



Chilled Mirror Dew Point Hygrometer Shinyei DewStar Series

Model S-1S3/M

The model S-1S3/M Chilled Mirror System is a high performance Chilled Mirror Sensor with three-stage Peltier Thermoelectric mirror cooling. It provides accurate and reliable dew point measurement over an extended range for long periods of time with new ACCU-STAR* mirror maintenance feature.

The S-1M is a remote multifunction display monitor.

The S-1M can display two selectable measurements simultaneously, while outputting two selectable analog outputs, one selectable alarm point and any combination of selected measurements on a serial port.

The S-1M also controls the function of the S-1S3 and timing of the ACCU-STAR feature.

The S-1M can be mounted up to 300m away from the S-1S3 using low cost cable.

The microprocessor controlled S-1S3 measures dew point by precisely controlling the temperature of a Rhodium plated mirror at the dew point temperature using a digital control algorithm. A fine layer of dew is grown on the mirror surface and mirror temperature is controlled by a thermoelectric heatpump at the point where the dew layer neither grows nor evaporates, but remains in a stable condition.

A 4 wire 100 Ohm platinum RTD is used to measure the stable dew point temperature.



ACCU-STAR*

- A: Automatic**
- C: Contamination**
- C: Correction**
- U: Utility**
- S: Special**
- T: Timed**
- A: Accuracy**
- R: Recovery**

An additional port for a temperature probe and pressure sensor allow the S-1S3/M to calculate and display many humidity, temperature and pressure based measurements such as:

Dew Point	Deg C or F
Temperature	Deg C or F
Pressure	kPa, mbar, psia, mmHg
Relative Humidity	%RH
Absolute Humidity	PPMv, PPMw, g/m ³ , grains/lb

Specifications:

	Dew point range	-60 to 20deg. C. D.P. at 20deg. C
	Accuracy	+/-0.2deg. C (+/-0.15deg. C as option)
	Repeatability	+/-0.05deg. C
	Hysteresis	None
Optional Inputs	Temperature	100Ohm PRT 4 wire 0.00385 Ohm/Ohm/deg. C
	Pressure	4 to 20mA abs. pressure sensor
Outputs	Analog	Dual 0 to 5VDC and 4 to 20mA (Any parameter)
	RS-232	Any parameter
	Alarm	100mA AC/DC Opto-Isolated
Operating Conditions	Ambient Temp.	0 to 60deg. C
	Pressure	0 to 1Mpa
	Power	85 to 265VAC, 50/60Hz, 100W
	Weight	5 kg
Size	S-1S3 Sensor	360 x 110 x 130 mm
	S-1M Monitor	210 x 110 x 30 mm

Remark; we have the right to revise specifications and product configurations without notice.



Contact :

Shinyei Corporation of America

11 East 44th St., Ste.700, New York, NY 10017

TEL (212)682-4610 FAX (212)286-8426

E-mail: tony.tokuya@sca-shinyei.com