Humidity and Temperature Controllers

DPiTH Series
CNiTH Series

- Output 1: Humidity, Output 2: Temperature
- High Accuracy ±0.5°C and ±3% RH
- 4 Popular DIN Sizes
- Ethernet and Serial Communications (Optional)
- User-Friendly, Simple to Configure
- Full Autotune PID Control
- Choice of Relays, SSR, DC Pulse, Analog Voltage and Current
- Programmable Ramp and Soak for Humidity and/or Temperature
- RH/Temperature Probe Included
- RoHS 2 Compliant

SENSOR INCLUDED!

All models shown smaller than actual size.

The OMEGA® iTH Series instruments monitor and control both temperature and relative humidity. All meters and controllers in the series are high quality, highly accurate instruments featuring OMEGA's award-winning iSeries technology, uncompromising accuracy, backed by an extended 5-year warranty.

The instruments are simple to configure and use, while providing tremendous versatility and a wealth of powerful features.

The OMEGA iTH Series instruments are available either as monitors or controllers. The monitors are extremely accurate programmable digital panel meters displaying humidity, temperature, or dew point. The controllers also provide single output control for humidity and temperature and are easily programmed for any control or alarming requirement from simple on-off to full autotune PID control.

The iTH family of meters and controllers are available in four true DIN sizes: the ultra compact 1/32 DIN; the popular midsize 1/16 DIN square bezel with dual display; the 1/8 DIN vertical, and the 1/8 DIN horizontal with the big bright 21 mm (0.87") digits.

The OMEGA iTH Series LED displays can be programmed to change color between **GREEN**, **AMBER**, and **RED** at any setpoint or alarm point.

The iTH controller models offer a choice of 2 control or alarm outputs in almost any combination: solid state relays (SSR); form "C" SPDT (single pole double throw) relays; pulsed 10 Vdc output for use with an external SSR; or analog output selectable for control or retransmission of the process value.

The networking and communications options (highly recommended) include direct Ethernet LAN connectivity with an embedded Web server, and serial communications. The C24 serial communications option includes both RS232 and RS485. Protocols include a straight forward ASCII protocol. The C4EIT option includes Ethernet and RS485 ASCII on one device.

The iTH Series meters and controllers are designed for easy integration with popular industrial automation, data acquisition and control programs as well as Microsoft Visual Basic® and Excel®. OMEGA provides free configuration software which makes it fast and easy to get up and running. Available for download at OMEGA.

Specifications

Control

Action: Reverse (heat) or direct (cool)

Modes: Time and amplitude proportional control modes; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative with anti-reset windup and ON/OFF

Rate: 0 to 399.9 seconds

Reset: 0 to 3999 seconds

Cycle Time: 1 to 199 seconds; set to 0 for ON/OFF operation

Gain: 0.5 to 100% of span; setpoints 1 or 2

Damping: 0000 to 0008

Soak: 00.00 to 99.59 (HH:MM), or OFF

Ramp to Setpoint: 00.00 to 99.59 (HH:MM), or OFF

Autotune: Operator initiated from front panel for 1 input at a time only

Outputs

Two Physical Outputs: Output 1 = RH, output 2 = temperature; functions are set up as outputs (PID or ON/OFF), or alarms

Ordering Outputs Choices:

Relay: 250 Vac @ 3 A or 30 Vdc @ 3 A (resistive load); Form C SPDT

SSR: 20 to 265 Vac @ 0.05 to 0.5 A (resistive load); continuous

DC Pulse: Non-isolated; 10 Vdc @ 20 mA (used with external SSR)

Analog Output (Output 1 Only): Non-isolated, control or retransmission 0 to 10 Vdc or 0 to 20 mA, 500Ω maximum, ±1% of full scale accuracy

Control Output 1 and 2

Operation:

Action: Reverse (heat) or direct (cool)

Modes: Time and amplitude proportional control modes; selectable manual or auto PID, proportional, proportional with integral, proportional with derivative with anti-reset windup and ON/OFF

Alarm 1 and 2 (Programmable):

1) Alarms are used for color changing sequence of alarm status (visual alarm)