

# Humidity/Temperature Transmitter



## HX400 Series



Optional

- ✓ 4 to 20 mA for Both RH and Temperature
- ✓ Two Points Field Calibration
- ✓ Models with Built-In Display Indicate Humidity and Temperature
- ✓ Field Configurable Parameters
- ✓ Two Isolated SSR Output

The HX400 Series transmitters provide remote and on-site monitoring of relative humidity and temperature. Each parameter is transmitted as a 4 to 20 mA signal to remote receivers.

The HX400 is a programmable 2-wire field-mounted humidity/temperature transmitter for use in environmental air monitoring and system. Its state-of-the-art design combines digital capacitor humidity/temperature chip and microprocessor-based linearization with temperature drift compensation technology offering proportional, linear, and highly accurate dual 4 to 20 mA output current in a variety of applications.

The HX400 integrates functions of transmitter, indicator and alarm outputs in one unit. All directly measured and computed parameters are configured via front 3 pushbutton without personal computer involved. Dual 3-digit 7-segments LED display module indicates the values of the measured parameters in measuring mode or prompting the programming instructions during setup mode and calibration mode. The current output models enable placing of the transmitter at a remote location virtually any distance away from the measuring device. The HX400 models feature built-in dual displays that indicate both humidity and temperature simultaneously.



HX402W shown smaller than actual size.



HX402D shown smaller than actual size.



## Specifications

**Loop Power:** 12 to 32 Vdc; dual 4 to 20 mA loop current; reverse polarity protected (Vloop = 24 Vdc, Tamb = 23 ±2°C, Rload = 250 Ω)

**Dual Isolated Solid State Relay Output:** For output #1 and output #2; 15 mA maximum, 40 Vdc maximum

**Accuracy and Range of Output Current:** ±0.02 mA; 4 to 20 mA (both channels)

**Accuracy @ 23°C and Scaleable Measurement Range:** Without field calibration

**Relative Humidity (RH):** ±2%; 10 to 90%

**Temperature:** ±0.5°C (0.9°F)

**Dew Point:** ±2°C (3.6°F)

**Wet Bulb Temperature:** ±2°C (3.6°F), -20 to 80°C (-4 to 176°F)

**Repeatability of Relative Humidity and Temperature:** ±1% RH, ±0.1°C

**Display Resolution:** 0.1% RH, 0.1°C (temperature < 100°C)

**Response:** 10 seconds (relative humidity); 30 seconds maximum (temperature)

**Filtering Ability of Sensor Cap:** Stainless steel wire mesh; 0.05 mm

**Type of Fluid:** Air and neutral gases

**Configuration Operation:** Front 3 pushbutton with dual high bright 3-digit LED module

**Working Temperature:**

**Electronics Device:** -20 to 70°C (-4 to 158°F)

**Sensing Probe:** -40 to 100°C (-40 to 212°F)

**Dual Miniature Loop-Powered Indicators:** Dual 3-digits LED (green for humidity; red for temperature)

**Reading Rate:** 1 update per second

**Display Accuracy**

**Relative Humidity:** ±2% RH

**Temperature:** ±0.5°C (1°F)

**Display Resolution:**

**Relative Humidity:** 0.1% RH

**Temperature:** 0.1°C (0.2°F)

**Housing Material:** POM

(sensing probe); polycarbonate (electronics device)

**Protection:** NEMA 4 (IP65) (electronic device); IP40 (sensing probe)

**Dimensions:** 110 W x 80 L x 56 mm D (4.3 x 3.2 x 2.2")

**Weight:** 250 g (8.8 oz)

**Probe Dimensions:**

**Wall Mount Unit:** L = 73 mm (2.87"), D = 15.5 mm (0.61")

**Remote Mount Unit:** L = 100 mm (3.94"), D = 15.5 mm (0.61"), 100 cm (39.4") cable, 5.3 (0.21") diameter cable

**Duct Mount Unit:** L = 200 mm (7.87"), D = 15.5 mm (0.61")

## To Order

Model No.	Description
HX401W	Wall mount relative humidity transmitter
HX401R	Remote probe relative humidity transmitter
HX401D	Duct mount relative humidity transmitter
HX402W	Wall mount RH and temperature transmitter
HX402R	Remote probe RH and temperature transmitter
HX402D	Duct mount RH and temperature transmitter

## Accessories

Model No.	Description
CAL-3-HU	NIST-traceable calibration
RHCN-7001	RH controller, 0 to 1 Vdc input, 110 Vac
PSR-24S	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, screw terminals, UL
PSR-24L	Regulated power supply, US plug, 90 to 264 Vac input, 24 Vdc output, 400 mA, stripped leads, UL
PSR-24L-230	Regulated power supply, European plug, 230 Vac input, 24 Vdc output, 400 mA, stripped leads, CE
PSU-93	Unregulated power supply, 16 to 23 Vdc, 300 mA max, screw terminal
TX4-100	4-conductor shielded transmitter cable 30 m (100')

Comes complete with operator's manual.

**Ordering Example:** HX402W, wall mount relative humidity and temperature transmitter.

# Relative Humidity On/Off Controller

**RHCN-7000 Series**



- ✓ Bright Green 3-Digit LED Display
- ✓ 0 to 1 or 0 to 3 Vdc, 4 to 20 mA Inputs
- ✓ 8 Amp Relay Output
- ✓ Simple On/Off Control
- ✓ Compatible with RH Transmitters
- ✓ Optional RH Probe

