



PPI HumiTherm-c Composite Temperature + Humidity Controller User Manual

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PPI

HumiTherm-c Composite Temperature + Humidity Controller



Product Information

The Composite Temperature + Humidity Controller is a device that controls temperature and relative humidity in an environment. It has a Dry Bulb RTD Pt100, 3-Wire and a Wet Bulb RTD Pt100, 3-Wire. The device has various temperature and humidity parameters that can be set and adjusted according to the user's requirements. It also has an OP3 function that allows the user to select either Alarm or Compressor mode and set the compressor setpoint, hysteresis, and time delay. The device has supervisory parameters that enable or disable SP adjustment and set the baud rate. The front panel of the device has an upper readout that displays the Dry Bulb temperature and a lower readout that displays the %RH.

Product Usage Instructions

To use the Composite Temperature + Humidity Controller, follow the instructions below:

1. Connect the device to the power source and ensure that all wiring connections are correct.
2. Access the temperature parameters on page 10 and set the required values for Alarm-1 Band, Alarm-1 Hysteresis, Proportional Band, Integral Time, Derivative Time, and Cycle Time.
3. Access the relative humidity (% RH) parameters on page 11 and set the required values for Alarm-2 Band, Alarm-2 Hysteresis, Proportional Band, Integral Time, Derivative Time, and Cycle Time.
4. Access the OP3 function parameters on page 13 and select either Alarm or Compressor mode. Set the compressor setpoint, hysteresis, and time delay as required.
5. Access the supervisory parameters on page 12 and enable or disable SP adjustment and set the baud rate.
6. Access the utility parameters on page 33 and set the compressor control strategy, zero offset for Dry-Bulb Temperature Value, zero offset for Wet Bulb Temperature Value, zero offset for RH Value, ID for Temperature Loop, and ID for %RH Loop.
7. Access the Compressor Operation & Power Indication on page 1 and set the Wet-Bulb Temperature Setpoint within the specified temperature range.
8. Use the front panel keys to enter or exit the set-up mode, decrease or increase the parameter value, and store the set parameter value.

Note: For more details on operation and application, please log on to www.ppiindia.net

PARAMETERS

TEMPERATURE PARAMETERS : PAGE-10	
Parameters	Settings (Default Value)
Alarm-1 Band dbAb	0.3 to 25.0°C (Default : 0.5)
Alarm-1 Hysteresis dbAH	0.2 to 10.0°C (Default : 0.2)
Proportional Band dbPb	0.1 to 999.9°C (Default : 5.0)
Integral Time dbIt	0 to 1000 Seconds (Default : 100)
Derivative Time dbdt	0 to 250 Seconds (Default : 25)
Cycle Time dbCt	0.5 to 25.0 Seconds (in steps of 0.5 secs.) (Default : 1.0)

RELATIVE HUMIDITY (% RH) PARAMETERS : PAGE-11	
Parameters	Settings (Default Value)
Alarm-2 Band rhAb	0.3 to 25.0% (Default : 2.0)
Alarm-2 Hysteresis rhAH	0.2 to 10.0% (Default : 2.0)
Proportional Band rhPb	0.1 to 999.9% (Default : 10.0)
Integral Time rhIt	0 to 1000 Seconds (Default : 100)
Derivative Time rhdt	0 to 250 Seconds (Default : 25)
Cycle Time rhCt	0.5 to 25.0 Seconds (in steps of 0.5 secs.) (Default : 1.0)

OP3 FUNCTION PARAMETERS : PAGE-13	
Parameters	Settings (Default Value)
Output-3 Function Selection OP3F	AL Alarm CP Compressor (Default : Alarm)
Compressor Setpoint CPSP	0.0 to 50.0°C or 0.0 to 25.0°C (Default : 45.0 or 0.2)

OP3 FUNCTION PARAMETERS : PAGE-13	
Parameters	Settings (Default Value)
Compressor Hysteresis CPHY	0.1 to 25.0°C (Default : 0.2)
Compressor Time Delay CTDY	0.00 to 10.00 Min. Sec (in steps of 5 Seconds) (Default : 00.00)

