

HumiTherm-iS 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

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OPERATOR PAGE AND PARAMETERS : PAGE 0

| Parameters | Settings (Default Value) |
|---|---|
| Maximum Dry Bulb Temperature Value db.H_i | View Only |
| Minimum Dry - Bulb Temperature Value db.Lo | View Only |
| Maximum %RH Value rh.H_i | View Only |
| Minimum Peak of RH rh.Lo | View Only |
| Reset Command rSt | <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No) |
| Reset Password COde | 0 to 9999 (Default : 0) |
| Select Channel SEL | <input type="checkbox"/> Temp <input checked="" type="checkbox"/> Humidity (Default : Temp) |
| Temperature Control Setpoint or RH Control Setpoint OCSP rhSP | Setpoint Low Limit to Setpoint High Limit (Default : 0.0) |
| Temperature or RH Alarm-1 Setpoint AlSP | |
| Temperature or RH Alarm-2 Setpoint Al2SP | |

ALARM PARAMETERS : PAGE-10

| Parameters | Settings (Default Value) |
|-------------------------------|---|
| Select Channel SEL | <input type="checkbox"/> Temp <input checked="" type="checkbox"/> Humidity (Default : Temp) |
| Alarm Function ALFC | <input checked="" type="checkbox"/> Alarm <input type="checkbox"/> Trip (Default : Alarm) |
| Alarm Latch ALLt | <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No) |

ALARM PARAMETERS : PAGE-10

| Parameters | Settings (Default Value) |
|------------------------------------|---|
| Alarm-1 Type AlTY | <input checked="" type="checkbox"/> None <input type="checkbox"/> Process Low <input type="checkbox"/> Process High (Default : None) |
| Alarm-1 Hysteresis AlHY | 0.2 to 99.9 (Default : 2.0) |
| Alarm-1 Inhibit AlIh | <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes) |
| Alarm 2 Type Al2TY | <input checked="" type="checkbox"/> None <input type="checkbox"/> Process Low <input type="checkbox"/> Process High (Default : None) |
| Alarm-2 Hysteresis Al2HY | 0.2 to 99.9 (Default : 2.0) |
| Alarm-2 Inhibit Al2Ih | <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : Yes) |

ON-OFF CONTROL PARAMETERS : PAGE 11

| Parameters | Settings (Default Value) |
|--|--|
| Select Channel SEL | <input type="checkbox"/> Temp <input checked="" type="checkbox"/> Humidity (Default : Temp) |
| Control Function Ctrl | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable) |
| Control Mode lTYPE | <input checked="" type="checkbox"/> Cool } Temp. Channel <input type="checkbox"/> Heat } <input checked="" type="checkbox"/> De-hum } RH Channel <input type="checkbox"/> Hum } |
| Setpoint Low Limit SP.Lo | Input Type Minimum Range to Setpoint High Limit (Default : 0.0) |
| Setpoint High Limit SP.H_i | Setpoint Low Limit to Input Type Maximum Range (Default : 100.0) |
| Hysteresis HYSt | 0.1 to 99.9 (Default : 2.0) |

