

Room carbon dioxide and temperature sensor

- >> 0-2000 PPM CO₂ range
- >> Patented self-calibration algorithm
- >> Guaranteed 5 year calibration interval
- >> NTC 10k Temperature Sensor
- >> Easily field calibrated



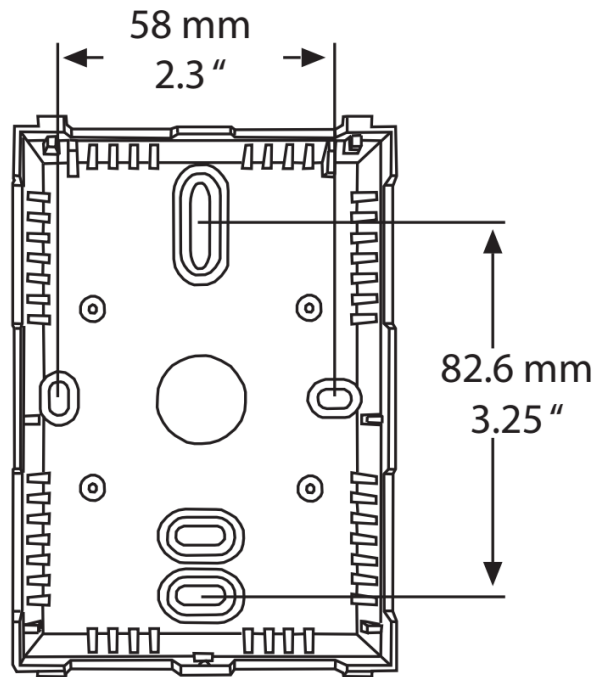
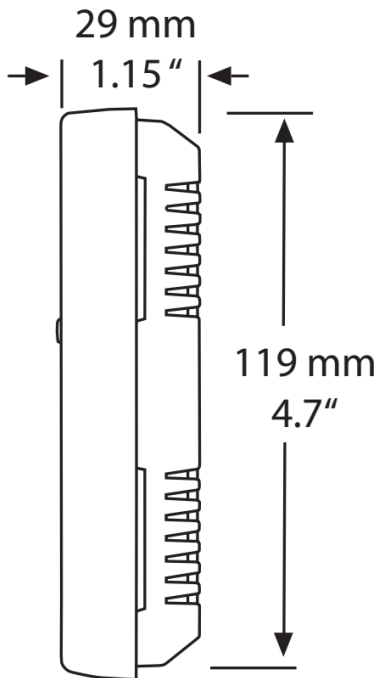
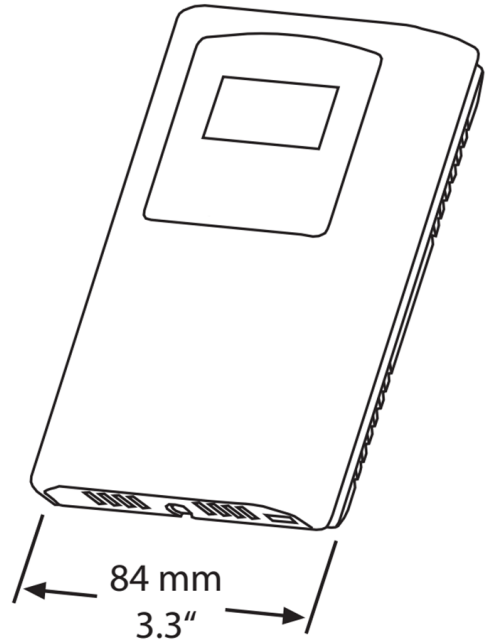
Room carbon dioxide (CO₂) measurement

The FX-CDTES-R carbon dioxide sensor (CO₂) uses a highly accurate and reliable Non-dispersive Infrared (NDIR) with state-of-the-art digital linearization and temperature compensated circuitry in an attractive, low profile enclosure for room applications to detect CO₂ levels and provides a linear analog signal output of 4-20 mA, 0-5 or 0-10 Vdc signals. The FX-CDTES-R is available with range of 0-2000 ppm. Parameters are set up via the LCD display which can be provided as viewable or concealed. NTC 10k temperature resistor is included in sensor.

Technical features

Range:	0 - 2000 ppm
Accuracy:	±30 PPM + 3% of reading with Auto Cal on.
Sensor:	Non-Dispersive Infrared (NDIR), diffusion sampling
Sensor Coverage Area:	100 m ² (1000 ft ²) typical
Temp. Dependence:	0.2% FS per °C
Stability:	< 2 % FS over life of sensor
Sensor Life Span:	15 years typical
Press. Dependence:	0.13% of reading per mm Hg
Altitude Correction:	Programmable from 0-5000 ft via keypad
Response Time:	<2 minutes for 90% step change typical
Warm-up Time:	<2 minutes
Power Supply:	20-28 Vac/dc (non-isolated half-wave rectied)
Output Signals:	4-20 mA active (sourcing), 0-5 Vdc or 0-10 Vdc (selectable)
Consumption:	100mA max @ 24Vdc, 185mA max @ 24Vac (with all options)
Output Drive Capability:	Current: 550 ohms max Voltage: 10 Kohm min
Output Resolution:	10 bit PWM
Protection Circuitry:	Reverse voltage & overvoltage protected
Operation Conditions:	0° - 50°C (32° -122°F), 0-95% RH non-condensing
Wiring Connections:	Screw terminal block (14 to 22 AWG)
External Dimensions:	84mm W x 119mm H x 29mm D (3.3" x 4.7" x 1.15")
Temperature Element:	NTC 10k
Enclosure Ratings:	IP30 (NEMA 1)
LCD Display Resolution:	1 ppm CO ₂
LCD Display Size:	1.4" w x 0.6" h (35 mm x 15 mm)
Backlight:	Enable or disable via keypad
Manufacturing Process:	ISO9001

Temp.	Ω	Temp.	Ω	Temp.	Ω
		29	8406	9	20884
140	235	28	8779	8	21918
130	301	27	9165	7	23015
120	390	26	9574	6	24170
110	511	25	10000	5	25391
100	679	24	10448	4	26683
95	786	23	10924	3	28051
90	916	22	11421	2	29498
85	1070	21	11940	1	31030
80	1255	20	12491	0	32650
75	1480	19	13073	-5	42327
70	1752	18	13681	-10	55329
65	2083	17	14325	-15	72957
60	2488	16	15000	-20	97083
55	2986	15	15710	-25	130422
50	3602	14	16461	-30	176976
45	4368	13	17256	-35	24682
40	5324	12	18091	-40	336479
35	6532	11	18970	-45	472178
30	8055	10	19902	-50	671305



Part numbers

FX-CDTES-R
FX-CDTES-R-LCD

CO₂ 0-5/10 Vdc or 4-20 mA, **TE** NTC 10k
 with 3-digit LCD display