

Temperature + Humidity Indicator

HumiTherm-iS Pro

Enhanced
 'Temperature+Humidity' Indicator
 (with Dry/Wet RTD Input Selection)

Process Precision Instruments
 Vasai Road (E), Dist. Palghar - 401210,
 Maharashtra, India

www.ppiindia.net

Sunlight-Readable
 Large Bright Display



Reduced-Depth
 Aesthetically-Improved
 Enclosure



Pluggable Terminals
 Easy Installation



Isolated
 Retransmission &
 Control / Alarm Outputs



Salient Features

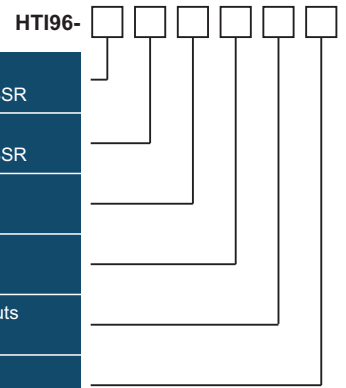
- 2 Rows of JUMBO Bright Green 0.8 inch 7-Segment LED Display, Designed for Sunlight Readability
- Universal Inputs (RTD/mA/V for Temperature & %RH) with Selection for Dry/Wet Configuration
- Min/Max Monitoring of Temperature & %RH Values
- Isolated Retransmission Outputs for Temperature & %RH
- Free PC Software for Online Data Monitoring & Recording
- 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
- Digital Input for Remote Alarm Acknowledgment
- 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 84(D)
- Flame-proof Enclosure (Gas Group IIA & IIB) Available

General Information

Product Type Enhanced 'Temperature + Humidity' Indicator (with Dry/Wet RTD Input Selection)

Ordering Code

Temp Control Output 0 : None 1 : Relay 2 : SSR
RH Control Output 0 : None 1 : Relay 2 : SSR
Temp Alarm Output 1 : Relay 2 : SSR
RH Alarm Output 1 : Relay
Temp & RH Retrans Outputs 0 : None 1 : mA 2 : V
Excitation 1 : 5V 2 : 12V 3 : 24V



Example Code : HTI96-001101

Temp Control Output : None, RH Control Output : None,
 Temp Alarm Output : Relay, RH Alarm Output : Relay,
 Temp & RH Retrans Outputs : None, Excitation : 5V

Quantity 1 Unit

Accessories (Optional) USB to RS485 Converter

Similar Modules HumiTherm-i Pro,
 HumiTherm-c Pro, HumiTherm-cS Pro

Temperature + Humidity Indicator

Operator Interface

Display	2 Rows of 4 Digits, 0.8" Luminous Green, 7 Segment LED
Status Indicators	8 Red LEDs
Keys	4 Tactile Switches PAGE, DOWN, UP, ENTER

Channel Specifications

Temperature Input (User Configurable)	RTD Pt100, 3 wire (Dry Bulb) 0-20 mA / 4-20 mA 0-5 VDC / 0-10 VDC / 1-5 VDC		
Humidity (%RH) Input (User Configurable)	RTD Pt100, 3 wire (Wet Bulb) 0-20 mA / 4-20 mA 0-5 VDC / 0-10 VDC / 1-5 VDC		
Accuracy	RTD Pt100	: $\pm 0.25\%$ of reading ± 1 LSD	
	DC mA / Volts	: $\pm 0.20\%$ of reading ± 1 LSD	
Resolution	Temperature	: 0.1 °C Fixed	
	Humidity	: 0.1 % Fixed	
Range	RTD Pt100 Input	: -199.9 to 600.0 °C	
	DC Linear mA / V	: Adjustable from -199.9 to 999.9 Counts	
Zero Offset	Independent for Temperature & Humidity (Adjustable over Full Range)		
ADC	16 Bit ($\pm 32,768$ Counts), Sigma-Delta ($\Sigma\Delta$)		
Input Resistance	> 8 M Ω for Pt100 > 47 K Ω for Voltage Input 249 Ω Precision Shunt for mA Input		
Common Mode Rejection	> 100dB at 50/60 Hz		
Input Protection	ESD : 8KV	EFT : 2KV	Surge : 1KV
Input Conditioning	First Order Analog R-C Low-Pass Filter & Settable Digital Low-Pass Filter		

Excitation Voltage

Ratings	5 V @ 15 mA (Standard) 12 V @ 15 mA (Optional) 24 V @ 50 mA (Optional)
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Alarms

