

HumiTherm GD

Composite 'Temperature + RH' Controller with Graphic Display

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 PARAMETERS | |
|--|--|
| Parameters | Settings (Default Value) |
| Temp. Set Value >> | SP Low Limit to SP High Limit for Temperature (Default : 25.0) |
| RH Set Value >> | SP Low Limit to SP High Limit for RH (Default : 60.0) |
| Temp. LO Deviation >> (Available only if Temp. Low Deviation Alarm is Enabled) | 0.2 to 99.9 (Default : 2.0) |
| Temp. HI Deviation >> (Available only if Temp. High Deviation Alarm is Enabled) | 0.2 to 99.9 (Default : 2.0) |
| RH LO Deviation >> (Available only if RH Low Deviation Alarm is Enabled) | 0.2 to 99.9 (Default : 2.0) |
| RH HI Deviation >> (Available only if RH High Deviation Alarm is Enabled) | 0.2 to 99.9 (Default : 2.0) |
| Change Password >> | 1 to 100 (Default : 0) |

| SUPERVISORY > SERIAL PARAMETERS | |
|---------------------------------|---|
| Parameters | Settings (Default Value) |
| Device ID >> | 1 to 127 (Default : 1) |
| Baud Rate >> | 2400 4800 9600 19200 38400 57600 (Default : 9600) |
| Parity >> | None Even Odd (Default : Even) |
| Serial Write >> | No Yes (Default : No) |

| SUPERVISORY > PV OFFSET | |
|-------------------------|-------------------------------|
| Parameters | Settings (Default Value) |
| Temp. Zero Offset >> | -50.0 to 50.0 (Default : 0.0) |
| RH Zero Offset >> | -50.0 to 50.0 (Default : 0.0) |

| SUPERVISORY > TEMPERATURE / RH ALARM ENABLE | |
|---|---|
| Parameters | Settings (Default Value) |
| Temp Low Alarm >> Temp High Alarm >> | Disable Enable (Default : Enable) |
| RH Low Alarm >> RH High Alarm >> | Disable Enable (Default : Enable) |

| SUPERVISORY > PASSWORD | |
|------------------------|------------------------------|
| Parameters | Settings (Default Value) |
| Change Password >> | 1000 to 1999 (Default : 123) |

| SUPERVISORY > EXIT | |
|--------------------|-----------------------------|
| Parameters | Settings (Default Value) |
| Exit Setup Mode >> | Yes No (Default : No) |

| FACTORY > TEMPERATURE > ALARM | |
|-------------------------------|-----------------------------|
| Parameters | Settings (Default Value) |
| Hysteresis >> | 0.1 to 99.9 (Default : 0.2) |
| Inhibit >> | No Yes (Default : No) |

| FACTORY > TEMPERATURE > CONTROL | |
|---------------------------------|--|
| Parameters | Settings (Default Value) |
| Tune >> | No Yes (Default : No) |
| Setpoint LO Limit >> | 0.0 to Setpoint HI Limit (Default : 10.0) |
| Setpoint HI Limit >> | Setpoint LO Limit to 99.9 (Default : 99.9) |

| CONTROL ZONES : DUAL | |
|-----------------------|---------------------------------------|
| Parameters | Settings (Default Value) |
| CZ Prop Band >> | 0.1 to 999.9 (Default : 50.0) |
| CZ Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| CZ Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| HZ Prop Band >> | 0.1 to 999.9 (Default : 50.0) |
| HZ Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| HZ Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| Cycle Time >> | 0.5 to 100.0 Sec (Default : 10.0 Sec) |

| CONTROL ZONES : SINGLE | |
|------------------------|---------------------------------------|
| Parameters | Settings (Default Value) |
| Proportional Band >> | 0.1 to 999.9 (Default : 50.0) |
| Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| Cycle Time >> | 0.5 to 100.0 Sec (Default : 10.0 Sec) |

