

Evapotranspiration Monitor



The new generation of environmental monitoring

Sensor system made for the acquisition of spectral properties to monitor the activity of plants.

Benefits

+ Excellent Values:

- Low initial investment for startup configuration
- Best performance and precision
- Compact design

+ Robust:

- Harsh environmental conditions
- Long term stability
- UV resistant

+ Versatile:

- Programmable recipes allow automatic execution
- Reconfiguration of all sensor parameters
- Wide spectral range

+ Connectivity:

- UART
- Kompass sensor gateway

Technology

The Evapotranspiration Monitor is a holistic sensor system to monitor the evaporation and transpiration properties in the application field of environmental monitoring. Due to a compact design and a simple communication interface, the sensor system can easily be brought into application. By using three different sensor technologies (spectrometer, thermopile, wideband photodiode), extensive information about plant activities can be measured. Through a dual mode, the incident and reflected radiation can be compared. Furthermore, the Evapotranspiration Monitor can be connected to a Kompass sensor gateway.

Product Parameters

Feature	Description
Dimensions (Diameter, Height)	160 mm, 240 mm
Weight	3,5 kg
Sensor Interface	UART
Real Time Data Acquisition	Synchronized sampling rate of all sensor signals
Options	Integration into Kompass sensor gateway

Sensor Parameters

Global radiation sensor	Description
Photo diode 1	250 - 1100 nm
Photo diode 2	600 - 1750 nm
Digital Resolution	24 Bit

MIR radiation sensor	Description
Wavelength	8 - 14 μ m
Absorption Area	0.8 x 0.8 mm
Digital Resolution	16 Bit

Spectrometer	Description
Wavelength	350 - 1000 nm
Optical Resolution	4.5 nm FWHM
Max. Wavelength Error	0.5 nm
Stray Light	<0,1%

Detection of radiance (FOV 180 Degree)

Detection of irradiance (FOV 25 degree)

Communication Interface

Direct communication with the Evapotranspiration Monitor can be done with commands via a UART interface. In combination with a UART-TTL USB adapter, the Evapotranspiration Monitor can be handled as a serial port with the setting *8N1/no protocol*. The transfer rate (baud rate) is 115200 Bd.

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