Humidity and Temperature Meter

(Model: SHT-DB9/RJ11)

(DB9 connector)

(RJ11 connector)

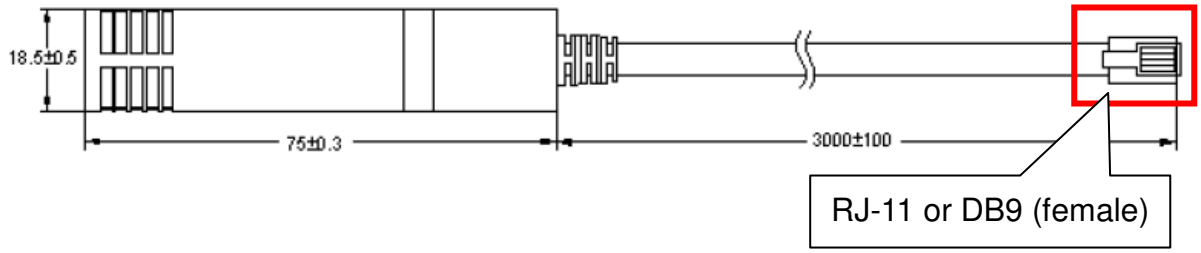
Specifications:

- Operation voltage : DC 3.3V~5V.
- Current Consumption : 5mA(max)
- Operation temperature : 0~60℃.
- Operation humidity : 15~95%RH.
- Accuracy :
  Temperature ±1℃
  Humidity ±3%RH at 25℃
- RS232 interface for TXD/RXD/GND.
- Baud rate : 9600 bps, 8 data bits, None parity, 1 Stop bit
- Connector: DB9 (female) or RG-11

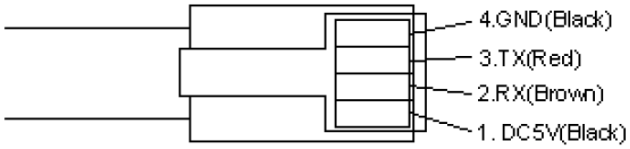
Application:

- Server room monitor.
- Indoor building automation.
- HVAC system.
- Wireless Sensor Network (WSN)

Dimensions and Pin definition:

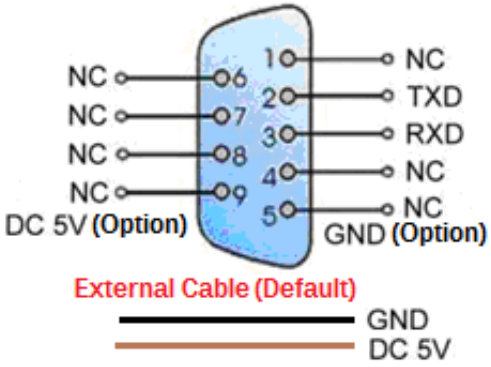


RJ11 connector pin definition:



Pin	Definition	Type	Description	Color
1	Power	P	5V DC IN	Black
2	RXD	I	RS-232 RXD	Brown
3	TXD	O	RS-232 TXD	Red
4	GND	P	Ground	Black

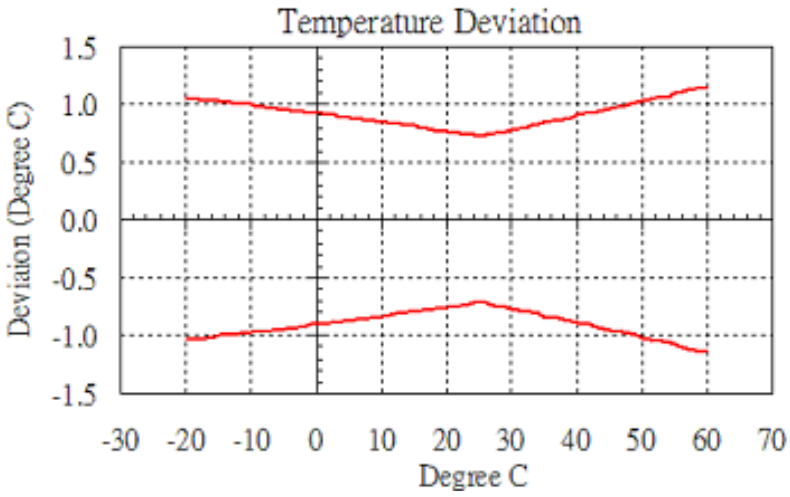
DB9(Female) connector pin definition:



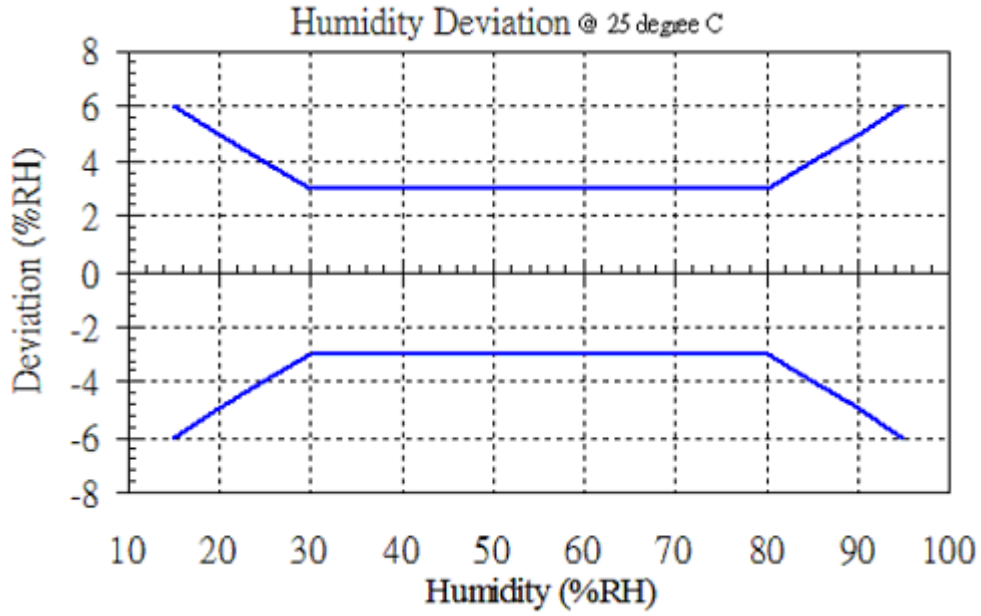
Description:

Pin	Definition	Type	Description	Remark
2	TXD	O	RS-232 TXD	
3	RXD	I	RS-232 RXD	
5	GND	P	Ground	Option, Default: External Black Line
9	Power	P	5V DC IN	Option, Default: External Brown Line

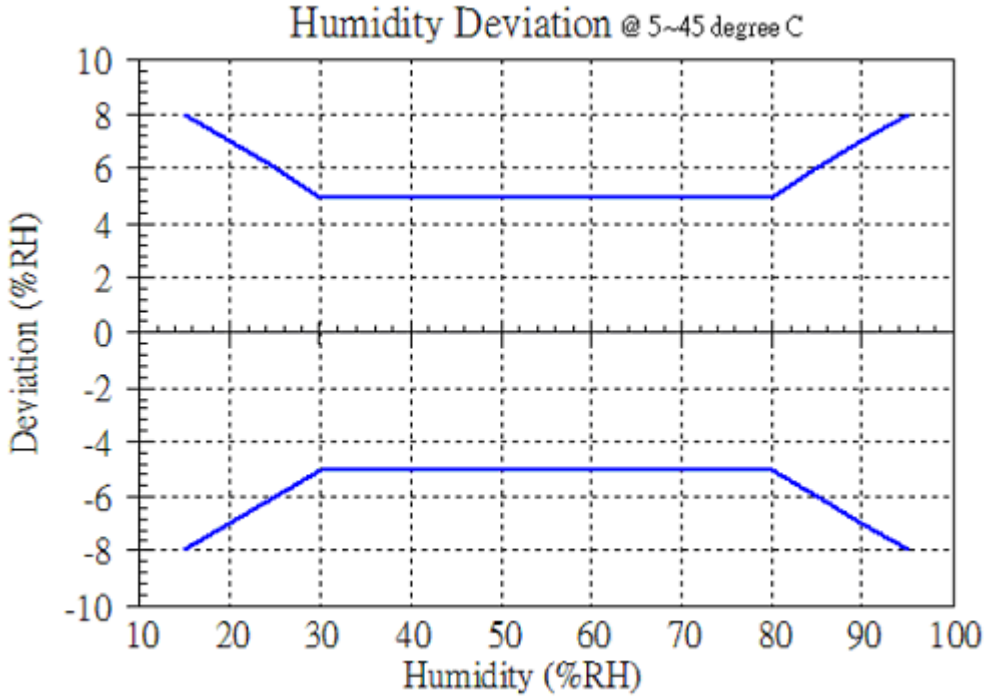
Temperature characteristics:



Humidity characteristics:



Humidity v.s Temperature characteristics (Reference only)



Reliability:

No.	Item	Method	Requirement
1	Impact test	To drop Module 3 times at random on to a hard wooden plate from 1meter above high.	No breakage, nor cracks. Should be electrically normal.
2	Vibration test	Vibration test in X-Y-Z axis for 30min. under 10-55Hz frequency, 1.5 mm(10-55-10Hz)amplitude.	No breakage, nor cracks. Should be electrically normal.

3	Heat resistance	1000 hours@ 70℃	Within ±5%RH
4	Cool resistance	1000 hours@ -30℃	Within ±5%RH
5	Humidity resistance	To leave module in an ambient of 60℃ and 90%RH for 1000hours.	Within ±5%RH
6	Temperature cycle test	Repeat 100 cycles，Each cycle: 30 minutes@-30℃ 30 minutes@85℃	Within ±5%RH

Remarks：

1. All standard figures are based on humidity variation under 60%RH(25℃)
2. Upon completion of all tests. The module will be left over under nominal environment and humidity for 24hours.

ASCII Command:

Command	Descriptor	Response
*RST	Software reset	No output
READ?	Read sensor data	*TH-10R;+025.5C;0064.0%;XX

Description:

*TH-10R : Temperature and Humidity module.

+025.5C : Temperature value.

0064.0% : Humidity value.

XX : Checksum.

Order Information:

Part No.	Description
SHT-DB9	Humidity and Temperature Meter with DB9 connector, Pin 5: GND, Pin 9: 5V DC IN
SHT-DB9-E	Humidity and Temperature Meter with DB9 connector, External black cable: Ground, External brown cable: 5V DC IN
SHT-RJ11	Humidity and Temperature Meter with RJ11 connector

Appendix: Wireless sensor communication solutions

1. Bluetooth RS-232 adapter: The PC/NB, smart phone or tablet PC will set the command and read the value. Please visit the site for more information.
   http://uconnect.com.tw/BT232BE.html
   http://uconnect.com.tw/Android.html

2. WiFi RS-232 adapter: The PC/NB, smart phone or tablet PC will set the command and read the value. Please visit the site for more information.
   http://uconnect.com.tw/WA232.html

3. Zigbee RS-232 adapter: The PC/NB or MCU will set the command and read the value. Please visit the site for more information.
   http://uconnect.com.tw/ZAH.html

Zigbee command: “MSG_Send”

SOP	CMD	LEN	DATA								FCS
			Short addr	Len	DATA						
					R	E	A	D	?	vbcr	
02	0043	09	(TBD)	06	52	45	41	44	3F	0A	(TBD)

Remark: Please refer to the Zigbee API document for reference.

4. Active RFID: The Temperature will be integrated with the active RFID RS-232 tag which will report the value periodically or set the alarm level. Please visit the site for more information.
   http://uconnect.com.tw/ActiveRFIDReader.html

Remark: The function is customized for project but not for standard product. Please contact us for the more information.

5. Ethernet to RS-232 gateway: The Ethernet to SR-232 gateway will convert the value to TCP/IP network. Please visit the site for more information.
   http://uconnect.com.tw/IPS.html