SUPERVISORY PARAMETERS : PAGE-12	
Parameters	Settings (Default Value)
SP Adjustment on PAGE-0 SP	EnbL Enable dSbL Disable (Default : Enable)
Self-Tune Command tUnE	no No YES Yes (Default : No)
Baud Rate bAud	1200 2400 4800 9600 (Default : 4800)
ID for Temperature Loop db.Id	1 to 8 (Default : 1)
ID for %RH Loop rh.Id	1 to 8 (Default : 2)

COMPRESSOR OPERATION & POWER INDICATION : PAGE-1	
Parameters	Settings (Default Value)
Compressor Operation Mode CPOP	AUTO Automatic OFF Off On On (Default : Auto)
Wet-Bulb Temperature Setpoint wbSP	Within Specified Temperature Range (View Only - Non editable)
Output Power for Temperature Loop OUT.1	0 to 100.0% (View Only - Non editable)

Parameters	Settings (Default Value)
Output Power for %RH Loop OUT.2	0 to 100.0% (View Only - Non editable)

UTILITY PARAMETERS : PAGE-33	
Parameters	Settings (Default Value)
Compressor Control Strategy CPSt	db.SP Dry Bulb SP db.PV Dry Bulb PV (Default : Dry Bulb SP)
Zero Offset for Dry-Bulb Temperature Value db.oF	-25.0 to +25.0°C (Default : 0.0)
Zero Offset for Wet Bulb Temperature Value wb.oF	-25.0 to +25.0°C (Default : 0.0)
Zero Offset for RH Value rh.oF	-25.0 to +25.0°C (Default : 0.0)

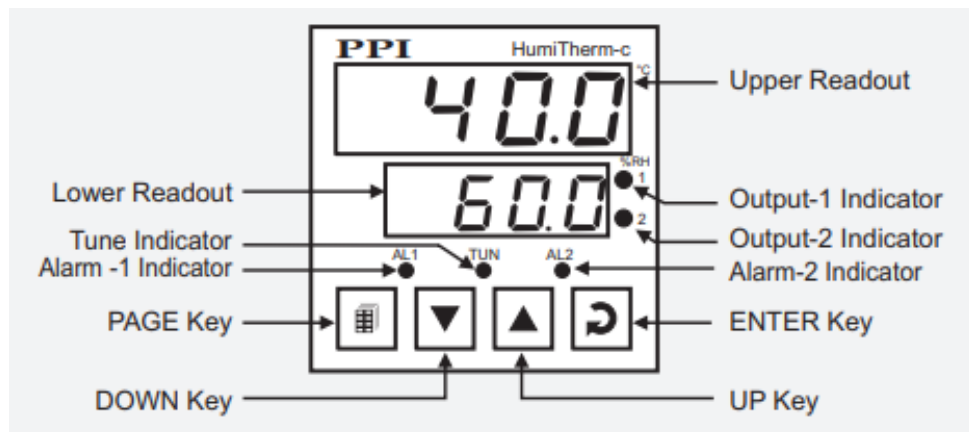
PV Error Indications For Dry Bulb Temperature (Upper Readout)

Message	PV Error Type
Or	Over-range (Dry-Bulb Temp. above Max. Range)
Ur	Under-range (Dry-Bulb Temp. below Min. Range)
OPEN	Open (Sensor open / broken)

PV Error Indications For Relative Humidity (RH) (Lower Readout)

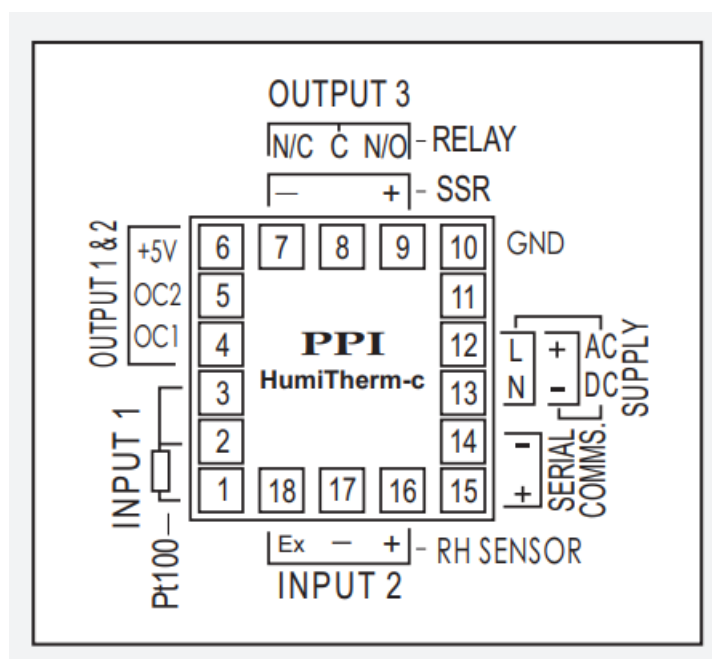
Message	PV Error Type
Or	Over-range (Wet-Bulb Temp. above Max. Range)
Ur	Under-range (Wet-Bulb Temp. below Min. Range)
OPEN	Open (Sensor open / broken)
rh.Er	Either Dry Bulb Temp. is below -20.0°C or above 162.0°C. The error may also occur if Wet Bulb depression is more than 60.0°C.

