Ground Pile Management

Product Manual

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Contents

1.0 PRODUCT IDENTIFICATION SYSTEM

1.1 Gateway

Input Voltage (VAC)	Communication	Part Number
115/240	Cell	N1111010740
480	Cell	N1111010742
115/240	Ethernet	N1111010744

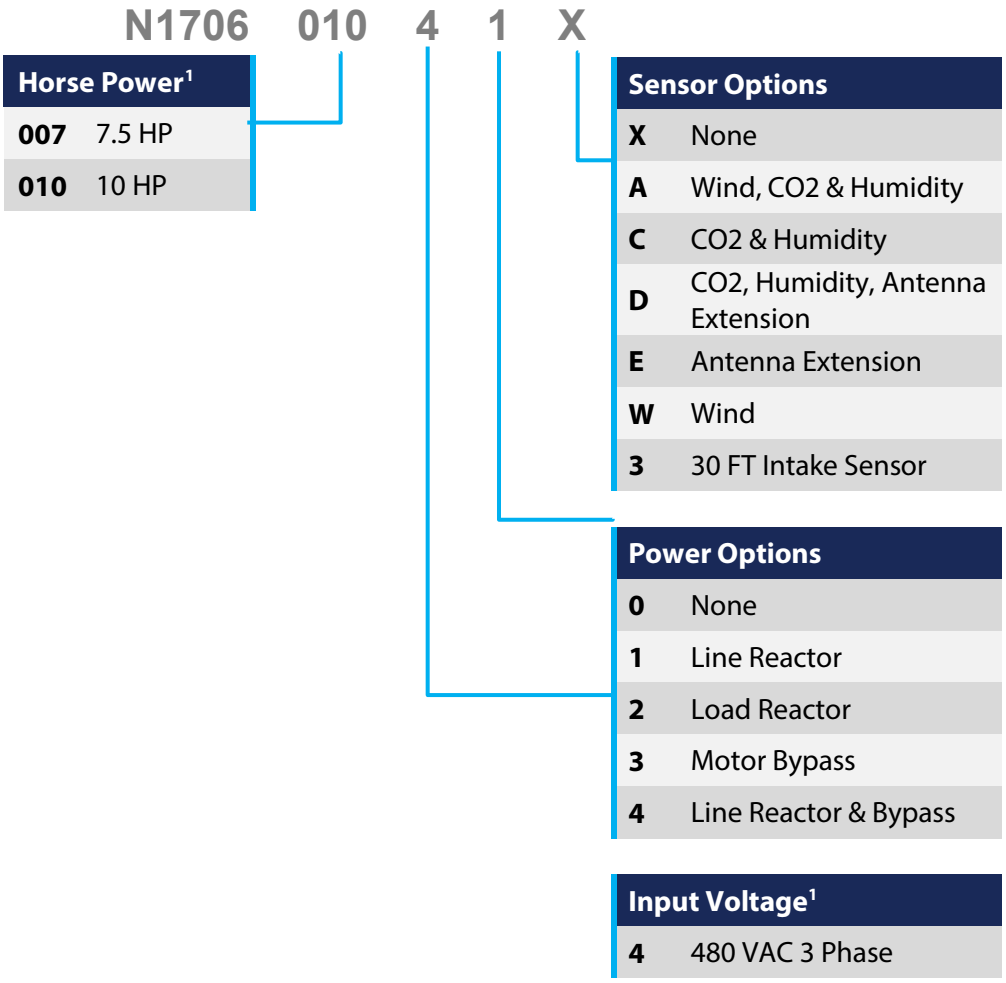
1.2 Temperature Probe

Length (Ft)	External Antenna	Part Number
25		N1111010730 (Obsolete)
25	X	N1111010731 (Obsolete)
30		N1111010732 (Obsolete)
25		N1505020721
30		N1505020730
60		N1505020760

