

Dewpoint Transmitters Chilled Mirror Technology

RHCM Series



Optional

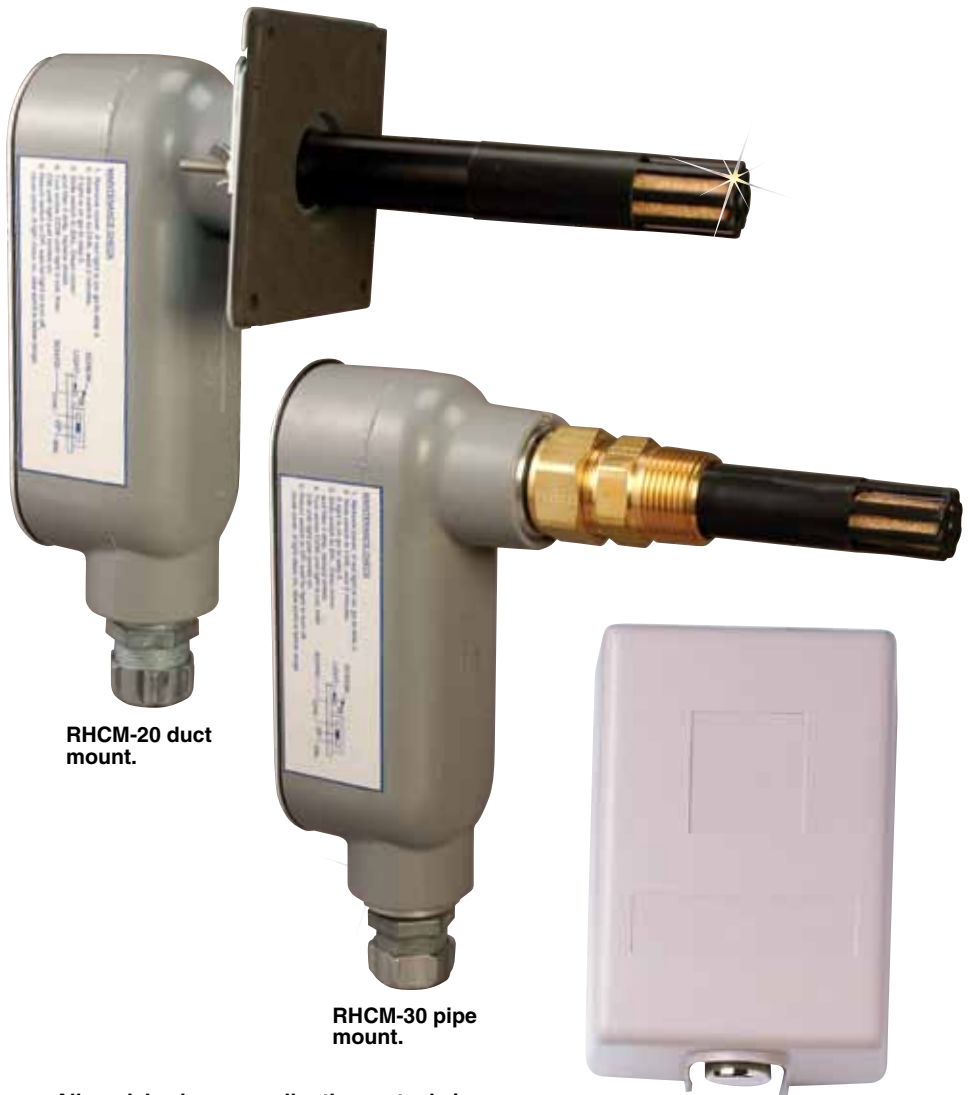
- ✓ No Routine Calibration Needed
- ✓ Minimum Drift
- ✓ $\pm 1^\circ\text{F}$ Dewpoint Accuracy
- ✓ 24 Vdc, 24 Vac, 115 Vac, and 230 Vac Power Available
- ✓ RTD Simulator or 4 to 20 mA Output

Applications

- ✓ HVAC/Energy Management
- ✓ Clean Rooms
- ✓ Dry Rooms
- ✓ Computer Rooms
- ✓ Environmental Laboratories
- ✓ Semiconductor Manufacturing

The RHCM Series is a family of low-cost, high-performance chilled mirror dewpoint transmitters. The sensor provides accurate long-term repeatability and high reliability for process control and energy management. The RHCM-10 sensor electronics are housed in a rugged enclosure that can be wall mounted for climate control. The RHCM-20 and RHCM-30 sensors are designed to be either pipe or duct mounted for process control in HVAC/energy management applications. Field calibration is not required and ambient temperature effects, hysteresis, and calibration drift with age are all virtually eliminated.