Numbers	4, Independent (2 Each for Temperature & %RH)		
Programmable Parameters	Type	: Process Low, Process High	
	Logic	: Normal, Reverse	
	Hysteresis	: 0.2 to 99.9 Unit Counts	
	Inhibit	: No, Yes	
Outputs	Relay Change-over Contacts or SSR Drive for Temperature		Relay Change-over Contacts for %RH

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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	Relay Change-over Contacts or SSR Drive

Retransmission

Numbers	2 (1 Each for Temperature & %RH)
Signal Type	DC Current (0/4-20 mA) OR DC Volts (0-5/10 V)
PV Range	Independently Settable through 'Range Low' & 'Range High' Parameters for Temperature & %RH

Digital Input

Type	Potential-free Contact Closure (Push button, etc.)
Function	Alarm Acknowledgment (Close to Acknowledge)

Electrical Specifications for Outputs

Relay	Contact Type : Potential-free Change-over Contacts Contact Rating : 5A Resistive @ 250 Vac Contact Life : > 5,00,000 Operations at Rated Voltage / Current
SSR Drive	12 VDC @ 30 mA
DC Linear	Current : 0-20mA, 4-20mA (into 500 Ohm Maximum) Voltage : 0-5V, 0-10V (into 1KOhm Minimum)
Isolation	All Outputs are Isolated from Power, Analog Inputs & Serial Communication Rating : 1500VAC for 1 second or 250VAC continuous Isolation.

Serial Communication

Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	MODBUS RTU
Baud Rate	Settable : 4800, 9600, 19200
Parity	Settable : None, Even, Odd
Max. Units per Loop	31
Max. Distance	1200 Meters

Power Supply

Type	Switch Mode (SMPS)
Line Voltage	85~264 VAC, 50/60Hz
Consumption	5 VA Max

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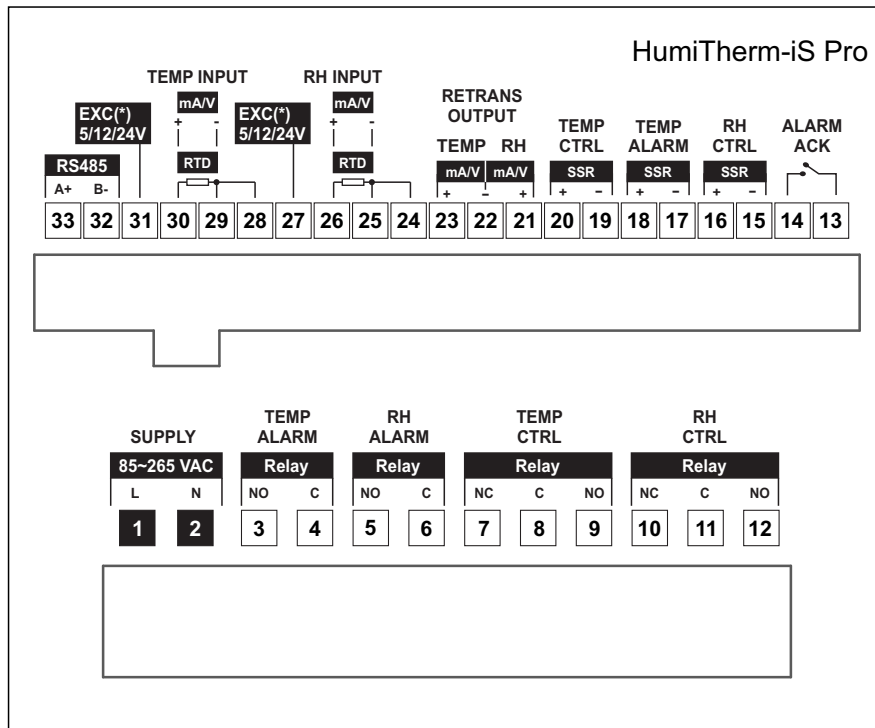
Physical

Mounting	Plug-in with Panel Mounting Clamps
Overall Dimensions	96(H) X 96(W) X 84(D), mm
Panel Cutout	92(H) X 92(W), mm
Terminals	Screw Type
Weight	400 gm, Appx.

Environmental

Operating Ambient	0 to 55°C & 5 to 90%RH Non-condensing
Storage Temperature	-10 to +70°C
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.

Terminations



Process Precision Instruments (An ISO 9001 : 2008 Company)

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