FRONT PANEL LAYOUT



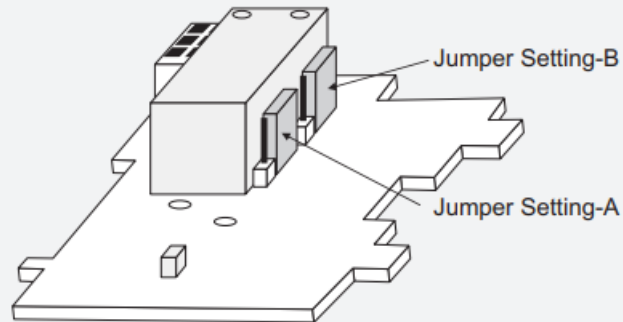
Symbol	Key	Function
	PAGE	Press to enter or exit set-up mode.
	DOWN	Press to decrease the parameter value. Pressing once decreases the value by one count; keeping pressed speeds up the change.
	UP	Press to increase the parameter value. Pressing once increases the value by one count; keeping pressed speeds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

ELECTRICAL CONNECTIONS

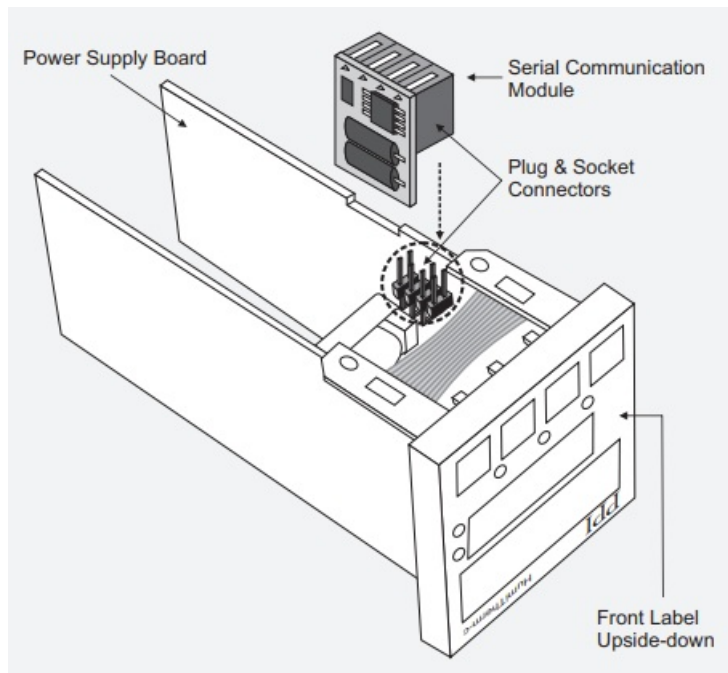


JUMPER SETTINGS

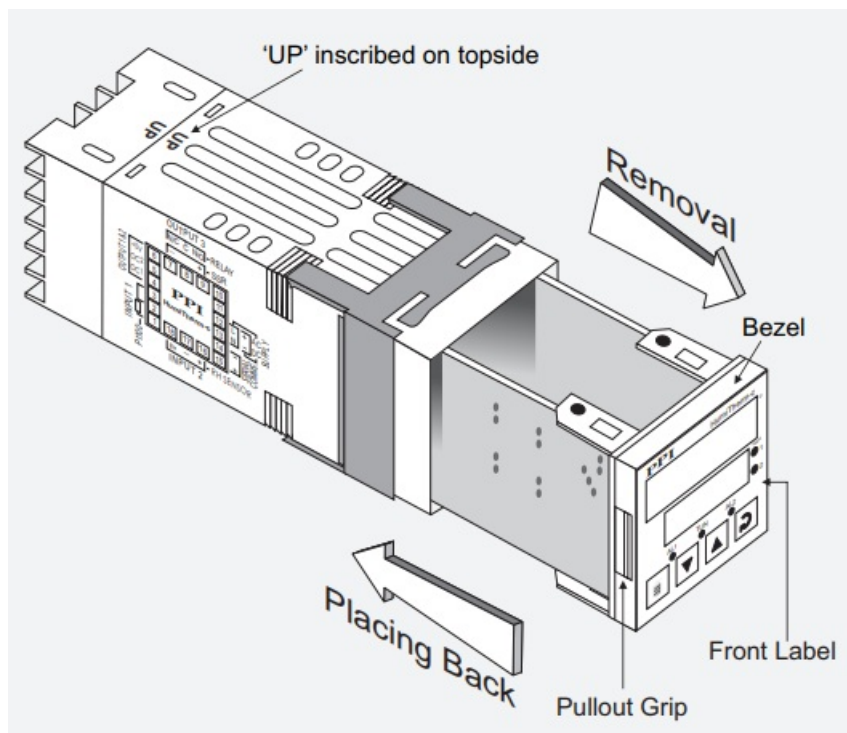
Output Type	Jumper Setting - A	Jumper Setting - B
Relay		
SSR Voltage Pulses		



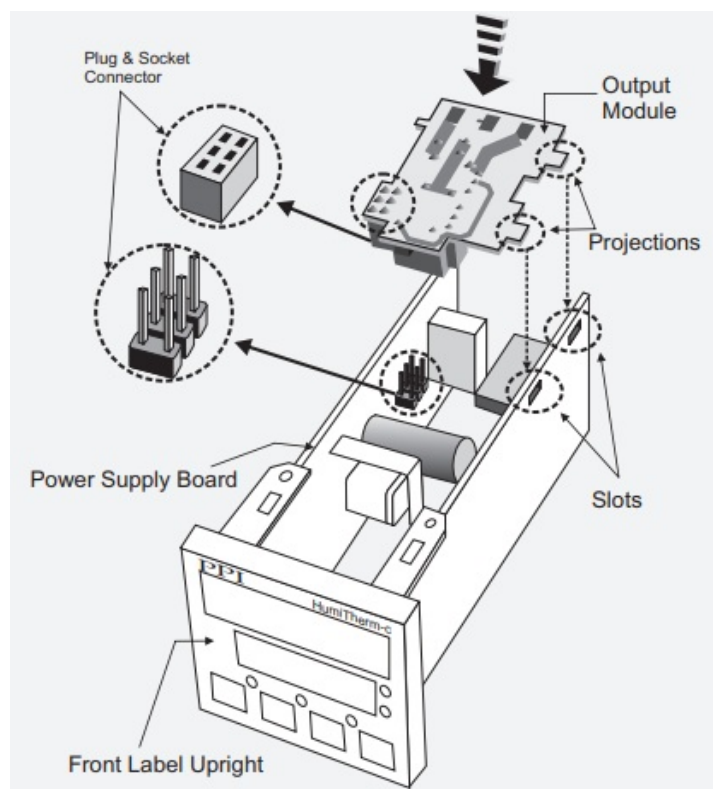
MOUNTING DETAILS



ENCLOSURE ASSEMBLY



MOUNTING DETAILS



101, Diamond Industrial Estate, Navghar, Vasai Road (E), Dist. Palghar – 401 210.

Sales: 8208199048 / 8208141446

Support: 07498799226 / 08767395333

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Documents / Resources



[PPI HumiTherm-c Composite Temperature + Humidity Controller](#) [pdf] User Manual
HumiTherm-c Composite Temperature Humidity Controller, HumiTherm-c, Composite Temperat
ure Humidity Controller, Temperature Humidity Controller, Humidity Controller, Controller

References

- [Factory Automation Products India | Automation Solutions in India](#)

[Manuals+](#).