# Datalogger Intro

Spring 2022

Datalogger

- Main goal: take measurements and store data files.
- Dataloggers are only one part of a data acquisition system.
  - Suitable, reliable sensors and reliable data retrieval.
- Suitable sensors transduce environmental change into measureable electrical properties by:
  - Outputting a voltage,
  - Changing resistance,
  - Outputting a pulses, or
  - Changing states
- Dataloggers can measure almost any senor with an electrical response.
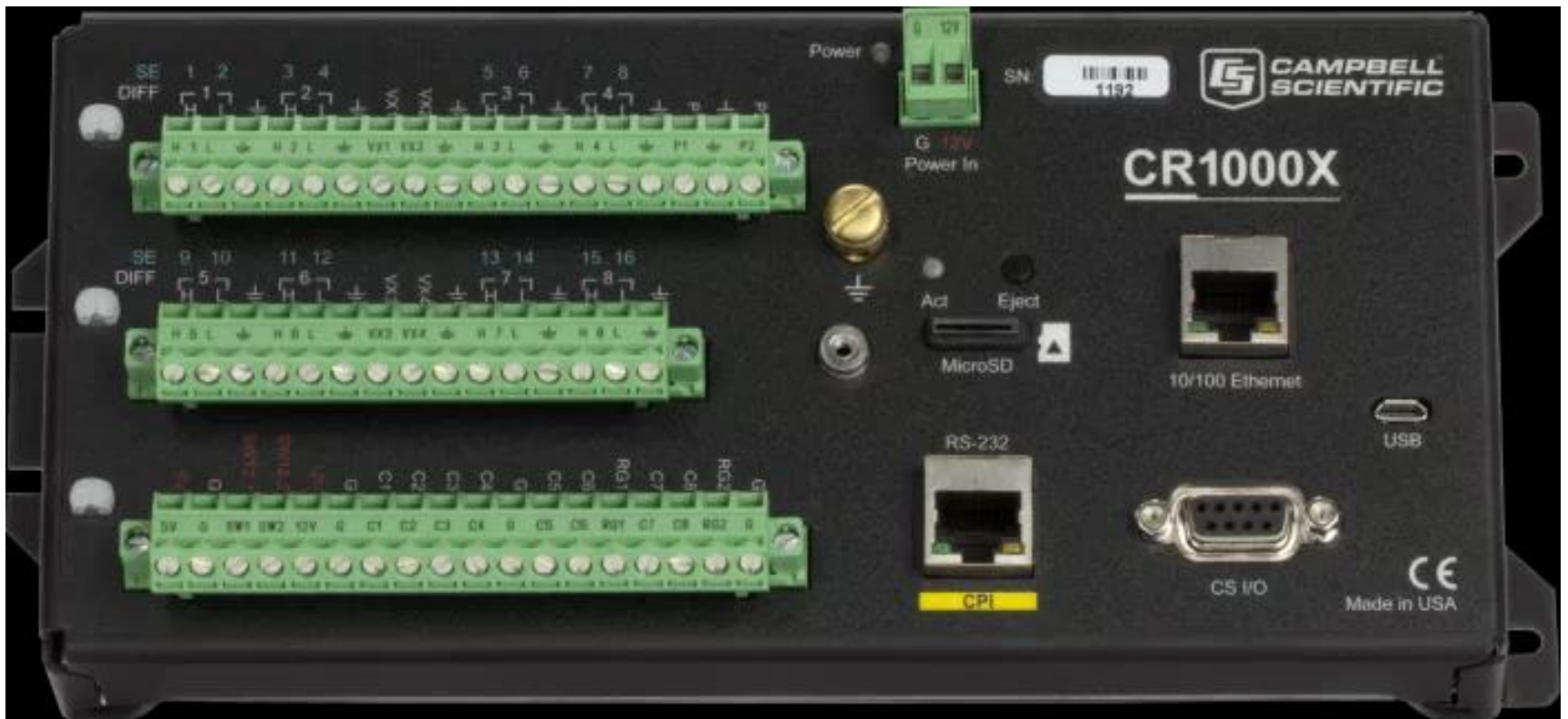
CR-1000 and CR-5000

