

# BrunataNet BoxGPRS

with battery

User and installation manual



**Brunata**

# Indholdsfortegnelse

<b>1. Introduction</b> .....	<b>3</b>
1.1 GPRS-box, ID and tel. no.....	3
1.2 Components in at Brunata RS485net.....	3
1.3 Tools.....	3
1.4 Text message commands .....	4
1.5 Status diodes and ON/OFF button.....	4
1.6 An example of a program flow In the GPRS-box .....	6
<b>2. SIM-card</b> .....	<b>7</b>
2.1 Demands to the SIM-card .....	7
2.2 Installation of SIM-card.....	7
<b>3. Installation of the GPRS-box</b> .....	<b>9</b>
3.1 Placement of the GPRS-box.....	9
3.2 Fitting a GPRS-box to a wall.....	10
<b>4. Battery</b> .....	<b>11</b>
4.1 Battery recharging .....	11
4.2 Battery charger.....	12
4.3 Durability.....	12
<b>5. Control and registration installation</b> .....	<b>13</b>
5.1 What does the control consist of? .....	13
5.2 Has the GPRS-box found all the receivers?.....	13
5.3 Can the GPRS-box send data to the Brunata database? .....	13
5.4 Registration of components in the network.....	13
<b>6. Technical support</b> .....	<b>14</b>

# 1. Introduction

## 1.1 GPRS-box, ID and tel. no

The GPRS-box has the following ID and telephone number:

GPRS-box ID	
Telephone no.	

## 1.2 Components in at Brunata RS485net

- GPRS-box With a RM485FM-radio receiver.
- Power-supply
- RM485FM-radio receiver.
- Brunata RS485-net cable.
- Connection box

## 1.3 Tools

It is recommended to use a KRONE LSA Terminal Tool (Brunata number 06-1040-C) to install the cables into the LSA-connectors.



## 1.4 Text message commands

There are several commands to the GPRS-box, which can be sent to the GPRS-box by text message. The text message must consist of the following 3 parameters divided by a space:

<Password> <Text message command> <value>

If you leave out <value> GPRS-box will reply with the value it is programmed with.

More than one command can be sent in the same text message, you only have to write <password> in the first line of commands:

<Password> <Text message command> <value>  
<Text message command> <value>  
<Text message command> <value>

<Password> has the default setting **dokfaw**.

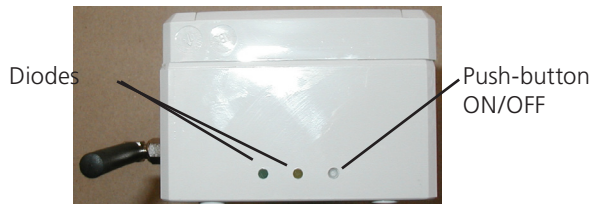
Text message command	Description
uploadnow	GPRS-box begins to collect new data from the receivers and thereafter sends data to WebMon via GPRS
reboot	Reboots the GPRS-box
uptime	Minutes the GPRS-box has run
units	A list of receivers which the GPRS-box has found
module_id	The GPRS-box serial number.
meters	A list of the meters the GPRS-box has found
gprs_apn	Parameters for the installation determine which apn the GPRS-box uses when it is transmitting data.
gprs_username	
gprs_password	

The table below shows an example of a SMS-command





SMS-command	SMS-answer
Dokfaw module_id	20999




## 1.5 Status diodes and ON/OFF button

At one end of the GPRS-box there are two status diodes which show the status of the GPRS-box. To the right of the 2 status diodes there is a little push-button which can be activated by a pencil.



Status-diodes	Button	Description
Turned off	Short push	If the GPRS-box is in sleep-mode the green diode start to flash
	Long push	Turns on the GPRS-box
Turned on	Long push	Turns off the GPRS-box

