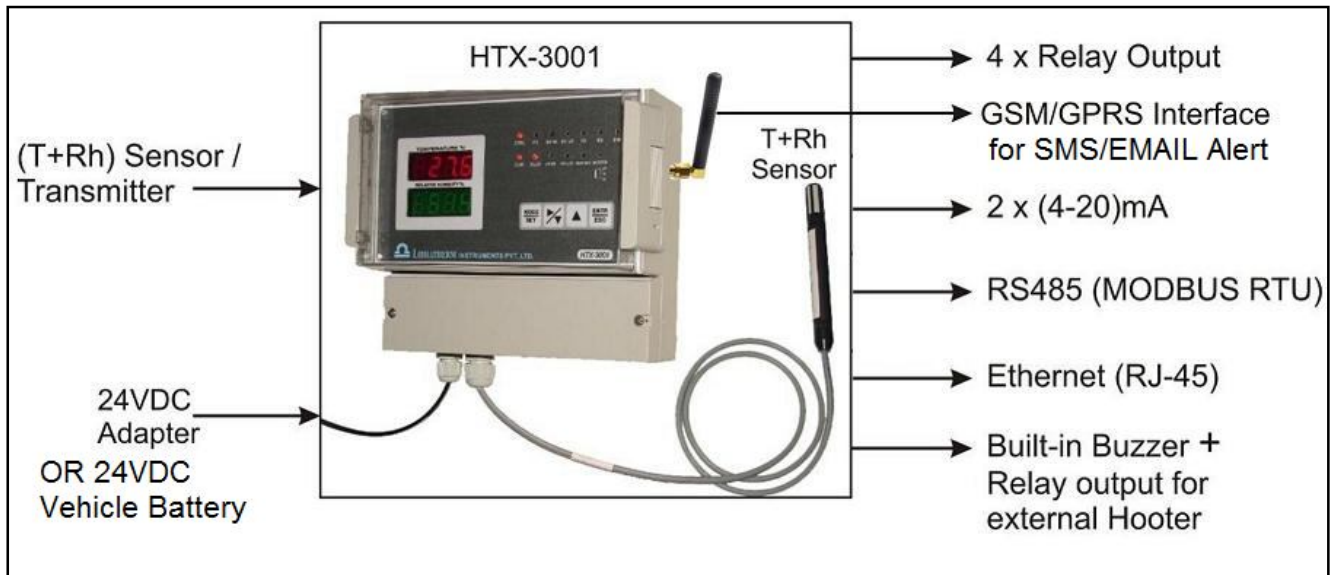


## Temperature / Humidity Monitoring system with Alarms and Serial/GSM Interface (Product Code 16.13)



### Description:

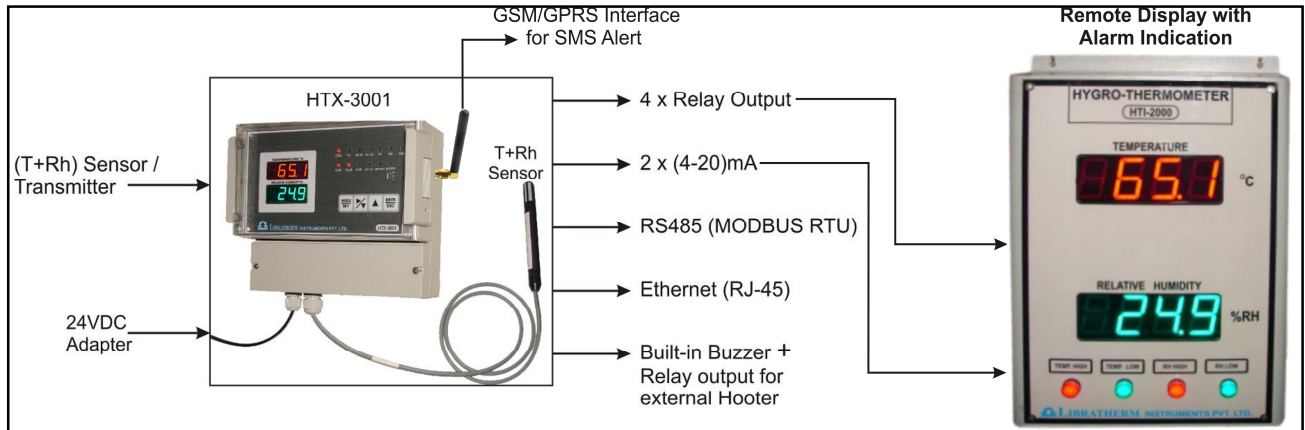
Libratherm offers micro-controller based (T + Rh) monitoring system, model **HTX-3001** with digital display, High and Low alarm relays, 4-20mA output, RS 485 and Ethernet outputs as per the requirement. Even SMS alert can be sent to 5 different users using GSM interface. User can store the desired 5 cell numbers in the SIM card where SMS are to be received. For Email alert, the desired 5 email IDs are to be specified by the user and will be factory programmed into the built-in memory of HTX-3001. For email alert facility, user must ensure to use the SIM card with data enabled facility from the service provider.