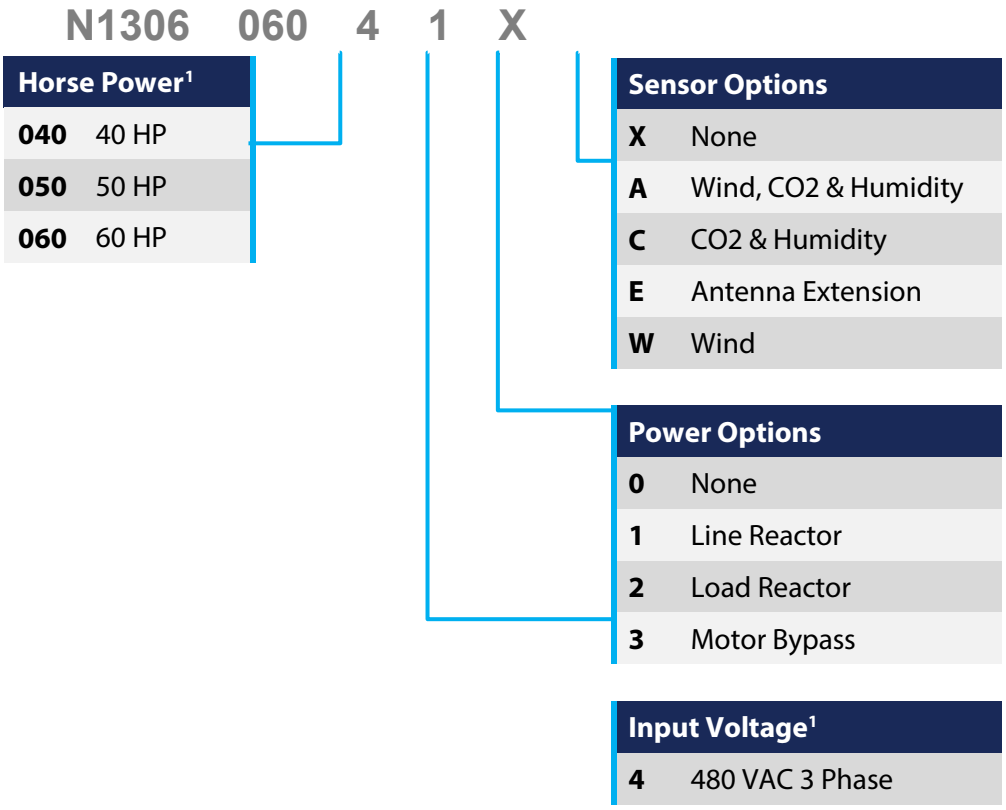
1.3 CO2 Node

Description	Part Number
480VAC Power Supply	N1711010800
115/240VAC Power Supply	N1711010801
Pile Sensor	N1711010811

1.4 Aeration Control: VFD



[1] Contact Extron Co. for applications with different horsepower and voltages.



1.5 Accessories

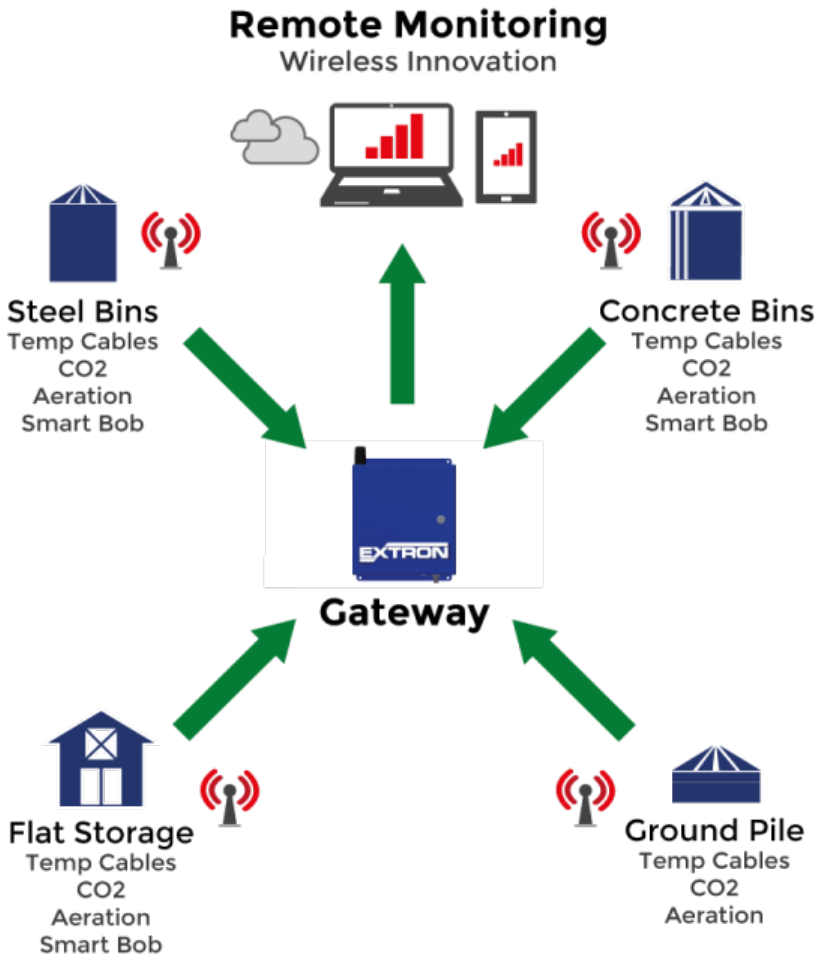
Description	Part Number
Probe Storage Tote	14931000
Probe Batteries	40000310
Post Puller	3000018200
Probe Installation Kit	N1111010019
ERM Subscription: 2 Year	N1111010714
ERM Subscription: 3 Year	N1111010715
ERM Subscription: 5 Year	N1111010713
Gateway Wind Speed Kit (Anemometer)	N1111010751
Gateway Power Loss Indicator	N1306010760
Fan Node Mounting Stand	N1306010790

