

POCKET GPRS WATER

Quick Guide ver. 1.0 03/2009

Thanks for purchasing a Digicom product.

Pocket GPRS Water is a **monitoring and signalling terminal** based on the **GSM technology**. It is ideal in the remote control and remote reading of water and liquid meters and it is able to send via SMS the information to a specific service center.

It can read the pulse counter and detect the wire cut alarm on 4 meters; as well as the antitamper alarm of the device itself.

If an alarm is detected, Pocket GPRS Water will send immediately a notification SMS to the Control Center, otherwise, depending on the factory setting, it will send the meters reading every 15 days. Pocket GPRS Water is equipped with an output to control an electrovalve.



PACKAGE CONTENT

- 1 Pocket GPRS Water
- 1 GSM Antenna
- 6 female clips with 3 contacts
- 1 O-Ring washer for GSM antenna
- 4 closing caps
- 1 Installation Guide

GSM MODEM TECHNICAL FEATURES

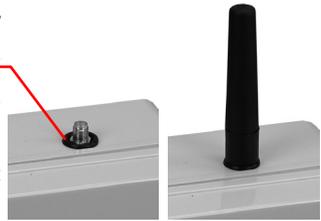
- Industrial Modem for GSM/SMS applications
- Quad-Band 850-900/1800-1900 MHz GSM module
- Ideal for application in water meters reading
- Management up to 4 local meters via wire
- Management of 1 digital input
- Management of command for bistable solenoid/hydrovalve
- Signalling of device tampering (magnetic contact)
- Signalling of meter wire cut
- Security based on CLI
- Remote configuration via SMS
- Power supply with removable built-in battery: Li-Thionyl 3,6V – 14Ah
- Operating temperature: from -20°C to +55°C
- Led for device status
- CE Mark

MECHANICAL FEATURES

- Plastic case IP 67 protection
- Size: 137 x 70 x 100 mm (antenna excluded) – 137 x 70 x 160 mm (antenna included)
- External Antenna on SMA connector
- 5 cable glands for min 2,5mm² – max 6,5mm² cables
- 6 female clips with 3 contacts, pin spacing 3,5 mm; 250V – 10A; cables: 0,08mm² – 1,5mm² (AWG 28-14), stripped 7 mm

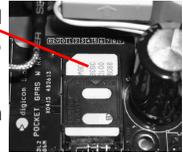
INSTALLATION

1. Connect the antenna by inserting the **O-Ring washer** in the seat around the SMA connector and screw tight.
To guarantee the IP 67 protection degree of the case the washer must stick the device and the antenna.



2. Open Pocket GPRS Water to **insert the SIM card** and the cabling of pulse count and of electrovalve.

3. Open the SIM holder by pressing and pushing it vertically towards the connectors. **Now insert the SIM card** being careful of the SIM corner, so that the golden contact are downwards. Close the drawer, press and push it counterclockwise the opening side to block and fix the SIM.

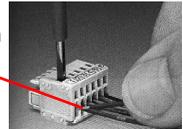


4. In the lower part of the device printed circuit look for the **6 connectors** to which the female clips with 3 contacts must be put on after the correct cabling of meters and electrovalve.

5. Define which and how many cable glands you must use in your installation, considering the number of meters and the position of the connectors on the printed circuit. Then **insert the closing caps into the cable glands that are not used**. In order to guarantee the IP 67 protection degree of the case, screw tight the cable glands and stick the washer to the closing cap.

6. **Insert the free cabling** of the pulses counter or of the electrovalve into the cable glands, and go on screwing tight the cable gland so that the washer perfectly stick the cable. In order to guarantee the IP 67 case protection degree, a single cable must be inserted in the cable gland, that can also contain 3 wires inside.

7. The wires of the pulses counter or of the electrovalve must be **stripped for about 7 mm** so you can insert them correctly in the female clips with 3 contacts.



8. To connect the wire in the terminal board, you need a screwdriver 2,5 x 0,4 mm.

9. Insert the screwdriver and press it in the upper hole of the female clip with 3 contacts. Insert the stripped wire and remove the screwdriver; be sure the wire is correctly fixed to the clip.

10. Once the cabling is over, insert the female clip in the connectors of the printed circuit and press it at the bottom being careful of the insertion way. Check carefully that the wires respect the contacts shown on the printed circuit:

<p>Meter 1 Tamper1: wire cut meter 1 Cont.1: pulses counter meter 1 GND: common signal</p>	<p>Meter 2 Tamper2: wire cut meter 2 Cont.2: pulses counter meter 2 GND: common signal</p>	<p>Meter 3 Tamper3: wire cut meter 3 Cont.3: pulses counter meter 3 GND: common signal</p>
<p>Meter 4 Tamper4: wire cut meter 4 Cont.4: pulses counter meter 4 GND: common signal</p>	<p>Digital Input 5 +4V1: not used Level Sense: digital input GND: common signal</p>	<p>Electrovalve output Open E.V.: opening signal Close E.V.: closing signal +16V: common signal</p>

11. Once the cabling and testing is over, you can turn on the device by connecting it to the battery. Look for the **Power** connector on the printed circuit; it is placed between the connectors 3 and 4 and insert the battery cables being careful of the insertion way.

12. When the battery is connected, the GSM and STATUS leds will be turned off and won't give any indication.

13. Now press **PUL1 – Start** button, placed between the connectors 1 and 2, for 5 seconds, then release it and check that leds are turned on. The **GSM led**, near the SIM holder, will **blink quickly** during the search for the GSM network. When the **blinking slows** down, it means the registration to the GSM network has been successful. The **STATUS led**, placed near the battery can blink slowly or quickly depending on the device configuration.
From now on the operating Center will be able to set the device via SMS. When finished, close the device.

