

PST3/PST8 Pump & Slug Test Systems

for Aquifer Tests

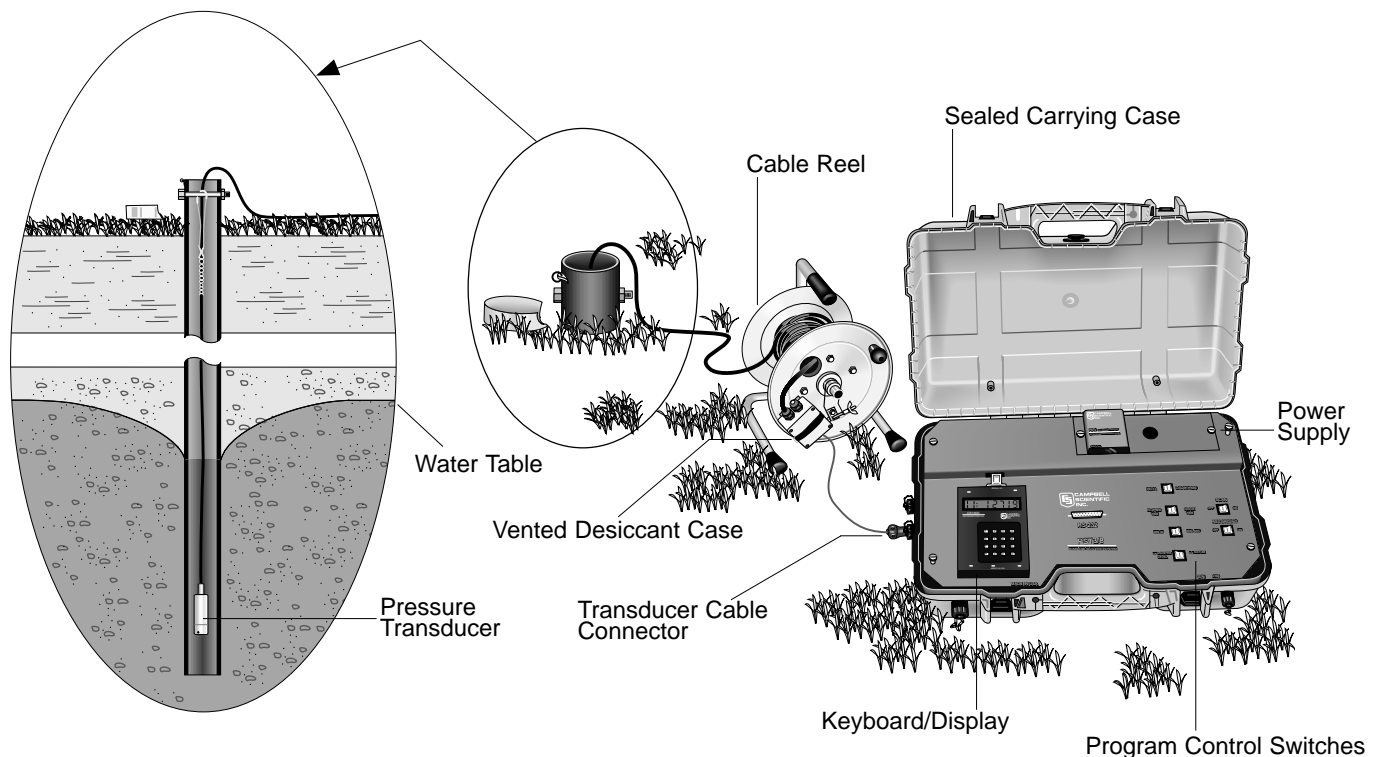
Campbell Scientific's PST systems monitor and record water level data. The PST3 measures up to three wells simultaneously; the PST8 monitors up to eight. The PST's accurate, reliable measurements and ease of use under field conditions make it an ideal system for aquifer testing.

System Design

The systems, based around the CR10X datalogger, include a display, enclosure, RS-232 port, internal power supply, and external connectors for pressure transducers.

- The system is pre-programmed for easy setup. Measurement, control, and timekeeping functions are standard.
- Monitor real time test conditions using hand held display or computer.
- Rugged and environmentally sealed briefcase-styled enclosure transports easily.
- Keyboard display can be externally connected using the KDCBL. This allows the case to remain sealed and the operator to monitor the test from the relative comfort of a field vehicle.
- Externally mounted circular connectors provide for quick connection of up to eight strain gauge pressure transducers. Sensors with cable lengths of up to 2000 feet are measured with negligible loss of accuracy.
- Internal 7 Ahr sealed rechargeable battery is standard. A 7.5 Ahr alkaline power supply can be substituted. Both battery types are accepted by all major carriers and require NO special shipping considerations. The use of an external battery, e.g. an automotive battery, is also possible.

Typical PST3/PST8 System Installation



CAMPBELL SCIENTIFIC, INC.

815 W. 1800 N. • Logan, Utah 84321-1784 • (435) 753-2342 • FAX (435) 750-9540 • www.campbellsci.com

Data Collection & Sample Rate

The CR10X can store 62,000 data points. Additional data storage is available by upgrading the CR10X memory, or adding a storage module.

Choice of two data collection methods:

Delta recording occurs whenever the measured level changes by more than a user-specified delta value. Data storage rate is up to four times per second.

Logarithmic recording scans the sensors and records data based on a logarithmic time sequence. The maximum initial sample rate is four times per second with one well; the user can enter a slower initial rate if multiple wells are monitored.

The ASCII data files resulting from either method are compatible with commercially available aquifer analysis software.

System Configuration

Use the included keyboard/display to enter the required test values, or

Use our free PCPST software in conjunction with PC208 (DOS-based) to download the information from a laptop.

Test Procedure

Prior to the test the user sets the datalogger clock and inputs the following data into a set-up table:

- ID number for the test,
- number of wells to be monitored, and
- multiplier, offset, and delta values (if needed) for each well.

Then the user toggles six program control switches to:

Preview the measurements

1) SCAN SENSORS without recording data (for sensor verification and pretest calibration checks).

Configure the test

2) SET RECORDING SCHEME for delta or logarithmic recording.

3) RECORD time as either clock time or elapsed time from start of test.

4) If ELAPSED TIME is selected, record in decimal minutes or minutes and seconds.

5) SELECT datum as 0.0 for the first level recorded or use unadjusted level.

Begin the test

6) START recording data and start elapsed time clock (if used).

Further Information

Contact our Water Resources Group at (435) 750-9693 if you have additional questions concerning the PST3/8 or any of our water resources products.

System Options

- Multiple PSTs can be networked to collect data simultaneously over a large area.
- Flowmeters can be added.
- Additional transducers are possible as a special option.
- Choice of pressure transducers.

Specifications

- Operating Temperature Range: -25° to +50°C*

Power requirements

- Voltage: 9.6 to 16 Vdc
- Current drain: 13 mA during processing
35 mA during analog measurement.

*Batteries not temperature tested.



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Printed April 2000