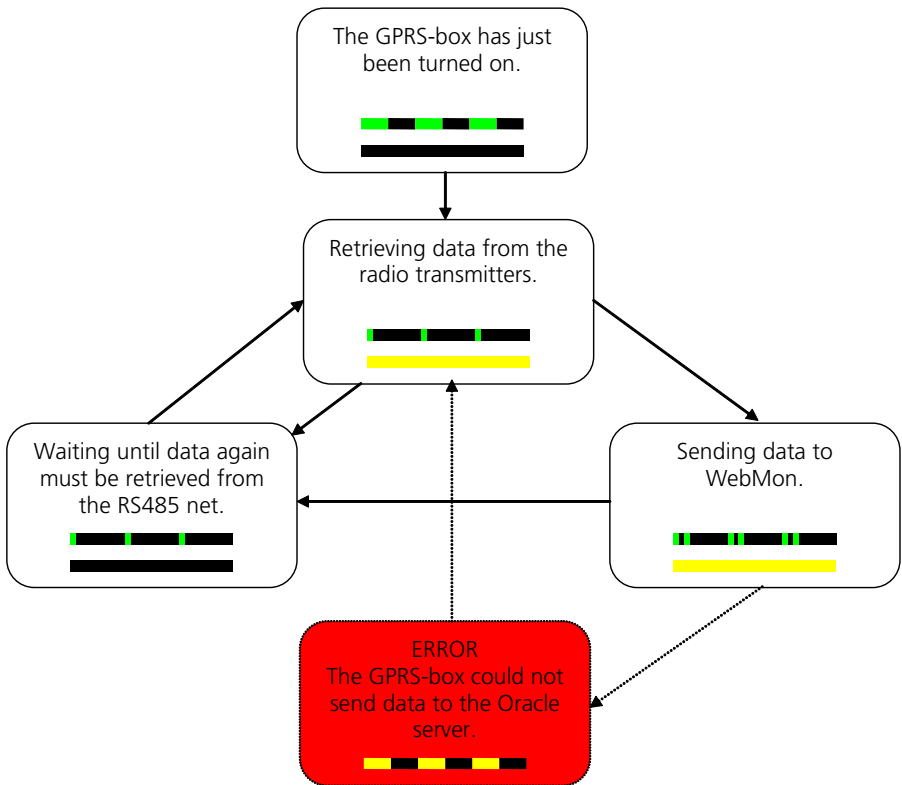
Green status-diode	Description
Flashing 	Searching for GSM-net
1 short flash followed by a long pause 	Has found GSM-net
2 short flashes followed by a long pause 	Transferring data via GPRS
Turned off 	The module is either turned off or in sleep-mode

Yellow status-diode	Description
Turned on 	Data is send to WebMon
Flashing 	Has not found any receivers or it has not been possible to send data to WebMon
Turned off 	The module is either turned off, in sleep-mode or waiting for the next program run

After 3 – 5 minutes the GPRS-box will turn off the status diodes partly to save power and partly to avoid drawing attention to the box if it is installed at a public place. With a short pressure (under 1 sec.) at the button right to the status diodes you can reactivate the diodes, and the status of the GPRS-box will be shown again. If the short pressure does not reactivate on the status diodes, it means that the GPRS-box is turned off or that there is no power to the box.

The GPRS-box will automatically start up when power is connected.

## 1.6 An example of a program flow In the GPRS-box



## 2. SIM-card

### 2.1 Demands to the SIM-card

The SIM-card must uphold the following standards: GSM/GPRS/SMS. The PIN-code must be switched off.

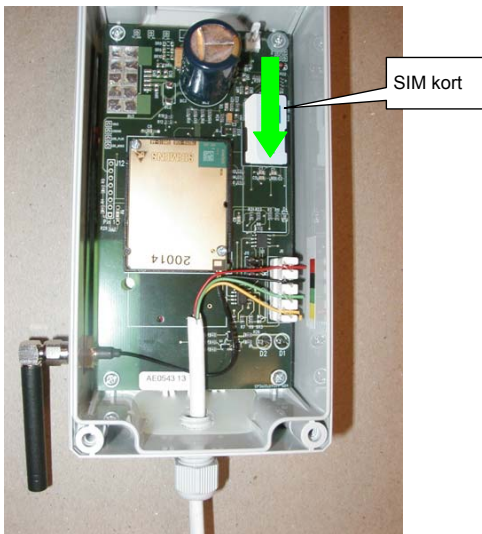
**Attention:** If using Danish SIM-card abroad, then make sure that the country's telephone operator supports GPRS-roaming.

### 2.2 Installation of SIM-card

The GPRS unit can be order with the SIM-card installed at delivery. Please control that the card is installed.

Brunata a/s can not be held liable for theft and misuse of the SIM-card.

If the unit is delivered without a SIM-card, the SIM-card must be installed before the unit is used. The GPRS-box is opened by removing the four screws in the lid. Hereafter the SIM-card is installed with the "cut-off" corner in the upper right-hand side and the chip facing down towards the print. Remember to write down the telephone number in the rubric "Telephone number" (see paragraph 1.1). When the SIM-card is installed and the GPRS-box is closed the power is turned on (see paragraph 1.3) Check that the green diode, if it is flashing, the GPRS-box is connected with the GSM-net.



When the GPRS-box is on, the APN, log-in and pass-word must be installed so it corresponds with the operator of the SIM-card.

It is done by sending a text message to the GPRS-box. Below is shown an example from the Netherlands.

SMS-Command	SMS-answer
dokfaw gprs_apn office.vodafone.nl	ok
gprs_username Vodafone	
gprs_password Vodafone	

Getting the GPRS-box to send data to the Brunata server by following SMS-command:

SMS-Command	SMS-answer
dokfaw uploadnow	ok

When the GPRS-box has send data to the server please control, that the GPRS components are received in WebMon.