14. Place the cover on the device correctly. In order to preserve the IP 67 case protection degree, screw tight the 4 wires and stick the washer on the four sides.

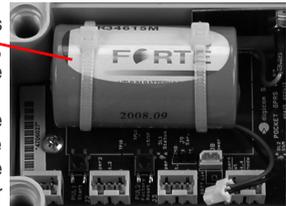
DESCRIPTION OF LED INDICATORS (LED)

LED	STATUS	DESCRIPTION
STATUS	OFF	Device is not powered
	Slow blinking	Device is in factory default setting (users lists empty)
	Fast blinking	SMS correctly sent (users lists inserted)
GSM	OFF	GSM module is not powered
	Slow blinking	Registered to the GSM network
	Fast blinking	Search for GSM network

BATTERY REMOVAL

A Li-Thionyl 3,6V – 14Ah removable battery is available inside the device. This supplies the power to Pocket GPRS Water. To remove the battery it is necessary to open the case, take out the battery connector, cut the two self-locking bands with a wire cutter and remove the battery.

To insert a new battery you need two new self-locking bands 200 x 3,6 mm. Insert the new band into the loops on the printed circuit, then place the battery considering the wire lenght and the position of the power connector (power). Fix the battery by pulling the bands. The new battery must be compliant with. To discharge the old battery, please refer to the laws in force.



All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, otherwise, without the prior written permission of Digicom S.p.A. The contents of this booklet may be modified without notice. Every possible care has been taken in testing and putting together all the documentation contained in this booklet, however Digicom can not take any responsibility brought by the use of this booklet.

ENVIRONMENTAL CONDITIONS

Environment temperature: from -20°C to +55°C
 Operative temperature range with no permanent damage: from -25°C to +70°C
 Storage temperature range: from -40°C to +70°C
 Any sudden change in temperature and humidity must be avoided.

CLEANING INFORMATION

Use a soft dry cloth and avoid any solvents or abrasive materials.

SHOCKS OR VIBRATIONS

Caution against shocks or vibration

BATTERY

Power supply: Li-Thionyl 3,6V – 14Ah built-in battery
 IP protection degree: according to CEI EN 60529 regulation the device is compliant IP 67 degree

DECLARATION  of CONFORMITY

We, Digicom S.p.A., with registered office at Cardano al Campo (VA - Italy) - Via Volta 39, declare under our sole responsibility, that the products named **Pocket GPRS Water**, to which this declaration refers to, satisfy the essential requirements of following Directive:

- 1999/5/CE 9th March 1999, R&TTE (concerning radio equipment and telecommunication terminal equipment and the acknowledgment of their conformity).

As indicated in conformity with the requirements of following Reference Standards or of other regulations documents:

EN 301 489-01 EN 301 489-07 EN 301 511 EN 60950-1



SAFETY WARNINGS

Read these instructions and norms carefully before powering the Pocket GPRS Water. Violation of such norms may be illegal and cause hazard situations.

For any of the described situations please refer to the specific instructions and norms.

The Pocket GPRS Water is a low power radio transmitter and receiver. When it is ON, it sends and receives radio frequency (RF) signals.

The Pocket GPRS Water produces magnetic fields. Do not place it next to magnetic supports such as floppy disks, tapes, etc.

Operating your Pocket GPRS Water close to other electrical and electronic equipment - such as a television, phone, radio or a personal computer - may cause interferences.



INTERFERENCES

The Pocket GPRS Water, like all other wireless devices, is subject to interferences that may reduce its performances.



ROAD SAFETY

Do not use your Pocket GPRS Water while driving. In case of use on cars, you must check that the electronic equipment is shielded against RF signals. Do not place the Pocket GPRS Water in the air bag deployment area.



AIRCRAFT SAFETY

Switch off your Pocket GPRS Water when on board aircrafts by disconnecting the power supply and deactivating the internal backup battery. Using GSM devices on aircrafts is illegal.



HOSPITAL SAFETY

Do not use the Pocket GPRS Water near health equipment, especially pacemakers and hearing aids, in order to avoid potential interferences. Take care when utilizing the Pocket GPRS Water inside hospitals and medical centres, which make use of equipment that could be sensitive to external RF signals. Switch it off when use is expressly forbidden.



EXPLOSIVE MATERIALS

Do not use the Pocket GPRS Water in refuelling points, near fuel or chemicals. Do not use the Pocket GPRS Water where blasting is in progress. Observe restrictions and follow any specific regulation or instruction.



INSTRUCTIONS FOR USE

Do not use the Pocket GPRS Water in direct contact with the human body and do not touch the antenna if not strictly necessary. Use approved accessories only. Consult documentation regarding any possible device connected to the Pocket GPRS Water. Do not connect incompatible products.

INFORMATION FOR USERS

According to the 2002/95/CE, 2002/96/CE and 2003/108/CE Directives, relative to reduction in the use of hazardous substances in electrical and electronic apparatus, as well as to disposal of waste materials.



The symbol of a crossed box applied on the apparatus or on its package indicates that at the end of its useful life the product must be collected separately from other waste materials.

The user must therefore take the apparatus which has reached the end of its useful life to appropriate separate collection centres for electronic and electro-technical waste materials, or deliver it back to the reseller when purchasing new apparatus of an equivalent type, giving one piece in for one piece out.

Suitable separate waste collection for then sending the cast-off apparatus for recycling, treatment and environmentally friendly disposal, contributes towards preventing any possible negative effects on the environment and on health and encourages recycling of the materials the apparatus is made up of.

Unauthorised disposal of the product by the user will lead to payment of the administrative sanctions in force in the country where it is put on the market.