

PD10

Pulse Divider Instructions



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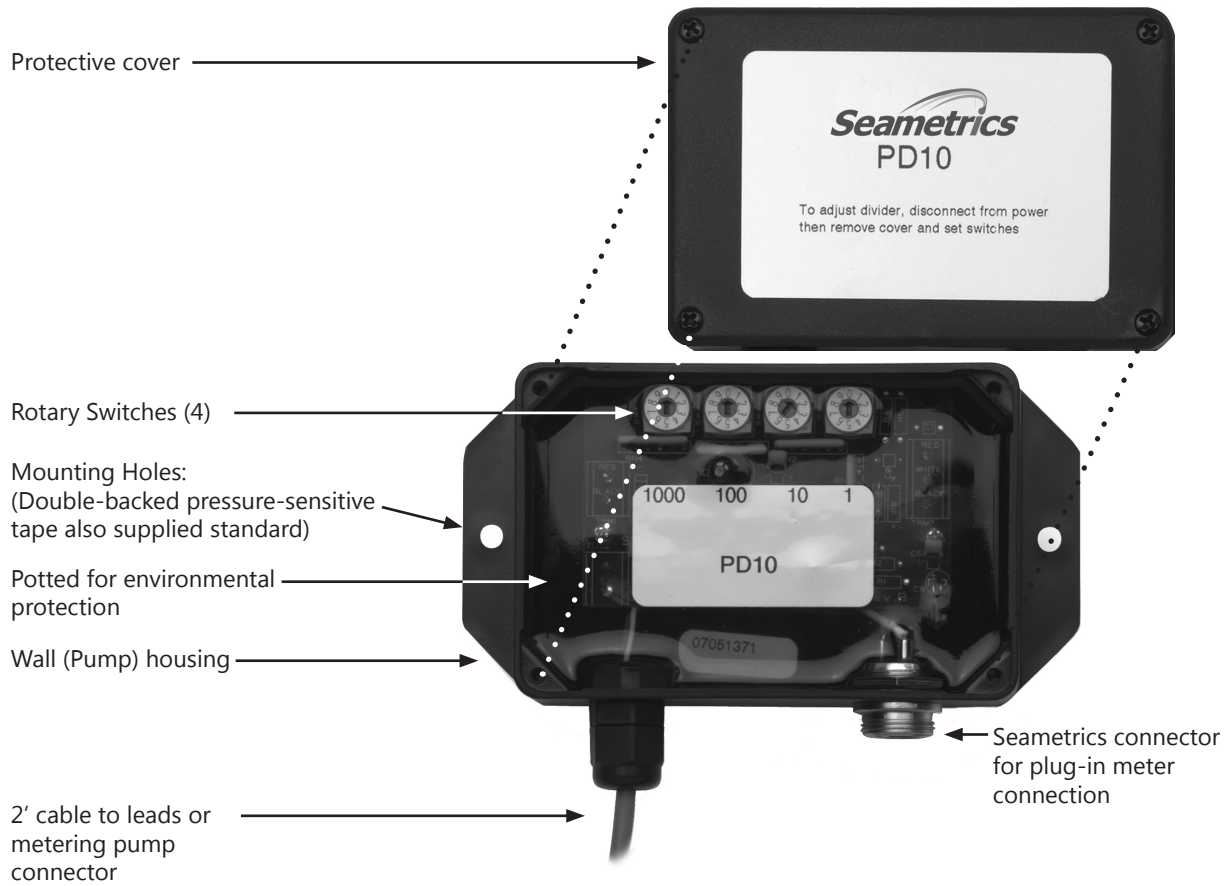
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Designed for use as a meter accessory, the PD10 Pulse Divider is used primarily for pacing electronic metering pumps. Any number from one to 9999 can be set on rotary switches. Each time the divider has received the set number of pulses from the meter, 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.

