WiWo
Control System
Owner’s Manual

Fig-1 WiWo Water Source Controller

WiWo Owner’s Manual and Installation Information Page 1
WiWo Sensor Connections & Information Display

**Float Inputs**

**Manual Pump Start**

**Auxiliary Input**

Bottom view of WiWo showing sensor connections and manual start button

Fig-2 Sensor Inputs

**Power Indicator**

**Flow Indicator**

**Water Source Indicator**

WiWo Status Display

Fig-3 Status Display

Fig-4 Expansion Connector

Please note that models may vary from country to country and these may vary slightly
Welcome
Congratulations on your decision to purchase our advanced water source and pump controller (WiWo).

When connected to an available water source such as rainwater tanks, recycled water, or mains reticulated potable water, WiWo will deliver a managed alternative water supply for your laundry and toilet flushing needs and allow stored reserves such as rainwater to be used for car washing and garden watering whenever you have water in your tank, even during severe water restrictions.

WiWo is the heart of our water control system and is also able to manage the way your tank water is used. With our unique system, you can reserve water for critical uses such as toilet, laundry, irrigation, and firewater retention when the tank is low, and only allow general use such as garden watering and car washing when your storage is full.

WiWo is designed to be used with clean water and should not be used with any other fluids, especially abrasive, corrosive or explosive fluids.
**WiWo Installation Instructions**

For full warranty and safety protection, you should ensure that the system is installed according to the installation guidelines by licensed tradesmen. The installation should also comply with all relevant plumbing and electrical standards, and be operated according to the operator’s manual.

**General Installation Requirements**

WiWo includes a backflow prevention device and is therefore subject to the general installation requirements for backflow devices as shown in AS/NZS 3500.1:2003 i.e.

- No heat shall be applied to any device during installation
- Backflow devices shall be fitted with inline strainers - except fire service installations
- Line strainer elements shall comply with the requirements of table 4.2 of AS/NZS 3500.1:2003
- Piping shall be flushed before devices are fitted
- Unprotected bypasses shall not be installed around WiWo
- The device shall be installed in accordance with clause 4.6.3 of AS/NZS 3500.1:2003 and the manufacturer’s written instructions
- The device shall be protected from damage including freezing
- Where continuous water supply is essential, devices shall be installed in parallel to permit shutdown of a device
- In-line devices shall be capable of being removed and replaced
- Where water hammer occurs it should be rectified by the installation of a surge protector or water hammer arrestor

We recommend that your installer read these instructions carefully before commencing installation. If he/she is not licensed for the installation and maintenance of electrical and pumping equipment they should seek advice from people with suitable experience and qualifications.
1.0 Application
WiWo is a world class water source and pump controller that is designed to reduce mains water consumption by suppling stored water (such as rain or bore water) to your toilet cisterns and washing machines in preference to the mains water supply. Stored rainwater can also be used for garden watering, car washing and other non-potable household applications. Larger applications can also be served such as commercial level water uses and irrigations system etc.

In domestic situations, WiWo will automatically switch to mains water once tank water is depleted and ensue that an uninterrupted water supply is maintained to the toilet cisterns and washing machines.

By harvesting and re-using natural rainwater you will significantly reduce your consumption of town water and ease the demand on our storage dams and catchments.

WiWo will also maximise your rainwater capture by ensuring that stored water is used to its full potential.

WiWo is designed to be used with clean water and should not be used with any other fluids, especially abrasive, corrosive or explosive fluids. Use of WiWo for these liquids will damage the unit and void the warranty.
## Specifications

### Hydraulic Specifications
- **Maximum Water Pressure**: 1,200 kPa
- **Maximum Flow Rate**: 120 lpm
- **Minimum Flow Rate**: 3 lpm
- **Mains Water Supply inlet**: 25mm (1”) BSP Male thread
- **Pump connection**: 25mm (1”) BSP Female thread
- **Water outlet connection**: 25mm (1”) BSP Male thread

### Electrical Specifications
- **Power consumption (Mains)**: 5W
- **Power consumption (Tank)**: 6W (not including pump)
- **Rated Supply Voltage**: 230VAC
- **Maximum electrical load**: 7.5 Amps

### General Specifications
- **Ambient Temperature range**: 1°C to 50°C
- **Water temperature range**: 1°C to 50°C
- **Status Display**: Three Tri-Colour LEDs indicating; Power/Tank/Town/Flow/Error
- **Sensor Connections**: 3 Pin Waterproof Connector with retainer
- **Power Supply Lead**: 3 Pin Mains Plug with 3m Cable
- **Dry Weight of Assembly**: 8kg

### Additional Features
- Dual Float Level Inputs
- Irrigation Controller Input
- External Expansion Port Module

### Optional Features
- Wireless Tank Level Sensor
- Self-Purging Filter Module
- Dual Pump Module
3.0 Installation

3.1 These instructions are a guide only. Installers not suitably qualified for the installation and maintenance of electrical and pumping equipment should seek advice from people with the relevant experience in pump installation and operation.

