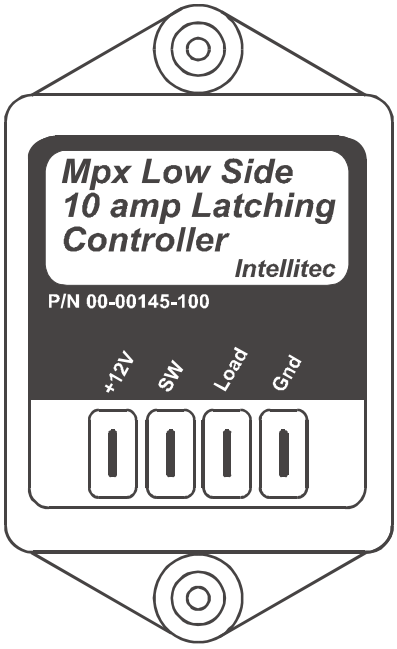
MONOPLEX WATER PUMP CONTROL

SERVICE MANUAL



P/N 00-00145-100

CAUTION

Note: The **MONOPLEX WATER PUMP CONTROLLER** is a power switching controller used to operate the domestic water pump in an RV. Power from the battery of the vehicle is fed to this control. Inadvertent shorts at this box could result in damage and/or injury.

All servicing of this box should be done only by a qualified Service Technician.

Tools required: Low current test light, DC voltmeter

Intellitec

1485 Jacobs Rd.
Deland, FL 32724
386.738.7307

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PRODUCT DESCRIPTION

The **MONOPLEX™ Water Pump Controller** is a part of the Intellitec **MONOPLEX™** family. These controllers all work on the principle of putting the controller near the load to minimize the length of heavy wiring, and the use of a single, low current control wire to connect to all the switches. Using this technique, the heavy gauge wire is confined to supplying the load in a direct fashion, while an unlimited number of small, simple switches can be added to control the loads by simply connecting the single **MONOPLEX™** wire to each switch.

The **Water Pump Controller** is an electronic circuit which functions as a remotely controlled on/off switch. It is used to switch the ground side of the load, and is therefore called a "low side" switch. The switch portion of the controller consists of a Field Effect Transistor which has virtually unlimited, on/off cycle life. Through the use of this transistor, current handling is high, voltage drop is low, and the controller standby current draw is less than 2 milliamps.

In a normal application, it is mounted near the water pump to minimize the length of heavy gauge wire. A light gauge wire is run from this unit to as many switches as desired, to control the pump.

HOW IT WORKS

The **Water Pump Controller** is connected in the ground side of the water pump. The positive side of the pump is connected to a source of +12 volts. The controller becomes the ground return for the pump. If the Controller is off, when the pump's pressure switch is on, both pump wires will be at +12 volts.

When 12 volts is first applied, the controller will be off. It can be turned on by momentarily pressing any switch connected to the **MONOPLEX™** switch wire. Pressing any switch again will turn off the controller. The switches are actually shorting the **MONOPLEX™** switch to ground. Each time the controller "sees" this short, it switches from one state (on or off) to the other state. When the switch is off, the controller puts approximately 2.50 volts on the **MONOPLEX™** wire. When the switch is on, the controller puts approximately 7.3 volts on the **MONOPLEX™** wire. This change in voltage can be used to light indicator LED's connected to this line.

CAUTION: Care should be taken when servicing the controller. Inadvertent shorts across the pump or from the output of the controller to +12 volts, will damage the controller.

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Trouble Shooting

Problem	**Possible Cause/Solution**
Pump won't run.	Pump fuse blown. Check fuse, replace if necessary.
	Pump defective. Remove pump wire from controller and connect it to ground. Pump should run, if not replace pump.
	Check voltage of pump lead at the Controller. Should be 0 volts. If not, momentarily short Switch wire to ground to turn controller on. If voltage is still at +12 volts, replace controller. If pump runs, check switch wiring. Voltage on switch wire should be 0 when any switch is pressed.
Pump won't shut off.	Check switch wire for voltage. Should be 7 volts when running, 2.5 when off. If not, replace controller.
	Check switch wiring.

