

This document is in addition to the product manual and provides extra information.
The OCIO Instruction manual must also be reviewed.

The OCIO GSM system

Transmit tank levels, via SMS and e-mail, on request.

Can automatically transmit tank levels at a present frequency (10min to 267840 (6 months)) by e-mail.

Possibility to automatically send SMS and e-mails to all the numbers and addresses contained on the phone book, whenever a tank enters into an alarm situation (alarm report).

Possibility to automatically send SMS and e-mails to all numbers and addresses contained on the phone book, whenever a tank exits from an alarm situation (alarm report).

Configuration and setup below is based on 1 OCIO connection

The whole configuration is carried out by sending coded SMS messages to the unit. The SMS messages are case sensitive in lower case only. A dedicated phone number is set as the administrator of the system, and only SMS messages from this number can be used to configure the system.

The phone book can contain a maximum of 10 phone numbers (1 admin number and 9 user defined numbers) to receive SMS messages and each number must be prefixed by the country code and knock off the leading 0 e.g +447989.....

To overwrite a stored number the entire setup message must be re-sent with the changes, so we recommend that a copy of the configuration SMS messages are kept.

The device can be used to also send emails. The tariff of the SIM card must be enabled to use this feature and the relevant configuration parameters required will be supplied by the tariff provider. A modem/site name (31 characters with no spaces allowed) can also be configured to help identify the site if informing fuel providers directly, and this will be visible as the email sender name.

The address book can contain a maximum of 10 email addresses.

The system can be set to cyclic sending of emails at preset intervals, allowing users to receive an email containing the tank's state irrespective of alarm condition.

Each phone number stored in the device can ad-hoc query the device directly by making a mute call or sending an SMS. The device can be set to either respond to the number that made the call with an SMS or to respond to ALL numbers in the phonebook with an SMS message and/or an e-mail.

Limitations

Can't configure an individual OCIO to report an alarm state exit, it has to apply to ALL OCIO's. You can however turn the alarm state OFF on the actual OCIO so that it does not register it anyway.

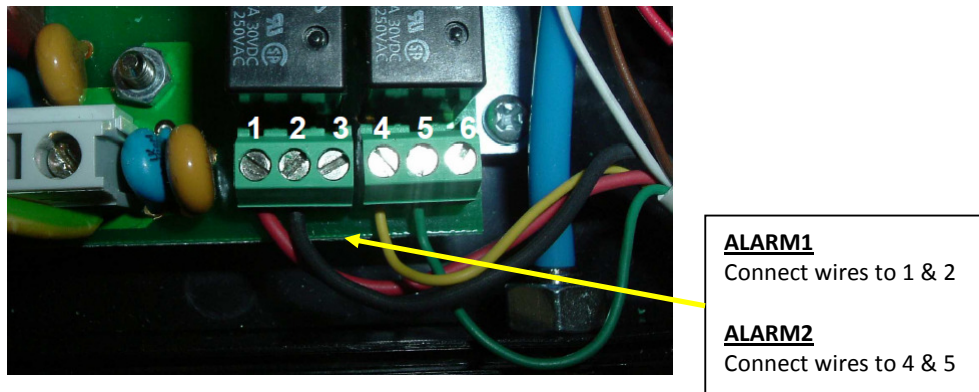
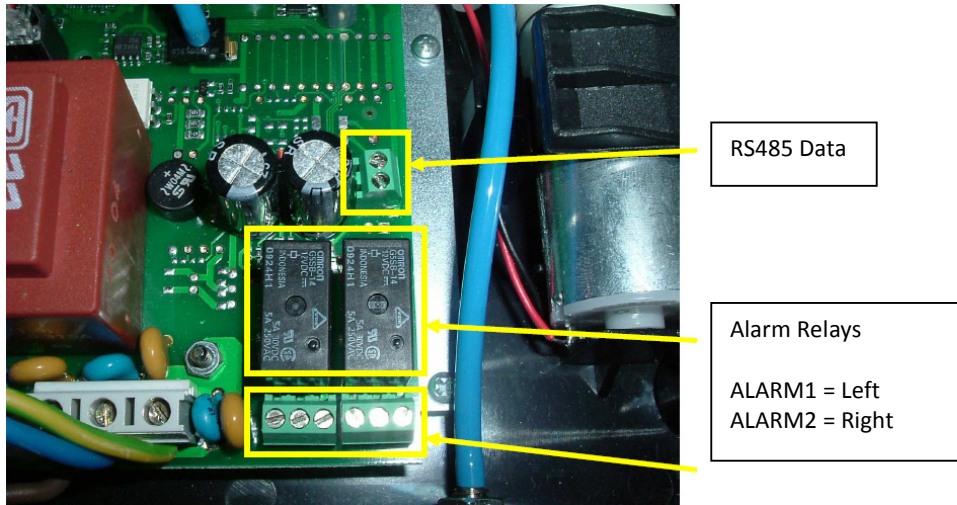
OCIO's can only be set to alarm between 3% & 90% and can take up to approx 2 mins to trigger the alarm once the float/air pressure has stabilized.

