

SON-100 / SON-200

Features

- Measures **Temperature** and **Humidity** through Internal sensors
- Optional external temperature sensor
- Communicates through Internet
 - SON-100: Ethernet Connection
 - SON-200: WiFi Connection
- User-Friendly Installation and Configuration
- Automatic Firmware Update
- No Calibration Required
- Low cost / Reliable

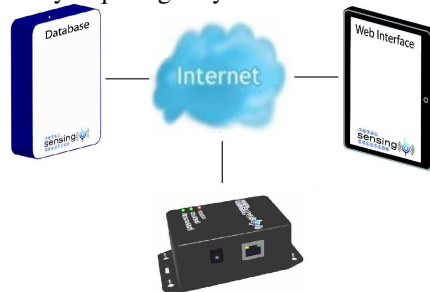


Applications

- Computer server room
- Wine cellar
- Pharmacy / Medication room monitoring
- Art gallery

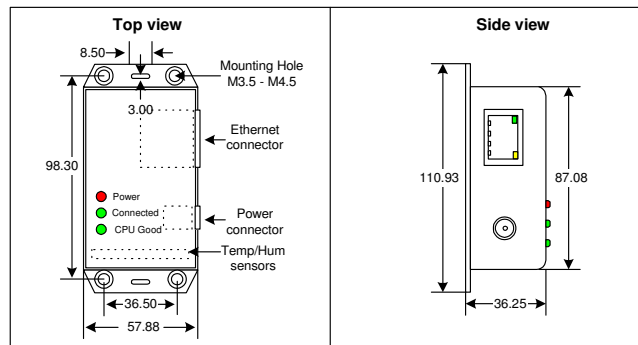
Overview

The SON-100/SON-200 measures ambient temperature and humidity with its internal sensors. There is an option for an external temperature. It offers high precision and reliability. The sensors do not require any calibration and their installation is easy requiring only an Internet connection and an electric outlet.



The data sampled by the SON-100/SON-200 unit is sent to the *Total Sensing Solution* (TSS) database server. The TSS is a complete monitoring system that allows the user to archive data, configure the SON units to send alarms and view real-time and historic values of the room being monitored. It presents the data on a user-friendly web interface. To know more about the TSS system and test it, please consult TSS website: www.sysacom.com/tss.

Mechanical



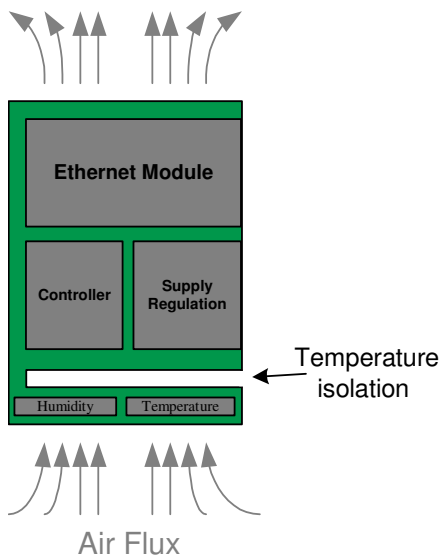
(Unit: mm)

Specifications

	SON-100	SON-200
Performance		
Baud Rate (Mbit/sec)	up to 100	up to 54
Temperature Error (°C)	+/- 1	
Temperature Resolution	0.1	
Humidity Error (% RH)		
- 11% RH to 89% RH	+/- 3	
- 0% RH to 10% RH and 90% RH to 100% RH	+/- 7	
Humidity Resolution (% RH)	0.1	
Environment		
Operating Temperature (°C)	-20 to 50	
Operating Humidity (%)	0 to 100	
Electrical		
Supply Voltage (Vdc)	12	
Supply Power (W)	<2	
Plug Diameter (mm)	2.1	
Physical		
Unit Size (in)	4.368 x 2.279 x 1.427	
(mm)	110.93 x 57.88 x 36.25	
Weight (g)	93	
(lb)	0.21	
Ext. sensor cable length (in)	35.8	
(mm)	910.0	

Connectors		
Pin	Power	Ethernet
1		TX+
2		TX-
3		RX+
4		GND
5		GND
6		RX-
7		GND
8		GND
Center	12Vdc	
Case	COM	

Principles of Operation



The SON-100/SON-200 unit produces readings of temperature and humidity at uniform intervals: the interval rate is selected by the user through the Web User Interface accessed on the Sysacom secured website. The analog to digital conversion is carried out by the unit itself (in the micro-controller) and has a resolution of 12-bit. Next, the read values are transmitted to the database, thanks to the unit's Ethernet or WiFi connection. The protocols used to package the delivery of them are MySQL and the TCP/IP. The TCP/IP assures that the Total Sensing Solution is a reliable and dependent service.

The unit's mechanical design was done so that the heat produced from the electronic circuit (Ethernet module, micro controller, power supply, etc.) does not influence the reading of the temperature and humidity. A cutout in the printed circuit board is added so that the sensors will be in the least physical contact with the circuit as possible. Next, special openings were placed in the SON-100 box in order to increase the air flow throughout the unit.

Ordering Information

Part	Communication Link	Temperature Range
SON-100-(X)	Ethernet (IEEE - 802.3)	-20°C ~ 50°C
SON-200-(X)	WiFi (IEEE - 802.11b/g/n)	-20°C ~ 50°C

(X): Without external temperature sensor (A), otherwise (B)

Units are ROHS compliant.