

## SPECIFICATION

AUXILIARY SUPPLY	
Supply voltage	100 to 250V AC, 50-60Hz
Power consumption (VA RATING)	Approx. 7 VA @ 230V AC MAX

ENVIRONMENT CONDITION	
Operating Temp.	0°C to 55°C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level	IP-65 (Front side) As per IS/IEC 60529 : 2001

OUTPUT SPECIFICATION	
<b>Analog Out</b>	
Output	4-20mADC/0-10VDC
<b>Relay Output/ SSR Output (Factory Set)</b>	
Relay/SSR	2
Relay Type	(NO-C)
Rating	Relay:10A, 230VAC/30V DC SSR: 12VDC,30mA

### 24VDC Transmitter supply & RS485 (Modbus)

COMMUNICATION SPECIFICATION	
Protocol	Modbus RTU Serial
Standard	RS - 485
Communication method	2 wire half duplex
Communication rate	9600,19200
Address range	1-127
Data type	Integer

DISPLAY	
128 x 64 Bit Graphical LCD	

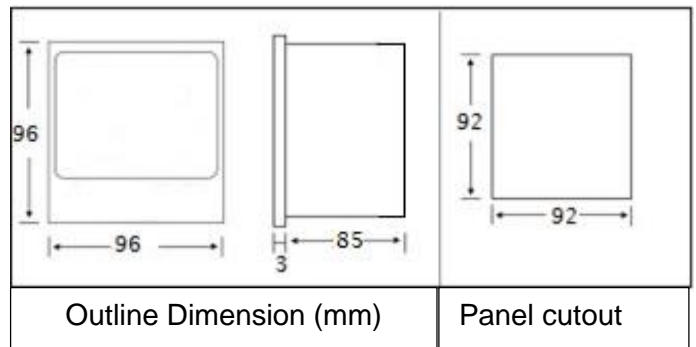
DIMENSION	
Size 96(H) X 96(W) X 85(D)/ Cutout 92(H) X 92(W)	

INPUT SPECIFICATION		
Sr.	INPUT	Range
1	PT	-100.0 To 400.0°C
2	Humidity Sensor	0.0 to 100.0 %RH

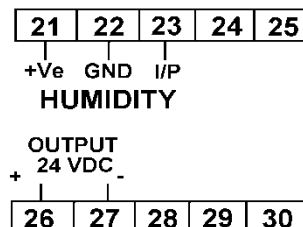
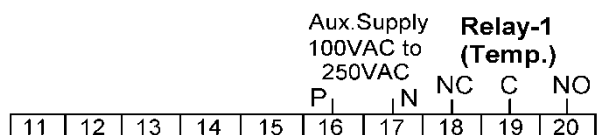
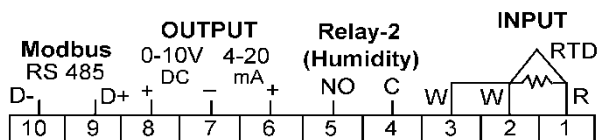
<b>Indication Accuracy</b>	±1% of FSD ± 1 (FSD: full scale deflection)
<b>Resolution</b>	PT:0.1 Humidity: 0.1

USB SPECIFICATION:	
USB Port	(USB 2.0) Mass Storage
USB Function	Retrieving logged data only
Storage Device Format	FAT32
Data Fetch File Format	CSV Microsoft Excel Supported
Data Retrieving Option	Full data fetch
Logging Sample	5000 (Internal memory)
Pendrive Support	Up to 16GB
Data logging time	Settable Up 5 to 9999 SEC.

## MECHANICAL INSTALLATION



## TERMINAL CONNECTION



## MODBUS PARAMETER

Read/Write	Parameter	Read Function Register(0x03/0x04) ADDRESS(INT)	Write Function Register (0x06/0x10) ADDRESS(INT)	REMARK
R	Temperature	40001/30001	-	OPEN Value: 20000
R	Humidity	40002/30002	-	
R/W	Set Value1 [Temp.]	40003/30003	40003	
R/W	Set Value2 [Humidity]	40004/30004	40004	
R/W	Retransmission Low Value	40005/30005	40005	
R/W	Retransmission High Value	40006/30006	40006	
R/W	OFFSET1 [Temp.]	40007/30007	40007	
R/W	OFFSET2 [ Humidity]	40008/30008	40008	
R/W	Hysteresis1 [Temp.]	40009/30009	40009	
R/W	Hysteresis2 [ Humidity]	40010/30010	40010	
R/W	R1MD [Temp.]*	40011/30011	40011	
R/W	R2MD [ Humidity]*	40012/30012	40012	

