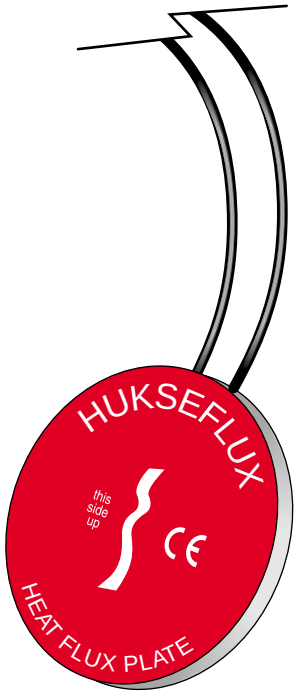
Self-Calibrating Heat Flux Sensor

Model HFP01SC



The HFP01SC measures heat flux, typically as a component within energy balance or Bowen ratio flux systems. The HFP01SC is manufactured for Campbell Scientific by Hukseflux (Delft, The Netherlands) and is compatible with our CR510, CR10(X), 21X(L), CR23X, and CR7 dataloggers. The sensor outputs a voltage signal that is proportional to the heat flux of the surrounding medium. At least two sensors are required for each site to provide spatial averaging. Sites with nonhomogeneous media may require additional sensors.

The HFP01SC includes an on-board heater allowing self-calibration using the "Van den Bos-Hoeksema" method. Self-calibration corrects for errors due to differences in thermal conductivity between the sensor and surrounding medium, temperature variations, and slight sensor instabilities. The calibration process takes approximately eight minutes and is typically performed every two hours. For more information about this self-calibration method, see Hukseflux's note, Application of Self Calibrating Heat Flux Sensors, available from http://www.hukseflux.com

Ordering Information

HFP01SC-L User specifies lead length (in feet) after the L.

Specifications

Sensor Type:	Thermopile
Sensitivity (nominal):	50 µV W^{-1} m^{-2}
Resistance (nominal):	2 Ω
Temperature Range:	-30° to +70°C
Weight:	7.05 oz (200 g)
Dimensions:	3.15" (80 mm) diameter, 0.20" (5 mm) depth

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