

# Deployment

## Kick-Off Guide

# Contents

Hardware & Software	Page 3
Requirements	Page 4
Deployment Process	Page 5
<b>Gateway</b> Install Guide	Page 6-11
<b>SensorBot</b> Install Guide	Page 12-17
<b>SensorBot</b> Schematics	Page 18-20

# Hardware & Software

## Gateway

- Receives data from **SensorBots** through a 900MHz radio frequency
- Requires a single Internet enabled Ethernet connection
- Can handle up to 25 **SensorBots** within a ~1 mile radius
- Managed remotely by Accumine team

## SensorBot

- Collects production data using 0-24VDC, 0-10V sensors and 4-20mA sensors
- Transmits data using 900MHz radio frequency to **Gateway**

## Accumine Cloud

- Real-time dashboards, reports & data management
- Used to configure SensorBot data collection & check status of **Gateway(s)**

# Requirements

## IT / Networking

- Single Ethernet connection that provides Internet over port 443 (TLS).
- One of the following:
  - An available DHCP IP Address (without login page)
  - IP Reservation

## Maintenance / Third-Party Electrical Contractor

- Ability to identify following signals from equipment:
  - When a part/cycle is produced
  - When the machine is cycling
  - Additional signals can be added as well (i.e. faults)

## Project Champion

- Someone that can work with Maintenance and IT to ensure the Gateway and SensorBots are connected and collecting data.

# Deployment Process

## Step 1 – Connect Gateway

Follow **Gateway** installation guide & requirements

## Step 2 – Connect SensorBots

Follow **SensorBot** installation guide & requirements

## Step 3 – Account Provisioning

Accumine team creates company account in Accumine Cloud and configures **Gateway & SensorBots**

## Step 4 – Training & Data Verification

Accumine team holds webinar to walk through software & answer questions

# Gateway

## Install Guide

# Step 1 – Box Contents

**a** Locate the box labelled **Gateway**.



**b** Ensure the box contains the following items:

- 1x Gateway
- 1x USB-C cable
- 1x Micro-USB cable
- 1x Radio module
- 1x Radio module antenna
- 1x USB-C power adapter



# Step 2 – Radio Module

**a** Screw the **Radio module antenna** onto the **Radio module**.



**b** Plug the micro end of the **Micro-USB cable** into the **Radio module**.



**c** Plug the other end of the **Micro-USB cable** into any of the USB ports on the **Gateway**.





# Step 3 – Ethernet

**a** Plug one end of an ethernet cable (not included) into the ethernet port on the **Gateway**.



**b** Plug the other end of the ethernet cable into a network switch port that provides Internet over port 443 (TLS).

**c** Networking options for the **Gateway**:

- Provide a DHCP IP Address
- Assign an IP reservation using the Gateway's MAC Address

# Step 4 – Powering On

**a** Plug one end of the **USB-C cable** into the **Gateway's** USB-C port.



**b** Plug the other end of the **USB-C cable** into the **USB-C power adapter**.



**c** Plug the **USB-C power adapter** into any standard power outlet.

# Step 5 – You're Done!

Contact your Accumine Representative and let them know the MAC Address on the underside of the **Gateway**.

MAC ADDRESS:  
XX:XX:XX:XX:XX:XX

# SensorBot

## Install Guide

# Step 1 – Box Contents

**a** Locate the box labelled **Sense** or **SensorBot**.



**b** Ensure the box contains the following items:

- 1x SensorBot
- 1x Micro-USB cable
- 1x Radio module antenna
- 1x Micro-USB power adapter
- 1x Radio module antenna base



# Step 2 - Power

## Option 1: USB Power

Connect the SensorBot to USB power. USB power can come from a 120V outlet installed in the panel.

**Note:** When wiring a SensorBot signal input to a PLC signal, COM must still be connected to the DC common of the 24V system.



## Option 2:24VDC Power

Connect the SensorBot to 24VDC power. 24VDC should be connected to one of the two PWR terminals. DC COM should be connected to one of the COM terminals. See reference schematic #1.



## Verification

The green PWR light should light-up when the SensorBot is powered.



# Step 3 - Connectivity

## Connect the antenna to the magnetic base

Using the SMA connector, screw the antenna into the magnetic base (to be placed on the outside of the panel).



## Connect the SMA cable to the SensorBot

Screw the SMA connector on cable attached to the magnetic antenna base to the SensorBot.



