HumiTherm-iS

Advanced Temperature + Humidity Indicator

PPI
The Perfection Experts

Highlights

- Universal Inputs (RTD/mA/V for Temperature & %RH) with Selection for Dry/Wet Configuration
- Min/Max Monitoring of Temperature & %RH Values
- Retransmission Outputs for Temperature & %RH
- PC Software for Online Data Monitoring & Recording

Features

- 2 Independent Alarms for Temperature & %RH Each with Relay/SSR Outputs
- On-Off Control Loops for Temperature & %RH with Direct/Reverse Logic
- 24V or 12V or 5V DC Excitation Voltage for Transmitters
- RS485 MODBUS/RTU Serial Communication Port
- Universal Supply Voltage : 85~264 VAC, 50/60 Hz
- DIN Standard Dimensions (mm) : 96(H) X 96(W) X 100(D)
- Flame-proof Enclosure (Gas Group IIA & IIB) Available

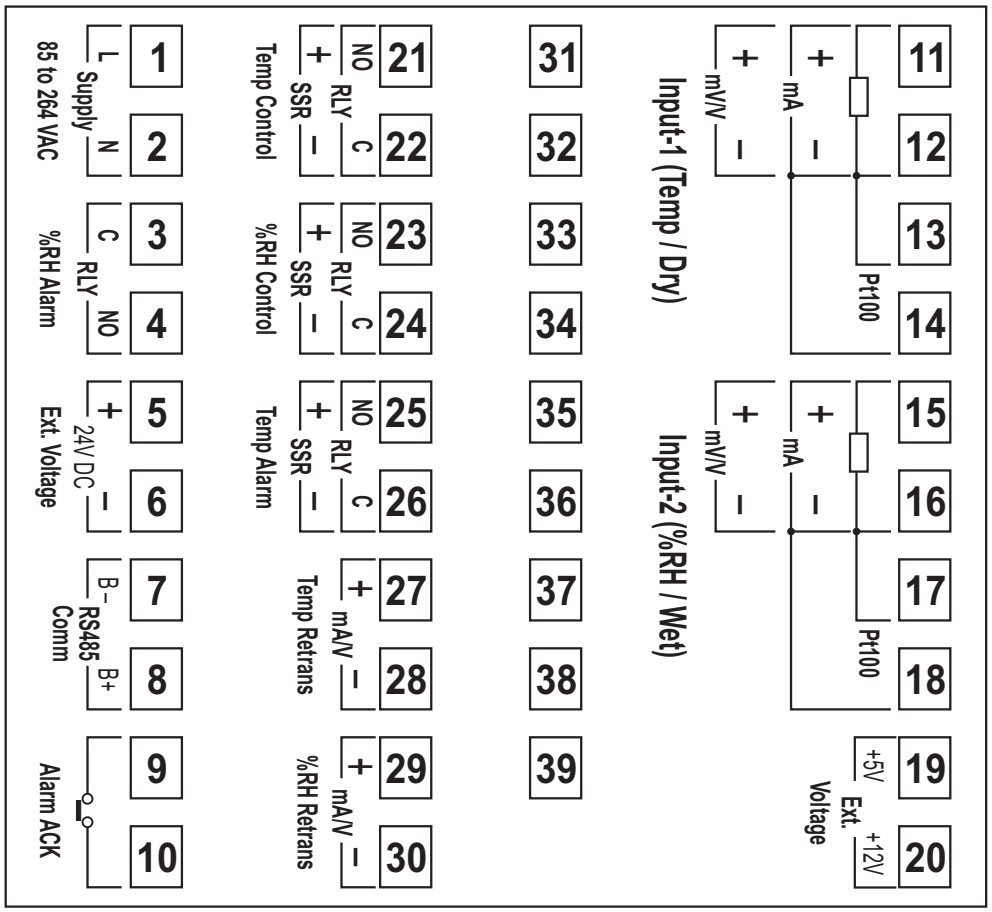
Specifications

Display	
Digital Readouts	Upper Readout : 4 digits, 0.56” Bright Red LED, 7 Segment Lower Readout : 4 digits, 0.56” Luminous Green LED, 7 Segment
Status Indicators	2 Red LEDs : Temperature & %RH Control Output Status 4 Red LEDs : Temperature & %RH Alarm Status
Keys	
Type	6 Tactile Switches
Functions	PAGE, DOWN, UP, ENTER Alarm Acknowledgement, Min/Max View
Sensor / Signal Input	
Type (User Programmable for Both Temperature & %RH Inputs)	RTD Pt100, 3 wire DC Linear : 0-20 mA, 4-20 mA 0-50 mV, 0-200 mV 0-1.25 V, 0-5 V, 0-10 V, 1-5 V
Accuracy	RTD Pt100 : ± 0.25% of reading ± 1°C DC Volts/Current : ± 0.25% of reading ± 1 LSD
Display Range	RTD Pt100 Input : 0 to 600.0 °C DC Volts/Current : Adjustable from -199.9 to 999.9 Counts
Display Resolution	Temperature : 0.1 Fixed %RH : 0.1 Fixed
Zero Offset	User Adjustable over Full Range for Both Temperature & %RH
ADC	16 Bit (±32,768 Counts), Sigma-Delta (ΣΔ)
Sampling Time	500mS (2 Samples per Second)
Common Mode Rejection	> 100dB at 50/60 Hz
Signal Conditioning	L-C Analog Filter on Each Input

