

PD10

Pulse Divider Instructions



General Information

General Information Page 3

Features Page 3

Specifications Page 4

Installation

Mounting Page 4

Power Source..... Page 4

Connections and Settings

PD10W/LMI Pump..... Page 5

PD10W/Non-LMI Pump Page 5

Settings..... Page 5

Troubleshooting

Problem Page 6

Probable Causes..... Page 6

Things to Try Page 6

Warranty

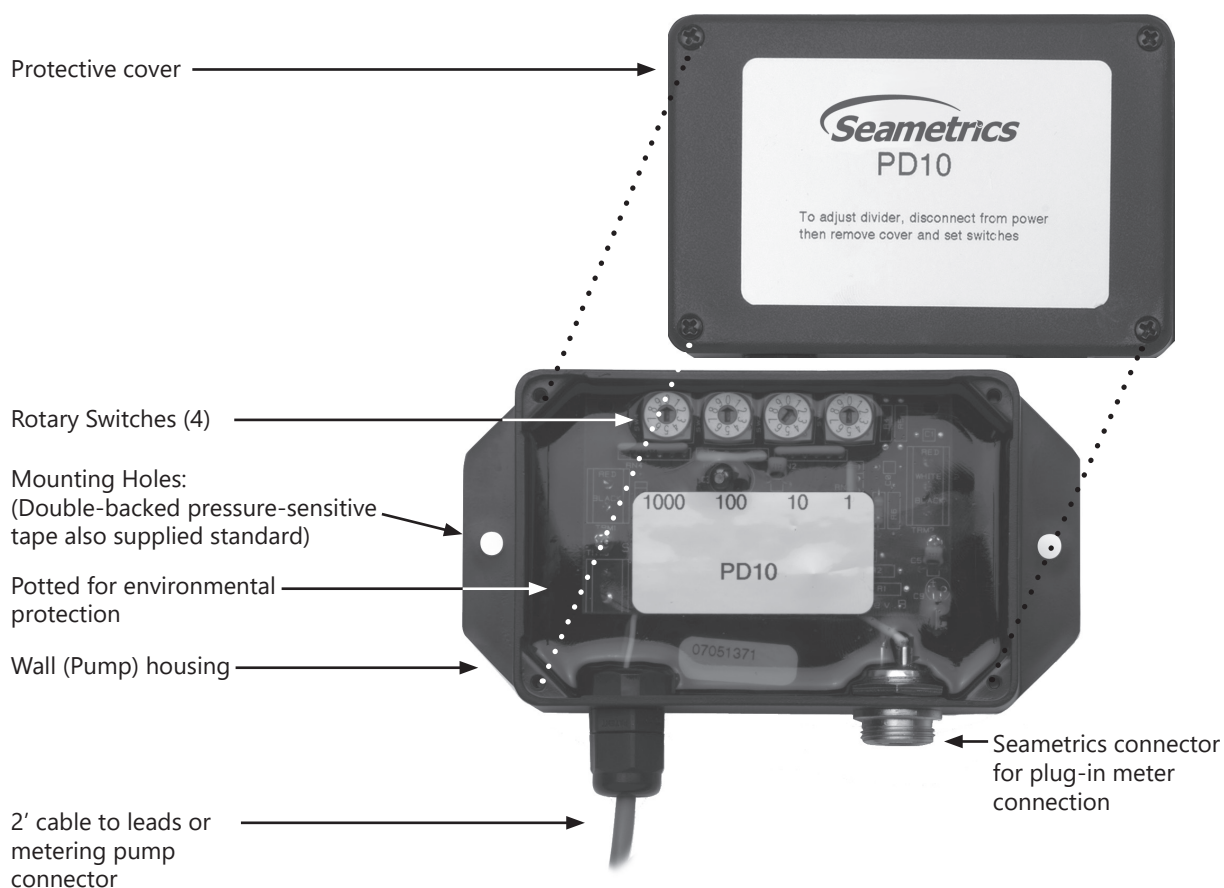
Seametrics Limited Warranty Page 7

Designed for use as a meter accessory, the PD10 Pulse Divider is used primarily for pacing electronic metering pumps. Any number from one to 9999 can be set on rotary switches. Each time the divider has received the set number of pulses from the meter, it puts out one pulse to stroke the pump. The PD10 is also useful in boiler and cooling tower feed and bleed operations, and for lowering frequency

output of high frequency meters. Compatible with all Seametrics flow meters, the PD10 creates a programmable pulse meter with an easily adjustable pulse rate.