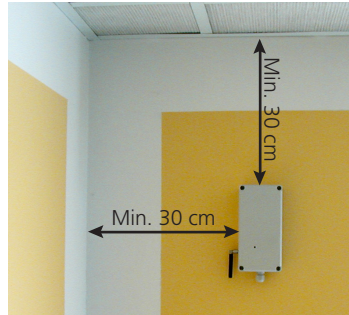


# 3. Installation of the GPRS-box

## 3.1 Placement of the GPRS-box

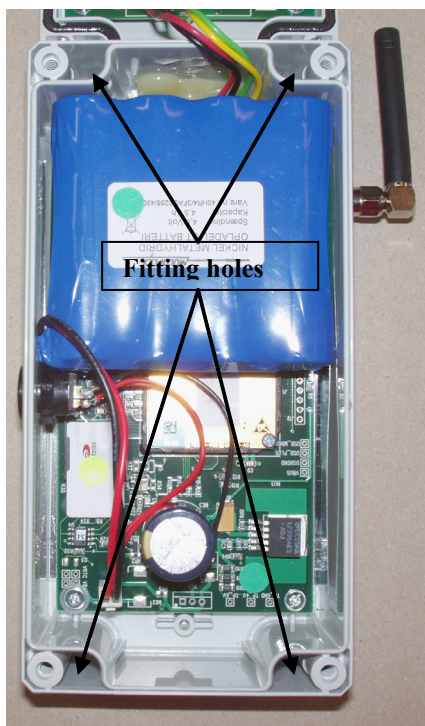
The GPRS-box must be installed at a place where there is a good connection to the GSM-net. This is achieved by observing the following rules:

- The box ought to be placed as far away from a corner as possible. Never closer than 30 cm. There will be a significant improvement of reception conditions if the GPRS-box is moved from 30 cm to 50 cm away from the corner. If moved further than 50 cm the improvement in reception conditions will not be essentially better.
- Always install as high as possible.
- Never place it in an iron cabinet.
- The GPRS-box should never be placed next to a refrigerator or other cupboards with big iron surfaces, which can block the radio telegrams from the meters.
- The GPRS-box can have difficulties in receiving data from meters installed behind the GPRS-box. You have to try to turn the GPRS-box so there are no meters behind it. If it is impossible to avoid meters behind the box, the backend of the GPRS-box must preferably be turned towards the meters closest to the box.
- A GPRS-box should never be placed closer than 2 m. to an allocator. If the GPRS-box is installed closer than 2 m. from the allocators make sure that the GPRS-box is receiving the signals from the allocators. If the GPRS-box is installed closer than 2 m. from an allocator it must be checked to see if the GPRS-box is receiving signals from the allocator.



### 3.2 Fitting a GPRS-box to a wall.

Underneath the cover of the GPRS-box there are 4 fitting holes through which the GPRS-box can be fitted to a level wall.



## 4. Battery

### 4.1 Battery recharging

The battery is recharged by attaching the charger to the plug at one side of the GPRS-box. The GPRS-box can not receive data while recharging.



If you want to use the GPRS-box while the battery is recharging you can by an extra battery.



In order to change the battery; take the lid of the GPRS-box and switch the battery.

After recharging and connecting the battery to the GPRS-box, the GPRS-box will automatically start up. If the GPRS-box first shall be used later on; remember to turn off the box by holding the on/off push-button down for 3-4 seconds.

#### 4.2 Battery charger

Recharging of a battery takes approximately 8 hours. The charger has two diodes which show when the battery is fully charged.



<span style="color: red;">●</span>	The battery is charging
<span style="color: green;">●</span>	The battery is fully charged

#### 4.3 Durability

With a fully charged battery the GPRS-box can run in 3 – 4 days before the battery has to be recharged.

# 5. Control and registration installation

## 5.1 What does the control consist of?

After the network has been installed it is tested to see if it works. The test consists of two parts:

- Has the GPRS-box found its receivers?
- Can the GPRS-box send data to Brunata's databases?

## 5.2 Has the GPRS-box found all the receivers?

By sending the following text message command to the GPRS-box you can check whether all of the network receivers are found.

Text message command	Text message reply
dokfaw units	4167

## 5.3 Can the GPRS-box send data to the Brunata database?

The power to the power supply is turned off and on again. Control the GPRS' status diodes, and see if they are flashing in the correct order, as shown in page 5 and 6.

If the yellow status diode is flashing at the end of program flow, the GPRS-box could not deliver its telegrams from the meters to the Oracle database at Brunata a/s. It could either be because the GPRS-box has no connexion to its receivers, or because it can not get access to the GPRS-network.

## 5.4 Registration of components in the network.

In order to monitor the network it is **very important** to register all the components in the network. In the form "BrunataNet component list" the ID numbers of the GPRS-box, the receivers and where they are placed in the building are noted. At the back of the form, if necessary, a drawing of the composition of the network can be drawn.

The form is given to your local department and they will make sure that the component data are punched into WebMon.

## 6. Technical support

If you have any questions in regards with the points above you are more than welcome to contact TA Service at:

Tel. +45 7777 7000

Fax +45 7777 7001

E-mail [service@brunata.dk](mailto:service@brunata.dk)

# Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

# Notes

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---