An existing configuration can not be amended so a new configuration text must be sent with all new settings.

Wiring Up the System

All power must be turned off and disconnected from any system parts before proceeding.

Each OCIO will require a 6 core screened data cable to connect the two alarm relays and the RS485 data connection.



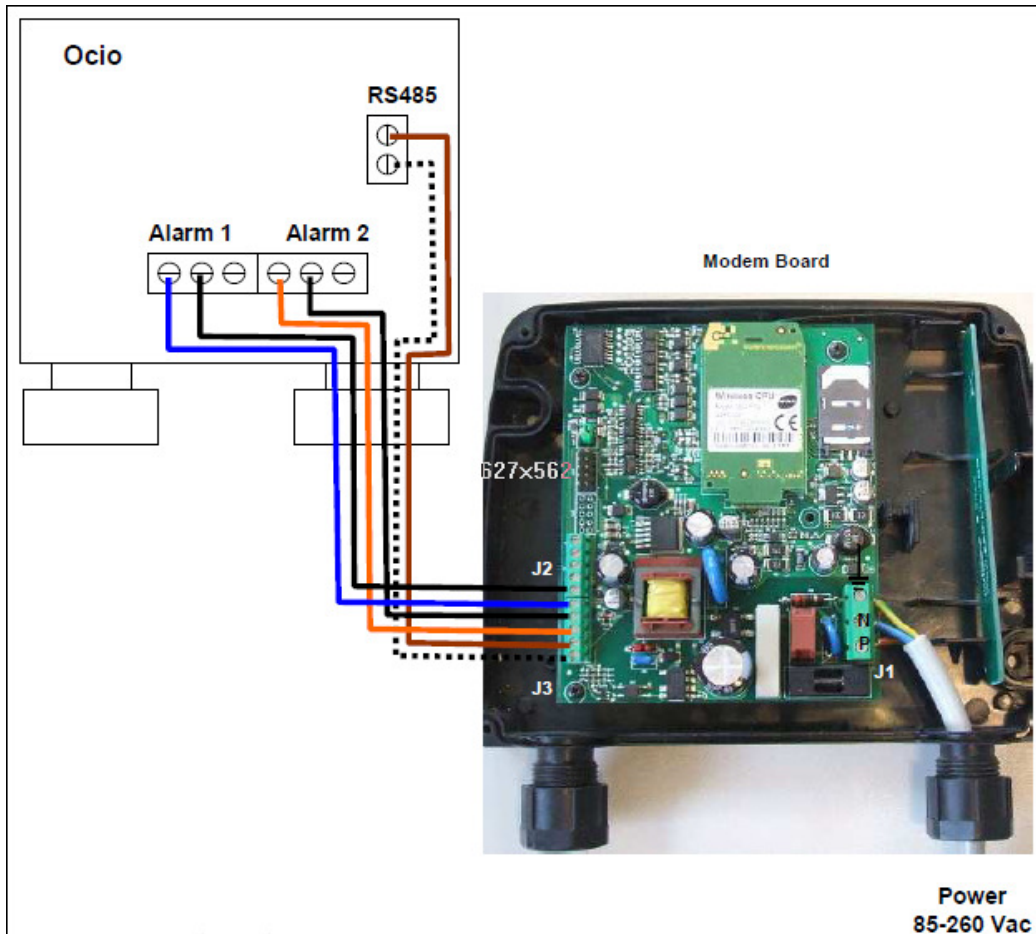
**** WARNING ** ** WARNING ****

Use a very small handled screw driver to gently unscrew the terminal connections before inserting the wires.

HOLD THE TERMINAL CONNECTION BLOCK STEADY with one hand while tightening gently with the screwdriver as too much force could disconnect the terminal block from the circuit board and render the OCIO useless...

**** Refer to SIM card config STEP 1 before performing this stage. ****

Open the SIM card holder as shown and insert the SIM card and close and lock it correctly.



Carefully count the screw terminal connectors and wire them up as shown in the diagram.

STEP1 – Configure the OCIO GSM SIM Card

Insert the SIM card into a mobile phone (same network as the SIM card as most phones are network locked) and DISABLE and PIN code access that may be configured by default.

Also disable the VOICEMAIL service on this SIM card / mobile phone number – you may need to contact the SIM card provider to do this or search on the internet for a service code.

e.g for the O2 network just dial 1760 on the phone and follow prompts.