The PD10 is mounted by attaching it to the metering pump with the included double-backed, pressure-sensitive tape. Alternatively, the control can be wall mounted with screws using the mounting brackets that extend out either side.

FEATURES



Specifications*

| | |
|---------------------------------|--|
| Enclosure | Epoxy-encapsulated ABS housing with cover |
| Temperature | 0° to 130° F (-18° to 55° C) |
| Divider Range | 1 to 9999 |
| Setting Mechanism | Rotary Switches |
| Power | 7–30 Vdc @ 4 mA |
| Maximum Sensor Load | 20 mA |
| Maximum Input Frequency | 350 Hz (pulses/second) |
| Maximum Output Frequency | 8 Hz (pulses/second) |
| Output | Solid state relay; 0–250 V, 170 mA max AC/DC |
| Output Pulse Width | 0.1 second |
| Input Connection | Seametrics connector |
| Output Connection | Pump connector on 24 inch lead |
| Environmental | NEMA 4X, IP66 |

* Specifications subject to change. Please consult our web site for current data (seametrics.com)

Mounting

The PD10 is mounted by attaching it to the metering pump with the included double-backed, pressure-sensitive tape. Alternatively, the control can be wall mounted with screws using the mounting brackets that extend out either side.



Power Source

Power for the PD10 can be supplied by the metering pump if the pump has a sensor power supply. This is the case with LMI externally-paced metering pumps. Some pumps require an external power supply, available from Seametrics. LMI and Seametrics connectors are available.

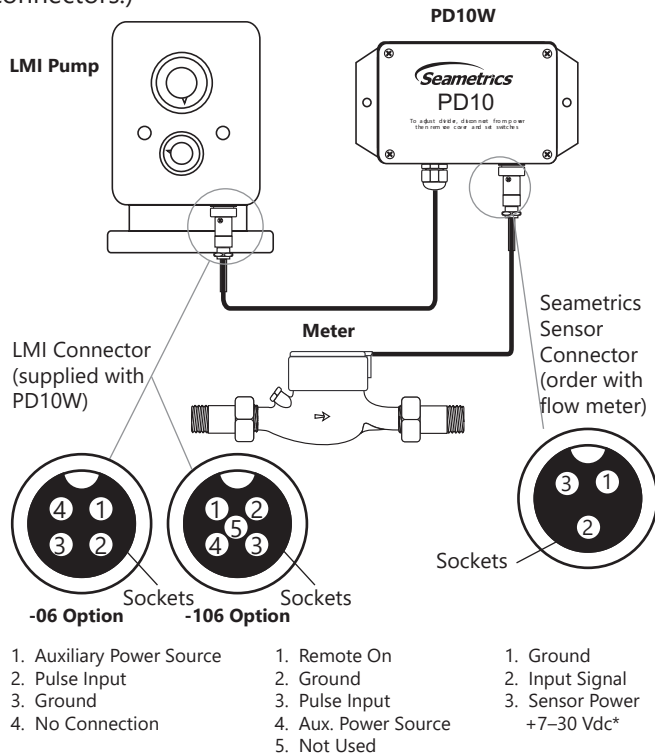
**CAUTION:**

Power supplies 18 Vdc and higher must be regulated to prevent damage to the PD10 from voltages exceeding its 30 V allowable maximum supply voltage caused by AC line variations and light loading.

PD10W/LMI Pump

The 24" pigtail that extends from the PD10W connects to an LMI metering pump and is connected as shown.

The input connector on the control mates with any three-pin Seametrics connector. (Meters or flow sensors to be used with a PD10W should be ordered with Seametrics connectors.)

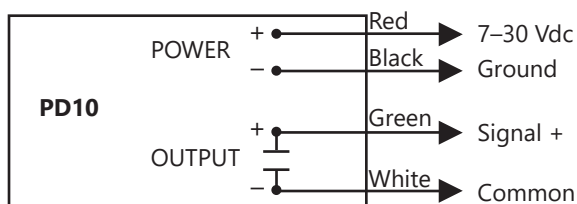


***CAUTION:**

If power is supplied to the flow sensor from the PD10, ensure that the voltage supplied to the sensor does not exceed the sensor's allowable maximum input voltage.

PD10W/Non-LMI Pump

If a metering pump is used that requires a connection other than the LMI connector supplied, cut the LMI connector off. Connect the PD10W to the pump using the diagram below in conjunction with the wiring diagram in the pump manual.

