

Plantomat® PRO SMS Alarm System

Operating instructions

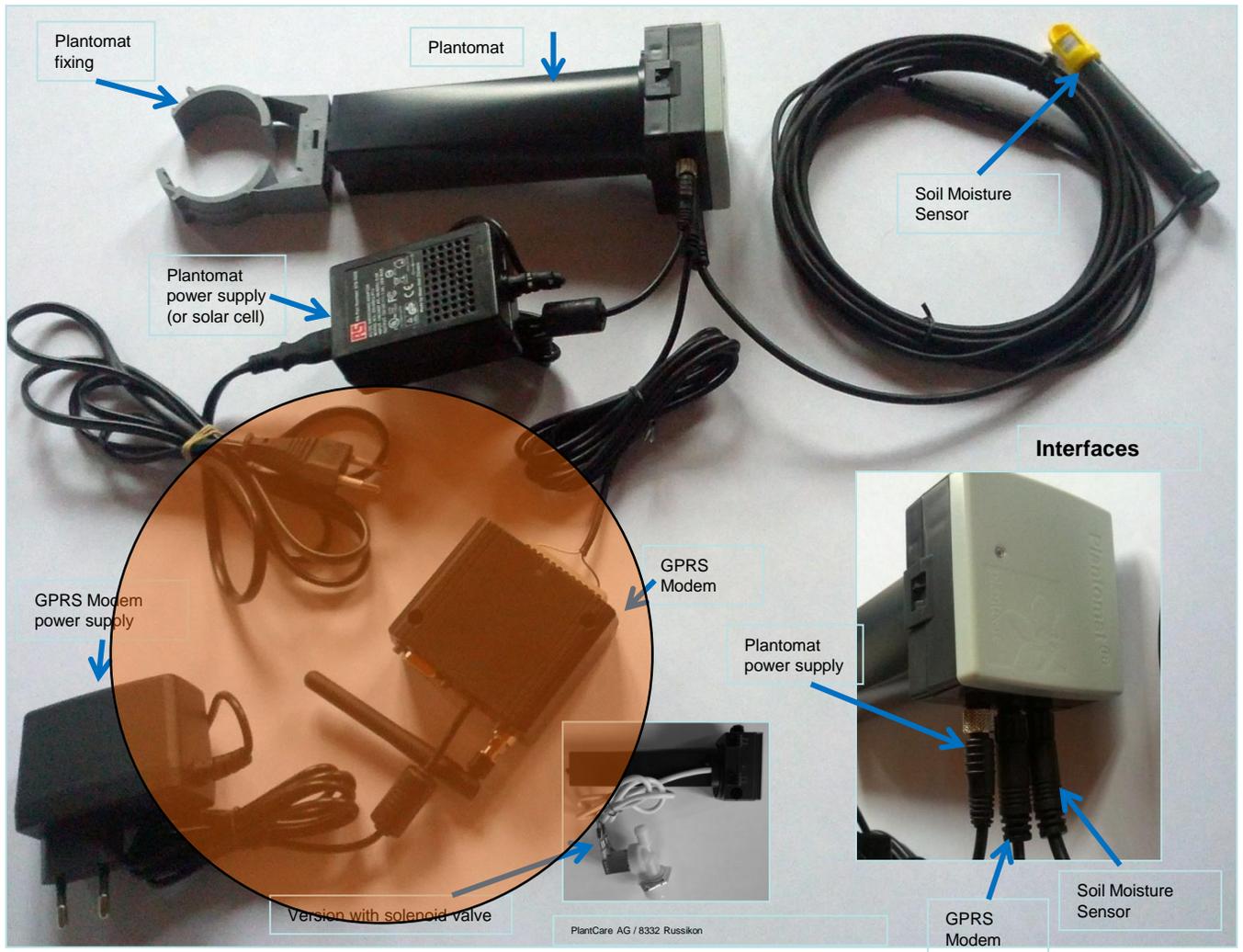


Table of contents

1.	Introduction	3
1.1	Working principles	3
1.2	System features	3
1.3	Technical specifications GSM Modem	3
1.4	Delivery contents	4
1.5	Connections	4
1.6	GSM Modem: LED status	4
1.7	GSM Modem: Edge connector	5
2.	Start-up procedure	5
2.1	Preparing the GSM Modem	5
2.1.1	Configuring the GSM Modem	6
2.1.2	Programming additional commands	7
2.1.3	Prepaid-SIM-Card Information	7
2.2	Function test	8
3.	Alarm Overview	8
4.	Trouble shooting	9
5.	Guarantee	9
6.	Disclaimer	9
7.	Support	9

1. Introduction

Please read these operating instructions carefully before programming and installing your Plantomat PRO SMS Alarm System.

1.1 Working principles

The Plantomat PRO SMS Alarm System is used to monitor the irrigation system for high-grade interior landscaping, such as indoor gardens or vertical plant walls, as well as in greenhouses. As soon as the Plantomat PRO detects an alarm, a SMS alert is automatically transmitted to a mobile phone of one or several recipients. This means that watering problems are alerted at an early stage and appropriate measures can be taken timely.



1.2 System features