INPUT CONFIGURATION PARAMETERS : PAGE 12

| Parameters | Settings (Default Value) | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------|---|------------|----------|---------|-----------|---------------------|-------|-----------|---------------------|-------|-------------|---------------------|-------|----------|----------------------|-------|-----------|---------------------|-------|----------|----------------------|-------|
| Select Channel SEL | <input type="checkbox"/> Temp <input checked="" type="checkbox"/> Humidity (Default : Temp) | | | | | | | | | | | | | | | | | | | | | |
| Input Type inPt | Refer Table 1 (Default For Temp. : RTD, For RH : 0 to 5.0) | | | | | | | | | | | | | | | | | | | | | |
| Signal Low S.Lo | <table border="1"> <thead> <tr> <th>Input Type</th> <th>Settings</th> <th>Default</th> </tr> </thead> <tbody> <tr> <td>0 to 20mA</td> <td>0.00 to Signal High</td> <td>0.00</td> </tr> <tr> <td>4 to 20mA</td> <td>4.00 to Signal High</td> <td>4.00</td> </tr> <tr> <td>0 to 1.25 V</td> <td>0.00 to Signal High</td> <td>0.00</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> </tbody> </table> | Input Type | Settings | Default | 0 to 20mA | 0.00 to Signal High | 0.00 | 4 to 20mA | 4.00 to Signal High | 4.00 | 0 to 1.25 V | 0.00 to Signal High | 0.00 | 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 |
| Input Type | Settings | Default | | | | | | | | | | | | | | | | | | | | |
| 0 to 20mA | 0.00 to Signal High | 0.00 | | | | | | | | | | | | | | | | | | | | |
| 4 to 20mA | 4.00 to Signal High | 4.00 | | | | | | | | | | | | | | | | | | | | |
| 0 to 1.25 V | 0.00 to Signal High | 0.00 | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | |
| Signal High S.H_i | <table border="1"> <thead> <tr> <th>Input Type</th> <th>Settings</th> <th>Default</th> </tr> </thead> <tbody> <tr> <td>0 to 20mA</td> <td>20.00 to Signal Low</td> <td>20.00</td> </tr> <tr> <td>4 to 20mA</td> <td>20.00 to Signal Low</td> <td>20.00</td> </tr> <tr> <td>0 to 1.25 V</td> <td>1.250 to Signal Low</td> <td>1.250</td> </tr> <tr> <td>0 to 5 V</td> <td>5.000 to Signal Low</td> <td>5.000</td> </tr> <tr> <td>0 to 10 V</td> <td>10.00 to Signal Low</td> <td>10.00</td> </tr> <tr> <td>1 to 5 V</td> <td>5.000 to Signal Low</td> <td>5.000</td> </tr> </tbody> </table> | Input Type | Settings | Default | 0 to 20mA | 20.00 to Signal Low | 20.00 | 4 to 20mA | 20.00 to Signal Low | 20.00 | 0 to 1.25 V | 1.250 to Signal Low | 1.250 | 0 to 5 V | 5.000 to Signal Low | 5.000 | 0 to 10 V | 10.00 to Signal Low | 10.00 | 1 to 5 V | 5.000 to Signal Low | 5.000 |
| Input Type | Settings | Default | | | | | | | | | | | | | | | | | | | | |
| 0 to 20mA | 20.00 to Signal Low | 20.00 | | | | | | | | | | | | | | | | | | | | |
| 4 to 20mA | 20.00 to Signal Low | 20.00 | | | | | | | | | | | | | | | | | | | | |
| 0 to 1.25 V | 1.250 to Signal Low | 1.250 | | | | | | | | | | | | | | | | | | | | |
| 0 to 5 V | 5.000 to Signal Low | 5.000 | | | | | | | | | | | | | | | | | | | | |
| 0 to 10 V | 10.00 to Signal Low | 10.00 | | | | | | | | | | | | | | | | | | | | |
| 1 to 5 V | 5.000 to Signal Low | 5.000 | | | | | | | | | | | | | | | | | | | | |
| Range Low r.Lo | -199.9 to 999.9 (Default : 0.0) | | | | | | | | | | | | | | | | | | | | | |
| Range High r.H_i | -199.9 to 999.9 (Default : 100.0) | | | | | | | | | | | | | | | | | | | | | |
| Offset OFSt | -99.9 to 99.9 (Default : 0.0) | | | | | | | | | | | | | | | | | | | | | |
| Filter FiLt | 0.5 to 60.0 Seconds (in steps of 0.5 Seconds) (Default : 2.0 sec.) | | | | | | | | | | | | | | | | | | | | | |

SUPERVISORY PARAMETERS : PAGE 13

| Parameters | Settings (Default Value) |
|---|--|
| Control Set-point Adjustment on Operator Page SP.OP | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable) |
| Alarm Set-point Adjustment on Operator Page AL.OP | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable) |
| Remote Acknowledge Switch rAck.A | <input checked="" type="checkbox"/> Disable <input type="checkbox"/> Enable (Default : Disable) |
| Password For Resetting Min/Max COde | 1 to 9999 (Default : 0) |
| Device Slave ID id | 1 to 127 (Default : 1) |
| Baud Rate BAUD | <input type="checkbox"/> 4800 <input checked="" type="checkbox"/> 9600 <input type="checkbox"/> 19200 (Default : 9.6) |
| Parity PAR_i | <input checked="" type="checkbox"/> None <input type="checkbox"/> Even <input type="checkbox"/> Odd (Default : Even) |
| Serial Write Permission COde | <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Default : No) |