CR-1000
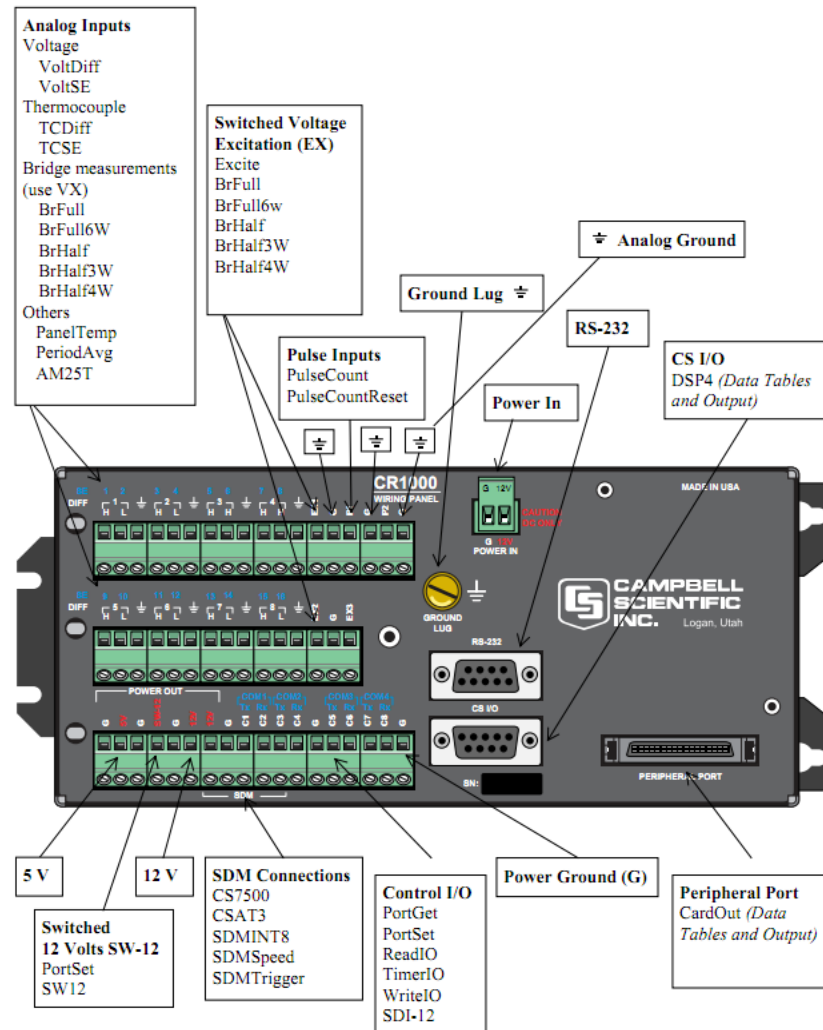
CR-1000X

CR-6

Channel Options

- Differential or Single Ended (SE)

- Differential measurement
  - Uses the H (high) and L (low) inputs.
  - Measures the voltage on the H input with respect to the voltage on the L input.

- Single Ended (SE)
  - Labeled SE on logger panel.
  - Measures the voltage on the single channel with respect to the analog ground.

- Grounds
  - Analog grounds (ground symbols): intended for use with instrument measurements.
  - G (Power grounds): intended for return currents from 5 V, SW 12 V, and 12V outputs.
    - Keeps return currents from flowing through and corrupting analog measurements.

Single-Ended Channel

Sensor Wired to Single-Ended Channel #2
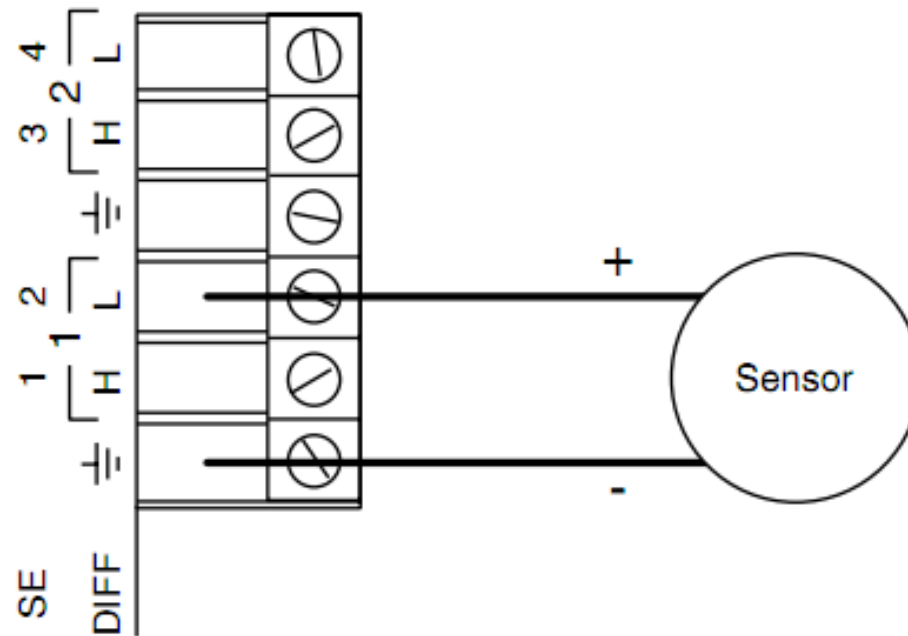
Differential

Sensor Wired to Differential Channel #1