[1] Contact Extron Co. for applications with different horsepower and voltages.

2.0 GATEWAY

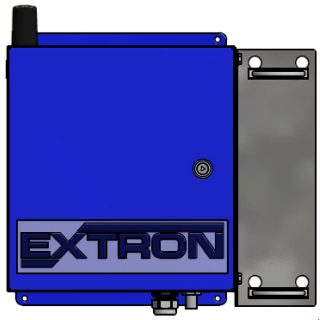
The Gateway is the communication hub which is responsible for handling communication from the cloud to the local devices.

2.1 Communication Diagram



Extron Grain Management System Architecture

2.2 Parts List

Gateway	Antenna Pole	Enclosure Key
		

2.3 Mechanical Installation

Placement Guidelines

1) Place the Gateway within line of sight of the Nodes.
2) The Gateway should be within 1,000 feet of the furthest Node unless a repeater is present.
3) Mount the Gateway in an area that has good cellular signal. If you have limited Verizon cell coverage, you might need to add a booster.

Installation

1) Mount the Gateway to a flat surface. See section **2.7** for dimensions and mounting holes.
2) Pass the bolts on the antenna pole through the opening on the Gateway bracket.
3) Slide the antenna pole down so it fits in the grooves in the bracket.
4) Tighten the bolts on the antenna pole to secure it to the Gateway bracket.
5) Attach the Antenna Connector from the antenna pole to the Gateway.
6) Pass the anemometer cable through the cord grip on the bottom of the Gateway. Attach the Anemometer Connector to the Green header (J11) on the back of the swing panel if the anemometer is installed.
7) Extend the antenna pole to the desired length.
    a. Note: Do not extend each section more than 3.5 Ft.
8) Install the Ambient Temperature & Humidity sensor out of direct sunlight (refer to **Figure 1: Gateway Installation**).

