WaSP-F1 Low Flow Controller

USER MANUAL

Issue 3

Waterra In-Situ®

Innovations in Water Monitoring

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SERVICE

Service Address

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Email: sales@Waterra-In-Situ.com
Website: www.Waterra-In-Situ.com

Guarantee

Warranty Period

This warranty is not transferable.

Waterra (UK) Limited warrants that it will replace or repair at no cost to the customer any defects in material or workmanship for a period of 1 year from date of purchase provided that the unit has only had normal use as described in this manual.

Warranty Exclusions

- Repairs required as a result of accidental damage or use outside the conditions of normal use as described in this manual
- Repairs required as a result of any modifications by the user
- Repairs required on any unit which has been loaned or rented to third parties by the purchaser

See our Terms & Conditions which can be supplied on request. This does not affect your Statutory Rights.

For Warranty conditions outside the UK and Ireland, refer to your local Waterra-In-Situ dealer.

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EC DECLARATION OF CONFORMITY

Producer

Waterra (UK) Limited
Unit 4, r/o 179-189 Stratford Road
Shirley
Solihull
West Midlands
B90 3AU

Description:

Variable voltage controller to enable low flow pumping with 12V submersible pumps

Type:

WaSP-F1

Requirements:

Meets the relevant emissions and immunity specifications of:
BS EN 61000-6-2: 2005 and BS EN 61000-6-4: 2001.

Which call up:

BS EN 55022 Class A	Radiated Emissions
BS EN 61000-4-2	Immunity to Electrostatic Discharge
BS EN 61000-4-3	Immunity to Radiated Fields
BS EN 61000-4-4	Immunity to Fast Transient Bursts

And meets the relevant requirements of:

BS EN 60335: General Requirements for Household and Similar Electrical Appliances

Authority:

Peter Dumble, Technical Director

SPECIFICATIONS

It is the policy of Waterra-In-Situ to continually review and update product design, therefore some details may differ from the actual product sold. All dimensions are approximate and include protrusions.

Electrical		
Input Voltage	12V DC	
Output Voltage	0 ï 12V DC	
Maximum Load	25 Amps	
Safety / Protection		
Input connection	Reverse polarity protected	
Maximum load	Load current limiter set to 25 Amps	
Internal protection	Internally fused to 30 Amps	
Low input voltage	Unit cut-out for input voltage below 8.3V	
High input voltage	Unit cut-out for input voltage above 16V	
Environment		
Protection	Splash proof case	
Dimensions / Weight		
Length	25.5 cm	(10ò)
Width	14.7 cm	(5.78ò)
Height	11.7 cm	(4.6ò)
Weight	1.6 kg	(3.5 lbs)
Input cable length	1 metre	(3.3 ft)
Controls		
Status LED	Steady ï correct operation Slow flash ï low input voltage warning Rapid flash ï high input voltage warning	
Rotary flow control dial	On/Off switch Varies voltage output from 0 to maximum	
Connections		
Input (cable)	Twin core cable with insulated crocodile clips for connection to a 12V DC battery	
Output (terminals)	Threaded positive and negative terminal posts and nuts suitable for crocodile clips or for cable connection	

TROUBLESHOOTING

Before contacting Waterra please use the following troubleshooting guide to resolve common difficulties.

LED Display	Problem	Possible cause	Remedy
Flashes slowly	No output	The input voltage has dropped below 8.3V and the Low Flow Controller has cut out to prevent damage to the battery	Replace or charge the battery
Flashes quickly	No output	The input voltage is greater than 16V and the Low Flow Controller has cut out to prevent damage to your pump	Use a power source with the correct input voltage of 12V
Off	No output	The input leads are not connected to the battery properly	Check the connections
		The input leads have been connected to the battery the wrong way round	Reconnect using the correct way round (Red +, Black -)
		The battery is discharged	Replace or charge the battery
On	Pump does not work	The pump leads are not connected properly	Check the connections
		There is a problem with the pump	Test the pump by connecting directly to the battery
		The Flow Control Dial is switched off	Switch the dial on
		The Low Flow Controller has been subjected to a heavy static electrical discharge	Switch the unit off and back on again

INTRODUCTION

This manual covers the operation and maintenance of the WaSP-F1 Low Flow Controller. This manual should be considered a permanent part of the WaSP-F1 Low Flow Controller and should remain with it if it is sold.

If a problem should arise, or if you have any questions, please contact Waterra UK Ltd.

Why use the WaSP-F1 Low Flow Controller?

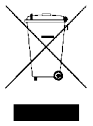
The WaSP-F1 Low Flow Controller is an easy to use and robust solution for progressively varying the voltage supply to a 12V submersible pump in a precise and controlled way.

