Phoenix Controls

PCS Combination Sensor with Display

Phoenix Controls temperature sensors provide a stable and secure environment for those facilities that need it the most, such as hospitals, cleanrooms, and laboratory animal facilities. The sensors also simplify room balancing by eliminating the need for a certified person to accompany the balancer during the commissioning process.

The PCS4xx/5xx/6xx series, microprocessor-based sensor, provides a choice of three temperature sensor output signal signals and three humidity sensor output signals. The five pushbuttons allow easy adjustment of set points, occupancy override, and access to the setup menu. The large backlit LCD display allows simultaneous display of two values (temperature, temperature set point, humidity, or humidity set point) and occupancy status.

PCS Combination Sensor

Features

- Test and Balance in the setup menu for heating, cooling, and normal operation
- Fully configurable set point range, relative or absolute
- Large Backlit LCD Display with readings within a tenth of a degree
- Simultaneous display of temperature, humidity, and occupancy status
- 3.5 mm communications jack (standard)
- Foam backing for drywall or 2" x 4" single gang junction box mounting (standard)
- Optional 3 Point NIST Calibration Certificates

SPECIFICATIONS

Specification	Temperature			Humidity
	4xx Series	**5xx Series**	**6xx Series**	**x05/x10/x20 Series**
Sensor Output Range (Span)	32-122 °F (0-50 °C)	40-104 °F (5-40 °C)	32-122 °F (0-50 °C)	0-100%
Sensing Element	Thermistor (NTC)	Platinum RTD (PTC)	Thermistor (NTC)	Impedance Type Humidity Sensor
Signal, Sensor Output (Common Ground)	10 K Type 2 thermistor	0-10 Vdc	20K NTC	0 to 5 Vdc, or 0 to 10 Vdc, or 4 to 20 mA
Keypad Configuration	5 Pushbuttons (Setup, Up and Down Arrows, O/R (Occupancy Override), and Select)			
Signal, Set Point Output (Common Ground)	0-20K ohms	0-10 Vdc	9.5-1K ohms	0 to 5 Vdc, or 0 to 10 Vdc, or 4 to 20 mA
Local Occupancy Control	Contact closure to common ground			
Display	Blue backlight LCD, 2.27"x 1.7", 3 LED, programming option for 0 or 1 decimal point			
Display Unit of Measure	Push Button Programming (°F (standard) or °C)			
Setpoint Display and Range (Push Button Control & Programming)	Fully configurable via pushbutton menu: - Setpoint range: 55 to 89 °F (15 to 31 °C) - Setpoint Adjust: adjustable up to -20 to +20 °F or °C of setpoint (1 °F or 0.5 °C increments) - Setpoint Limits: 40 to 104 °F (4.5 to 40 °C) - Relative range: up to -20 to 20 ° F or °C (1 °F or 0.5 °C increments)			Fully configurable via pushbutton menu: - Setpoint range: 33 to 67% - Setpoint Adjust: adjustable up to -20% to +20% of setpoint (1% increments) - Setpoint Limits: 13% to 87%
Occupancy Display	Remote contact closure to common ground indicates *Occupied* on display			
Housing Material/ Color	ABS/PC (White); UL 94-5VB			

