alarm
☒ Temperature sensor alarm is urgency 24 hours
☒ Enable Temperature Sound alarm

Save Clear

Reload successfully, connected with PC!

You can preset a high and a low temperature value; if the temperature is out of the normal range, an alarm is triggered. You also can send SMS commands to the data logger to get the current temperature. The user can set the “Adjust” value to the temperature calibration value.

- Timespan between two SMS alarms

This function is designed to avoid excessive alarm/recover SMS within a short time.

- TMPRS time: timespan before resending alarm SMS

This option is designed for repetitions of alarm status notifications to phones. 0 means that repeated notifications are disabled.

- Alarm state ensure intervals

This function is used to avoid errors due to shaking. If you select 0, the counter will be disabled.

Internal battery

Attention: This is designed to warn the user when the battery is low. When the external power supply is cut off, the PCE-GPRS 2 will be powered by an internal battery and an alarm will be sent to CS numbers.

Basic params
Inputs _Outputs
ADC params
Data trans
i-Sensors
Buzzer
Tmp100 sensor
Internal battery
Others

Internal Battery

Time of ensure power alarm (sec) 5

☒ Enable power lost alarm

Save

Reload successfully, connected with PC!

Time of ensure power alarm

Here, you can set the time after which the device alerts the user when the external power is lost. By selecting "0", you can disable the function.

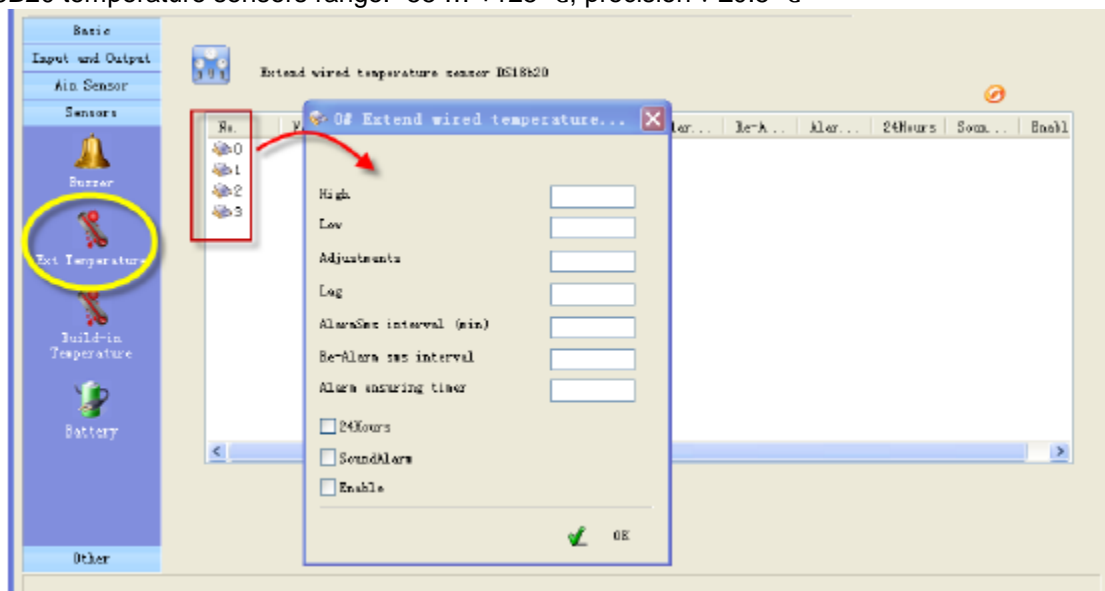
Battery specifications:

Lithium battery
Voltage: 3.7V
Capacity: 800mAh
Limited voltage for charging 4.2V
Implementation standard GB/T 18287-2000

Setup external temperature sensors

The PCE-GPRS 2 can be connected to 4 DS18B20 temperature sensors with extended wires. You can set a high and a low limit for every channel, so that whenever the current temperature is above the high limit or below the low limit, the PCE-GPRS 2 will ring the alarm. You can also send SMS commands to find out the current temperature.