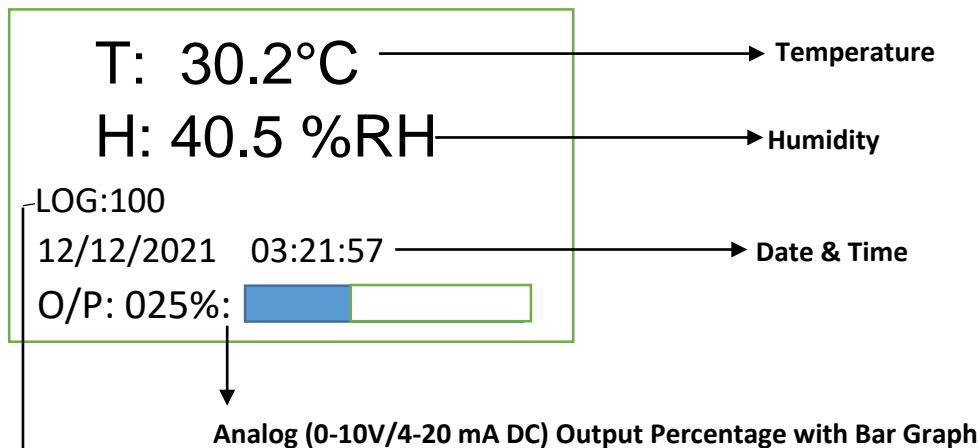
### \*R1MD/R2MD [Relay Mode]

Relay1/2 Mode (Range: 0-5) 0:HEAT,1:COOL,2:H-AL,3:L-AL,4:IB-A,5:OB-A

Data type = Sign Integer show value as per following

Input	Actual Value	DP Selection
Humidity	Value/10	Fix
Temperature	Value/10	Fix

## DISPLAY PARAMETER



### Data Log [Internal memory]

LOG BLINKING (IF 90% Memory Used)

NOTE: IF LOG Memory is full then all previous data will be Deleted and Logging start again

### For External memory Display show USB:IN/OUT

When Pen drive attach in USB HOST display shows USB:IN & Logged data directly copy to the Pen Drive

NOTE: For External memory, pendrive must be attached in USB HOST

## PARAMETER SETUP

Press Left (←) AND Right (→) key Enter into Parameter Menu

Enter Password  
00000

Press Up (↑) or Down (↓) Key to Change Value of Digit  
Press Left (←) or Right (→) key to Change Digit  
Press SET Key to Enter Password (Default Password 00000)  
Press ENT Key for Exit Menu

1.IO Setup  
2.USB COPY  
3.LOG Setup  
4.Communication

Press Up (↑) or Down (↓) Key to Select Menu  
Press SET Key to Enter Into Menu  
Press ENT Key for Exit Menu

1.IO Setup	6.Hystersis
2.USB COPY	7.OFFSET
3.LOG Setup	8.Date & TIME
4. Communication	9. Change Password
5.Relay Mode	

### IO Setup (Output Setup):

OUTPUT : 4-20mA/0-10VDC  
O/P-On : Temperature/Humidity

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

### USB COPY:

USB LOG:0005  
COPY LOG: YES  
COPY:0002/0005

Press Left (←) or Right (→) key to YES/NO  
For Copy Log into Pen-drive Select YES & Press SET Key.  
Wait till Process Completion.

### LOG Setup:

USB LOG SETUP  
LOG RESET : NO  
LOG TIME :30 SEC.  
LOG MEMO : Internal

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

### Communication:

SLAVE ID : 001  
BuadRate : 9600  
Parity : None

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

### Relay Mode

Relay Mode  
RELAY1 : HEAT [Temp.]  
RELAY2 : HEAT [Humi.]

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

Heat/COOL/HIGH-AL/LOW-AL/IN-BAND/OUT-BAND

## Hysteresis

HYS1 : 03.0 [Temp.]  
HYS2 : 10.0 [Humi.]

