

OWM installation guide

About the OMNI Water Monitor

The OMNI Water Monitor (OWM) works with OMNI-Water to continuously monitor water usage and notify OMNI-4000 of any alarm conditions.

One OMNI Water Monitor can monitor up to five water meters. Using multiple OMNI Water Monitors, you can monitor water usage for every outlet or water line at your site.

Features

- ◆ Five pulse counting inputs
- ◆ Easy-to-follow installation instructions
- ◆ Low-maintenance design
- ◆ Large, rugged and durable enclosure (corrosion resistant, water resistant, and fire retardant)
- ◆ Two-year limited warranty

Electrical ratings

The recommended power supply is the Phason Regulated Power Supply (RPS). One RPS can provide power for up to 11 OMNI Water Monitors. For more information, see the RPS installation guide or contact your dealer.

- ◆ Power requirement: 10 to 14 VDC
- ◆ Power consumption: 100 mA

Installing the OWM

The following parts are included in the box:

- ◆ OMNI Water Monitor
- ◆ OWM user manual
- ◆ Four mounting screws

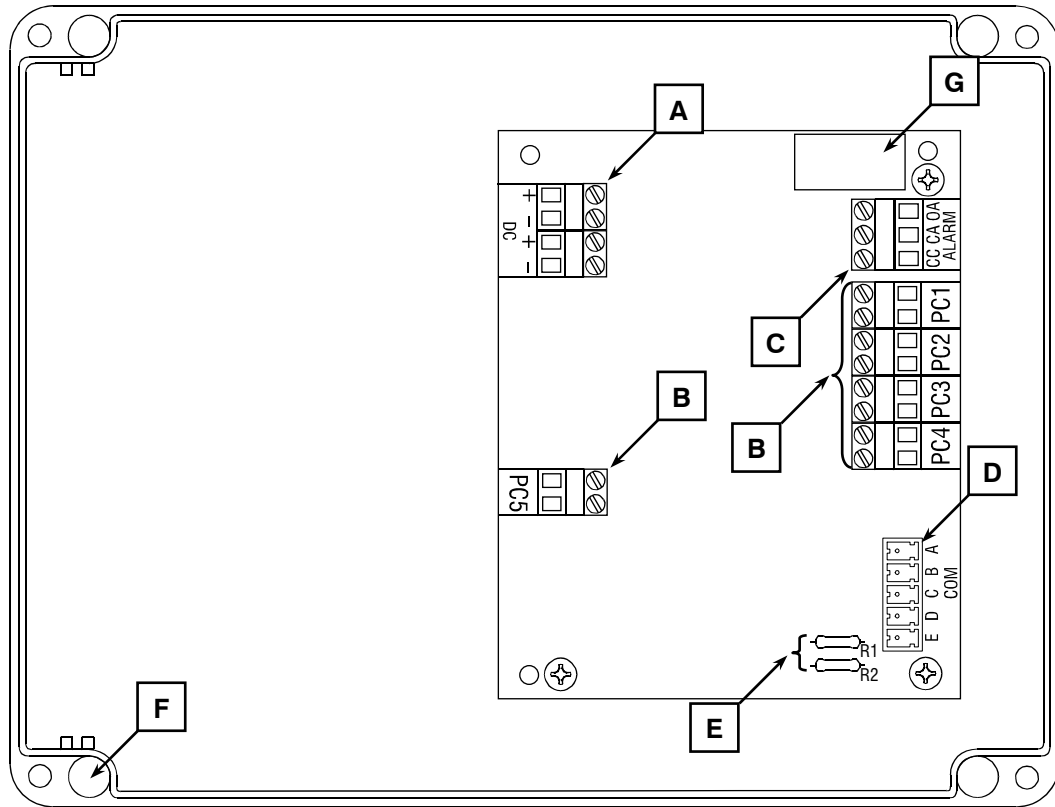
In addition to the parts included with the OWM, you need to provide the following items.

Item	Notes
DC power supply (10 to 14 VDC)	Phason Regulated Power Supply (RPS) recommended
Communication cable	Unshielded twisted pair (UTP), category 3 or higher Four pair recommended Enough to go from the OMNI-Server or previous device to the OWM
Power cable	Enough to go from the RPS to the OWM
Watertight strain reliefs or conduit connectors	Use at all cable entry points

There are four main steps to installing the OWM. Read all the steps before installing the OWM and then follow them steps in the order they are listed.

1	2	3	4
Read all the installation instructions and collect all necessary items.	Select a suitable location and then mount the OWM.	Wire the equipment and incoming power to the OWM.	Verify all wires are connected properly and then fasten the cover to the OWM.

OWM layout



- A** Incoming power terminals—connect the incoming power (10 to 14 VDC) to these terminals.
- B** Pulse count terminals (PC1 to PC5)—connect the dry contacts (from the water meters) to these terminals.
- C** Alarm relay terminal—if you are using OMNI-Alert and the OMNI Alarm Manger (OAM) connect the Alarm Manager to this terminal.
- D** Communication socket—connect the communication wiring to this socket.
- E** Termination resistors—if there are any devices on this communication channel *after* the OWM, then use wire cutters to remove *only these two* resistors (R1,R2).
- F** Mounting holes (x4)—use these mounting holes and the screws provided to mount the OWM.
- G** Serial number label—if you need to contact Phason Customer Support or require warranty service, you will need to provide this number.

Warnings and installation notes



Before installing or servicing the OWM, switch OFF the power at the source.



Use the electrical knockouts to bring wires into the enclosure. DO NOT drill any other holes in the enclosure; this could damage the control and void the warranty.

Use watertight strain reliefs or conduit connectors at all cable entry points.

Mounting the OWM

When selecting a mounting location, follow the guidelines below.

- ◆ Select a location that is away from sources of heat.
- ◆ Mount the control on a solid, vertical surface.
- ◆ Mount the control with the electrical knockouts facing down.



Failure to follow the mounting guidelines can allow moisture into the control and will void the warranty.

To mount the OWM

1. Remove the cover from the enclosure.
2. Attach the OWM to the mounting surface using the four screws provided.

Connecting water meters

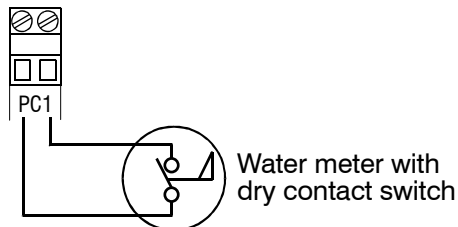
You can connect any water meter that has a dry contact to one of the pulse counter (PC1 to PC5) terminals. When selecting a water meter, you need to consider the maximum pulse rate at the expected peak flow rate of the water line. The peak flow rate is the maximum flow rate of the water line.

Expected flow rate	Suggested water meter pulse rate
Low	10 pulses per unit
Medium	1 pulse per unit
High	1 pulse per 10 units
Very high	1 pulse per 100 units

If you do not expect a peak flow rate of more than one unit (US gallon, Imperial gallon, or litre) per second, choose a water meter that puts out 10 pulses per unit. If you expect a medium or high flow rate, select a water meter that puts out one pulse per unit or one pulse per 10 units. For a very high flow rate, select a water meter that puts out one pulse per 100 units.

To connect water meters to pulse counter inputs

Connect a water meter to the OWM as shown below.



Connecting OMNI Water Monitors to the power supply

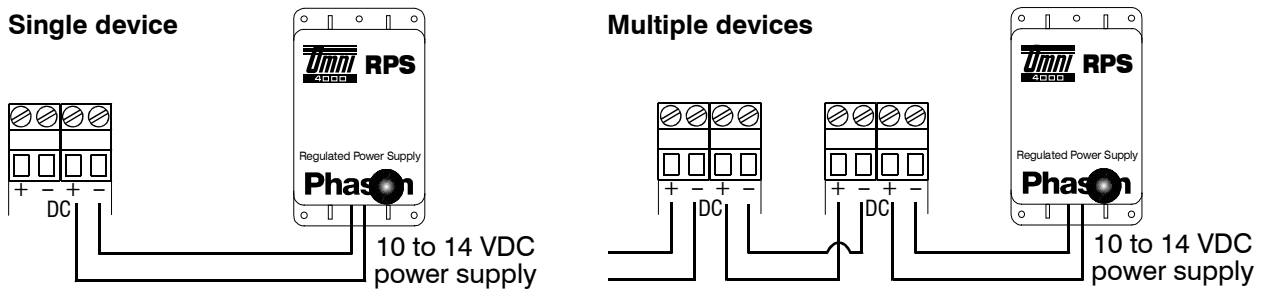
The OMNI Water Monitor requires a 10 to 14 volt DC power supply. The Phason Regulated Power Supply (RPS) is recommended. If you require battery backup for your system, an RPS is required.

The Regulated Power Supply provides 13.6 VDC and can supply power to up to 11 OMNI Water Monitors. With an auxiliary 12-V battery and the RPS Battery Cable, the RPS can provide battery backup to your OMNI Water Monitors.

For more information about the Regulated Power Supply or the RPS Battery Cable, see the RPS installation guide or contact your dealer.

To connect the OWM to the power supply

1. Run the wires from the power supply to the OMNI Water Monitor.
2. Connect the negative DC power wire to the DC- terminal.
3. Connect the positive DC power wire to the DC+ terminal.
4. If you are connecting more than one OMNI Water Monitor, connect the remaining units as shown below.



NOTE For information about connecting battery backup, see the RPS Battery Cable installation guide.

Connecting the communication wires

The OMNI Water Monitor connects to the communication channel using unshielded twisted pair (UTP) cable, category 3 or higher.

OMNI Water Monitors can be on a separate OMNI-Server communication channel or on a channel that has other Phason devices connected to it. All the devices on a channel must be connected in series.

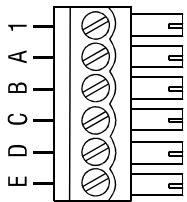
To connect the communication wires

1. Run the communication wire from the OMNI-Server (or previous device on the communication channel) to the OMNI Water Monitor.
2. Connect the communication wires as shown below.
3. If the OMNI Water Monitor is not the last device on the communication channel, use wire cutters to remove the termination resistors from the circuit board (see the drawing on page 3 for the location.)
4. Continue the communication wires as shown below.

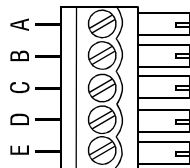
Connector alignment

The following diagrams and table show the alignment of the wiring on the communication connectors.

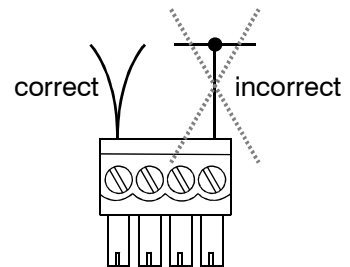
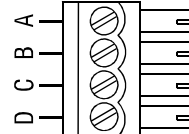
Six-pin connector



Five-pin connector



Four-pin connector



Previous device	Wire color(s) *(see below)	OWM	Next device
1		For OMNI systems with an OMNI Alarm Manager	
A		A	A
B		B	B
C		C	C
D		D	D
E**		E	**


* The wires used for 'A/B' and 'C/D' must be twisted pairs.
 ** Common reference wiring—for more information, see the **RS-485A Converter installation guide**.

Connecting OMNI Water Monitors to the OMNI Alarm Manager


OMNI Water Monitors and OMNI-Water are compatible with OMNI-Alert. OMNI-Alert is a voice notification system that notifies personnel (by phone) of alarm conditions.

OMNI Water Monitors must be connected to a device called the OMNI Alarm Manager. The OMNI Alarm Manager, which is located in the OMNI Server, allows the OMNI Water Monitor to tell the computer when it has an alarm condition.

For more information about OMNI-Alert or the OMNI Alarm Manager, contact your dealer.



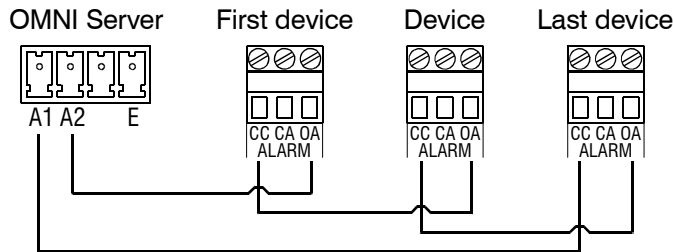
You cannot directly connect any other alarm system or siren to the OMNI Water Monitor. If you want to connect an external alarm system, you must connect it to the OMNI Alarm Manager.