DS18B20 temperature sensors range: -55 ... +125 °C; precision : ± 0.5 °C



- Adjustments

You can set the value to reduce error.

- Alarm SMS interval

This setting is designed to avoid high amounts of alarm/recover SMS within a short time.

- Re-alarm SMS interval

This option is designed for repeating alarm status notifications to phones. 0 means that repeated notifications are disabled.

- Alarm state ensure intervals

This function is used to avoid errors due to shaking. If you select 0, the counter will be disabled.

- "24 Hours" property

If ticked, the channel will execute alarm action (send alarm SMS, interlock, etc.) when an alarm is triggered, even when the PCE-GPRS 2 is in alarm disabled status.

- "Sound" property

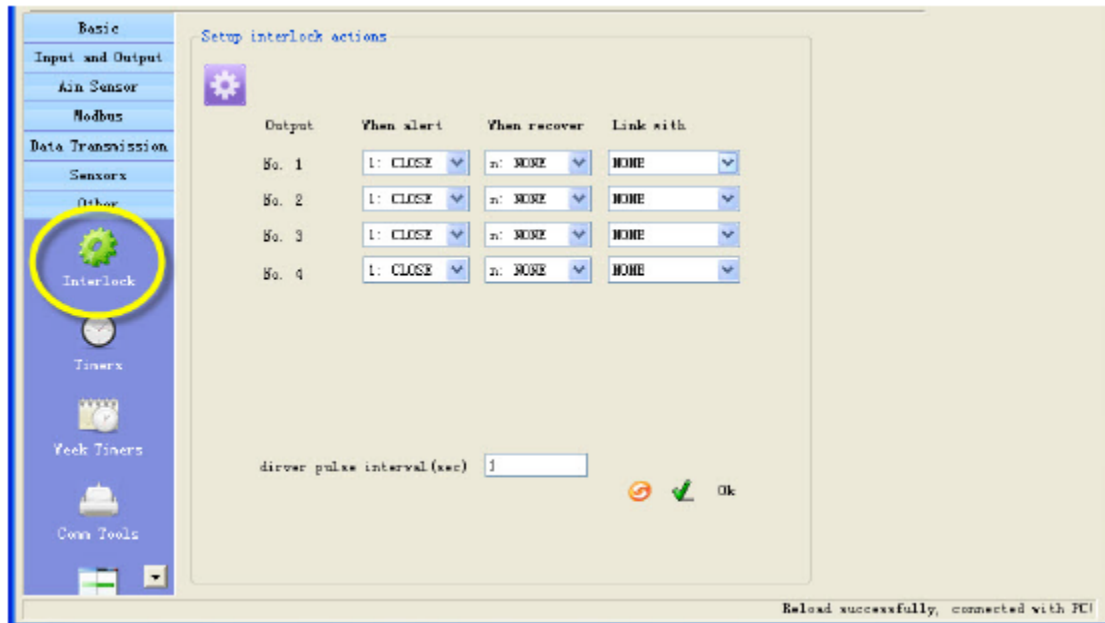
Means that alarm events regarding this line will trigger the internal buzzer or siren sound.

- “Enable” property

To enable or disable this channel's alarm.