The RHCM Series offers a wide range of user-specified power inputs including 24 Vdc, 24 Vac, 115 Vac, and 230 Vac, encompassing many applications. The user-specified outputs include 100 Ω Platinum



RHCM-20 duct mount.

RHCM-30 pipe mount.

RHCM-10 wall mount.

All models shown smaller than actual size.

RTD (4-wire) or 4 to 20 mA, which can be scaled over 3 different temperature ranges of 0 to 100°F, 0 to 50°C, and -40 to 140°F. Either output can be directly connected to a panel meter, controller, or data acquisition system.

Specifications

Accuracy: $\pm 1.0^\circ\text{F}$, max

Repeatability: $\pm 1.0^\circ\text{F}$, max

Hysteresis: None

Response Time: 2-min, duct/pipe; 4-min, wall

Power: 24 ± 6 Vdc @ 350 mA; 24 Vac @ $\pm 10\%$; 115 Vac @ $\pm 10\%$; 230 Vac @ $\pm 10\%$

Power Consumption: 10 W max

RTD Output: 100 Ω Pt, 4-wire

Operating Range, Sensor: -18 to 71°C (0 to 160°F)

Current Output: 4 to 20 mA, scaled to range of 0 to 100°F, 0 to 50°C or -40 to 140°F; all ranges also provide 1 to 5 Vdc using 250 Ω shunt

Operating Range, Housing: 0 to 50°C (32 to 120°F)