Alarms	
Numbers	4, Independent (2 Each for Temperature & %RH)
Programmable Parameters	Type : Process Low, Process High Logic : Normal, Reverse Hysteresis : 0.1 to 25.0 Unit Counts Inhibit : No, Yes
Outputs (Optional)	Relay Change-over Contacts or SSR Drive (Jumper Selectable)
ON-OFF Control Loops	
Numbers	2 (1 Each for Temperature & %RH)
Programmable Parameters	Setpoint : Settable over Full Range Logic : Direct, Reverse Hysteresis : 0.1 to 99.9 Unit Counts
Outputs (Optional)	Relay Change-over Contacts or SSR Drive (Jumper Selectable)
Retransmission	
Numbers	2 (1 Each for Temperature & %RH)
Parameter Type	Process Value (PV)
Parameter Value	User Settable through 'Range Low' & 'Range High' Parameters
Outputs (Optional)	DC Volts (0-5/10 V) or DC Current (0/4-20 mA)
Outputs	
Relay	Contact Type : Potential-free Change-over Contacts Contact Rating : 5A Resistive @ 120/240 Vac Contact Life : > 5,00,000 Operations at Rated Voltage / Current
SSR Drive	> 4.2 VDC into 1KOhm Minimum
DC Linear	Voltage : 0-5V, 0-10V (into 1KOhm Minimum) Current : 0-20mA, 4-20mA (into 400 Ohm Maximum)
Serial Communication	
Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	Modbus RTU
Baud Rate	Settable : 4800, 9600, 19200, 38400, 57600
Parity	Settable : None, Even, Odd
Max. Units per Loop	31
Max. Distance	1200 Metres
Power Supply	
Type	Switch Mode (SMPS)
Line Voltage	85~264 VAC, 50/60Hz
Consumption	5VA Max

Physical	
Mounting	Plug-in with Panel Mounting Clamps
Overall Dimensions	96(H) X 96(W) X 100(D), mm
Panel Cutout	92(H) X 92(W), mm
Terminals	Screw Type
Weight	400 gm, Appx.
Environmental	
Operating Ambient	0~55°C & 5~90%RH Non-condensing
Storage Temperature	-10 to +70 °C
EMC Standards	EN50081-2 & EN 50082-2 Generic Stds for Industrial Environment
Safety Standards	Meets EN61010, Installation Catagory II
Atmospheres	Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution.

Back Panel Terminations



Ordering Code

Input-1* (Temp / Dry)	
PT	RTD Pt100
LV	Linear Voltage
LC	Linear Current

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Input-2* (%RH / Wet)	
PT	RTD Pt100
LV	Linear Voltage
LC	Linear Current

-

Temp. Control	
0	None
1	Relay**
2	SSR**

-

%RH Control	
0	None
1	Relay**
2	SSR**

-

Temp. Alarm	
0	None
1	Relay**
2	SSR**

-

%RH Alarm	
0	None
1	Relay

-

Temp. Retrans	
0	None
3	0-5/10 V
4	0/4-20 mA

-

%RH Retrans	
0	None
3	0-5/10 V
4	0/4-20 mA

-

Power Supply	
0	85~264 VAC

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Excitation Supply	
1200	+12V DC Only
1205	+12V & +5V DC
1224	+12V & +24V DC

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Options	
N	None
S	Serial Port

Example Code **PT - LV - 0 - 0 - 1 - 1 - 0 - 0 - 0 - 1224 - S**

Temp Input Pt100, %RH Input Voltage, Temp Control None, %RH Control None, Temp Alarm Relay, %RH Alarm Relay, Temp Retransmission None, %RH Retransmission None, 85~264 VAC Supply, +12V & +24V DC Excitation Voltage, Serial Port

* Input type is universal and requires appropriate parameter setting. The ordering code only implies the factory settings at the time of dispatch.

** Relay and SSR selection is jumper settable by user. The ordering code only implies the factory settings at the time of dispatch if Relay/SSR output option is ordered .

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