

Proudly



MADE IN USA



## irSense Model 380

Near Field Communication  
Carbon Dioxide Sensor

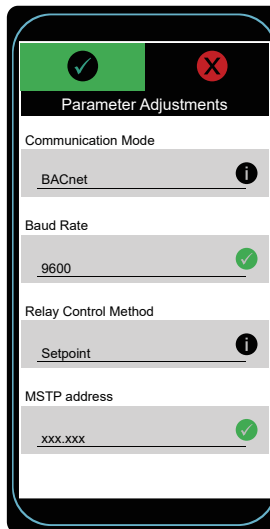
Now it is possible to adjust several settings for the device.

1. communication mode can be set to either BACnet or Modbus.
2. baud rate can be selected which will apply to either mode of communication.
3. Equipped with 2-Amp dry-contact capable pilot relay

### irSense M380-NF CO<sub>2</sub> Sensor

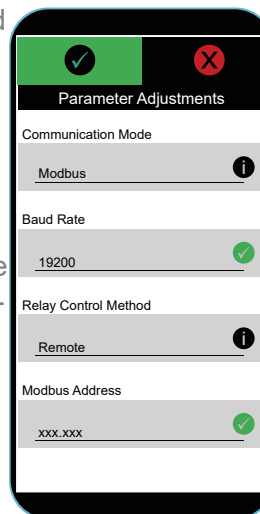
SIMPLY SMART

#### BACnet



BACnet (Building Automation and Control network) is a standardized communication protocol used for building automation created by ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers). BACnet specifies a vendor-neutral set of models and messages that enable equipment from multiple manufacturers to be integrated within the same control network. BACnet can use several different physical communication systems depending on the constraints of the system, the most common being BACnet/MSTP and BACnet/IP.

#### Modbus



Modbus is an industrial control protocol. It has somewhat less overhead than BACnet, allowing fewer data types and providing less context information about modeled objects. In Modbus all data is held in registers that can be read or written to interact with the values they model (e.g., CO<sub>2</sub> reading, relay state, etc.). A single client device sends requests to servers. Servers will not initiate communication unless they are directly addressed.

## Get more for less!

The Model 380 can be configured using an NFC capable Android phone.

With the configuration app open, hold the phone near the tag to read the current settings.

Now it is possible to adjust several settings for the device.

The communication mode can be set to either BACnet or Modbus.

The baud rate can be selected which will apply to either mode of communication.

If the mode is set to BACnet then we can change the MSTP address, MSTP max master, and device instance number, as well as a pair of string values for the device location and a device description. Each of the strings can hold up to 50 characters each, so there should be plenty of space to describe where the device is located or anything else that needs to be noted.

If the mode is set to Modbus the only other communication specific field available is the device address.

## Made in America

AirSense *always has been, and always will be* designed and manufactured in America!



**M380 Manual**  
Scan Code



Parameter	Value
Communication protocols	BACnet MS/TP, Modbus RTU
Support Baud rates	9600, 19200, 38400, 76800, 115200
Sensor Operating Principle	Dual beam Non-dispersive infrared (NDIR)
Gas Sampling Method	Diffusion
Measurement Range	0-2000ppm
Repeatability	± 20 ppm CO2
Measurement Accuracy	± 30 ppm ± 2% of reading
Calibration	One point: single gas calibration
Recommended Calibration Interval	5 years
Warm-up time	Less than 1 Minute
Power Requirements	15 - 30 VDC or 18 - 28 VRMS AC
Power Consumption	Less than 2 Watts
Operating Temperature Range	0 - 50° Celsius
Operating Humidity Range	5 - 95% RH, non-condensing
Enclosure Dimensions mounting	4.5" x 2.8" x 1.0" (116 x 72 x 25 mm) Wall
Enclosure Material	White Satin Finish, ABS UL 94 V-O Flammability Rated Plastic
Relay	SPDT, Dry contact, Max rating 2A at 24VDC or 120VAC(RMS)
Warranty	7 years on electronic components, 3 years on NDIR sensor