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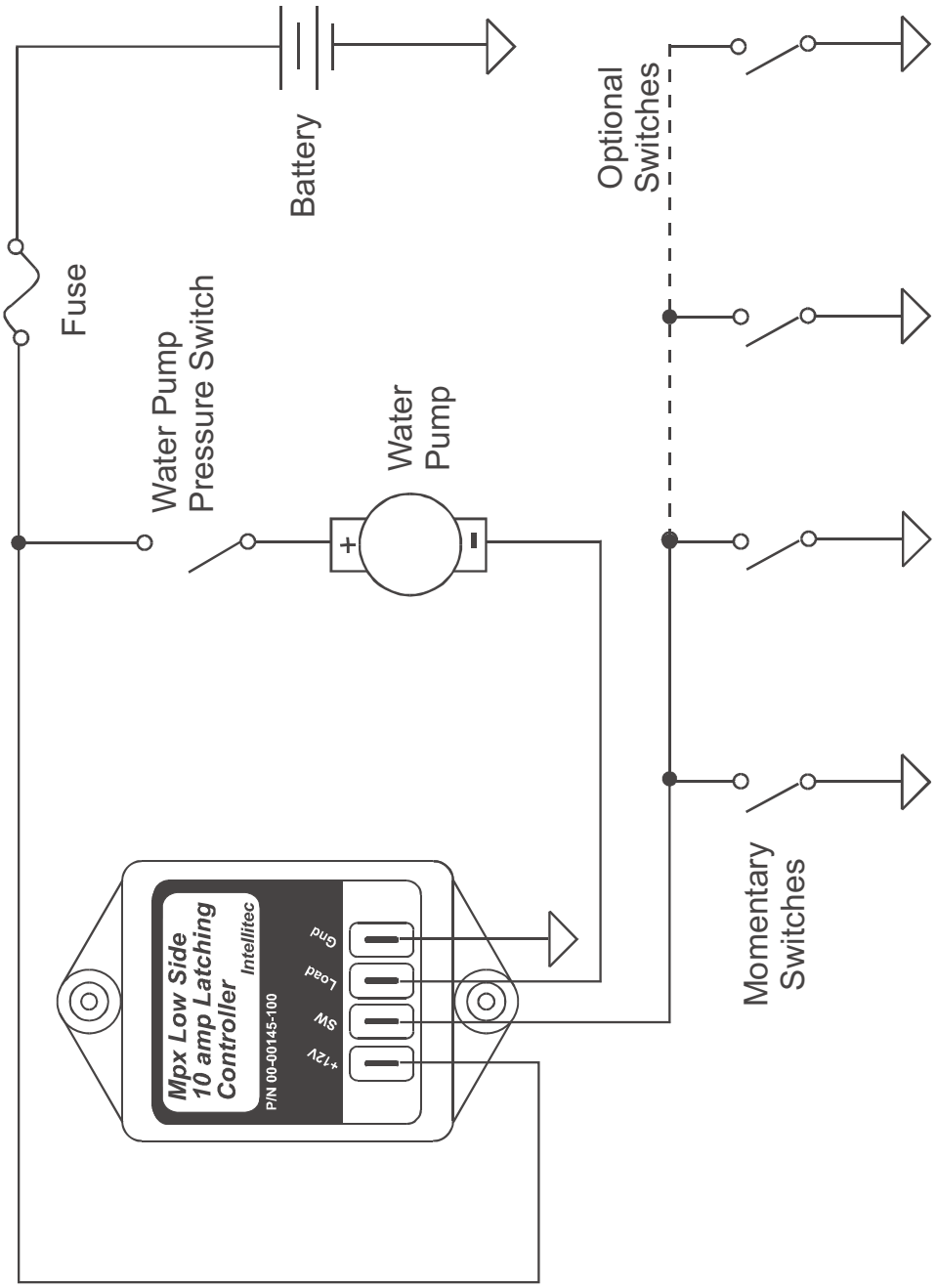
Typical Installation Schematic



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