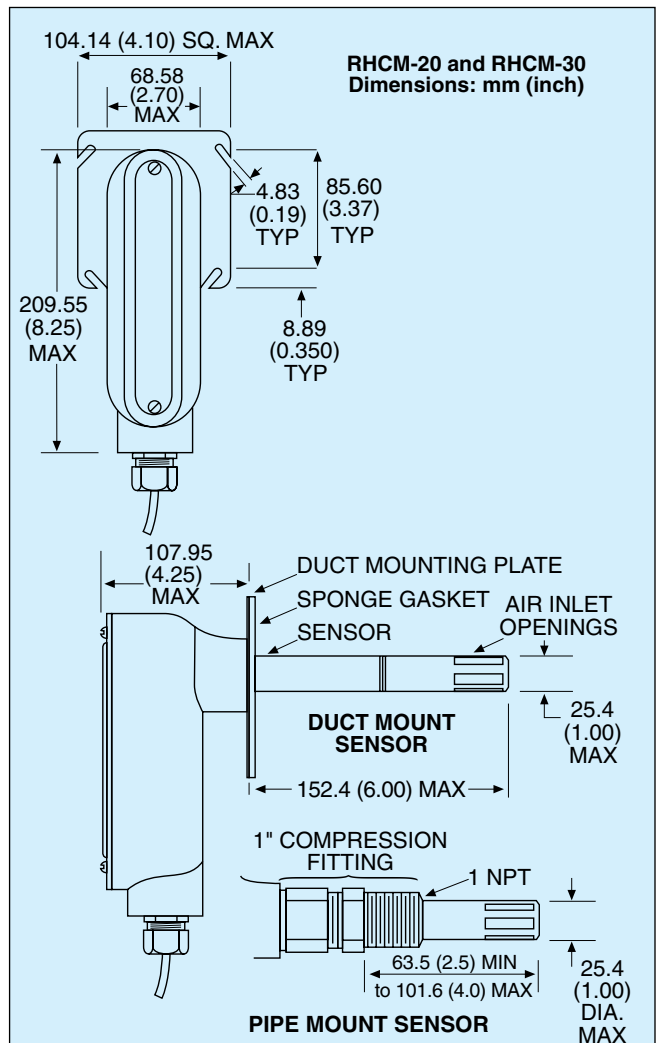
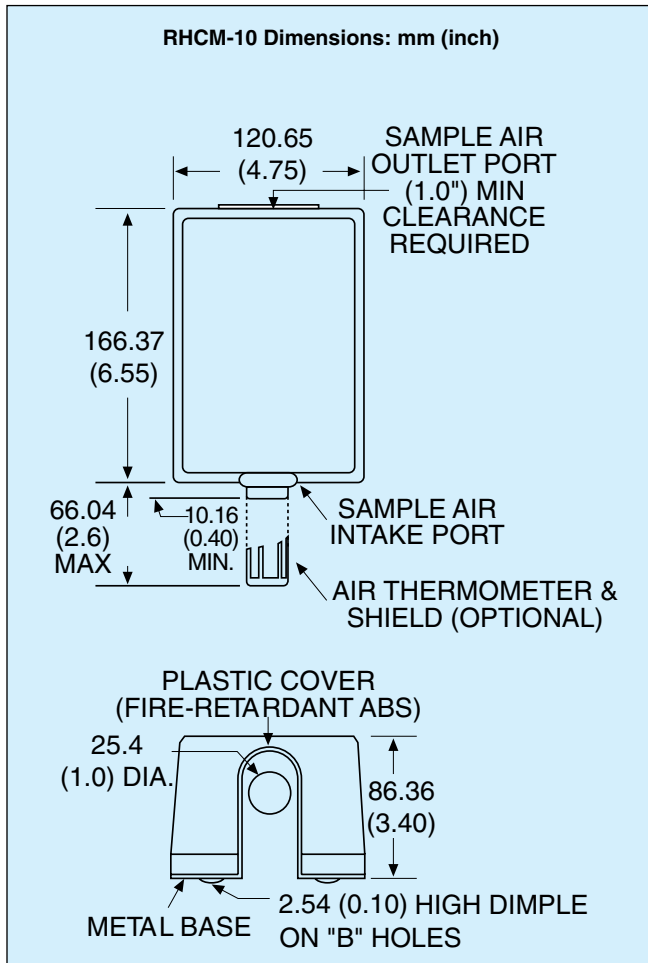
Flow Rate: 300 to 3000' per minute (duct/pipe mount)

Max Pressure: 0 to 5 psig

Humidity: 10 to 90% RH @ 27°C (80°F)

Ship Weight: 4.55 kg (10 lb)

Dry Weight: 2.73 kg (6 lb)



Output Options

Order Code	Output (Scale)
PT100	100 Ω RTD
100F	4 to 20 mA (0 to 100°F)
50C	4 to 20 mA (0 to 50°C)
140F	4 to 20 mA (-40 to 140°F)

Power Supply Options

Order Code	Description
1	24 Vdc
2	24 Vac
3	115 Vac
4	230 Vac

To Order	
Model No.	Description
RHCM-10-(*)-(**)	Wall mount dewpoint transmitter
RHCM-10T-(*)-(**)-(***)	Wall mount dewpoint/temperature transmitter
RHCM-20-(*)-(**)	Duct mount dewpoint transmitter
RHCM-30-(*)-(**)	Pipe mount dewpoint transmitter
TX4-100	4 conductor shielded transmitter cable, 30 m (100')
CAL-3-HU	NIST-traceable calibration
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

Comes complete with operator's manual.

* Insert power code from power supply options chart (1, 2, 3 or 4).

** Insert output code for dewpoint range from the output options chart (PT100, 100F, 50C or 140F).

*** Insert second output code for ambient temperature output from the output options chart (PT100, 100F, 50C or 140F).

Ordering Examples: RHCM-10T-1-50C-50C, dewpoint/temperature transmitter with 24 Vdc power, a dew point output of 4 to 20 mA (0 to 50°C) and an ambient temperature output of 4 to 20 mA = 0 to 50°C with CAL-3-HU, NIST-traceable calibration.

RHCM-10-1-PT100, dewpoint/temperature transmitter with 24 Vdc power, a dew point output of 100 Ω RTD.