- As soon as the Plantomat PRO detects an alarm or an error, a SMS alert is automatically transmitted. The SMS message contains the following information: Alarm, location of the plant, device number (more than one Plantomat can be connected to the GSM Modem), date and time and in case a Prepaid SIM card is used, the credit left.
- Programming the GSM Modem by using a mobile phone is fast and easy. Programming requires only to send a SMS to the modem containing the plant location as well as the recipient's number (one or several).
- Up to 3 Plantomat PRO can be connected to the GSM Modem.

1.3 Technical specifications GSM Modem

- Plug-in power supply (230V)
- No internal power supply in the event of power cuts/outages. The system will recommence normal operation as soon as power is restored.
- Not watertight

1.4 Delivery contents

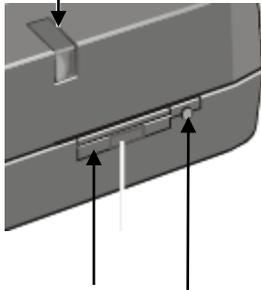
- GSM Modem (without SIM card)
- Plug-in power supply (230V)
- GSM antenna
- Connection cable from GSM Modem to Plantomat PRO (5 m)

Accessories:

- Extension cable GSM Modem to Plantomat PRO (5 m)

1.5 Connections

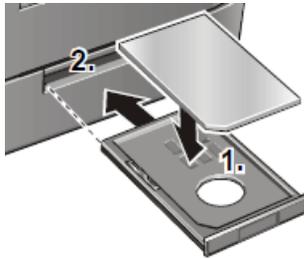
Status LED



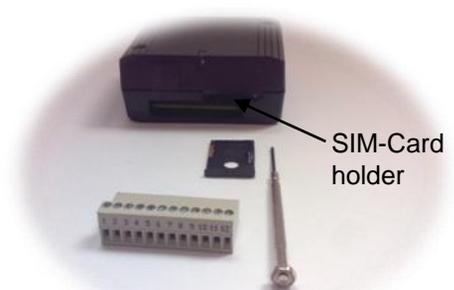
SIM-Card holder

SIM-Card holder unlocking pin

(visible, when edge connector is removed)

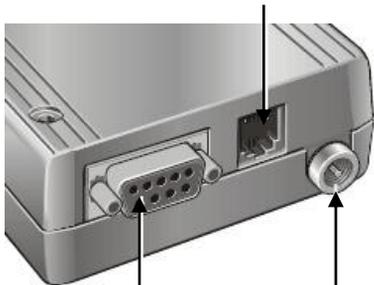


SIM-Card holder



PlantCare version with edge connector / SIM-Card holder

Power supply socket



RS232 interface (not used)