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

## OFFSET

T.OFFSET:0.0  
H.OFFSET:0.0

Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

## Date & Time

DATE :29 HOUR:22  
MONTH:12 MIN:20  
YEAR :20 SEC: 20

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Change (Date & Time)  
Press ENT Key for Exit Menu

## Change Password

Enter Password  
00000

### Enter Current Password

Press Up (↑) or Down (↓) Key to Change Value of Digit  
Press Left (←) or Right (→) key to Change Digit  
Press SET Key for Enter Value or Press ENT Key for Exit Menu

Set New Password  
00000

### Set New Password

Press Up (↑) or Down (↓) Key to Change Value of Digit  
Press Left (←) or Right (→) key to Change Digit  
Press SET Key for Enter Value

## SET POINT SETUP

Press SET Key Enter into Set-Point Menu

Set-TEMP :100.0  
Set-HUMI :60.0  
RT-LOW :0.0  
RT-HIGH :100.0

Press Up (↑) or Down (↓) Key for Select Menu  
Press Left (←) or Right (→) key for Desire Value  
Press SET Key for Enter Value  
Press ENT Key for Exit Menu

**Retransmission:** 4-20mA/0-10VDC output according to Retransmission Low Value -> Retransmission High Value  
[Ex.1.

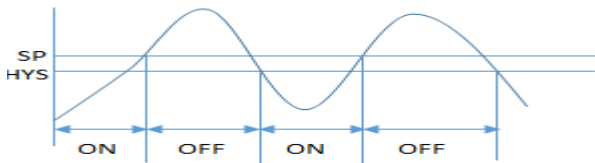
RT-LOW (Retransmission Low Value) = 0 °C

RT-HIGH (Retransmission High Value) =200°C

0 °C->4mA,50°C->8mA,100°C->12mA, 150°C->16mA, 200°C->20mA.]

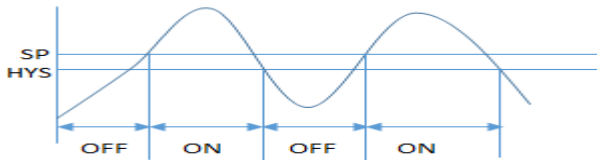
## Relay1 & Relay2 Operating Modes

- **Heat Mode:**



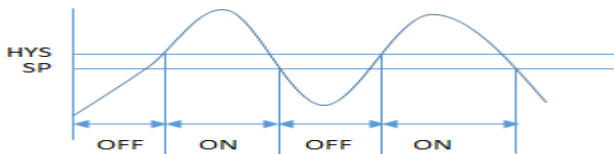
Initially Relay will be on condition. When Process value equals to Set Point Relay will turn off. When Process value equal to Set Point- Hysteresis then again Relay will be on.

- **Cool Mode:**



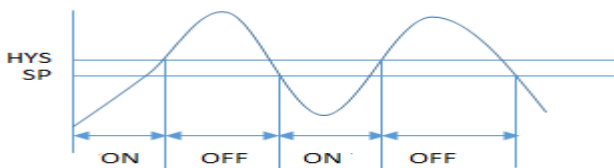
Initially Relay will be off condition. When Process value equals to Set Point Relay will turn on. When Process value equal to Set Point+ Hysteresis then again Relay will turn off.

- **High Alarm Mode [H-AL]:**



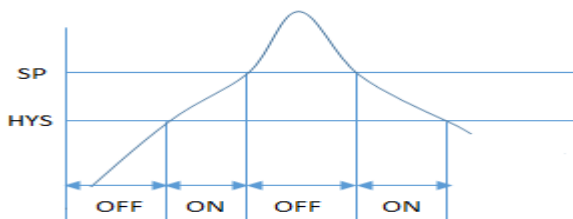
Initially Relay will be off condition. When Process value equals to Set Point + Hysteresis Relay will turn on. When Process value equal to Set Point then again Relay will turn off.

- **Low Alarm Mode [L-AL]:**



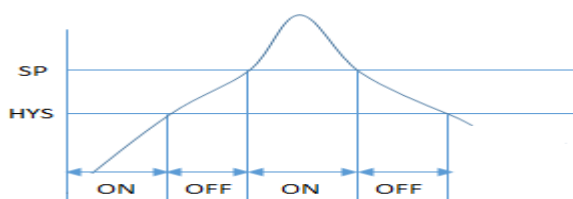
Initially Relay will be on condition. When Process value equals to Set Point + Hysteresis Relay will turn off. When Process value equal to Set Point then again Relay will turn on.

- **In Band Alarm Mode [IB-A]:**



Relay will be on between Set point & Hysteresis condition. If Set Point=100 & Hysteresis=3 than Relay on between 97to100

- **Out Band Alarm Mode [OB-A]:**



Relay will be off between Set point & Hysteresis condition. If Set Point=100 & Hysteresis=3 than Relay off between 97to100.