3.2 Preparation for installation
Please read these instructions carefully and inspect WiWo for product damage prior to installation. Report any product damage to your WiWo dealer without delay.

Mains supply pressure to your WiWo should not exceed 1,000kPa. If the feed pressure to WiWo exceeds 1,000kPa a pressure reducing valve must be fitted.

If your installer is not qualified for the installation or operation of pressure reduction equipment they should refer to suitably qualified people before proceeding with the installation.

WiWo is not designed to be exposed to freezing conditions. If installed in a cold climate it should be disconnected and drained before the onset of freezing conditions. Damage caused by freezing is not covered by warranty.

WiWo operates on 230VAC at 50Hz. Any pumps attached to WiWo must also be designed to operate at this voltage. WiWo MUST be isolated from the electricity supply during installation and any subsequent service work.

Inlet and outlet connections protruding from WiWo must be firmly held with a suitable tool so that excessive pressure is not applied when connecting external piping and does not interfere with the manufactured jointing of the device.

Do not install or operate WiWo in an explosive environment or near combustible materials.
4.0 Fittings and Accessories

4.1 Before installing WiWo you should ensure that you have all required fittings and accessories.

For installation using 25mm (1”) copper tube we recommend the following items:
- Thread seal tape
- 3 x 25mm (1”) BSP connectors (2 x Female 1 x Male)

For installation using polyethylene tube, we recommend the following items
- Thread seal tape
- 3 x 25mm (1”) BSP to polyethylene adaptors to suit the installation

4.2 Environmental Protection
To extend the life of your WiWo and protect it from physical damage, insects, and other pests, it should be housed in a well-ventilated weatherproof enclosure.

4.3 Installation Recommendations
i) It is recommended that in-line filters be installed on both the mains water supply line and the tank water supply line to eliminate the possibility of small particles entering the system and causing a malfunction. It is also recommended that isolating valves be installed on the mains supply inlet to WiWo, and the water outlet to help in commissioning and testing. These will also be useful for servicing purposes at a later date.

ii) Fitting a tap near to the outlet side of WiWo will assist the user during system commissioning and maintenance.

iii) It is recommended that the height of the tank outlet from the base of the tank be set at least 100mm.

iv) It is recommended that a minimum distance of 100mm of straight pipe prior to the WiWo Primary Supply inlet.
vi) Clean water is essential for the reliable operation of your WiWo system and it is recommended that a first flush diverter and heavy matter filtration system be installed on your water collection system.

4.4 Mounting
The pump connected to WiWo must be mounted on a solid, level, vibration free surface. The WiWo can be mounted on top of the pump and supported with wall brackets, or separate from the pump and supported by suitable wall brackets.

i) Wrap an appropriate amount of thread seal tape around the thread on both ends of a 25mm (1”) Nipple.

ii) Connect one end of the nipple into the alternate supply input on the base of WiWo, threading it until it is watertight. (DO NOT OVERTIGHTEN)

iii) Connect the 25mm (1”) female end of the complete barrel union onto the protruding end of the 1” Nipple until it is watertight. (DO NOT OVERTIGHTEN)

4.5 Primary supply Inlet Connection
WiWo has a 25mm (1”) BSP female fitting to connect the incoming primary supply water. This is marked with an arrow pointing into the unit as seen on the WiWo logo (showing water flow direction). Brace this fitting to prevent movement while connecting to the mains supply. Any movement of this fitting may disturb internal seals and cause leakage.

4.6 Water Outlet Connection
WiWo has a 25mm (1”) BSP female fitting to connect it to the household toilet cisterns, washing machine, and garden taps. Brace this fitting to prevent movement while connecting to the mains supply. Any movement of this fitting may disturb internal seals and cause leakage.

4.7 Installation Requirements
The installation shall be in accordance with the requirements of AS/NZS 3500.1 and carried out by a registered/licensed plumber. Any pipe work connected to the WiWo shall be WaterMark (WMK) certified.
4.8 Water Level Sensor Installation
4.8.1 Determine a suitable position on the top of the tank near the man-hole and drill a 50mm hole for the water level (float) switch cable to access the tank. Install the float switch and secure it in a suitable manner.

   a) Surface Tank installations
   Drape the level sensor up against the side of the tank, lifting the cable until the float is 70mm above the suction. At this point mark the position of the cable that is level with the roof of the tank using marking tape.

   b) In-ground installations
   Lower the float into the tank. Position the float 70mm above the suction fitting or pump outlet. Mark the cable to indicate top of tank position.