## Mount the antenna outside of the panel

Mount the antenna somewhere in a relatively unobstructed area, typically on the top or side of the outside of the electrical panel. Use a cord-grip when threading the cable from the outside to inside of the electrical panel.



## Verification

The blue CON light should light-up and slowly pulse when the SensorBot is connected to the network.



# Step 4 – Data Inputs

**Identify the target data inputs** The SensorBot can be configured to read analog, digital or counting inputs from a PLC or external sensor. Identify what inputs you will be connecting to. Verify the terminals are outputting the expected voltages or currents.



**Option 1:**  
24VDC digital  
OR  
0-10VDC analog

Connect the voltage signal to one of the terminals labelled IN1-4

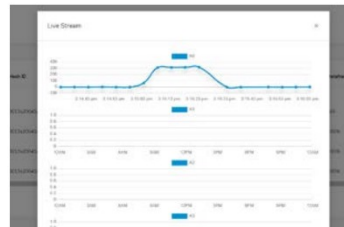


**Option 2:**  
4-20mA analog

Connect the current signal to one of the terminals labelled IN5-8



**Verification** With the help of the Accumine team, calibrate the SensorBot to read the inputs it has been connected to.





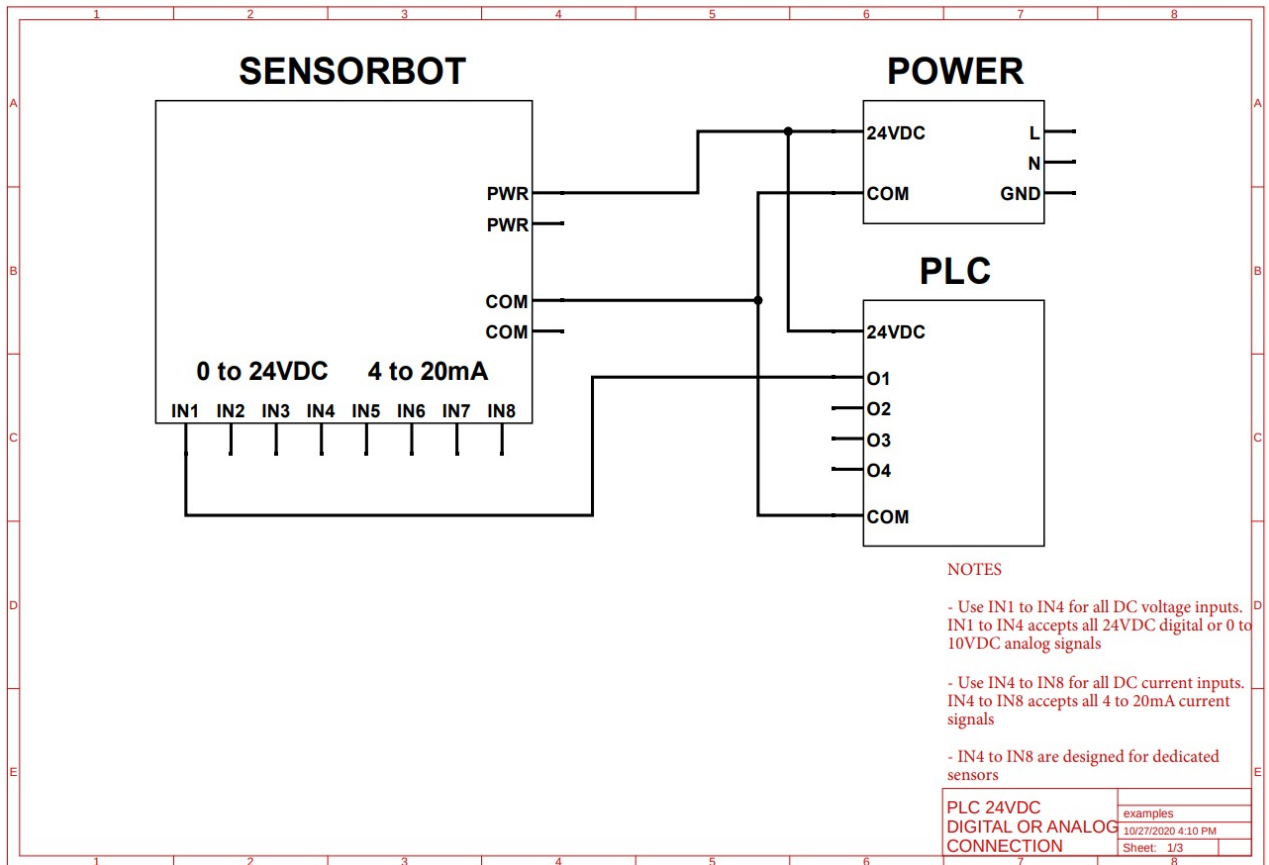
# Step 5 – You're Done!

