

Newport Humidity & Temperature Controllers

- Dual Loop Control
- High Accuracy $\pm 0.5^\circ\text{C}$ and $\pm 2\%$ RH
- 4 Popular DIN Sizes
- 2 Control or Alarm Outputs (optional)
- Choice of Relays, SSR, DC Pulse, Analog Voltage and Current
- Full Autotune PID Control
- Ethernet or RS-232/RS-485 (optional)
- User-friendly, Simple to Configure
- Programmable Ramp and Soak for Humidity and/or Temperature
- RH / Temperature Probe included
- NEMA 4, IP65 Front Bezel

The NEWPORT® iTH Series monitor and control both temperature and relative humidity. The meters accurately display humidity, temperature, or dew point. They also provide dual loop control for both humidity and temperature and are easily programmed for any control or alarming requirement from simple on-off to full autotune PID control.

The LED displays can be programmed to change color between Green, Amber, and Red at any set point or alarm point.

The iTH family is available in four true DIN sizes with NEMA 4, IP65 splash resistant bezels: 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 21mm digits.

SPECIFICATIONS

Sensor Specifications

Relative Humidity Accuracy/Range:

- $\pm 2\%$ for 10 to 90% RH
- 3% for 0 to 10% RH and 90 to 100% RH

Non-Linearity: $\pm 3\%$;

Hysteresis: 1% RH

Temperature Accuracy/Range*:

- $\pm 0.5^\circ\text{C}$ ($\pm 1^\circ\text{F}$) for 0 to 80°C (32 to 176°F)
- $\pm 1^\circ\text{C}$ ($\pm 2^\circ\text{F}$) for -40 to 0°C and 80 to 124°C (-40 to 32°F and 176 to 254°F)

*Note: extended temperature range is for Probe only, the iTH's operating temperature is 0 - 50°C .

Resolution: 0.03%, 12 bit for RH; 0.01 $^\circ\text{C}$
14 bit for Temperature

Response Time: 4 sec for RH; 5 sec for Temp
(63% slowly moving air)

General

A/D Conversion: 12 bit RH and 14 bit Temp.

Reading Rate: 2 samples per second max.

Digital Filter: Programmable

Display: 4-digit, 9-segment LED
 • 10.2 mm (0.40"): i32, i16D, i8DV
 • 10.2 mm (0.40") & 21 mm (0.83"): i8DH

Red, green and amber programmable colors for process variable, set point and temp units

Operating: 0 to 50°C (32 to 122°F),

Temperature: 90% RH non-condensing



ORDERING INFORMATION

To Order—Insert Number Code for Each Letter to Select Catalog Number.

Order Example: NE/iTH - i8DH - 00 - 5 - C24

A	B	C	D	E	F
A	Model #	Description			
	NE/iTH-i8DH	Temperature and RH Input 1/8 DIN Dual Display Horizontal			
	NE/iTH-i8DV	Temperature and RH Input 1/8 DIN Dual Display Vertical			
	NE/iTH-i16D	Temperature and RH Input 1/16 DIN Dual Display			
	NE/iTH-i32	Temperature and RH Input 1/32 DIN Single Display			
B	Outputs (2 digits)				
	0 0	Monitor version, no control outputs.			
	2 2	Two solid state relays (SSR's): 0.5 A @ 120/240 Vac continuous			
	2 3	SSR and relay: Form "C" SPDT 3A @ 120Vac, 3A @ 240Vac			
	2 4	SSR and pulsed 10 Vdc @ 20 mA (for use with external SSR)			
	3 3	2 Relays: Form "C" SPDT 3 A @ 120 Vac, 3 A @ 240 Vac			
	4 2	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and SSR			
	4 3	Pulsed 10 Vdc @ 20 mA (for use with external SSR) and relay			
	4 4	Two pulsed 10 Vdc @ 20 mA (for use with external SSR)			
	5 2	Analog Output selectable as either control or retransmission of process value; 0 to 10 Vdc or 0-20 mA @ 500 ohm max. & SSR			
	5 3	Analog Output 0 to 10 Vdc or 0-20 mA @ 500 ohm max & Relay			
	5 4	Analog Out 0 to 10Vdc or 0-20mA @ 500 ohm max & Pulse 10Vdc			
C	RH/Temperature Probe (must select one)				
	2	2" (51mm) Probe for iTH with 3ft (0.9m) cable			
	5	5" (137mm) Probe for iTH with 20ft (6.1m) cable			
D	Power Supply				
	*	Standard power input: 90-240 Vac $\pm 10\%$, 50-400 Hz, 110-375 Vdc, equivalent voltage (*no entry required)			
	DC	Low Voltage Power Option: 12 - 36 Vdc; 24 Vac $\pm 10\%$			
E	Network Options				
	EI	Ethernet with Embedded Web Server			
	C24	Isolated RS-232 and RS-485/422. (MODBUS & ASCII)			
	C4EI	Ethernet with Embedded Web Server + Isolated RS-485/422 hub for up to 31 devices			
F	Factory Setup				
	FS	Factory Setup and Configuration (requires Network Option)			

*1 -C4EI or -EI option is not available on the 1/32 DIN. Consult Sales for other Ethernet devices that can connect to an iTH-i32xx-x-C24.