



Chilled Mirror Dew Point Hygrometer Shinyei DewStar Series

Model S-1S/M

The model S-1S/M Chilled Mirror System is a high performance Chilled Mirror Sensor with two-stage Peltier Thermoelectric mirror cooling to measure low frost points. 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-1S and timing of the ACCU-STAR feature.

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

The microprocessor controlled S-1S 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

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An additional port for a temperature probe and pressure sensor allow the S-1S/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	65deg. C D.P or less at 25deg. C(below ambient Temperature)
	Accuracy	+/-0.2 deg. C (+/-0.15deg. C as option)
	Repeatability	+/-0.05 deg. C
	Hysteresis	None
Optional Inputs	Temperature	100 Ohm PRT 4 wire 0.00385 Ohm/Ohm/deg. C
	Pressure	4 to 20 mA abs. pressure sensor
Outputs	Analog	Dual 0 to 5 VDC and 4 to 20mA (Any parameter)
	RS-232	Any parameter
	Alarm	100mA AC/DC Opto-Isolated
Operating Conditions	Ambient Temp.	0 to 60 deg. C
	Pressure	0 to 1 Mpa
	Power	85 to 265 VAC 50/60Hz 100W
	Weight	5 kg
Size	S-1S 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.



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