CONTROLS SERIES

CONDAIR CONTROLS PORTFOLIO OVERVIEW

Humidification, dehumidification
and evaporative cooling

condair

Are you looking for highly efficient, reliable humidification systems that offer simplistic controls?

Look no further! Condair offers a wide range of highly accurate control products that perfectly complement our humidifiers meet your control needs. Designed to provide clear information regarding humidifiers and their operating conditions, they allow for users to quickly input preferred functions and maintain system operations. We can supply control technology suited for any type of humidity application including residential, commercial and industrial environments.

Control System Selection

Selection of a suitable control system depends on the design conditions including permissible control tolerance, humidity increase and supply air temperature. A distinction is made in humidification between isothermal (steam) and adiabatic (atomization, evaporation) humidification.

Isothermal Humidification Control

During isothermal humidification, water vapor leaving the steam distribution pipes condenses in the air current and is visible as mist over what is called the absorption distance. Optimal control is achieved through sufficient humidity distribution in the location of the sensing elements. The humidification distance thus forms the basis for establishing the required minimum distances to downstream system parts and sensing elements.

Adiabatic Humidification Control

Adiabatic humidification systems introduce water to the air using a wetted medium (evaporation) or spray mechanism (atomization). Heat energy contained in the surrounding air then causes the water to evaporate. Due to the ensuing temperature drop associated with the removal of this heat energy, adiabatic humidification control is often carried out in conjunction with temperature control. Optimal control is achieved by installing sensing elements at a location with uniform mixing and adequate absorption.

CONDAIR CONTROLS PORTFOLIO OVERVIEW

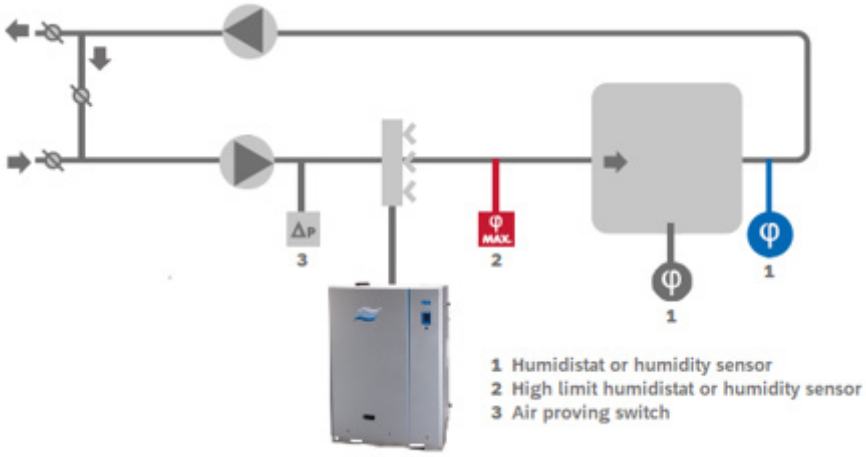
Types of Control Devices

When it comes to ducted air systems, three control devices are involved:

Air Proving Device An airflow monitor or air proving switch is used to indicate whether there is air flow in the supply duct.

Room Control Device A humidistat or sensor is used to compare the relative humidity of a space to the desired set point.

High Limit Protection Device A humidistat or sensor is used to compare the relative humidity of the duct to the desired set point (typically 85% RH), to ensure the duct does not become over-humidified.



Modulating vs. On/Off Controls

Modulating Controls
Modulating controls are our most frequently used controls for in-space humidification. These controls can provide either demand or transducer signal to your Condair humidifier, and our new high-precision devices can hold in-space conditions in a ±0.5% range. Our modulating controls come as either a wall or duct-mounted controller. Additionally, our duct-mounted modulating controller can be used as a high-limit device, allowing for more precise control.

On/Off Controls
Condair on/off humidification controls are the backbone of our controls offering. Most commonly used for safety, Condair is proud to readily provide air-proving and high-limit controls ensuring your humidifier never over saturates your duct or air handling unit. Our intuitive devices feature innovative built-in sensors, a keypad for easy adjusting set points, a subtle yet high-resolution backlit LCD display, and boast an accuracy of up to ±2.5%.