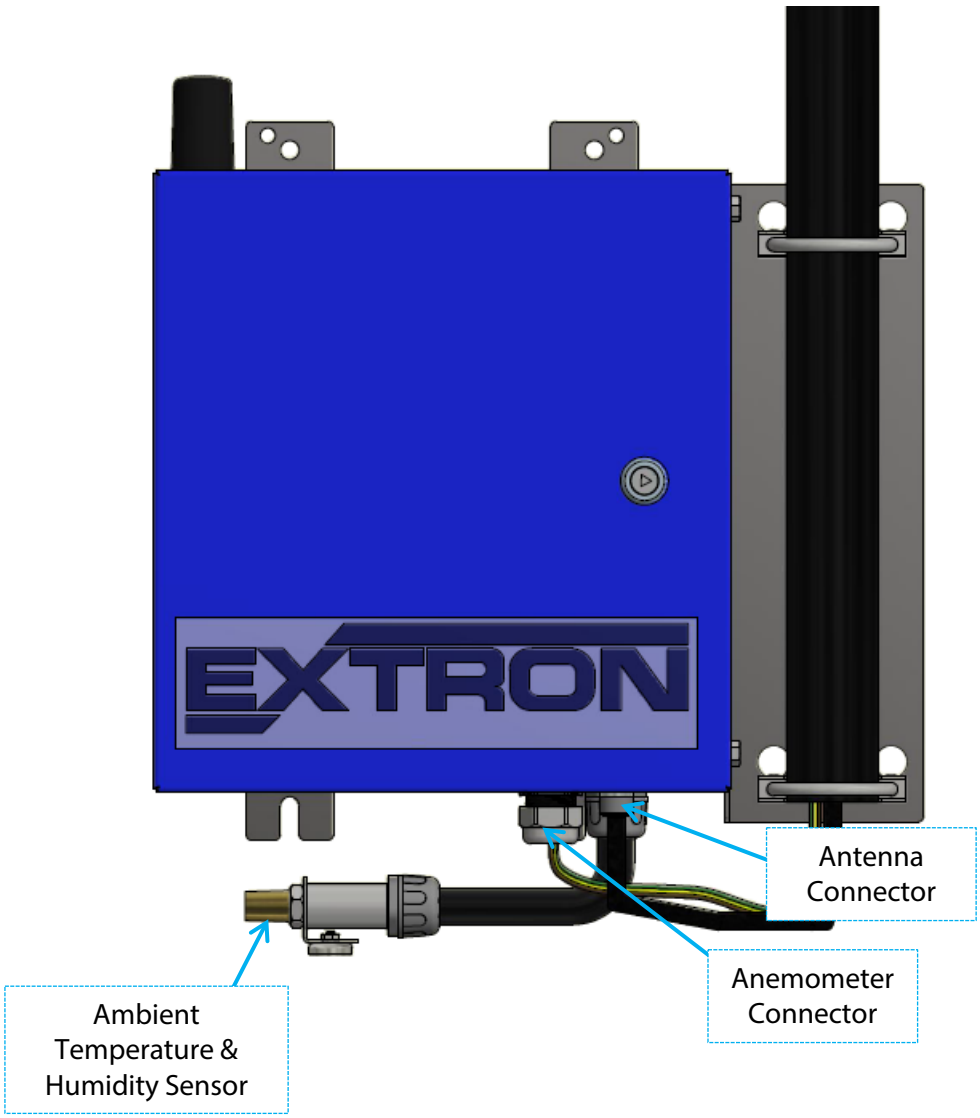


Figure 1: Gateway Installation

2.4 Electrical Installation

 **WARNING**	Electrical Installation should be done by qualified personnel. **DISCONNECT POWER BEFORE INSTALLATION.**

 **WARNING**	**VERIFY LINE VOLTAGE MATCHES DEVICE BEFORE PROCEEDING.**

1) Use the enclosure key to unlock and open the enclosure.
2) Remove the two screws on the inside of the enclosure that secures the swing panel.
3) Remove the desired knockout on the bottom of the enclosure.
4) Feed the power cable through the knockout.
5) Attach the Ground wire to the Ground Terminal.
6) Attach L/L1 and N/L2 wires to the circuit breaker. Refer to **Figure 2: Gateway Electrical Installation**.
7) Close the swing panel and secure using two screws.
8) Turn on the circuit breaker.
9) Turn on power.
10) Verify that the display turns on.
11) Close and lock the enclosure.