The phone may register many new SMS messages from your network provider. Delete ALL of these messages once they have been read before installing the SIM card in the OCIO GSM Modem.

STEP 2 – Configure Phonebook

An SMS will be sent from the manager's phone who will be configuring the system.

phbk [password] [on/off] [exchange] [number1] [number2]

where:

[password] is the password that allows the phonebook configuration – default 0000

[on/off] enables/disables the phonebook;

[exchange] is the number of the mobile telephone authorised to carry out the configuration of the system and which automatically receives SMS alarm reports;

[number1] [number2]... are the other numbers included in the phone book which are automatically forwarded SMS alarm reports, but are not authorised to carry out system configuration.

The password and telephone numbers included in the message must always be separated by a space.

NUMBERS MUST USE THE +44 DIALING CODE and DROP the FRIST 0

**** New SMS message to send configuration ****

phbk 0000 on +447989122345 +447730766543

STEP 3 – Configure the System Parameters

cfg [number] [report alarms over] [millimeters/inches] [diffused SMS] [diffused e-mail] [cyclic sending] [modem name]

where:

[number] is the number of actual Ocio's connected to the GSM Modem

[report alarms over] expresses a desire to receive a notification of return to normal conditions. ++[report alarms over] = y then the device will send to all SMS and e-mail addresses (if applicable) notification when a tank exits from an alarm situation.

++ [report alarms over] = N then the device will not send either SMS or e-mails to notify when a tank has exited from an alarm situation.

*[millimeters/inches] is setting the level shown in the reports to be in **m** or **i***

[diffused SMS] indicates if diffused SMS is desired

++ [diffused SMS] = y then when the device is queried by a mute call, it answers with an SMS to all phone numbers stored in the phone book.

++ [diffused SMS] = n then when the device is queried by a mute call, it answers with an SMS only to the caller's number- (probably the widely required option).

[diffused email] indicates if diffused e-mail is desired

++ [diffused e-mail] = y then when the device is queried by a mute call, it sends an email to all e-mail addresses stored in the phone book.

++ [diffused e-mail] = n then when the device is queried by a mute call, it answers with an SMS only to the caller's number.

[cyclic sending] indicates the frequency of sending emails to all the addresses, starting from the moment in which the configuration SMS is sent. Such time is expressed in minutes. If this time is 0, the modem will not send cyclic emails. The maximum time that is possible to set is between 10 and 267840 minutes (about 6 months).

[modem name] is the name given to the system by the system manager. This name appears as the mail sender and in the object of the emails. The [modem name] can be 31 character long with NO SPACES

**** New SMS message to send configuration ****

For example, if we want to set 3 OCIO's with a report when an OCIO exits from alarm situation, level in inches, multi SMS, not multi e-mail, we want to send an e-mail to all the addressers every 2 hours and the modem name is "Site-A", we have to write the following message:

cfg 3 y i y n 120 Site-A

or

For example, if we want to set 1 OCIO to not report when an OCIO exits from alarm situation, level in mm, send SMS on request to sender only, no multi e-mails, we do not want to send an e-mail at a set time and the modem name is "ocioatcts", we have to write the following message:

cfg 1 n m n n 0 ocioatcts

STEP 4 – Email Configuration Settings

We recommend only to use the SMTP server of the telephone company

```
net [GPRS APN] [GPRS USERNAME] [GPRS PASSWORD] [SMTP SERVER]
[MAILSENDER] [MAIL USER NAME] [MAIL PASSWORD] [MAIL PORT]
```

where:

*[GPRS APN] is the APN supplied by the telephone company;
[GPRS USERNAME] is the GPRS user name supplied by the telephone company;
[GPRS PASSWORD] is the GPRS password supplied by the telephone company;
[SMTP SERVER] is the address of the SMTP server.
[MAIL SENDER] is the address from which the mail is sent.
[MAIL USER NAME] is the user name of the sender mail box.
[MAIL PASSWORD] is the password of the sender mail box.
[MAIL PORT] is the SMTP server port. Insert this value only if it is different from 25.*

The password and all the other mail parameters included in the message must be separated by a space.

For O2 Pay and Go Settings that work in the UK

```
[GPRS APN] = payandgo.o2.co.uk
[GPRS USERNAME] = payandgo
[GPRS PASSWORD] = password
[SMTP SERVER] = smtp.o2.co.uk
[MAIL SENDER] = username@o2.co.uk (register here https://registration.o2.co.uk/Register/PreRegister)
[MAIL USER NAME] = *
[MAIL PASSWORD] = *
```

**** New SMS message to send configuration ****

```
net payandgo.o2.co.uk payandgo password smtp.o2.co.uk piloterror2@o2.co.uk * *
```

Refer to network provider for other APN and GPRS settings if not using O2.