4.8.2 Feed the connector plug, on the end of the float switch cable, through the cable gland from the inside of the tank. Pull the cable through the gland until the marker appears and is level with the top of the tank. Tighten the gland’s external dome nut to fix the cable position.

4.8.3 Once in position, route the cable to the WiWo and plug the connector to the matching socket on the underside of the unit. Using cable ties, fix the cable to the pipe work near the WiWo to avoid the cable being pulled free or damaged.

Please Note: Connections may vary from country to country

Fig-5 Sensor Inputs
4.9 Electrical Connection

WiWo is designed to operate on a mains supply voltage of 230VAC at 50Hz and is supplied with a standard 3 pin mains plug. The plug must be connected to a suitably earthed mains socket that has been installed by a qualified electrician.

To prevent the risk of electric shock, DO NOT connect WiWo to the mains supply until the system is fully installed and all safety covers are in place.

The power supply voltage for WiWo must be within plus or minus 10% of the rated supply voltage. If you suspect the voltage is outside this range you should consult a qualified electrician or your energy provider to correct the problem. Incorrect voltage can cause WiWo to operate incorrectly and will void its warranty.

If the power supply cord or pump interconnection cord is damaged, it must be replaced by an authorised Service Agent or a suitably qualified person in order to maintain electrical safety.

Before connecting WiWo to the electrical power supply, the pump and all sensor cables should be connected to the device. Ensure that all connectors are completely dry before attaching them to WiWo. Cables should only be removed for commissioning and maintenance purposes. Ensure that the tank level sensor is firmly connected and the lead is secured to prevent it being pulled free or damaged.

WiWo is supplied with a standard Australian 10A plug and cord and must be connected to the power supply via a suitable socket outlet. If local authorities require the WiWo and pump to be wired to a fixed the electrical connection, the installation must be done by a qualified electrician with pump knowledge, according and to the National Wiring rules (AS/NZS 3000) and/or any local council requirements. We recommend that WiWo be connected to a mains outlet that is protected by an approved residual current device - RCD (safety switch). Contact a qualified electrician if you cannot verify that the socket outlet is protected by RCD. RCD tripping indicates an electrical problem. If the RCD trips and will not reset you must have the system inspected by a qualified electrician.
5.0 Commissioning and Testing

To commission the system you will need to have enough water in the tank to raise the tank’s float switch to a point where the WiWo source display indicates that there is water in the tank, then switch on the power to WiWo

i) The “Power” indicator will come on and the “Source” indicator will go green.

ii) Open a tap on the outlet side of the WiWo or flush the toilet. The pump will start and run till the cistern is filled or the tap is turned off. The “Flow” indicator should be coloured orange while the pump is running.

iii) Turn off the tap and the pump will stop after a few seconds.

iv) To simulate depletion of tank water, disconnect the level sensor from WiWo by removing the sensor cable on the underside of the unit. This indicates that there is no water in the tank. The “Source” indicator will go red to indicate that mains water is in use.

v) Open a tap or flush the toilet. The “Flow” indicator will go green indicating that town water is flowing.

vii) Close the tap and replace the water level sensor.

It is important that the system be properly bled of all air from all taps and appliances connected to the system. This is achieved by opening and closing each appliance to ensure air is bled and water is present.

If there are any variations to these outcomes, please see the troubleshooting section on page 15.
6.0 Operation
Once fully installed and commissioned, the operation of WiWo is completely automatic and no user intervention is required. However, the operator must be provided with this owner's manual and should be familiar with WiWo’s operations.

This manual provides information that will enhance the users benefit from the WiWo and extend its operational life. It should be read by both users and installers for continued safety and reliability.

WiWo is designed to be used with clean water. It must not be used with alternative fluids, specifically abrasive, corrosive, or explosive fluids.

Young children should be supervised to ensure that they do not play with the equipment.

6.1 Fault Mode
WiWo is designed to prevent the pump from running without water. If the tank level sensor indicates water in the tank, but no flow is detected, the centre Pump/Flow indicator will go red. If this condition remains for more than 5 seconds, WiWo will attempt to correct the error by using short (5 second) priming pulses of mains pressure to stimulate water flow. If this error cannot be corrected after 10 continuous fail scenarios, the water source indicator led will pulse to indicator a system error and WiWo will return to supply the primary source water until the error is corrected and the power is reset to the device.
6.2 General Operation
WiWo operates entirely automatically and does not require user intervention during normal operation. If the electrical supply is interrupted, WiWo will not be able to operate the pump and will automatically revert to mains water supply. When electrical power becomes available, WiWo will perform a self test and automatically re-enter its normal operational mode.