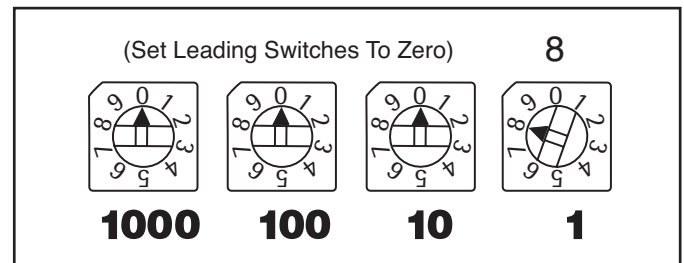
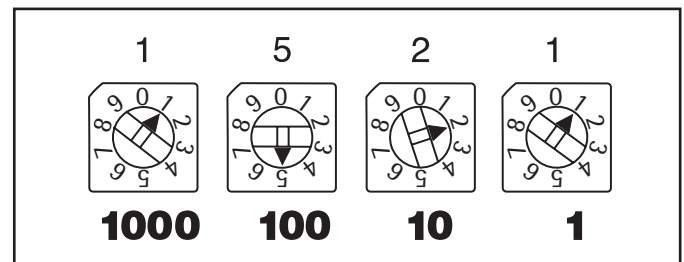


The input connector on the control mates with any three-pin Seametrics connector. (Meters or flow sensors to be used with a PD10W should be ordered with Seametrics connectors.)

Settings

The four numbered rotary switches marked "1000", "100", "10", and "1" control the ratio of meter pulses to pump strokes. **Before setting the switches, disconnect power to the unit by removing the connector from the pump or unplugging the power adapter.**

To set any four-digit number, rotate the dials to the appropriate numbers. For example, to set 1521, set the four switches to "1", "5", "2", and "1". Any unused switches should be set to zero. For example, to set 8, position the dials to "0", "0", "0", "8". See samples below.



Setting Examples

| Problem | Probable Causes | Things to try... |
|---|---|--|
| Metering pump not stroking | Meter dials not turning | Check visually, then check for adequate flow |
| | Meter pickup not working | Remove from meter, check with a magnet |
| | Pump connector not plugged in all the way | Check or tighten threaded locking ring (LMI) |
| | Pump doesn't supply power to the PD10 | Check pump manual, add power supply |
| | PD10 set to large number or all zeros | Check rotary switches, especially for leading zeros. |
| Pump strokes continually | Pump not set for external pacing | Check pump manual and selector switch |
| Pump doesn't stroke often enough or too often | PD10 set for wrong number | Review setting section, check rotary switches |
| | Multiple contacts from meter | Set PD10 to 1 contact/pump stroke (0001) and see if the pump strokes once for each magnet revolution |
| | Meter ordered with wrong pulse rate | Check meter model/serial tag |

The limited warranty set forth below is given by Seametrics, with respect to Seametrics brand products purchased in the United States of America.

Seametrics warrants that products manufactured by Seametrics, when delivered to you in new condition in their original containers and properly installed, shall be free from defects in material and workmanship. **Seametrics products are warranted against defects for a minimum period of two (2) years from date of installation, unless otherwise specified, with proof of install date. If no proof of install date can be provided, warranty period will be two (2) years from date of shipment from Seametrics, as defined on Seametrics' invoice.** Seametrics' obligation under this warranty shall be limited to replacing or repairing the part or parts, or, at Seametrics' option, the products, which prove defective in material or workmanship. The following are the terms of Seametrics' limited warranty:

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- b. Any defective part or parts must be returned to Seametrics' factory or to an authorized service center for inspection.
- c. Buyer will prepay all freight charges to return any products to Seametrics' factory, or another repair facility, as designated by Seametrics.
- d. Defective products, or parts thereof, which are returned to Seametrics and proved to be defective upon inspection, will be repaired to factory specifications.
- e. Seametrics will deliver repaired products or replacements for defective products to the buyer (ground freight prepaid) to the destination provided in the original order.
- f. Products returned to Seametrics for which Seametrics provides replacement under this warranty shall become the property of Seametrics.
- g. This limited warranty covers all defects encountered in normal use of Seametrics products, and does not apply to the following cases:
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 - ii. Failure to follow operating, maintenance, or environmental instructions prescribed in Seametrics' instruction manual
 - iii. Products not used for their intended purpose
 - iv. Alterations to the product, purposeful or accidental
 - v. Electrical current fluctuations
 - vi. Corrosion due to aggressive materials not approved for your specific product
 - vii. Mishandling, or misapplication of Seametrics products
 - viii. Products or parts that are typically consumed during normal operation
 - ix. Use of parts or supplies (other than those sold by Seametrics) which cause damage to the products, or cause abnormally frequent service calls or service problems
- h. A new warranty period will be established for repaired products, or products replaced during the original warranty period.
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