

HumiTherm-i Pro

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

Operation Manual

This brief manual is primarily meant for quick reference to wiring connections and parameter searching. For more details on operation and application; please log on to www.ppiindia.net

PPI

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PAGE-10 : TEMPERATURE - ALARM PARAMETERS	
Parameters	Settings (Default Value)
Temperature Alarm Type TYPE	none None P_Lo Process Low P_Hi Process High (Default : None)
Temperature Alarm Setpoint ALSP	-50.0 to 150.0°C or -58.0 to 302.0°F (Default : For Process Low : -50.0 For Process High : 150.0)
Temperature Alarm Hysteresis ALHY	0.1 to 25.0 °C or °F (Default : 0.2)
Temperature Alarm Logic ALLO	dir Direct rev Reverse (Default : Direct)
Temperature Alarm Inhibit ALIH	no No yes Yes (Default : Yes)

PAGE-11 : RELATIVE HUMIDITY - ALARM PARAMETERS	
Parameters	Settings (Default Value)
%RH Alarm Type TYPE	none None P_Lo Process Low P_Hi Process High (Default : None)
%RH Alarm Setpoint ALSP	0.0 to 100.0% (Default : For Process Low : 0.0 For Process High : 100.0)
%RH Alarm Hysteresis ALHY	0.1 to 25.0% (Default : 0.2)
%RH Alarm Logic ALLO	dir Direct rev Reverse (Default : Direct)
%RH Alarm Inhibit ALIH	no No yes Yes (Default : Yes)

PAGE-12 : INPUT CHANNEL CONFIGURATION PARAMETERS																								
Parameters	Settings (Default Value)																							
Input Type For Temp Sensor <div>db.in</div>	Refer Table 1 (Default : RTD)																							
Signal Low For Temp Sensor <div>db.SL</div>	<table><tr><th>Input Type</th><th>Settings</th><th>Default</th></tr><tr><td>0 to 20 mA</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>4 to 20 mA</td><td>4.00 to Signal High</td><td>4.00</td></tr><tr><td>0 to 1.25 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 5 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 10 V</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>1 to 5 V</td><td>1.000 to Signal High</td><td>1.000</td></tr></table>	Input Type	Settings	Default	0 to 20 mA	0.00 to Signal High	0.00	4 to 20 mA	4.00 to Signal High	4.00	0 to 1.25 V	0.000 to Signal High	0.000	0 to 5 V	0.000 to Signal High	0.000	0 to 10 V	0.00 to Signal High	0.00	1 to 5 V	1.000 to Signal High	1.000		
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Signal High For Temp Sensor <div>db.Sh</div>	<table><tr><th>Input Type</th><th>Settings</th><th>Default</th></tr><tr><td>0 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr><tr><td>4 to 20 mA</td><td>Signal Low to 20.00</td><td>20.00</td></tr><tr><td>0 to 1.25 V</td><td>Signal Low to 1.250</td><td>1.250</td></tr><tr><td>0 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr><tr><td>0 to 10 V</td><td>Signal Low to 10.00</td><td>10.00</td></tr><tr><td>1 to 5 V</td><td>Signal Low to 5.000</td><td>5.000</td></tr></table>	Input Type	Settings	Default	0 to 20 mA	Signal Low to 20.00	20.00	4 to 20 mA	Signal Low to 20.00	20.00	0 to 1.25 V	Signal Low to 1.250	1.250	0 to 5 V	Signal Low to 5.000	5.000	0 to 10 V	Signal Low to 10.00	10.00	1 to 5 V	Signal Low to 5.000	5.000		
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Temperature Range Low <div>db.Lo</div>	-199.9 to 999.9 (Default : 0.0)																							
Temperature Range High <div>db.Hi</div>	-199.9 to 999.9 (Default : 100.0)																							
Zero Offset For Temp Value <div>db.OF</div>	-25.0 to 25.0 (Default : 0.0)																							
Input Type For Humidity Sensor <div>HU.in</div>	Refer Table 1 (Default : 0 to 5 V)																							
Signal Low For Humidity Sensor <div>rh.SL</div>	<table><tr><th>Input Type</th><th>Settings</th><th>Default</th></tr><tr><td>0 to 20 mA</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>4 to 20 mA</td><td>4.00 to Signal High</td><td>4.00</td></tr><tr><td>0 to 1.25 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 5 V</td><td>0.000 to Signal High</td><td>0.000</td></tr><tr><td>0 to 10 V</td><td>0.00 to Signal High</td><td>0.00</td></tr><tr><td>1 to 5 V</td><td>1.000 to Signal High</td><td>1.000</td></tr></table>	Input Type	Settings	Default	0 to 20 mA	0.00 to Signal High	0.00	4 to 20 mA	4.00 to Signal High	4.00	0 to 1.25 V	0.000 to Signal High	0.000	0 to 5 V	0.000 to Signal High	0.000	0 to 10 V	0.00 to Signal High	0.00	1 to 5 V	1.000 to Signal High	1.000		
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%RH Range Low <div>rh.Lo</div>	-199.9 to 999.9 (Default : 0.0)																							
%RH Range High <div>rh.Hi</div>	-199.9 to 999.9 (Default : 100.0)																							