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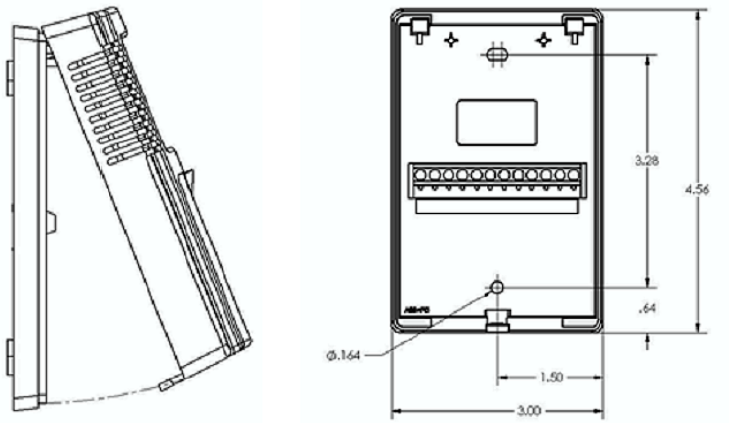
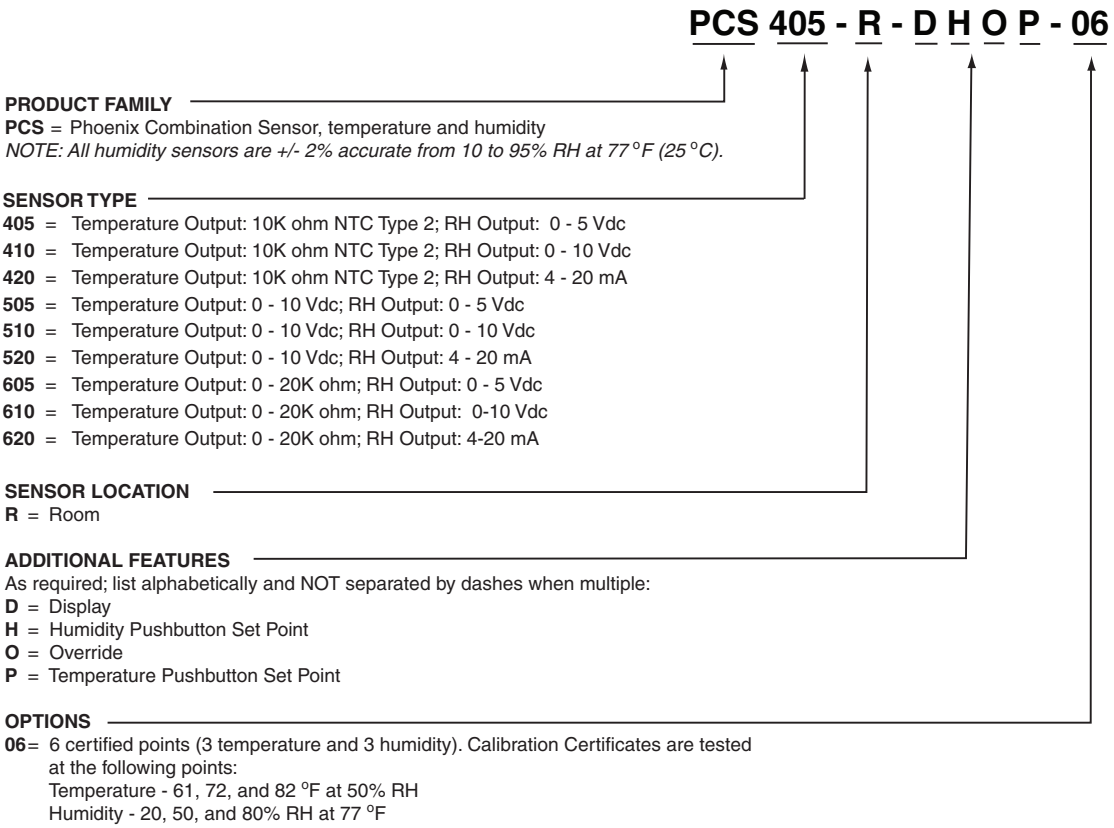
Specification	Temperature			Humidity
	4xx Series	**5xx Series**	**6xx Series**	**x05/x10/x20 Series**
Test & Balance Settings (Push Button Control)	40 °F (4.4 °C), 72 °F (22.2 °C), and 104 °F (40 °C)			0%, 50%, and 100%
Communication Jack	3.5 mm Stereo Jack (Ring, Tip, Shield)			
Operating Range	35-122 °F (1.5-50 °C), 0-95% Relative Humidity Non-Condensing			
Storage Range	-4-131 °F (-20-60 °C), 0-95% Relative Humidity Non-Condensing			
Reference Resistance	10K ohm @ 77 °F (25 °C)	1K ohm @ 32 °F (0 °C)	20K ohm @ 77 °F (25 °C)	N/A
Accuracy	Sensor Output Accuracy: +/- 1.0 °F (+/- 0.56 °C): LCD Display Accuracy +/- 1.5 °F due to Rounding			2% from 10 to 95% RH @ 77 °F (25 °C)
Dissipation Constant	N/A			
Response Time	10 seconds nominal for a 63% step increase (room-hot water) 11 seconds nominal for a 63% step decrease (room-ice water)			20 seconds for a step of 46%-96% 45 seconds for a step of 98%-47%
Stability	< 1% after 1000 hours at 212 °F (100 °C)	N/A	< 1% after 1000 hours at 212 °F (100 °C)	< 2% over 5 years
Supply Voltage	+18 to 40 Vdc (NOTE: Use of PVC400-HW is required for LON applications)			
Power Consumption	< 0.65 VA (x05 and x10 Series), < 4 VA (x20 Series)			
Product Dimensions (L x W x D)	4.56" (115.82 mm) x 3.0" (76.2 mm) x 1.45" (36.75 mm)			
Product Weight	0.35 lbs (0.162 kg)			
NIST Certification (6 Points)	61 °F (16 °C), 72 °F (22.5 °C), and 82 °F (28 °C)			20%, 50%, and 80% @ 72 °F (22 °C)
Regulatory Compliance	RoHS 2 **EU Contact Address:** Pittway Tecnologica Srl Via Caboto 19/3 34147 Trieste TS Italy CE 20 c ETL US LISTED Intertek **WEEE Directive 2012/19/EC** **Waste Electrical and Electronic Equipment directive** At the end of the product life dispose of the packaging and product in a corresponding recycling centre. Do not dispose of the unit with the usual domestic refuse. Do not burn the product.			