If the town water supply is shut off, WiWo might not be able to detect water demand in the household. Pressing the RED manual pump button will override normal control and start the pump to supply water.

*Note: Even when the float indicates there is no water in the tank, there is normally a small amount of water left in the tank which can be used to supply a small amount of water for critical applications.*

7.0 Service and Maintenance
WiWo is an inherently reliable device and will normally provide you with many years of dependable service. However, certain circumstances may cause WiWo to operate in an unpredictable manner. These circumstances could include poor power regulation, lightning, or other electrical or hydraulic disturbances.

Problems caused by these can generally be overcome simply by following the re-start procedure.
1) Turn off power for 30 seconds.
2) Turn power supply back on.
3) Prime the pump

In the event that this does correct WiWo’s operation, the following procedure should be performed before WiWo is removed for service.
1) Switch off power to WiWo before proceeding.
2) Close shut-off valves at inlet, outlet and water tank gate valve.
3) Carefully release all pressure from the pump and piping system.
4) **Never tighten or loosen fittings while the pump is operating.**
5) Restart the system. WiWo should resume normal operation.
Should these procedures fail to correct WiWo’s operation, it may need to be returned to an authorised service agent for inspection and serving.

You should ensure that WiWo is isolated from the electricity and water supplies before removing for service. You should also consider installing a bridging pipe to ensure that toilets remain operational.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Tank is Empty</td>
<td>Replenish Tank</td>
<td></td>
</tr>
<tr>
<td>No Power at Power Outlet</td>
<td>Check Power Supply</td>
<td></td>
</tr>
<tr>
<td>No Signal from Tank Sensor</td>
<td>Check Float and cable</td>
<td></td>
</tr>
<tr>
<td>Pump has Overheated</td>
<td>Allow Pump to Cool Down</td>
<td></td>
</tr>
<tr>
<td>Tank Valve is Closed</td>
<td>Open Valve</td>
<td></td>
</tr>
<tr>
<td>Pump has lost Prime</td>
<td>Prime Pump</td>
<td></td>
</tr>
<tr>
<td>Inline Filter is Blocked</td>
<td>Clean or Replace Filter</td>
<td></td>
</tr>
<tr>
<td>Isolating Valve Closed</td>
<td>Open Isolation Valves</td>
<td></td>
</tr>
<tr>
<td>System Blockage</td>
<td>Check plumbing and unblock</td>
<td></td>
</tr>
<tr>
<td>No water delivered from WiWo</td>
<td>Isolating valves closed</td>
<td>Open isolation valves</td>
</tr>
<tr>
<td></td>
<td>System Blockage</td>
<td>check plumbing and unblock</td>
</tr>
</tbody>
</table>

Please note that WiWo requires a dry environment and as such will be attractive to insects and vermin that can cause electrical malfunction. Malfunctions caused by insects or vermin etc are not cover by our warranty. These malfunctions can be avoided by the keeping the area around WiWo clean and insect free.
One Water Naturally Pty. Ltd. Warranty
WiWo Control Systems

2 Years Warranty

(Subject to the provisions of the Trade Practices Act and Goods and Consumer Protection Legislation of various States and New Zealand)

One Water Naturally Pty Ltd (One Water Naturally) warrants that WiWo systems that we distribute, are free from defects in workmanship and materials, for 2 years from the date of purchase. Subject to the conditions of the warranty, One Water Naturally will repair any defective products free of charge at the premises of our authorised service agents throughout Australia and New Zealand.

This warranty excludes transportation costs to and from One Water Naturally or its appointed service agents and excludes defects due to non-compliance with installation instructions, neglect or misuse, inadequate protection against freezing, low voltage or use or operation for purposes other than those for which they were designed. For further information regarding the suitability of your intended application contact us on our contact details below.

The 2 Years warranty refers only to WiWo Control Systems sold after the 1st July 2010, and is not transferable to another APP or Sparkle Product and only applies to the original owner, purchaser or end user, and is subject to the Trades Practices Act and Goods, Consumer Protection legislation and Consumers Guarantee Act NZ throughout Australia and New Zealand.

Our warranty commences from the date of purchase of the above mentioned system. Proof of Purchase is required before consideration under warranty is given. Record your date of purchase in the space below and retain this copy for your records.
IMPORTANT
Please retain your sales invoice/docket as proof of purchase should warranty service be required.

Please do not return the Warranty Card - Retain for your records.

Purchased From ........................................................................................................................................

Purchase Date ................................... Batch No ..........................................

Model..................................................................................................................................................

Address info
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Disclaimer: Whilst every endeavour has been made to publish the correct details in this manual. No responsibility will be taken for errors, omissions or changes in product specifications. One Water Naturally Pty Ltd reserves the right to change specifications in the interest of product improvement.

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WiWo Distribution and Support Contact Details

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