STEP 5 – Email Address Book

The address book can only be configured from the exchange mobile phone number that was set up in the configuration.

adbk [on/off] [address1] [address2]...

*[on/off] enables/disables the phonebook;
[address1] [address2]... are the addresses for receiving alarm reports.*

The password and the email addresses, included in the message, must be separated by a space.

**** New SMS message to send configuration ****

adbk on test@centretank.com test1@centretank.com

STEP 6 – Checking

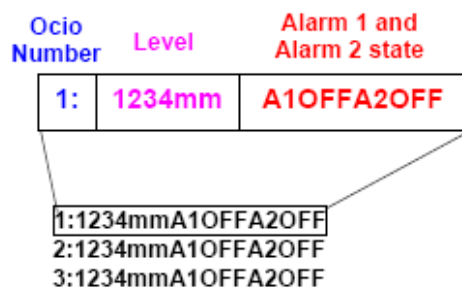
Configure the alarm settings inside the actual OCIO configuration for each alarm that you have wired up to the GSM unit, however for this example we will assume that the low level alarm has been set.

Test the alarm activation by slowly lifting the weight inside the tank until the OCIO low level alarms on the screen.

After approx 2 mins the GSM Modem will send the configured notifications :

SMS Alerts

How to interpret the SMS

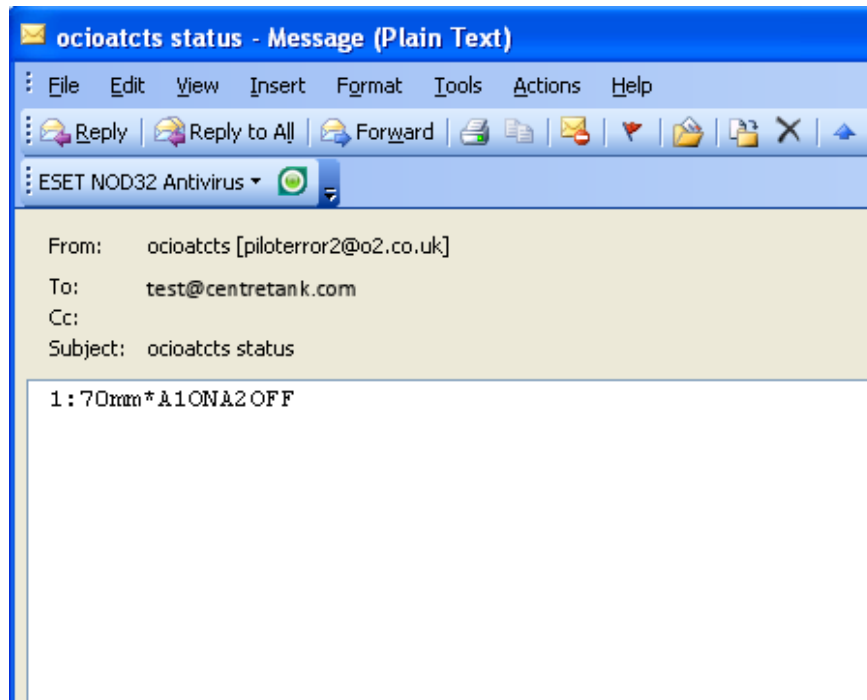


If the OCIO has triggered an alarm then an asterisk will be shown next to the alarm state notification.

1:1234mmA1OFFA2OFF
2:1234mmA1OFFA2OFF
3:1234mm* A1ONA2OFF

Email Alerts

How to interpret the Email



From : This is the name that was given to the SITE that the OCIO and GSM Modem is installed on. The actual address shown is the o2 account that was configured on the o2 website for the phone number of the SIM card.

To : This is one of the email addresses added to the address book of the SIM card for receiving emails.

Subject : This starts with the SITE name.

If the OCIO has triggered an alarm then an asterisk will be shown next to the alarm state notification.

1:70mm*A1OFFA2OFF

Troubleshooting

Ensure that if you are using a Pay and Go SIM card that there is sufficient credit installed as most require month tops ups

Ensure that no PIN is required on the SIM card.

Turn system off at the power for both OCIO and the GSM modem if the system becomes un-responsive.

Check signal strength if system fails to send emails – green light in middle of GSM Modem board should be flashing if correctly registered on the mobile phone network. Modem requires good signal strength to send emails even though SMS will still work (check inside a mobile phone)

Level showing "N.C" and not a mm reading means that the OCIO RS485 port is not connected correctly and the wires may need to be reversed. E.g. (1: N.C.A1OFFA2OFF)

Level showing "EEEE" can mean that there is some electrical noise present on the data cable. Check that the cable is screened and that it does not run close by or parallel to any mains electrical cables. Any time the data cable runs close to a mains cable it must do so at 90 degrees.