RETRANSMISSION PARAMETERS : PAGE 15

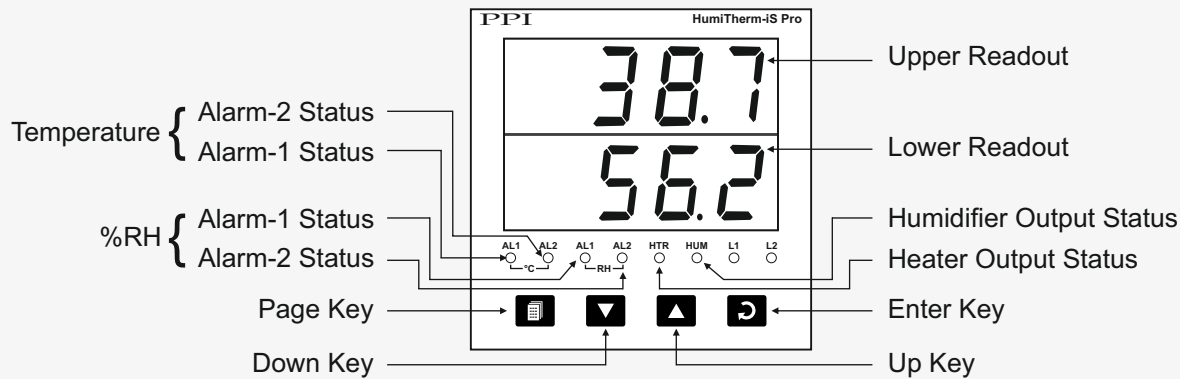
| Parameters | Settings (Default Value) |
|--|--|
| Select Channel SEL | <input type="checkbox"/> Temp <input checked="" type="checkbox"/> Humidity (Default : Temp) |
| Retransmission Output Type rEt.o | <input checked="" type="checkbox"/> 0 - 20mA <input type="checkbox"/> 4 - 20mA <input type="checkbox"/> 0 - 5 V <input type="checkbox"/> 0 - 10 V (Default : 4 - 20mA) |

| Parameters | Settings (Default Value) |
|-------------------------------------|---|
| Retransmission Low rEt.L | Input Type Minimum Range to Input Type Maximum Range (Default : 0.0) |
| Retransmission High rEt.H | Input Type Minimum Range to Input Type Maximum Range (Default : 100.0) |

TABLE- 1

| Option | Range (Min. to Max.) | Resolution |
|--|-----------------------|------------|
| rtd 3-wire, RTD Pt100 | -199.9 to +600.0°C | 0.1°C |
| 0-20 0 to 20mA DC current | -199.9 to 999.9 units | 0.1 units |
| 4-20 4 to 20mA DC current | | |
| rES.1 rES.2 Reserved (Default : 0 to 20mV) | | |
| 1.25 0 to 1.25V DC voltage | | |
| 5.0 0 to 5.0V DC voltage | | |
| 10.0 0 to 10.0V DC voltage | | |
| 1-5 1 to 5.0V DC voltage | | |

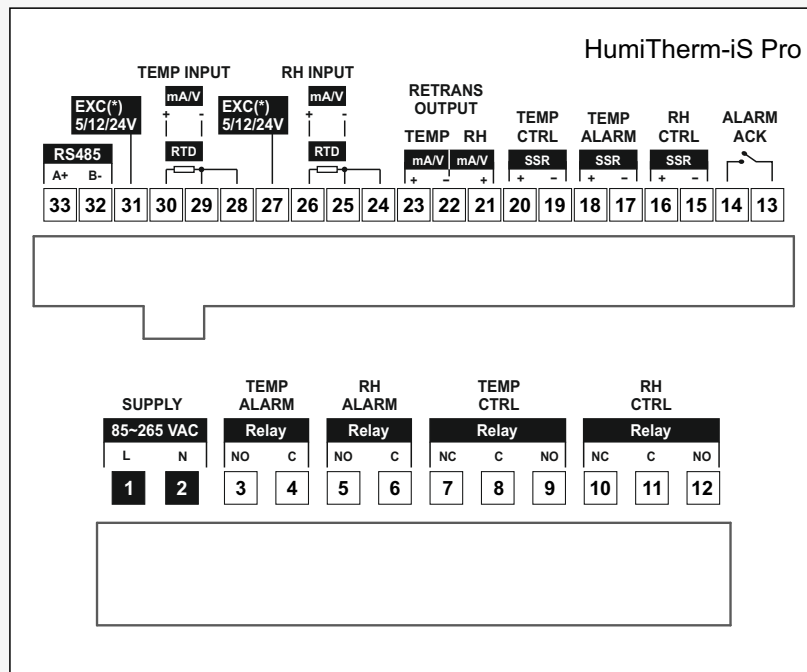
FRONT PANEL LAYOUT



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 : <ul style="list-style-type: none"> 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 : <ul style="list-style-type: none"> Wet-Bulb Temperature exceeds Dry-Bulb Temperature. Computed % RH above 100.0%. |
| | Display Freezes To 0.0% | Computed % RH is below 0.0%. |