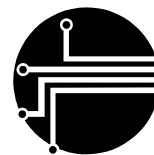


EZ SDI™ Booster Pump Assembly

Installation and Operating Manual

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RODI
systems

EZ SDI™ Automatic Booster Pump Assembly Installation and Operating Manual

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Version 1.00

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Version Log

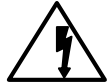
Version	Date	Effective Pages	Description of Changes
1.00	06/10/04	-	Original Issue

Conventions and Symbols

Special characters, listed and described below, are used in this documentation to emphasize certain information.



Note: Emphasizes additional information pertinent to the subject matter.



Warning: Emphasizes information about actions, which may result in personal injury.



Caution: Emphasizes information about actions, which may result in equipment damage.

The following electrical symbols may be used in this documentation.

Symbol

Meaning



Direct current.



Alternating current.



Both direct and alternating current.



Earth (ground) terminal.



Frame or chassis terminal.

General Limited Warranty

Warranty

1. In no event will RODI Systems Corp., or any of its representatives, be responsible or liable for indirect or consequential damages resulting from the use or application of any product. The user and those responsible for applying the product must satisfy themselves with the acceptability of the application.
2. RODI Systems Corp. extends a one (1) year warranty covering parts and labor on any factory manufactured product. Any product, which is found to have a defect in workmanship or components, shall be replaced or repaired at the option of RODI Systems Corp.
3. A prepaid minimum inspection fee is required for the repair of products not covered by the warranty period. Contact RODI Systems Corp. for repair information and repair rates.
4. RODI Systems Corp. will not be responsible for replacement or repair of any product that was damaged by improper installation, mishandling, or user modifications.
5. All units returned for repair must have a RA (return authorization) number obtained from RODI Systems Corp. This RA number must be included with the returned product and any correspondence regarding the returned product must reference that number. Shipping on all returned products must be pre-paid and insured. RODI Systems Corp. will not be responsible for any shipping damage incurred. Repaired products will be shipped pre-paid and insured.
6. RODI Systems Corp. reserves the right to change any specification or feature of any product at any time. This right also extends to repair fees or any warranty conditions contained herein.

Table of Contents

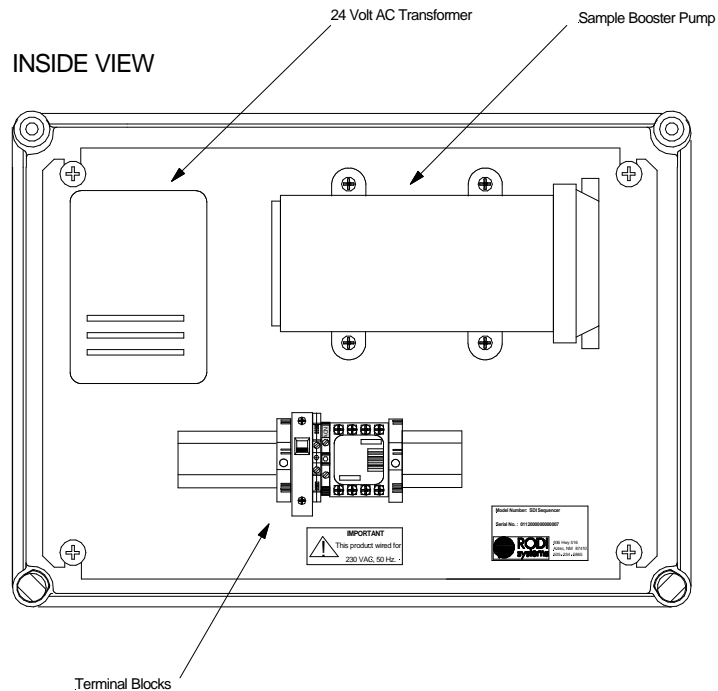
EZ SDI™ Booster Pump Assembly	1
Introduction	1-1
Features	1-1
Specifications	1-1
Installation and Operation	2
Environmental	2-1
Mounting	2-1
Power	2-1
Ground	2-2
Signal	2-2
Water	2-2
Operation	2-2

EZ SDI™ Booster Pump Assembly Overview

1

Introduction

The EZ SDI™ Booster Pump Assembly is designed to automatically boost the sample pressure for the EZ SDI-1™ during the test process. This allows the EZ SDI to be used on low pressure sample points of the pre-treatment system.



Features

The EZ SDI™ Booster Pump Assembly incorporates the following features:

- One sample booster pump which allows the sample to be taken from points under low pressure.
- One 24 VAC transformer for powering the booster pump.
- One 24 VDC relay allowing the booster pump to be automatically controlled by the Booster Pump Assembly of the EZ SDI unit.

Specifications

The EZ SDI™ Booster Pump Assembly incorporates the following specifications:

Power Requirements: The controller requires 120 volts AC, 60 Hz, single phase, 1 amp maximum (or 230 volts AC, 50 Hz, 0.6 amp maximum).