Antenna socket

Plantomat PRO GSM Modem Connection „C“



Connection cable GSM Modem to Plantomat PRO



Cable to edge connector GSM Modem

Connector to Plantomat PRO

- Ⓐ Display
- Ⓑ Connection to moisture sensor
- Ⓒ Multifunctional connection for SMS alert | interface for data export
- Ⓓ Connection to solar cell | power unit | External pump control
- Ⓔ Connection to watering tubing

1.6 GSM Modem: LED status

	Orange (GSM)	Red (System)
Blinking every 1 second	Searching for GSM network	Initializing
Blinking every 3 seconds	Connected to the GSM network and ready for operation (only if SIM-Card is inserted)	

1.7 GSM Modem: Edge connector

The edge connector has a total of 12 connections. Up to 3 Plantomat PRO can be connected to the GSM Modem.



Pin	Funktion	Farbe der Anschlusslitze	Details
1	3V Output	-	Not used for Plantomat PRO
2	Connection for Plantomat 1	Black	
3	Connection for Plantomat 2	Black	
4	Connection for Plantomat 3	Black	
5	Connection for Plantomat 4	Black	
6	Connection for Plantomat 5	Black	
7	Connection for Plantomat 6	Black	
8	Not used	-	-
9	Not used	-	-
10	Not used	-	-
11	Not used	-	-
12	Ground	Brown or White	For up to 3 Plantomat

Example:

- Plantomat 1 is connected as follows:
 - Pin 2 = Plantomat 1 (Black)
 - Pin 12 = Ground (Brown)
- Plantomat 2 is connected as follows:
 - Pin 3 = Plantomat 2 (Black)
 - Pin 12 = Ground (Brown)

2. Start-up procedure

2.1 Preparing the GSM Modem

Please follow exactly the following procedure:

- Insert the SIM-Card of the GSM Modem in a mobile telephone, in order to **unlock the SIM-Card***. The SIM-Card is unlocked correctly, when after switching off and switching on your mobile device, no PIN code entry is requested.
- Pull out the grey edge connector from the GSM Modem. The cables connected to the edge connector must not be removed. Unlock the SIM-Card holder by pushing a ball-pen or alike onto the small button on the right of the card holder. Place the **unlocked SIM-Card** into the card holder and insert it into the GSM Modem. Insert now the grey edge connector to the GSM Modem.
- Connect the GSM antenna (if not connected yet).
- Connect the power supply unit to the GSM Modem and to a 230V socket. Check the status LED which will first light up red and then start blinking every second. Continue observing the status LED, which will blink after approx. 20 seconds every 3 seconds. If this is not the case, check if the location has sufficient reception and/or the SIM-Card is placed correctly and is unlocked.
- Connect now the connection cable of the Modem to the appropriate multifunctional interface of the Plantomat PRO (middle connection C – see also 1.5).
- Configure now the GSM Modem according to the following steps.

* Please read the manual of your mobile phone.

2.1.2 Programming additional commands

1. Adding an additional receiver:

Send a SMS with the following message to the SIM card number in the GSM Modem:

Cfg;receiver2:0041786600002


receiver2 is variabel

The GSM Modem sends back the following confirmation:

„Configuration successful“

2. Status request

Send a SMS with the following message to the SIM card number in your GSM Modem:

Cfg;status

The GSM Modem sends back the following confirmation:

„Cfg;location:PlantCare office Zurich;receiver1:0041786600001“

3. Deleting existing configuration

Deleting existing location as well as all receivers:

Send a SMS with the following message to the SIM card number in your GSM Modem:

Cfg;reset

The GSM Modem sends back the following confirmation:

„Configuration successful, Default settings applied“

2.1.3 Prepaid-SIM-Card Information

If you use a prepaid SIM card, we would like to inform you about legal regulations in some countries regarding the use of prepaid SIM card products.

