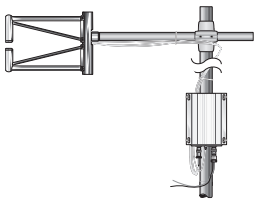
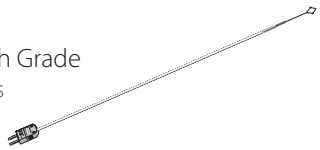
CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

BIOMET SENSORS

Campbell Scientific offers optional eddy covariance sensors, energy balance sensors, and general meteorological sensors that may be added to your flux station. Below are the sensors that are often added to our flux stations:

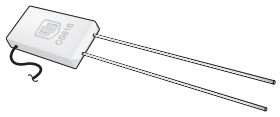
OPTIONAL EDDY COVARIANCE SENSORS

	Description
KH20 Krypton Hygrometer 	The KH20 is a highly sensitive hygrometer that measures rapid fluctuations in atmospheric water vapor. It does not measure absolute concentrations.
FW05, FW1 & FW3 | Research Grade Type E, Fine Wire Thermocouples 	Campbell Scientific's FW05, FW1, and FW3 thermocouples measure atmospheric temperature gradients or fluctuations with research-grade accuracy. The diameters of the FW05, FW1, and FW3 thermocouples are 0.0005 in., 0.001 in., and 0.003 in., respectively.

ENERGY BALANCE SENSORS

	Description
HC2S3 | Accurate and Rugged Temperature and Relative Humidity Probe 	The HC2S3 is Ideal for long-term, unattended applications. It uses an advanced capacitive sensor to measure relative humidity and a 100 ohm PRT to measure temperature.
NR-LITE2 | Weather Resistant Net Radiometer 	The NR-LITE2 is a rugged net radiometer that includes PTFE-coated absorbers instead of a fragile dome. It measures the energy balance between incoming short-wave and long-wave infrared radiation relative to surface-reflected short-wave and outgoing long-wave infrared radiation.
NR01 | Research Grade Net Radiometer 	The NR01 is a robust, four-way radiometer that requires little maintenance. It measures the energy balance between incoming short-wave and long-wave infrared radiation versus surface-reflected short-wave and outgoing long-wave infrared radiation.

ENERGY BALANCE SENSORS CONT.

	Description
CNR4 | WMO Class Quality Net Radiometer 	The CNR4 offers a professional solution for scientific-grade energy balance studies. It is a four-way radiometer that contains both an internal thermistor and an internal PT-100 RTD. This net radiometer measures the energy balance between incoming and outgoing radiation.
TCAV Type E Thermocouple Averaging Soil Temperature Probes 	The TCAV provides the average temperature of the top 6 to 8 cm of soil for energy-balance in flux systems. It parallels four thermocouples together into one, 24-AWG wire. Each member of a thermocouple pair can then be buried at a different depth. The two pairs are separated at a distance of up to 1 m.
CS616 | High Accuracy and Precision Water Content Reflectometer (volumetric soil moisture) 	The CS616 is designed for long-term monitoring of volumetric water content from 0% to saturation. The probe outputs a megahertz oscillation frequency, which is scaled down and easily read by a Campbell Scientific datalogger.
CS650 or CS655 | Innovative Water Content Reflectometer (volumetric soil moisture) 	The CS650 and CS655 use innovative techniques to monitor soil volumetric water content, bulk electrical conductivity, and temperature. These reflectometers make more water content measurements in soils with high electric conductivity without performing a soil-specific calibration. They output an SDI-12 signal that many of our dataloggers can measure. The CS650 has 30-cm rods, and the CS655 has 12-cm rods.
HFP01 | Extreme Accuracy Soil Heat Flux Plate 	The HFP01 measures soil heat flux for energy-balance systems. At least two sensors are required for each site to provide spatial averaging. Sites with heterogeneous media may require additional sensors.
HFP01SC | Extreme Accuracy Self-Calibrating Soil Heat Flux Plate 	The HFP01SC is a self-calibrating soil heat flux for energy-balance systems. At least two sensors are required for each site to provide spatial averaging. Sites with heterogeneous media may require additional sensors.