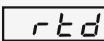
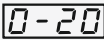
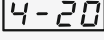
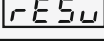
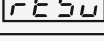
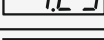
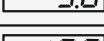
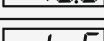
Parameters	Settings (Default Value)
Wet-bulb Temperature Zero Offset wbOF	-25.0 to 25.0 (Default : 0.0)
%RH Zero Offset rhOF	-99.0 to 99.0 (Default : 0.0)

PAGE-13 : SUPERVISORY PARAMETERS	
Parameters	Settings (Default Value)
Unit Selection for Temperature Unit	°C °C °F °F (Default : °C)
Dry-Bulb Temperature and % RH Min / Max Monitoring HiLo	no No yes Yes (Default : No)
Password For Resetting PV High - Low CODE	0 to 250 (Default : 0)
Slave Id Id	1 to 127 (Default : 1)
Baud Rate BAUD	48 4800 96 9600 192 19200 (Default : 9600)
Parity PARi	none None Even Even Odd Odd (Default : Even)
Communication Write Enable ConE	no No yes Yes (Default : Yes)

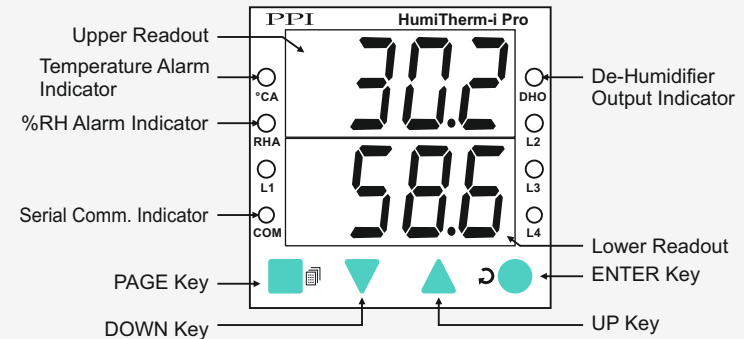
PAGE-14 : DE-HUMIDIFIER CONTROL PARAMETERS	
Parameters	Settings (Default Value)
De-humidifier Control dHUN	dsbL Disable EnbL Enable (Default : Disable)
De-humidifier Setpoint dHSP	0.0 to 100.0 (Default : 0)
De-humidifier Hysteresis dHHY	0.1 to 99.9 (Default : 2.0)

PAGE - 0 : OPERATOR PAGE AND PARAMETERS	
Parameters	Settings (Default Value)
Maximum Dry Bulb Temperature Value dbHi	View Only
Minimum Dry - Bulb Temperature Value dbLo	View Only
Maximum %RH Value rhHi	View Only
Minimum Peak of RH rhLo	View Only
Reset Command rst	no No yes Yes (Default : No)
Reset Pass - Code CODE	0 to 250 (Default : 0)

Table 1

Option	What it means	Range (Min. to Max.)	Resolution
	3-wire, RTD Pt100	-199.9 to +600.0 °C / -199.9 to 999.9 °F	0.1 °C / °F
	0 to 20mA DC current	-199.9 to 999.9 units	0.1 units
	4 to 20mA DC current		
	Reserved (Don't Select)		
			
	0 to 1.25V DC voltage		
	0 to 5.0V DC voltage		
	0 to 10.0V DC voltage		
	1 to 5.0V DC voltage		

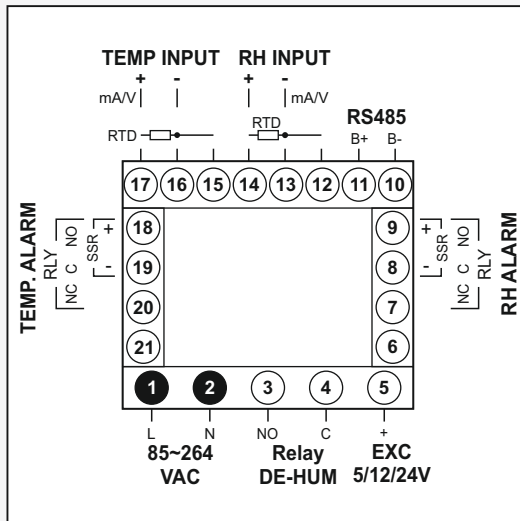
FRONT PANEL LAYOUT



Keys Operation

Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed speeds up the change.
	ENTER	Press to store the set parameter value and to scroll to the next parameter on the PAGE.

ELECTRICAL CONNECTIONS



PV Error Indications for Dry Bulb Temperature

Message	Error Type
	Over-range Dry Bulb Temp. above Max. Range
	Under-range Dry Bulb Temp. below Min. Range
	Sensor Open Dry Bulb Sensor (RTD) Broken / Open

PV Error Indications for Relative Humidity (RH)

Message	Error Type	Cause
	Over-range	Wet Bulb Temperature above Max. Range
	Under-range	Wet Bulb Temperature below Min. Range
	Sensor Open	Wet Bulb Sensor (RTD) Broken / Open
	RH Error	This error is indicated in the following cases : • Dry Bulb Temperature above 102.0°C. • Dry Bulb Temperature below -20.0°C. • Wet Bulb depression beyond: 50.0°C for Dry Bulb Temperature above 0°C 5.6°C for Dry Bulb Temperature below 0°C
	Display Freezes To 100.0%	This error is indicated in the following cases : • Wet-Bulb Temperature exceeds Dry-Bulb Temperature. • Computed % RH above 100.0%.
	Display Freezes To 0.0%	Computed % RH is below 0.0%.