| FACTORY > TEMPERATURE > SENSOR INPUT | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|------------|----------|---------|-----------|---------------|------|-----------|---------------|------|---------|----------------|-------|----------|---------------|------|---------|----------------|-------|
| Parameters | Settings (Default Value) | | | | | | | | | | | | | | | | | | |
| Input Type >> | RTD Pt100 0-20mA 4-20mA 0-5V 0-10V 1-5V (Default : RTD Pt100) | | | | | | | | | | | | | | | | | | |
| Signal LO >> Signal HI >> | <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 20.00</td> <td>0.00</td> </tr> <tr> <td>4 to 20mA</td> <td>4.00 to 20.00</td> <td>4.00</td> </tr> <tr> <td>0 to 5V</td> <td>0.000 to 5.000</td> <td>0.000</td> </tr> <tr> <td>0 to 10V</td> <td>0.00 to 10.00</td> <td>0.00</td> </tr> <tr> <td>1 to 5V</td> <td>1.000 to 5.000</td> <td>1.000</td> </tr> </tbody> </table> Default : Signal Low 0.000 Signal High 5.000 | Input Type | Settings | Default | 0 to 20mA | 0.00 to 20.00 | 0.00 | 4 to 20mA | 4.00 to 20.00 | 4.00 | 0 to 5V | 0.000 to 5.000 | 0.000 | 0 to 10V | 0.00 to 10.00 | 0.00 | 1 to 5V | 1.000 to 5.000 | 1.000 |
| Input Type | Settings | Default | | | | | | | | | | | | | | | | | |
| 0 to 20mA | 0.00 to 20.00 | 0.00 | | | | | | | | | | | | | | | | | |
| 4 to 20mA | 4.00 to 20.00 | 4.00 | | | | | | | | | | | | | | | | | |
| 0 to 5V | 0.000 to 5.000 | 0.000 | | | | | | | | | | | | | | | | | |
| 0 to 10V | 0.00 to 10.00 | 0.00 | | | | | | | | | | | | | | | | | |
| 1 to 5V | 1.000 to 5.000 | 1.000 | | | | | | | | | | | | | | | | | |
| Range LO >> | -199.9 to 999.9 Counts (Default : 0.0) | | | | | | | | | | | | | | | | | | |
| Range HI >> | -199.9 to 999.9 Counts (Default : 100.0) | | | | | | | | | | | | | | | | | | |

| FACTORY > HUMIDITY (RH) > ALARM | |
|---------------------------------|-----------------------------|
| Parameters | Settings (Default Value) |
| Hysteresis >> | 0.1 to 99.9 (Default : 0.2) |
| Inhibit >> | No Yes (Default : No) |

| FACTORY > HUMIDITY (RH) > CONTROL | |
|-----------------------------------|--|
| Parameters | Settings (Default Value) |
| Tune >> | No Yes (Default : No) |
| Setpoint LO Limit >> | 0.0 to Setpoint HI Limit (Default : 10.0) |
| Setpoint HI Limit >> | Setpoint LO Limit to 99.9 (Default : 99.9) |

| CONTROL ZONES : DUAL | |
|-----------------------|---------------------------------------|
| Parameters | Settings (Default Value) |
| CZ Prop Band >> | 0.1 to 999.9 (Default : 50.0) |
| CZ Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| CZ Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| HZ Prop Band >> | 0.1 to 999.9 (Default : 50.0) |
| HZ Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| HZ Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| Cycle Time >> | 0.5 to 100.0 Sec (Default : 10.0 Sec) |

| CONTROL ZONES : SINGLE | |
|------------------------|---------------------------------------|
| Parameters | Settings (Default Value) |
| Proportional Band >> | 0.1 to 999.9 (Default : 50.0) |
| Integral Time >> | 0 to 3600 Sec (Default : 100 Sec) |
| Derivative Time >> | 0 to 600 Sec (Default : 16 Sec) |
| Cycle Time >> | 0.5 to 100.0 Sec (Default : 10.0 Sec) |