There are usually two additional wires in the communication cable. You can use these to connect the OMNI Water Monitor to the OMNI Alarm Manager.

To connect a OMNI Water Monitor to the OMNI Alarm Manager

Connect the communication alarm loop wires (**CC**-common contact and **OA**-open on alarm) from the OMNI Server or previous device to the OWM as shown below. For more information, see the **OMNI Alarm Manager installation guide**.



Finishing the installation

1. Make sure all equipment is properly installed and connected to the correct terminals.
2. Switch on the incoming power at the source.
3. Fasten the cover to the OWM using the four cover screws.

Maintaining the OWM

Proper care and maintenance will help your OWM last longer. To prevent damage to the control, perform the following steps after the first two weeks of operation, and once a year after that.

1. Switch off the power to the control.
2. Remove the cover and check inside for moisture. If there is any moisture, wipe it away using a dry cloth.
3. Check all cable entry points to make sure they are properly sealed. If they are not properly sealed, apply silicone sealant around the entry points.



If you need to seal the enclosure, use a sealant that is labelled as 'non-corrosive', 'electronics grade', or 'neutral cure', such as GE Silicone RTV6780B, RTV 142, or RTV 162.

Do not use a sealant that is labelled as 'acetic acid cure' or 'acetoxycure'. These sealants release acetic acid while curing, which can damage the OWM and will void the warranty.

4. Check all wires to make sure they are properly connected and that they are in good condition.
5. Fasten the cover to the enclosure and then turn on the power to the control.

Cleaning the OWM

To clean the OWM, wipe the surface with a damp cloth.



Be careful when washing the room using a high-pressure washer. **DO NOT** spray the control using a high-pressure washer, this can damage the control and will void the warranty.

Evidence of moisture damage inside the control will void the warranty.

Obtaining service and technical support


Your dealer will be happy to answer all technical questions. If the OWM needs service after the warranty has expired, contact your dealer.

Before contacting your dealer or Phason, check the following:

- ◆ Read this manual and verify that all sensors are connected to their proper locations and that all jumpers are in their proper positions.
- ◆ Make sure the communication wiring is correct. For more information, see **OWM layout** on page 3.

If you still have a problem, collect the following information:

- ◆ Serial number _____ (See **OWM layout** on page 3.)
- ◆ A description of the problem
- ◆ Any messages displayed by the OMNI-4000 software

My dealer's name: _____	
How to contact my dealer: _____	
Street/PO Box	_____
City	_____
State/Province	_____
Zip/Postal	_____
Phone	_____
Fax	_____
E-mail	_____
Web site	_____
	2 Terracon Place Winnipeg, Manitoba Canada R2J 4G7
Phone Fax E-mail Web site	204-233-1400 204-233-3252 support@phason.ca www.phason.ca

Limited warranty

This warranty applies only to this product. If you need warranty service, return the product and original proof of purchase to your dealer.

Phason Inc. (Phason) warrants this product subject to the following terms and conditions.

This warranty is valid only to the original purchaser of the product, for two years from the manufacturing date. The manufacturing date is stated in the first eight digits of the serial number in the form year-month-day.

Phason hereby warrants that should this product fail because of improper workmanship, Phason will repair the unit, effecting all necessary parts replacements without charge for either parts or labor.

Conditions

Installation must be done according to our enclosed installation instructions.

The product must not have been previously altered, modified, or repaired by anyone other than Phason.

The product must not have been involved in an accident, misused, abused, or operated or installed contrary to the instructions in our user and/or installation manuals. Phason's opinion about these items is final.

The person requesting warranty service must be the original purchaser of the unit, and provide proof of purchase upon request.

All transportation charges for products submitted for warranty must be paid by the purchaser.

Except to the extent prohibited by applicable law, no other warranties, whether expressed or implied, including warranties of merchantability and fitness for a particular purpose, shall apply to this product. Any implied warranties are excluded.

Phason is not liable for consequential damages caused by this product.

Phason does not assume or authorize any representatives, or other people, to assume any obligations or liabilities, other than those specifically stated in this warranty.

Phason reserves the right to improve or alter this product without notice.

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