Other settings

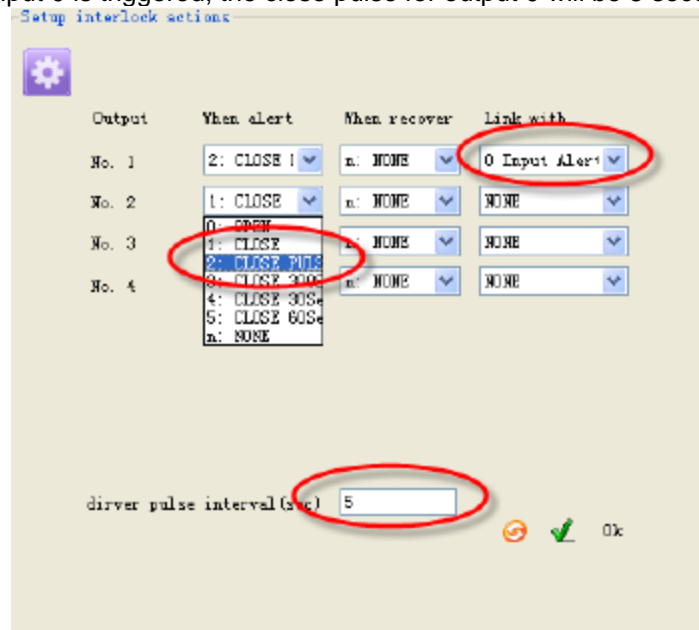
Realtime interlock



Realtime interlock is a means to make outputs automatically execute action under some internal triggering conditions.

For example:

If the alert for digital input 0 is triggered, the close pulse for output 0 will be 5 seconds.



Timers

The screenshot shows the 'Timers' configuration window. The sidebar on the left contains various icons, with the 'Timers' icon (a clock) highlighted by a yellow circle. The main window is titled 'Timers' and contains three sections: 'Minutes Timers', 'Second timers', and 'System timers'. Each section has a table of counters/timers. The 'Minutes Timers' section has 4 counters (Counter0 to Counter3), each with a 'per' field (set to 0), a unit (minute), and an 'exec' field (set to None). The 'Second timers' section has 4 counters (Counter0 to Counter3), each with a 'per' field (set to 0), a unit (seconds), and an 'exec' field (set to None). The 'System timers' section has 6 timers (Timer0 to Timer5), each with an 'at' field (set to 0), a unit (hour), a 'minute' field (set to 0), and an 'exec' field (set to None). A 'Save' button is located at the bottom right of the window.

The timers function is designed to set the time when tasks are executed, including enable and disable alarm, open/close output, etc.

- Minutes timers

4 minute counters can be set to make the device execute a task in intervals of every x minutes. For example, the PCE-GRPS 2 executes the output 0 pulse every 30 minutes.

The screenshot shows the 'Minutes Timers' configuration window. It contains a table with 4 rows (Counter0 to Counter3). Counter0 is highlighted with a red box, showing a period of 30 minutes and an action of 'Pulse D00'. The other counters have a period of 0 minutes and an action of 'None'.

Counter	per	unit	exec
Counter0	30	minute	Pulse D00
Counter1	0	minute	None
Counter2	0	minute	None
Counter3	0	minute	None

- Second timers

4 second counters can be set to make the device execute a task in intervals of every x seconds.

- System timers

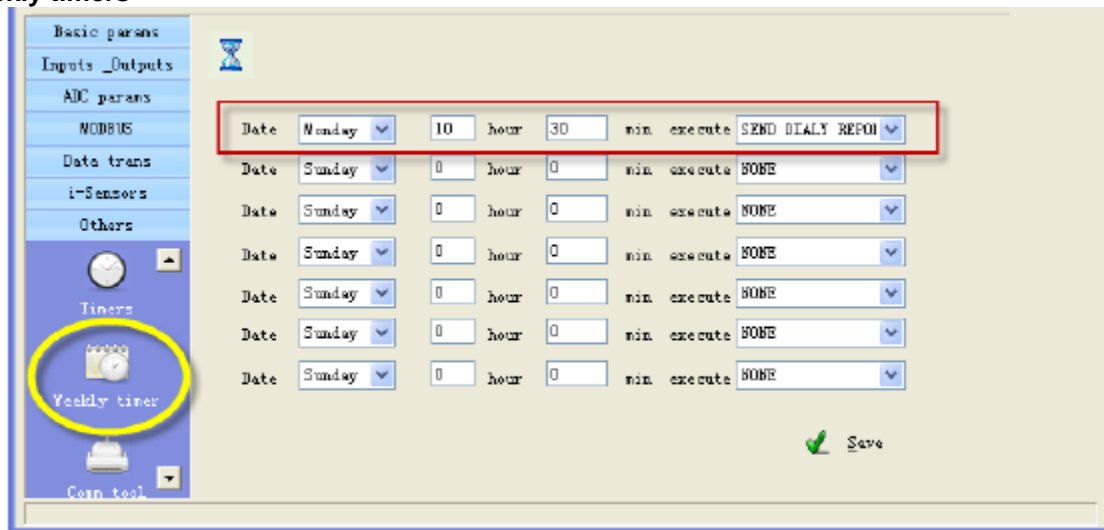
6 times can be set for one day to make the PCE-GPRS 2 execute a task at the times set. For example:

8:30: output 0 on; 17:00: output 0 off.