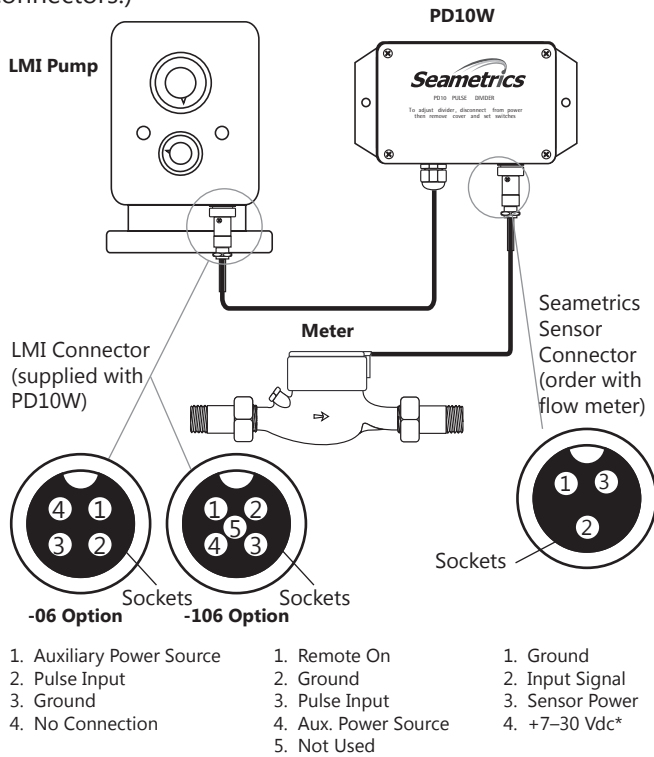
**CAUTION:**

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.

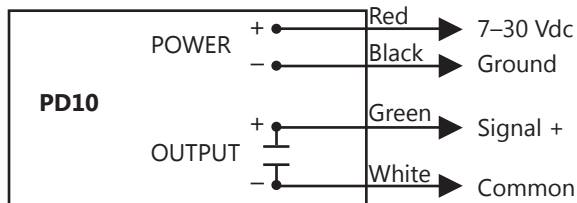
The input connector on the control mates with any three-pin Seametrics connector. (Meters or flow sensors to be used with a PD10W should be ordered with Seametrics connectors.)



***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.

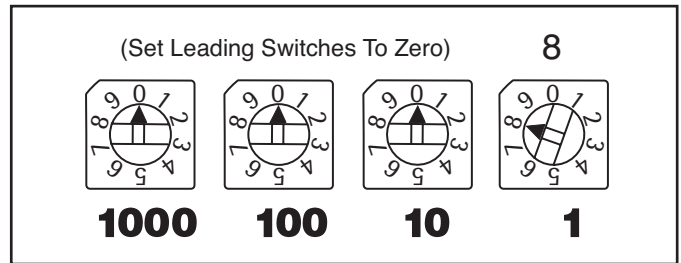
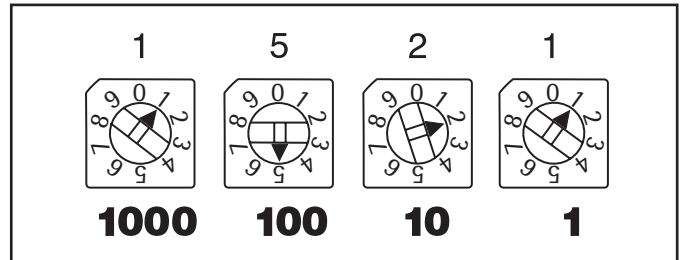


The input connector on the control mates with any three-pin Seametrics connector. (Meters or flow sensors to be used with a PD10W should be ordered with Seametrics connectors.)

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	<p data-bbox="472 233 743 264">Meter dials not turning</p> <p data-bbox="472 380 776 411">Meter pickup not working</p> <p data-bbox="472 527 980 558">Pump connector not plugged in all the way</p> <p data-bbox="472 674 943 705">Pump doesn't supply power to the PD10</p> <p data-bbox="472 789 906 821">PD10 set to large number or all zeros</p>	<p data-bbox="1008 233 1468 296">Check visually, then check for adequate flow</p> <p data-bbox="1008 380 1393 443">Remove from meter, check with a magnet</p> <p data-bbox="1008 527 1463 590">Check or tighten threaded locking ring (LMI)</p> <p data-bbox="1008 674 1474 705">Check pump manual, add power supply</p> <p data-bbox="1008 789 1430 852">Check rotary switches, especially for leading zeros.</p>
Pump strokes continually	<p data-bbox="472 911 857 942">Pump not set for external pacing</p>	<p data-bbox="1008 911 1398 974">Check pump manual and selector switch</p>
Pump doesn't stroke often enough or too often	<p data-bbox="472 1031 797 1062">PD10 set for wrong number</p> <p data-bbox="472 1178 813 1209">Multiple contacts from meter</p> <p data-bbox="472 1356 906 1388">Meter ordered with wrong pulse rate</p>	<p data-bbox="1008 1031 1425 1094">Review setting section, check rotary switches</p> <p data-bbox="1008 1178 1419 1272">Set PD10 to 1 contact/pump stroke (0001) and see if the pump strokes once for each magnet revolution</p> <p data-bbox="1008 1356 1349 1388">Check meter model/serial tag</p>

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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 period of two (2) years from date of installation, 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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- 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.
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 - 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
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Seametrics • 19026 72nd Avenue South • Kent, Washington 98032 • USA
(P) 253.872.0284 • (F) 253.872.0285 • 1.800.975.8153 • seametrics.com

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