This model find its application in Green House, Storage rooms, Server room, data centers, Sterilizers, Pharmaceutical and Food product storage or manufacturing plants, Cold chain vehicles and all such similar areas where the measurement is important and critical and required to be strictly maintained at the desired levels. For sensing (T + Rh) in vacuum system, specially designed suitable sensor assemblies are also available.

### Features:

- ❖ Microcontroller based design.
- ❖ Elegant appearance, easy to operate and compact in size.
- ❖ Highly accurate and sturdy in operation.
- ❖ Dual display for simultaneous indication of T and RH.
- ❖ Relays, 4-20mA, RS485 and Ethernet, GSM interface.
- ❖ Easy to mount and install.





### Technical Specifications:

<b>Sensor</b>	T + Rh sensor / transmitter
<b>Temperature Range</b>	-40.0 to 60.0 °C / -20.0 to 80.0 °C / 0.0 to 60.0 °C / 0.0 to 100.0 °C (User to specify the display range)
<b>Temperature Accuracy</b>	+/- 0.3 °C
<b>%RH Range</b>	0.0 to 100.0 %RH
<b>RH Accuracy</b>	+/-1.5 %RH @ 23.0 °C .
<b>Display for T and %RH</b>	4 digit each – 0.5" seven segment LED, red for Temperature and green of %Rh
<b>Power Requirement (*)</b>	24VDC +/- 10% @ 150mA.
<b>Output 1 for Temperature</b>	4-20mA proportional to -40.0 to 60.0 °C / -20.0 to 80.0 °C / 0.0 to 100.0 °C <b>Or</b> for any other range – please see the Ordering Information table given below (this output has 12 bit resolution)
<b>Output 2 for %RH</b>	4-20mA proportional 0.0 to 100.0 %RH (12 bit resolution)
<b>Load Resistance to (4-20)mA</b>	RLmax. = 400 Ohms @ 24VDC.
<b>Relay Outputs</b>	2 nos. High/Low alarm relay each for T and RH - Total 4 nos.
<b>Audio Output</b>	Built in Buzzer + Single Relay to activate external audio alarm.
<b>Serial Output (optional)</b>	Isolated 2 wire RS485 interface on MODBUS RTU protocol (slave mode)
<b>Ethernet Port (optional)</b>	Ethernet port on RJ-45 jack with TCP/IP protocol.
<b>GSM/GPRS Interface (optional)</b>	Allows user to send SMS/Email alert on 5 cell nos. or 5 email IDs – in the event of temperature or humidity going outside the preset limits. (This is for preventive measures)
<b>Key board</b>	Membrane key board is provided for programming the MODBUS address and for calibration.
<b>Enclosure (Size)</b>	ABS plastic with transparent protection cover 212(W) x 185(H) x 106(D) mm.
<b>Available T +RH Sensor</b>	Hygroclip XD
<b>24VDC Adapter (Optional)</b>	24VDC adapter working on 90-250VAC can be supplied along with HTX-3001 as shown above or external 24VDC can be used.
<b>Mounting</b>	Suitable for Wall mounting.

## Format of SMS/Email Alert:

LIBRATHERM HTX-3001  
 STATUS OF (T+RH)  
 T(Actual)=020.0°C  
 T(Set Hi)=025.0°C  
 T(Set Lo)=015.0°C  
 T(Status)=OK  
 Rh(Actual)=050.0%  
 Rh(Set Hi)=045.0%  
 Rh(Set Lo)=035.0%  
 Rh(Status)=Hi

## Ordering Information:

MODEL	A - Temp. Range	B - %RH Range	C - RS 485	D- Ethernet	E- GSM/GPRS interface	E-24VDC Adapter
HTX-3001	A1- (-40.0 to 60.0 °C) A2- (-20.0 to 80.0 °C) A3- (0.0 to 100.0 °C) A4- (0.0 to 60.0 °C)	B1- (0.0 to 100.0%)	C1-(Yes) 00-(None)	D1- (Yes) 00-(None)	E1 – SMS only E2 – Email only E3 – SMS+EMAIL 00 – (None)	E1-(Yes) 00-(None)

Note: Dual 4-20mA and 4 relay outputs are available as standard.

## Examples:

MODEL	A - Temp. Range	B - %RH Range	C - RS 485	D- Ethernet	E- GSM interface	F-24VDC Adapter
HTX-3001	A1	B1	00	D1	E1	F1
HTX-3001	A3	B1	C1	00	00	00

Example	Ordering Code	Description
1	HTX-3001-A1-B1-00-D1-E1-F1	This is wall mounting type T + RH transmitter with 4-20mA proportional to -40.0 to 60.0 °C and 0.0 to 100.0% and with Ethernet and GSM interface for SMS alert and 24VDC adapter.
2	HTX-3001-A3-B1-C1-00-00-00	This is T + RH transmitter with 2 meter sensor cable, with 4-20mA proportional to 0.0 to 100.0 °C and 0.0 to 100.0%Rh and RS 485 interface.

## Representation of Installation Site:

