

## Datasheet: K-30 Probe



The K-30 Probe is a low cost, infrared and maintenance-free transmitter module that can monitor CO<sub>2</sub> concentrations. The Probe is designed for students, teachers and indoor greenhouse growers who need a rugged and easy-to-use 0-10,000 (1%) CO<sub>2</sub> meter and data logger.

### CO<sub>2</sub> Measurement

Measurement Range .....	0 – 10,000 ppm <sub>vol</sub> .
Sensing Method .....	non-dispersive infrared (NDIR) waveguide technology with ABC automatic background calibration algorithm
Sampling Method .....	diffusion
Response Time (T <sub>1/e</sub> ) .....	20 sec diffusion time
Sensitivity .....	± 20 ppm ± 1 % of measured value
Accuracy .....	± 30 ppm ± 5 % of measured value
Pressure Dependence.....	+ 1.6 % reading per kPa deviation from normal pressure, 100 kPa

### General Performance

Operating Temperature Range .....	0 to 50 °C
Storage Temperature Range .....	-30 to +70 °C
Operating Humidity Range .....	0 to 95% RH (non-condensing)
Sensor Life Expectancy .....	> 15 years
Maintenance Interval .....	no maintenance required
Self-Diagnostics .....	complete function check of the sensor module
Warm-up Time .....	≤ 1 min
Conformance with the standards.....	Emission: EN61000-6-3:2001 Immunity: EN61000-6-2:2001 RoHS directive 2002/95/EG
Operating Environment .....	Residential, commercial, industrial spaces and Potentially dusty air ducts used in HVAC (Heating Ventilation and Air-Conditioning) systems.

### Electrical/Mechanical

Power Input.....	Powered by 5-volt USB
Current Consumption .....	40 mA average < 150 mA peak current (averaged during IR lamp ON, 120 msec) < 300 mA peak power (during IR lamp start-up, the first 50 msec)
Dimensions .....	3.15 x 2.36 x 1.18 inches (Length x Width x approximate Height)

### UART Serial com port

Protocol .....	MODBUS open protocol, refer specification and registers definitions
Hardware interface .....	CMOS UART with Rx/D, Tx/D
Baud Rate .....	9600

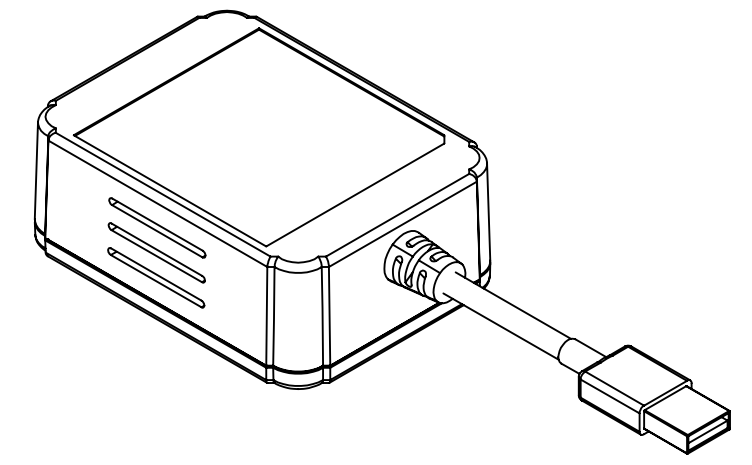
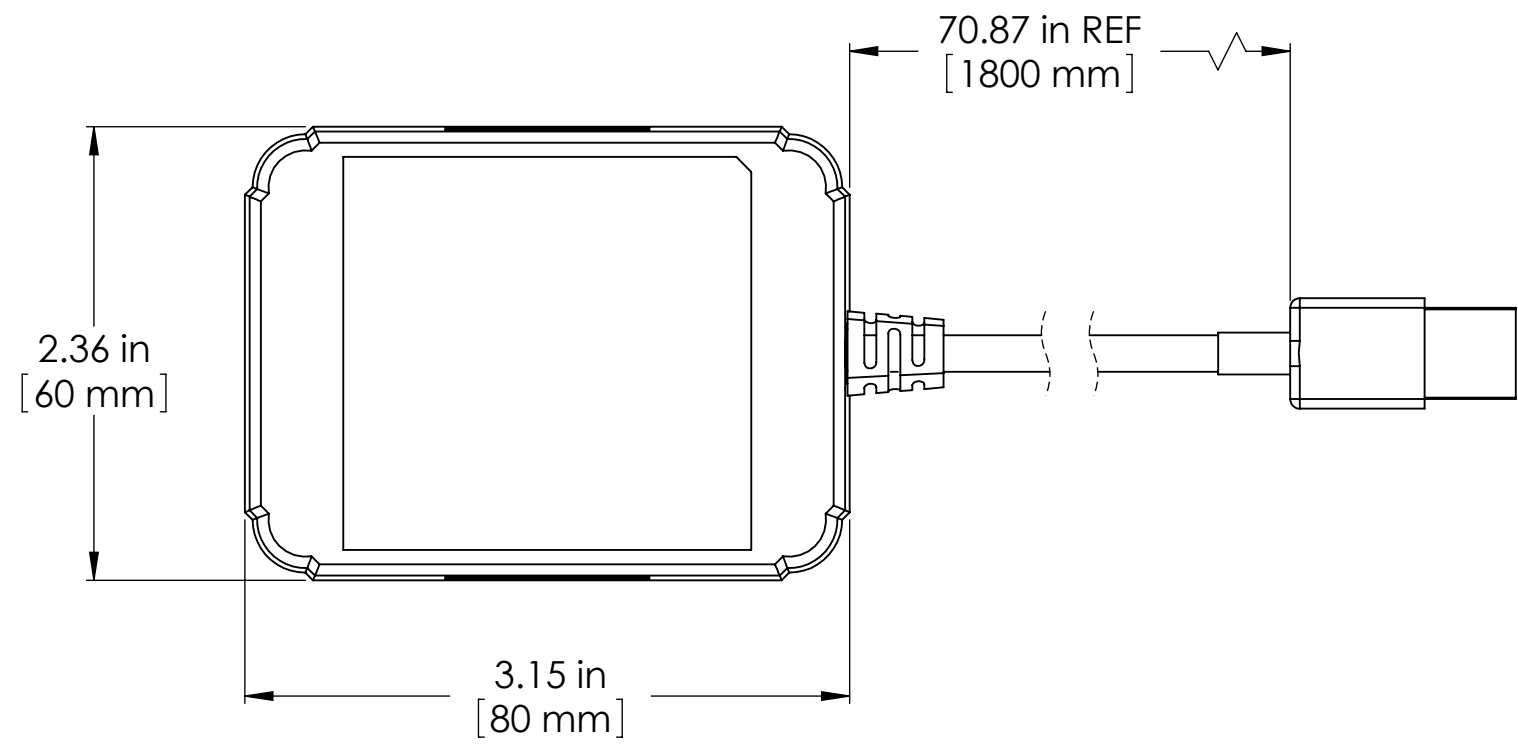
### Software Features