Flow Requirements:

- 500 mL / Min.
- 5-60 PSI

Tubing connections: The two tubing connections located at the bottom and top of the pump are as follows:

- 1 feed water connection: 3/8" poly tubing
- 1 supply connection: 3/8" poly tubing, requires a 1/4" x 3/8" Fast & Tite connector on the EZ SDI-1™.



The sample booster pump will only run while a test is being conducted by the EZ SDI-1™.

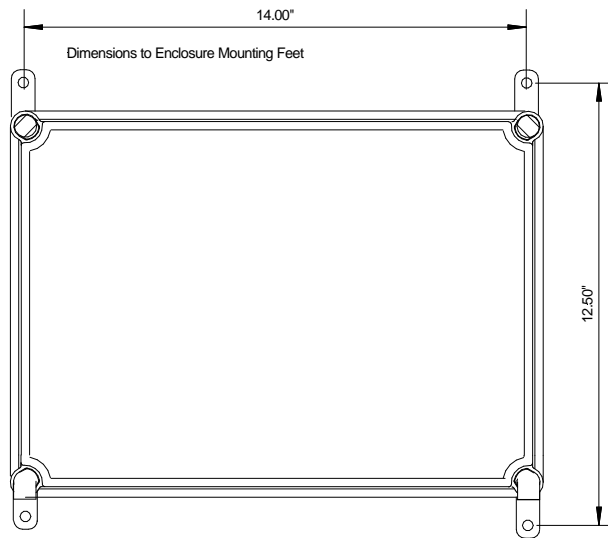
Environment: The controller can operate at a temperature from 0° to 55° C (32° to 131° F). Relative humidity must not exceed 95 percent.

Installation and Operation

Environmental The EZ SDI™ Booster Pump Assembly is mounted onto a flat wall or panel surface. The unit should be mounted as close to the EZ SDI-1™ as possible. The Booster Pump Assembly should not be used in explosive environments. General environmental specifications are listed below.

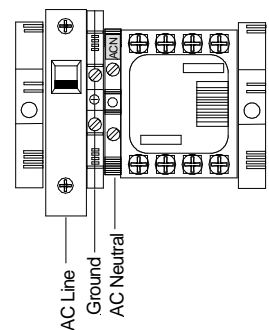
Environmental Specifications	
Specification	Rating
Storage Temperature	-20 to 70 Deg C
Ambient Operating Temperature	0 to 55 Deg C
Ambient Humidity	30% to 95 % Relative Humidity (Non-Condensing)

Mounting When mounting the Booster Pump Assembly, sufficient room should be allowed on the top and bottom of the device for access to the supply and sample connections. Mounting dimensions are shown below.



Power

A power cord is supplied for 120 VAC applications. The Booster Pump Assembly has internal circuit protection on the incoming power supply in the form of a DIN rail-mounted fuse holder. Only 5mm x 20mm fuses should be used. If the supplied power is to be hardwired to the Booster Pump Assembly, the power terminals are located on DIN rail below the pump (see figure at right). AC line is connected to the fuse holder. AC neutral is connected to the blue neutral terminal block. Ground is connected to the yellow and green ground terminal block. **Power should always be disconnected from the Booster Pump Assembly before making or changing any connections.**



Ground A good common ground reference (earth ground) is essential for safe operation of the Booster Pump Assembly. A good earth ground or power circuit ground should be connected to the green and yellow ground terminal block. If a power cord is used, the ground terminal on the power cord must be grounded.

Signal The signal cable is pre-wired to the Booster Pump Assembly. The connector on this cable should be connected to the sample interface signal connector on the left side of the EZ SDI-1™ control enclosure.

Water The EZ SDI™ Booster Pump Assembly has two water connections on the pump. Connect the 3/8" discharge tubing to the pump by running the tubing through the compression fitting on the top of the assembly enclosure and into the push fitting on the pump. Tighten the compression fitting to prevent any leaks from running down the tubing into the assembly enclosure. A 1/4" NPT x 3/8" tubing connector should be installed in the supply connection fitting of the EZ SDI-1™ allowing the 3/8" tubing from the booster pump to supply the EZ SDI unit.



Connect the 3/8" suction tubing by running the tubing through the 7/8" hole on the bottom of the assembly enclosure and into the push fitting of the pump. The sample source connected to the Booster Pump Assembly should be able to provide a minimum of 500 ml per minute at 5 – 60 psi. Do not feed more than 60 psi to the sample inlet connection of the pump.



The EZ SDI-4™ is designed to operate on Reverse Osmosis feed water. This feed water should be pretreated to remove particles above 160 microns in diameter. The use of feed water with particles over 160 microns in diameter can result in plugging of the regulator or vent orifice. If the regulator or vent orifice becomes plugged then the unit will malfunction and produce invalid results.

Operation After making all connections to the Booster Pump Assembly (power, signal, sample, and supply) make sure that all valves are open supplying the sample to the pump suction connection. Operate the EZ-SDI-1™ following the instructions supplied with the SDI monitor.

The sample booster pump will only run while a test is being conducted by the EZ SDI-1™ (while water is passing through the filter). It will be necessary to adjust the SDI test pressure of the EZ SDI unit while the booster pump is running during the test.