| FACTORY > HUMIDITY (RH) > SENSOR INPUT | | | | | | | | | | | | | |
|--|---|------------|----------|------------|---------------|------------|---------------|----------|----------------|-----------|---------------|----------|----------------|
| Parameters | Settings (Default Value) | | | | | | | | | | | | |
| Input Type >> | 0-20mA 4-20mA 0-5V 0-10V 1-5V (Default : 0-5V) | | | | | | | | | | | | |
| Signal LO >> Signal HI >> | <table border="1"> <thead> <tr> <th>Input Type</th> <th>Settings</th> </tr> </thead> <tbody> <tr> <td>0 to 20 mA</td> <td>0.00 to 20.00</td> </tr> <tr> <td>4 to 20 mA</td> <td>4.00 to 20.00</td> </tr> <tr> <td>0 to 5 V</td> <td>0.000 to 5.000</td> </tr> <tr> <td>0 to 10 V</td> <td>0.00 to 10.00</td> </tr> <tr> <td>1 to 5 V</td> <td>1.000 to 5.000</td> </tr> </tbody> </table> Default : Signal Low 0.000 Signal High 5.000 | Input Type | Settings | 0 to 20 mA | 0.00 to 20.00 | 4 to 20 mA | 4.00 to 20.00 | 0 to 5 V | 0.000 to 5.000 | 0 to 10 V | 0.00 to 10.00 | 1 to 5 V | 1.000 to 5.000 |
| Input Type | Settings | | | | | | | | | | | | |
| 0 to 20 mA | 0.00 to 20.00 | | | | | | | | | | | | |
| 4 to 20 mA | 4.00 to 20.00 | | | | | | | | | | | | |
| 0 to 5 V | 0.000 to 5.000 | | | | | | | | | | | | |
| 0 to 10 V | 0.00 to 10.00 | | | | | | | | | | | | |
| 1 to 5 V | 1.000 to 5.000 | | | | | | | | | | | | |
| Range LO >> | -199.9 to 999.9 Counts (Default : 0.0) | | | | | | | | | | | | |
| Range HI >> | -199.9 to 999.9 Counts (Default : 100.0) | | | | | | | | | | | | |

| FACTORY > COMPRESSOR | |
|--|---|
| Control Strategy : Heat + Cool | |
| COMPRESSOR STRATEGY >> | |
| | CONT. OFF CONT. ON SP BASED PV BASED (Default : CONT. ON) |
| | CONT. ON SP BASED PV BASED |
| Time Delay (sec) >> 0 to 1000 Sec (Default : 200 Sec) | Compressor SP >> 0.0 to 100.0 (Default : 2.0) |
| | Control Zones >> SINGLE DUAL (Default : SINGLE) |
| | Hysteresis >> 0.1 to 99.9 (Default : 2.0) |
| | Time Delay (sec) >> 0 to 1000 Sec (Default : 200 Sec) |
| | Time Delay (sec) >> 0 to 1000 Sec (Default : 200 Sec) |

| FACTORY > BOILER WATER LEVEL | |
|------------------------------|---|
| Parameters | Settings (Default Value) |
| Enable >> | No Yes (Default : No) |
| Water Level Strategy >> | Single Switch Dual Switch LO-HI Dual Switch LO-VLO (Default : Single Switch) |
| Switch-1 Logic >> | Open : Water LO Close : Water LO (Default : Close : Water LO) |
| Switch-2 Logic >> | Open : Water HI Close : Water HI (Default : Close : Water HI) OR Open : Water VLO Close : Water VLO (Default : Close : Water VLO) |

| FACTORY > DOOR OPEN | |
|-------------------------|--|
| Parameters | Settings (Default Value) |
| Enable >> | No Yes (Default : No) |
| Switch Logic >> | Open : Door Open Close : Door Open (Default : Close : Door Open) |
| Door Alarm Dly (sec) >> | 0 to 1000 Sec (Default : 60 Sec) |

| FACTORY > FACTORY DEFAULT | |
|---------------------------|-----------------------------|
| Parameters | Settings (Default Value) |
| Set To Default >> | No Yes (Default : No) |

| FACTORY > PASSWORD | |
|--------------------|------------------------------|
| Parameters | Settings (Default Value) |
| Change Password >> | 2000 to 2999 (Default : 321) |

| FACTORY > EXIT | |
|--------------------|-----------------------------|
| Parameters | Settings (Default Value) |
| Exit Setup Mode >> | No Yes (Default : No) |

| FRONT PANEL KEY | | |
|-----------------|-------------------|--|
| KEYS OPERATION | | |
| Symbol | Key | Function |
| | Scroll | Press to scroll through various Process Information Screens in Normal Operation Mode. |
| | Alarm Acknowledge | Press to acknowledge and mute (if active) alarm output. |
| | 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. |
| | SET-UP | Press to enter or exit set-up mode. |
| | ENTER | Press to store the set parameter value and to scroll to the next parameter. |

| PV ERROR INDICATIONS | | |
|----------------------|-------------|--|
| Message | Error Type | Cause |
| OPEN | Sensor Open | Sensor (RTD Pt100) Broken / Open |
| OVR | Over-range | Temperature above Max. Specified Range |
| UNR | Under-range | Temperature below Min. Specified Range |