- Read and record CO<sub>2</sub> levels on PC
- Stand-alone application
- Libraries for Microsoft Visual Studio Standard or Express Edition
- Exports data in .CSV format
- Data can be posted directly to a URL for integration into web applications

SensorSDK software can be found here: [www.co2meter.com/pages/downloads](http://www.co2meter.com/pages/downloads) under “1. K-Series Sensors, Development Kits & Data Logger Software”. *It must be downloaded and installed before plugging the probe into your computer.*

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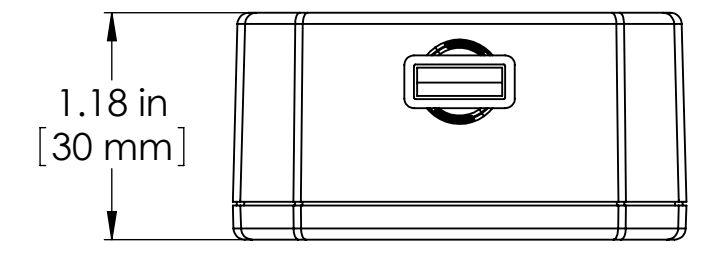
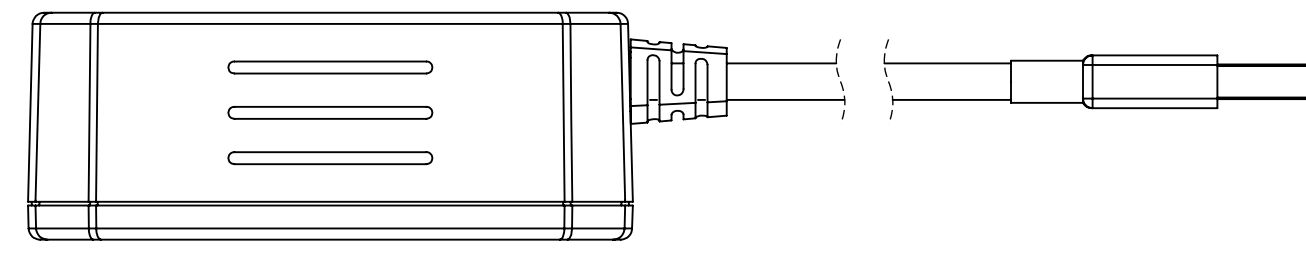


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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<b>CO2Meter.com</b>	
		DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED		DRAWN	JMM		
		TOLERANCES:		CHECKED			TITLE:
		ANGULAR: ±0.25 DEGREE		ENG APPR.			ePROBE
		X.XX: ±0.01		MFG APPR.			PACKAGE DIMENSIONS
		X.XXX: ±0.003		Q.A.			SIZE
		X.XXXX: ±0.0005		COMMENTS:			<b>B</b>
		INTERPRET GEOMETRIC TOLERANCING PER:					DWG. NO.
		MATERIAL N/A					PROBEDIM-A
NEXT ASSY	USED ON	FINISH N/A					SCALE: 1:1
APPLICATION		DO NOT SCALE DRAWING					QTY: 1
							SHEET 1 OF 1

8 7 6 5 4 3 2 1