HumiTherm-c Pro

Enhanced
'Temperature + Humidity' PID Controller
(Dry / Wet Version)

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

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TEMPERATURE PARAMETERS : PAGE-10

Parameters	Settings (Default Value)
Alarm Band db.AL	0.3 to 25.0°C (Default : 0.5 °C)
Alarm Hysteresis db.HY	0.2 to 10.0°C (Default : 0.2 °C)
Proportional Band (For T+RH mode) db.Pb	0.1 to 999.9°C (Default : 5.0 °C)
Integral Time (For T+RH mode) db.It	0 to 1000 Seconds (Default : 100)
Derivative Time (For T+RH mode) db.dt	0 to 250 Seconds (Default : 25)
Proportional Band (For Temp only mode) Pb	0.1 to 999.9°C (Default : 5.0 °C)
Integral Time (For Temp only mode) It	0 to 1000 Seconds (Default : 100)
Derivative Time (For Temp only mode) dt	0 to 250 Seconds (Default : 25)
Cycle Time db.Ct	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)
%RH Alarm Band rh.AL	0.3 to 25.0% (Default : 2.0)
%RH Alarm Hysteresis rh.HY	0.2 to 10.0% (Default : 2.0)

OP3 FUNCTION PARAMETERS : PAGE-13

Parameters	Settings (Default Value)
Compressor Setpoint CP.SP	0.0 to 50.0°C **or** 0.0 to 25.0°C (Default : 45.0 **or** 0.2)
Compressor Hysteresis CP.HY	0.1 to 25.0°C (Default : 0.2)
Compressor Time Delay t.dLY	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	dSbL Disable EnbL Enable (Default : Enable)
Self-Tune Command tUnE	no No YES Yes (Default : No)
Water Level-low Detection Logic YLLO	OPEn Open CLOS Close (Default : Open)
Slave Id Id	1 to 127 (Default : 1)
Baud Rate bAUd	4.8 4800 9.6 9600 19.2 19200 (Default : 9600)
Parity PAr1	nonE None EuEn Even Odd Odd (Default : Even)
Communication Write Enable ConE	no No YES Yes (Default : Yes)

RELATIVE HUMIDITY (% RH) PARAMETERS : PAGE-11

Parameters	Settings (Default Value)
%RH Proportional Band rhPb	0.1 to 999.9% (Default : 10.0)
%RH Integral Time rh.It	0 to 1000 Seconds (Default : 100)
%RH Derivative Time rhdt	0 to 250 Seconds (Default : 25)
%RH Cycle Time rhCt	0.5 to 25.0 Seconds (in steps of 0.5 secs.) (Default : 1.0)

UTILITY PARAMETERS : PAGE-33

Parameters	Settings (Default Value)
Compressor Control Strategy CP.St	db.SP Dry Bulb SP db.Pu 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 Yb.OF	-25.0 to +25.0°C (Default : 0.0)
Zero Offset for RH Value rh.OF	-99.0 to +99.0°C (Default : 0.0)
Digital Filter For Dry Bulb Temperature db.F1 **Digital Filter For Wet Bulb Temperature** Yb.F1	3.0 to 60.0 (Default : 3.0)

COMPRESSOR OPERATION & POWER INDICATION : PAGE-1

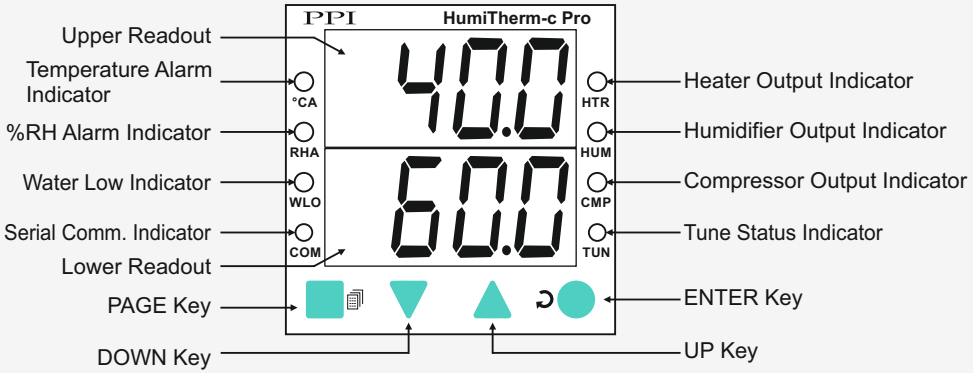
Parameters	Settings (Default Value)
Compressor Operation Mode CP.OP	On On OFF Off AUtO Automatic (Default : Auto)
Wet Bulb Temperature Setpoint Yb.SP	0 to 100.0% (View Only - Non editable)
Output Power for Temperature Loop OUt.1	0 to 100.0% (View Only - Non editable)
Output Power for %RH Loop OUt.2	0 to 100.0% (View Only - Non editable)

OPERATOR PARAMETERS : PAGE-0

Parameters	Settings (Default Value)
Temperature Setpoint db.SP	-20.0 to 160.0°C **or** -199.9 to 600.0°C (Default : 25.0)
Humidity Setpoint rh.SP	0.0 to 100.0°C (Default : 40.0)
Single Mode Lower Indication L.ind	rh RH Unit Unit (Default : 00.00)

FRONT PANEL LAYOUT

Front Panel



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 then 60.0°C.

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

