

HCD2RMC Series of Room Carbon Dioxide Transmitter



The room CO₂ transmitter device uses a highly accurate and reliable nondispersive infrared (NDIR) sensor in an attractive, low profile enclosure for room applications to monitor CO₂ levels. The sensor uses dual wavelength optics and LTA (long term adjustment) signal processing technology to deliver industry leading long-term accuracy and reliability. These technology features ensure optimum measurement stability for both periodic and constant occupancy applications, so the device is equally suitable for a classroom or a hospital room.

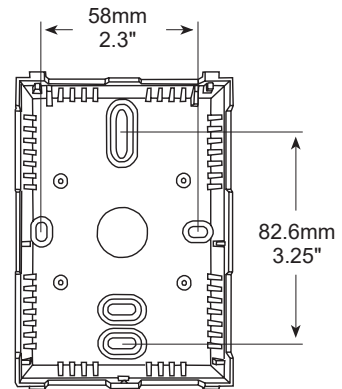
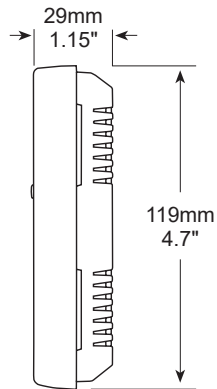
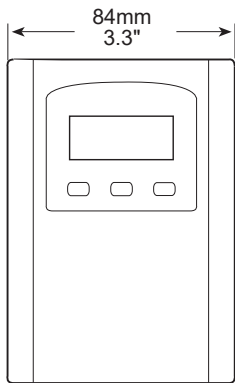
Standard features include a field selectable output signal of either 4-20 mA, 0-5 Vdc or 0-10 Vdc for the highest versatility, programmable CO₂ measurement span, a backlit alpha-numeric LCD and easy menu operation for configuration.

Optional features include a resistive temperature sensor output (with LCD display of temperature in either °C or °F), 2 button setpoint adjustment, a control relay with programmable setpoint, hysteresis and time delay, and a dry-contact override switch.

SPECIFICATIONS

Gas Type Detected:.....	Carbon dioxide (CO ₂)	Display Size:.....	35mm W x 15mm H (1.4" x 0.6")
Sensor Type:	Dual wavelength non-dispersive infrared (NDIR)	Digit Height:.....	2-line x 8 character
Sensor Accuracy:.....	± 50 ppm + 3% of reading	Optional Temperature Sensor	
Measurement Range:.....	0-2000 ppm (default), adjustable 1000-5000 ppm	Type:.....	Various Thermistors and RTDs
Pressure Dependency:.....	< 1% of reading / kPa	Accuracy:.....	Thermistors: ±0.2°C (±0.36°F) @ 25°C (77°F)
Response Time:.....	90 seconds (T90)		Platinum RTD's: ±0.3°C (±0.54°F) @ 0°C (32°F)
Warm-Up Time:	1 minute		Nickel RTD's: ±0.4°C (±0.72°F) @ 0°C (32°F)
Sensor Coverage Area:	100 m ² (1000 ft ²) typical	Output:.....	2-wire resistive
Sensor Life Span:.....	>10 years	Relay:	Form A (N.O.), 2 Amps @ 140 Vac / 30 Vdc
Transmitter Accuracy:.....	±0.25% of span		(Optional 2-wire output)
	(including linearity, hysteresis and repeatability)	Override Switch:	50 mA @ 12 Vdc max
Power Supply:	24 Vdc ±20% or 24 Vac ±10%		(Optional 2-wire output)
	(non-isolated half-wave rectified)	Optional Setpoint Control	
Protection Circuitry:	Reverse voltage and transient protected	Type:.....	Front panel up/down pushbuttons
Input Voltage Effect:	Negligible over specified operating range	Range:.....	±10 resistive steps, range 16 to 26°C in
Output Signal Type:.....	4-20 mA (3-wire), 0-5 or 0-10 Vdc (field selectable)		0.5°C increments or 60 to 80°F in 1°F increments
Current Consumption:	Current: 75 mA @ 24 Vdc max,	Midpoint:.....	Default 21°C/70°F,
	150 mA @ 24 Vac max		programmable 18 to 25°C (64 to 77°F)
	Voltage: 50 mA @ 24 Vdc max,	Resolution:.....	Programmable 0.5 / 1°C/°F
	100 mA @ 24 Vac max	Action:.....	Programmable direct or reverse acting
Output Drive @ 24 Vdc:	Current: 550Ω max	Enclosure:.....	White ABS, IP30 (NEMA 1)
	Voltage: 10,000Ω min		84mm W x 119mm H x 29mm D (3.3" x 4.7" x 1.15")
Ambient Operating Range:.....	-10 to 50°C (14 to 122°F),	Wiring:	Screw terminal block (14 - 22 AWG)
	5 to 90 %RH non-condensing	Approvals.....	CE
Storage Conditions:.....	-30 to 70°C (-22 to 158°F),	Country of Origin	Canada
	5 to 90 %RH non-condensing		
LCD Display Units:	ppm (CO ₂), °C/°F (optional temperature/setpoint)		
Display Range:.....	0-5000 ppm, 0 to 50°C / 0 to 122°F		

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ORDERING

MODEL	Product Description
HCD2RMC	Room Carbon Dioxide Transmitter

CODE	Display
C	Concealed LCD (Not available if setpoint selected)
V	Viewable LCD

CODE	Optional Temperature Sensor
XX	None
02	100 Ω Platinum, IEC 751, 385 Alpha, thin film, 3-wire
05	1801 Ω NTC Thermistor, ±0.2°C
06	3000 Ω NTC Thermistor, ±0.2°C
07	10,000 Ω Type 3, NTC Thermistor, ±0.2°C
08	2,252K Ω NTC Thermistor, ±0.2°C
12	1000 Ω Platinum, IEC 751, 385 Alpha, thin film
13	1000 Ω Nickel, Class B, DIN 43760
14	10,000 Ω Type 3, NTC Thermistor, ±0.2°C c/w 11,000 shunt resistor
20	20,000 Ω NTC Thermistor, ±0.2°C
24	10,000 Ω Type 2, NTC Thermistor, ±0.2°C
59	10,000 Ω, 25°C, ±1%, B = 3435 ±1% (25/85)

CODE	Optional Relay
X	None
R	Adjustable Relay

CODE	Optional Override
X	None
S	Override

CODE	Optional Setpoint Adjustment
XXX	None
P00	0 to 10,000Ω
P01	20,000 to 30,000Ω
P02	2,000 to 3,000Ω

HCD2RMC	C	XX	X	S	P01
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