



Present Weather Sensor Model 6490

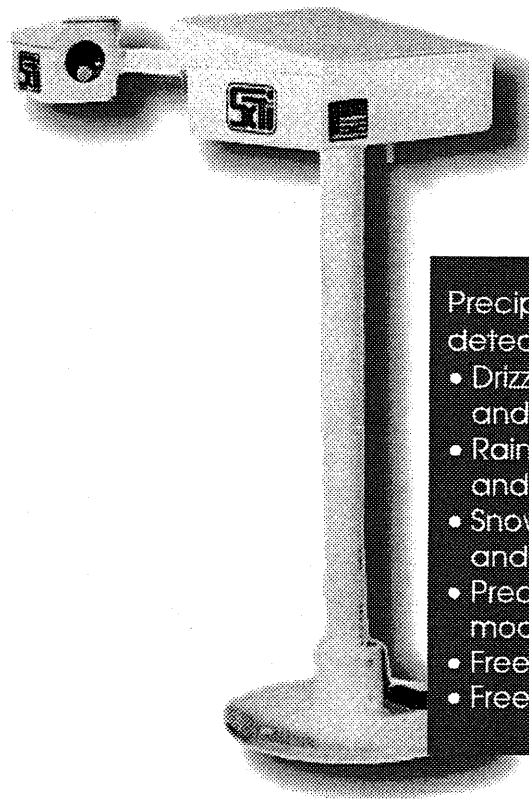
GENERAL DESCRIPTION

The Model 6490 Present Weather Sensor optically measures precipitation induced scintillation and applies algorithms to automatically determine the precipitation occurrence, type, and rate. The Model 6490 is vastly superior to traditional type sensors, and offers reliability and proven performance.

The Model 6490 measures precipitation by detecting the optical irregularities—known as scintillations—induced by particles falling through a beam of partially coherent infrared light (in the sample volume).

By detecting the intensity of the scintillations characteristic of precipitation, the precipitation rate is determined, allowing it to be used as a precipitation accumulation sensor.

By analyzing the frequency spectrum of the induced scintillation, the precipitation type is determined.



Precipitation types detected include:

- Drizzle (light, moderate, and heavy)
- Rain (light, moderate, and heavy)
- Snow (light, moderate, and heavy)
- Precipitation (light, moderate, and heavy)
- Freezing rain
- Freezing drizzle

By adding an optional Hail and Ice Pellet Sensor (HIPS), hail and ice pellets can also be detected. Precipitation is measured using the sensor head “in-beam” optics.

An optional rechargeable backup battery kit (housed in the Model 1190 DCP) is available to power the sensor in the event of AC power failure.

Designed for rugged, unattended operation, the Model 6490 provides accurate measurement of precipitation in all weather conditions.

SPECIFICATIONS

Performance Specifications

PW Codes Reported	More than 50 NWS & WMO codes
Rain Dynamic Range.....	0.1 to 3000 mm/hr
Rain Accumulation	0.1 to 999.999 mm
Rain Accuracy	5% Accumulation
Rain Resolution	0.001 mm
Snow Dynamic Range	0.01 to 300 mm/hr water eq.
Snow Accuracy	10% Accumulation
Snow Resolution.....	0.001 mm
Hail & Ice Pellet Accuracy.....	Correctly reports 90% of the time
Data Update Rate	Once per minute

Electrical Specifications

Power	Field selectable to: 100/110/220/230 VAC, 50/60 Hz
Requirements.....	50 VA (12 VDC @ 3 A power supply optional)
Signal Output	RS-485
Transient Protection	AC power and RS-485 signal lines fully protected

Environmental Specifications

Temperature	-40 to +50°C (-40 to +122°F)
Humidity	0-100%
Precipitation/Dust	NEMA-4X protection

Options

Hail and Ice Pellet Sensor (HIPS)
Backup Battery Kit



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