Contact your Accumine Representative and let them know the Serial Number on the underside of the **SensorBot**.

SERIAL NUMBER:  
XXXXXXXXXXXXXXXXXX

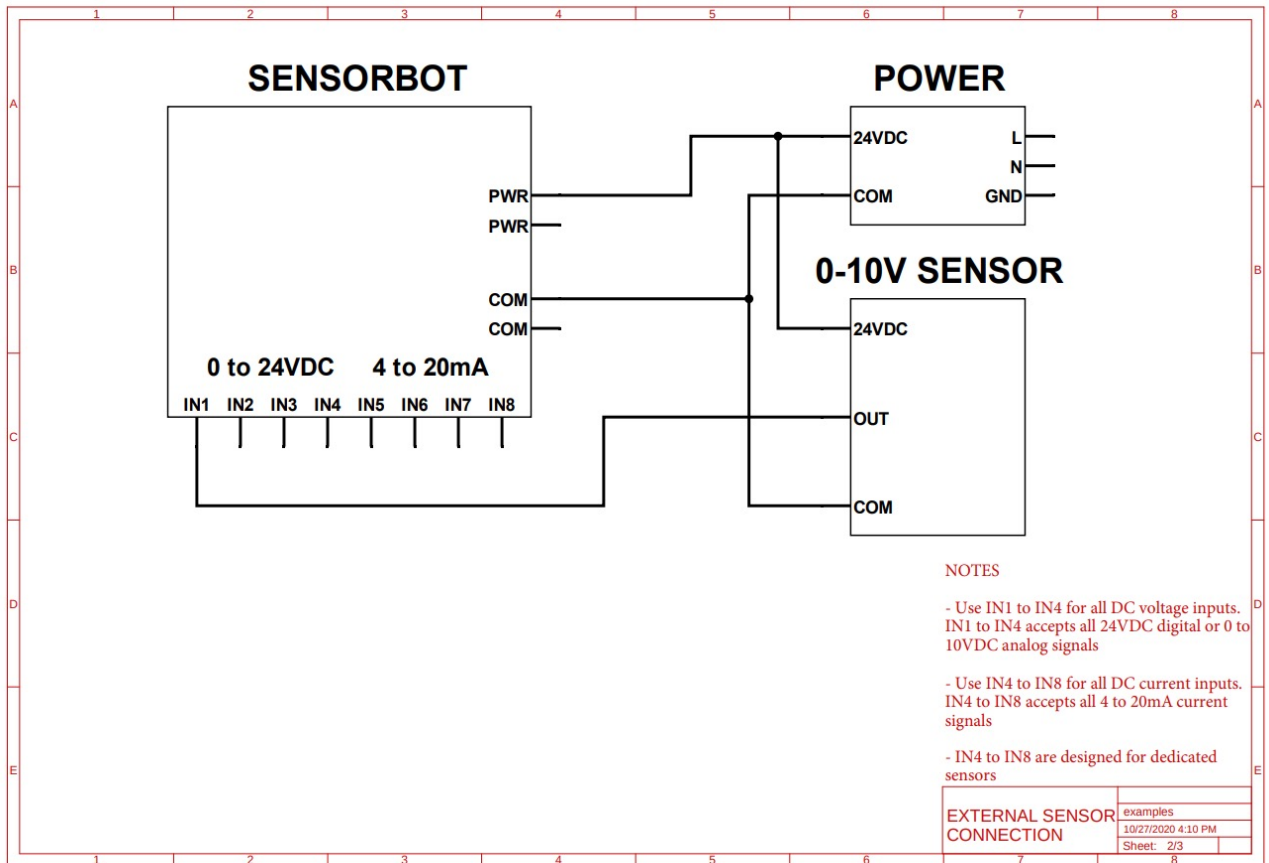
# Reference Schematics

## 0-24VDC PLC Signal



# Reference Schematics

## 0-10V Sensor



# Reference Schematics

## 4-20mA Dedicated Sensor