The screenshot shows the 'System timers' configuration window. It contains a table with 6 rows (Timer0 to Timer5). Timer0 and Timer1 are highlighted with a red box, showing times of 8:30 and 17:00 respectively, and actions of 'Driver D00' and 'Switch off D00'. The other timers have a time of 0:00 and an action of 'None'.

Timer	at	hour	minute	exec
Timer0	8	30	minute	Driver D00
Timer1	17	30	minute	Switch off D00
Timer2	0	0	minute	None
Timer3	0	0	minute	None
Timer4	0	0	minute	None
Timer5	0	0	minute	None

Weekly timers



7 times can be set for one week to make the PCE-GPRS 2 execute a task at the times set.

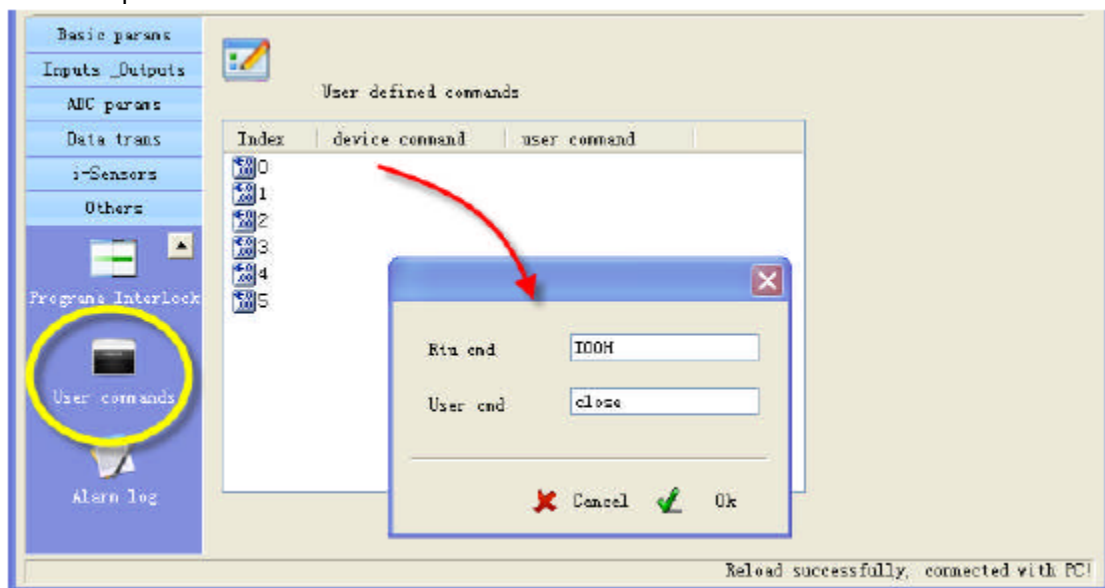
For example:

Monday 10:30: daily report is sent

Define users commands

Users can define 6 commands instead of system commands.

For example, user can set "close" instead of the system command "IOOH", to be able to just send "close" to close the output.



6 Contact

If you have any questions about our range of products or measuring instruments please contact PCE Instruments.

6.1 PCE Instruments UK

By post:

PCE Instruments UK Ltd.
Units 12/13 Southpoint Business Park
Ensign Way, Southampton
Hampshire

United Kingdom, SO31 4RF

By phone:

02380 987 035

6.2 PCE Americas

By post:

PCE Americas Inc.
711 Commerce Way
Suite 8
Jupiter
33458 FL
USA

By phone:

561 320 9162