DIMENSIONS



ORDERING GUIDE



Valid Catalog Numbers

PHX-COMBINATION-SENSOR (10K-2 Temperature Output)		PHX-COMBINATION-SENSOR (0-10VDC Temperature Output)		PHX-COMBINATION-SENSOR (20K Temperature Output)	
Catalog Number without Calibration Certificate	Catalog Number with 6 Point Calibration Certificate	Catalog Number without Calibration Certificate	Catalog Number with 6 Point Calibration Certificate	Catalog Number without Calibration Certificate	Catalog Number with 6 Point Calibration Certificate
PCS405-R-DOP	PCS405-R-DOP-06	PCS505-R-DOP	PCS505-R-DOP-06	PCS605-R-DOP	PCS605-R-DOP-06
PCS405-R-DHOP	PCS405-R-DHOP-06	PCS505-R-DHOP	PCS505-R-DHOP-06	PCS605-R-DHOP	PCS605-R-DHOP-06
PCS410-R-DOP	PCS410-R-DOP-06	PCS510-R-DOP	PCS510-R-DOP-06	PCS610-R-DOP	PCS610-R-DOP-06
PCS410-R-DHOP	PCS410-R-DHOP-06	PCS510-R-DHOP	PCS510-R-DHOP-06	PCS610-R-DHOP	PCS610-R-DHOP-06
PCS420-R-DOP	PCS420-R-DOP-06	PCS520-R-DOP	PCS520-R-DOP-06	PCS620-R-DOP	PCS620-R-DOP-06
PCS420-R-DHOP	PCS420-R-DHOP-06	PCS520-R-DHOP	PCS520-R-DHOP-06	PCS620-R-DHOP	PCS620-R-DHOP-06

OUTPUT FORMULAS AND TABLES

For output formulas and complete sensor output tables, see *MKT-0474 Sensor Outputs and Tables*.