Humidity & Temperature Sensors

nLink analogIP
Humidity & Temperature Transmitter

nSens HT-ENS
High Precision Humidity & Temperature Sensor

	nLink analogIP	nSens HT-ENS
APPLICATIONS	• Industrial/Commercial in-duct and in-room • Applications requiring high precision control	• Sensing element for use with high precision humidity & temperature transmitter
FEATURES	✓ IP67 Rating	✓ Electrolytic-resistive technology
ACCURACY		± 0.5% RH (15-30 °C) ± 0.1 °K (0-65 °C)

Humidity Sensors

CRC-NA
Room Humidity Sensor

CDC-NA
Duct Humidity Sensor

CDC-SL
Duct Humidity Sensor

	CRC-NA	CDC-NA	CDC-SL
APPLICATIONS	• Industrial/Commercial in-duct and in-room • In-duct with room humidity control	• Industrial/Commercial in-duct • High humidity control	• Private end user in-duct • Standard humidity control
FEATURES	✓ Capacitive sensing element	✓ Capacitive sensing element	✓ Capacitive sensing element
ACCURACY	± 2.5% RH	± 2.5% RH	± 4.5% RH

Humidistats

CHD-NA
Duct Humidistat

CHR-NA
Room Humidistat

MHR
Mechnical Room Humidistat

	CHD-NA	CHR-NA	MHR
APPLICATIONS	• In-duct • Industrial/Commercial • High limit humidistat for safety loop	• In-room • Industrial/Commercial • High limit humidistat for safety loop	• In-duct or in-room • Humidification or dehumidification
FEATURES	✓ Binary humidifier control and fam coil output ✓ Outdoor temperature input for set-back mode ✓ Capacitive sensing elements	✓ Binary humidifier control and fam coil output ✓ Outdoor temperature input for set-back mode ✓ Capacitive sensing elements	✓ No power supply required ✓ Suitable for high humidity levels ✓ IP30 Rating
ACCURACY	± 4.5% RH	± 4.5% RH	± 3% RH

Humidity Controllers

DCC-NA
Humidity Controller with External Duct Sensor

RCC-NA
Room Controller

	DCC-NA	RCC-NA
APPLICATIONS	• High humidity control requirements • Industrial/Commercial in-duct	• High humidity control requirements • Industrial/Commercial in-duct or in-room
FEATURES	✓ Outdoor temperature input for set-back mode ✓ Capacitive sensing element	✓ Outdoor temperature input for set-back mode ✓ Capacitive sensing element
ACCURACY	± 2.5% RH	± 2.5% RH

Air Proving Switches

CDA-S
Duct Airflow Monitor

CDA
Duct Airflow Monitor

APS-NA
Air Proving Switch

	CDA-S	CDA	APS-NA
APPLICATIONS	• Private end user In--duct	• Industrial/Commerical In-duct	• Industrial/Commercial In-duct • Differential pressure switch in safety loop
FEATURES	✓ Calorimetric measurement principle ✓ Adjustable switch point ✓ IP65 Rating	✓ Calorimetric measurement principle ✓ Adjustable switch point ✓ IP65 Rating	✓ Operating difference ~0.04” WC ± 15% ✓ IP54 Rating
ACCURACY	± 4.5% RH	± 4.5% RH	± 3% RH

Accessories

COT Outdoor Temperature Sensor
All in-duct and in-room applications

nSens Cable
5m Extension Cable for nLink analogIP & nSens HT-ENS

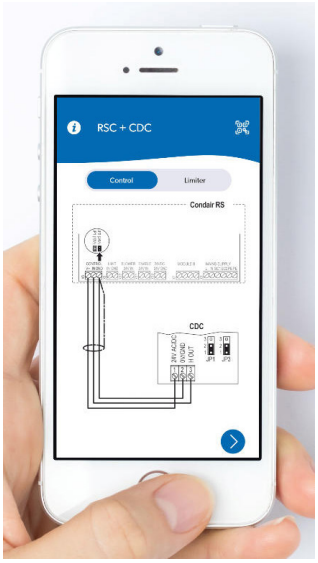
CDT Duct Temperature Sensor
Industrial/Commercial in-duct applications

Temperature Sensors prevent condensation on windows and building structures by adjusting humidity control set-point according to outdoor temperature.

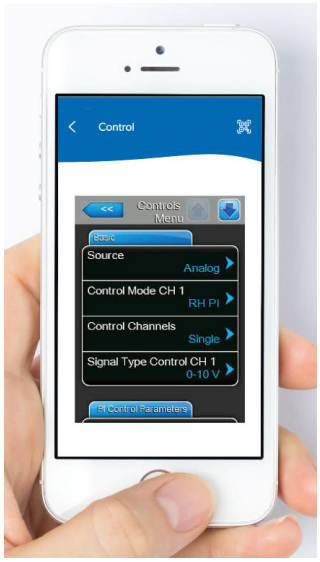
Smartphone App – Condair Sensor Connect

Scan the Sensor QR

Scan the Device QR



Get the Schematic



Get the Settings

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