The WaSP-F1 Low Flow Controller design features include:

- Universal voltage controller suitable for any non-boosted 12V device with up to 25 Amps current draw
- Single on/off dial with precision control of flow rate
- Splash proof sealed housing
- Intelligent electronics with built-in safety features
- LED warning signal
- Light-weight (1.6 kg) and compact
- Robust aluminium housing

Explanation of Symbols

The Waterra WaSP-F1 Flow Controller is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the Flow Controller. Failure to do so could result in personal injury or equipment damage.

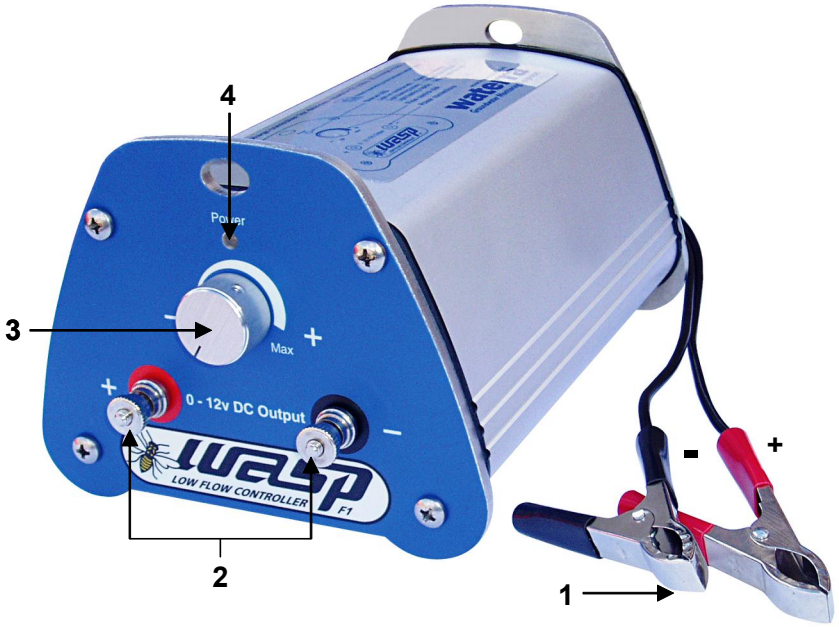


The Waste Electrical and Electronic Equipment Directive (WEEE Directive) aims to minimise the impact of electrical and electronic goods on the environment, by increasing re-use and recycling and reducing the amount of WEEE going to landfill. It seeks to achieve this by making producers responsible for financing the collection, treatment, and recovery of waste electrical equipment, and by obliging distributors to allow consumers to return their waste equipment free of charge.

CE marking is a declaration by the manufacturer that the product meets all the appropriate provisions of the relevant legislation implementing certain European Directives.

COMPONENT IDENTIFICATION

Components described elsewhere in this manual are referred to in the following diagram:



Description

1. Crocodile Clips
2. Output Connections
3. Flow Control Dial
4. Status LED

OPERATION

The operation of the WaSP-F1 Low Flow Controller is straightforward. However, prior to use for the first time, unpack the flow controller and familiarise yourself with the controls and components as described in this manual.

Connection to Power Supply

Note: before connection, make sure that the Flow Control Dial (3) is in the Off position. If a connection is made while the unit is turned on, the pump will start operating immediately.

Connect the WaSP-F1 Low Flow Controller crocodile clips (1) to a 12V DC power supply e.g. car battery. For longer battery life, Waterra recommend using a heavy-duty or marine specification battery.

When connecting to the power supply, ensure that the correct polarity is observed: Red to Positive (+) and Black to Negative (-), and that there is no possibility of any bare metal touching between the two connections.

Connection to 12V Submersible Pump or Other Device

Connect the cable from the 12V pump to the WaSP-F1 Low Flow Controller Output Connections (2). Where the pump cable has crocodile clips, clip these directly onto the output connector posts. For cables that end with bare wires, loosen the output connector post nuts and then tighten them onto the ends of the wires.

When connecting the pump to the Low Flow Controller, ensure that the correct polarity is observed and that there is no possibility of any bare metal touching between any part of the crocodile clips or output connections.

Please note: Waterra do not recommend the use of the Low Flow Controller with pumps that have a voltage booster.

Operation

Once the power supply and pump are connected correctly, turn the Flow Control Dial (3) from the Off position. The further the dial is turned clockwise, the higher the output voltage to the pump, up to the maximum output of 12V.

To turn the Low Flow Controller Off, turn the dial anti-clockwise to the Off position until the dial clicks off.