

Humidity Transmitters, operational up to 100% RH



CH2D

DESCRIPTION

Duct humidity transmitters.

APPLICATION

Measure humidity up to 100% RH (accepts over-wetted condition), and transmit readings to any compatible electric, electronic analog, or DDC/PLC control or automation system.



"Can be saturated without damage"



SPECIFICATIONS

Measuring	- Range	0% to 100% RH
	- Accuracy	± 2% RH
Working range		30% to 100% RH, non-corrosive air
Sensing	- Element	Polyga/multi plastic fibre band, "can be saturated without damage"
	- Linearity	< 0.8% RH at 73.4°F (23°C)
Power	- Supply	24 VDC (15 to 30 VDC), or 24 VAC, + 20%, 50 to 60 Hz
	- Consumption	5 mA
Output signal		Polarity protected
	- Current versions	4 to 20 mA, loop powered, two wire; or four wire, 24 VAC
	- Voltage version	0 to 10 VDC
Load requirement		
	- Current output	Max loop resistance 500 ohms
	- Voltage output	Min load 10k ohms
Permissible air velocity		1575 ft/min (8 m/sec); 2970 ft/min (15 m/sec), with gauze protection
Permissible ambient temperature		
	- At housing	-4°F to 140°F (-20°C to 60°C)
	- At probe	-40°F to 176°F (-40°C to 80°C)
Wire	- Connection	Screw terminal for wire leads
	- Size	Maximum 15 AWG (1.5 mm ²)
Cable entry		PG 13.5 fitting, replacable by 1/2" conduit connector
Housing	- Cover material	ABS, fire retardant
	- Duct probe	Stainless steel
	- Color	light gray/gray/silver
	- Protection	NEMA 4 (IP64) Printed circuit board moisture protected
	- Dimensions	3.1 x 4.7 x 2.8 in (80 x 120 x 72 mm), and probe Ø 0.6 x 8.7 in (Ø 16 x 220 mm) for duct
	- Installation	Duct mounted, sensor vertically, downwards, or horizontal
Ship weight		1.4lb (0.7kg)

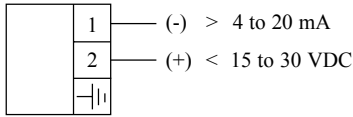
Part Numbers

Sensor and Transmitter				
Housing Type	Accuracy	Output Signal	Power	Part Number
Duct, NEMA 4	± 2% RH	4 to 20 mA	LP*	CH2D420/2
Duct, NEMA 4	± 2% RH	4 to 20 mA	24 VAC	CH2D420/4
Duct, NEMA 4	± 2% RH	0-10 VDC	24 VAC/VDC	CH2D010
High velocity protector gauze				CH-VEL-GAUZE
Probe protection tube against sun and rain				CHPP
Duct mounting bracket				DBZ-24
Wall mounting bracket				DBZ-20/1

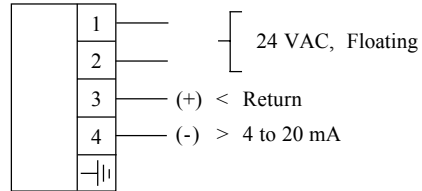
LP* = Loop powered, 24 VDC (15 to 30 VDC)

WIRING DIAGRAMS

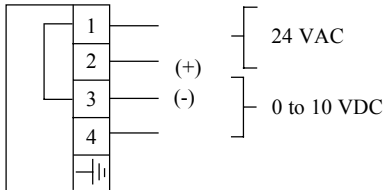
CH2D420/2



CH2D420/4



CH2D010



“Do not connect 24 VAC power supply with signal out put 4 to 20 mA, and do not connect 24 VAC to earth ground.”

MAINTENANCE

The sensor element is maintenance-free when applied in clean air.

Polluted air (ie. particles of any aggressive solvent) may cause faulty measurements.

Water repellent protective film forming deposits (ie., resins aerosols, lacquer aerosols, fumigant substances, etc.) on the sensor element could be harmful to the element itself. The water resistant polyga sensor element shall be cleaned with water only ("do not use any solvent"). A factory designed process insures a good longtime stability of the sensor and any regeneration is not necessary.

ATTENTION

No warranty will be guaranteed when the sensor element has been inappropriately touched and/or the inner part of the sensor/transmitter is physically abused.