Your prepaid SIM card provider is possibly bound by legal regulations and, therefore, must deactivate your SIM card number if not used for a certain length of time. In such a case, the GSM Modem cannot transmit any data. Legal regulations vary according to provider and country. We recommend contacting your provider and asking for the contract details of your prepaid SIM card.

For instance, some providers require SIM cards to be used within one year for an incoming or outgoing call. In such cases, you may have to periodically remove the SIM card from the GSM Modem, insert it in a mobile phone and make a phone call. Some providers also accept an outgoing message as an outgoing call. If this is the case with your provider, you could periodically send an SMS message to the SIM card number of your GSM Modem (for example the command [cfg;status](#)).

Alternatively, you can have a SIM card subscription with a provider instead of a prepaid SIM card. However, monthly costs arise in such cases, depending on provider and subscription type.

2.2 Function test

Test your system after programming the GSM Modem and before installing it:

1. Connect the power supply unit to the GSM Modem and to a 230V socket.
2. Switch-on the Plantomat PRO.
3. Switch-off the Plantomat PRO.

The following SMS alarm message (example) will be sent to the mobile phone number programmed as "receiver".

*„Alarm PlantCare office Zurich **Device1** 14.10.2009 12:43 CHF 50.20“*

3. Alarm Overview

The Plantomat PRO can be operated in two different irrigation modes. Depending on the mode in use, an alarm SMS can have different reasons.

- a) IP1: Operated **with the integrated pump** (IP1 = internal pump on)
- b) IP0: Operated **without the integrated pump** (IP0 = internal pump off). Watering is being handled by an external solenoid valve.

Please check the Plantomat PRO manual for the settings of the irrigation mode as well as for more details on the following alarms. An alarm SMS indicates only, that an alarm exists. The type of alarm can be seen on the Plantomat PRO display.

Type of Alarm	Irrigation Mode		Notes
	Alarm-SMS when IP1?	Alarm-SMS when IP0?	
Battery alarm	Yes	Yes	Battery voltage below 6.7 Volts
Plantomat switched-off	Yes	Yes	In order to avoid a false alarm, always disconnect the GSM Modem from the power supply first before the connection cable is disconnected from the Modem or the Plantomat.
GSM cable connection disconnected from Plantomat or from GSM Modem.	Yes	Yes	In order to avoid a false alarm, always disconnect the GSM Modem from the power supply first before the connection cable is disconnected from the Modem or the Plantomat.
Water alarm	Yes	No	When in IP0 mode, an irrigation problem can also be detected, when the error message „Err6“ is displayed on the Plantomat (see also the manual for Plantomat PRO).
Err3 (the water pump fails to operate)	Yes	No	
Err5 (the water pump is blocked)	Yes	No	
Err6 (The moisture sensor measures excessively dry substrate despite watering.)	Yes	Yes	

4. Trouble shooting

System does not send SMS message after configuration:

- Check, if the GSM Modem is connected to the power supply and the Plantomat PRO is switched on.
- Check, if the SIM card has been correctly placed and unlocked (2.1)
- Check, if the Modem is connected to the GSM network (1.6)
- Check, if the receiver number has been correctly entered (2.1.1).
- If necessary, check your configuration details by sending an SMS with a status request (2.1.2)

5. Guarantee

The vendor will give you a 1-year guarantee on this product (from purchase date). This guarantee covers any significant defects of the device, which are clearly linked to material or manufacturing errors.

We shall decide whether a new, fully functional device will be supplied or the device which has been sent in will be repaired free of charge, insofar as the following conditions are met:

- The device has been used appropriately and in line with the recommendations in the operating instructions.
- Neither the purchaser nor a third party have tried to repair the device.

6. Disclaimer

No liability can be accepted for damage resulting from the incorrect use of this product or as a result of it malfunctioning.

7. Support

Please contact us at:

- support@plant-care.ch