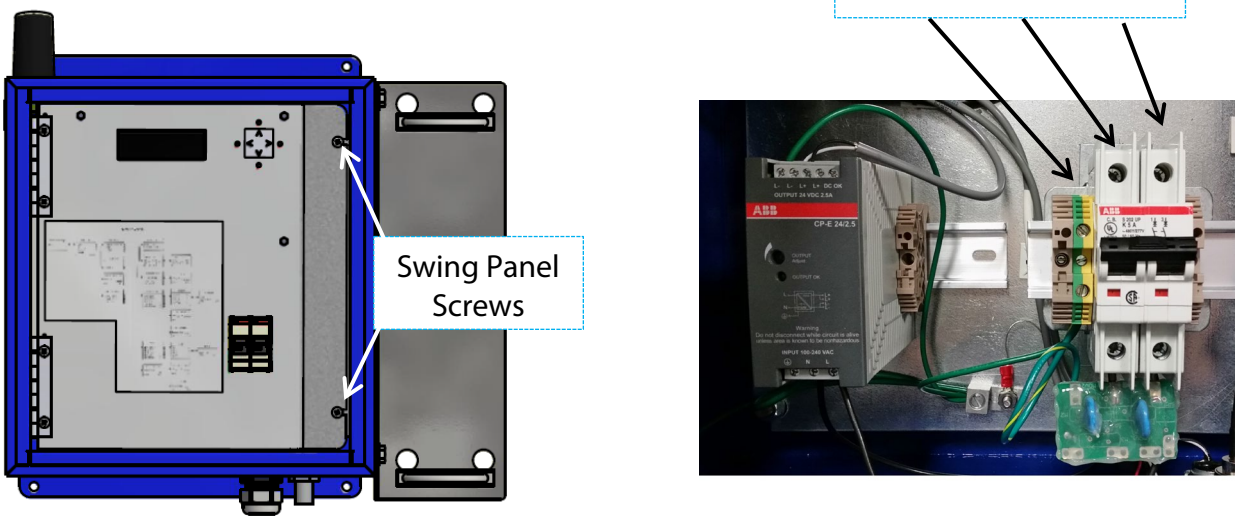


Figure 2: Gateway Electrical Installation

2.5 Anemometer Kit (Wind Speed)

1) Turn off power to the Gateway by turning off the main disconnect or opening the enclosure and turning the circuit breaker off.
2) Retract the antenna pole to the shortest length.
3) Loosen the nuts securing the antenna pole to the bracket and then lift the pole out of the bracket.
4) Attach the bolt, from the anemometer kit, to the bracket on the top of the antenna pole with the included nut.
5) Pass the wire on the top of the antenna pole through the black boot on the anemometer.
6) Connect the wires to the Anemometer.

Antenna Pole Wires	Anemometer
Green	6(+)
Brown	7(-)
Yellow	8(OUT)

7) Attach the black boot to the anemometer.
8) Slide the anemometer and boot into the bolt.
9) Verify that the anemometer spins freely.
10) Connect the green anemometer cable to the **3 position green header (J11)** on the back of the swing panel.
11) Close the swing panel.
12) Verify that the anemometer works.
    a. Turn on power to the Gateway and go to the Weather menu under the Main Menu.
    b. Spin the anemometer. The "Loc W" speed should be **greater** than 0 MPH.
    c. Turn off the Gateway.
13) Attach the antenna pole to the Gateway bracket and tighten the bolts to secure.
14) Extend the antenna to the desired length.
    a. Note: Do not extend each section more than 3.5 Ft.
15) Turn on the circuit breaker on the Gateway and close the enclosure door.

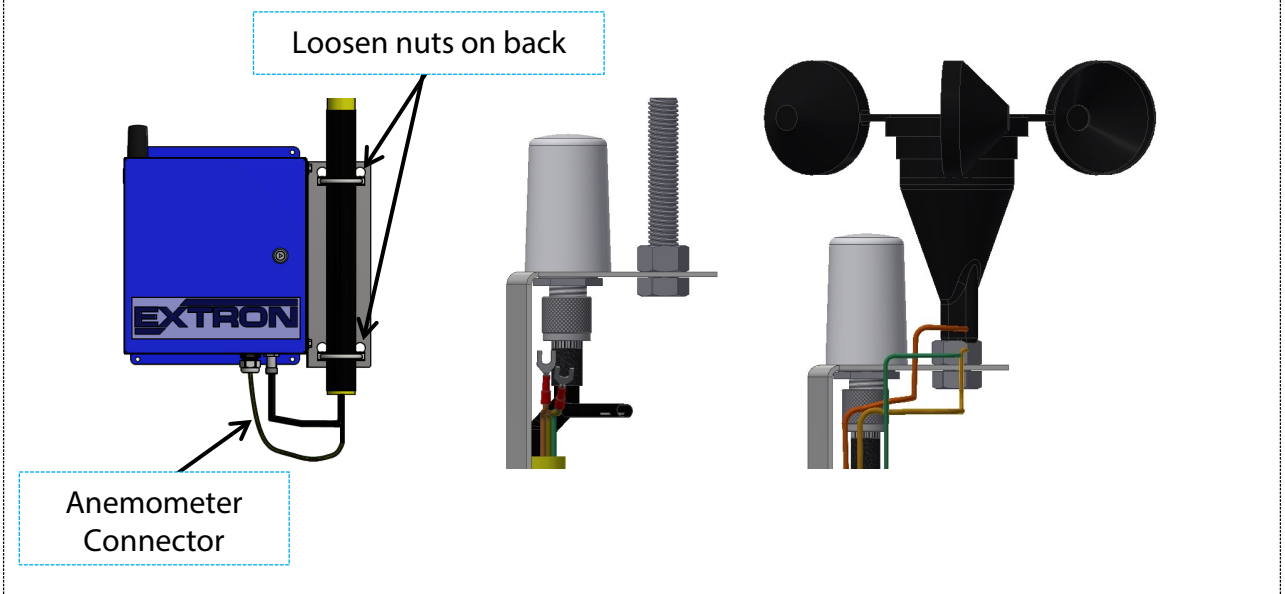


Figure 3: Anemometer Kit

2.6 Operation

Pile Monitoring
The Gateway collects temperature data from the Pile Probes and triggers temperature alarms based on a grain temperature set point. The data is sent to the ERM cloud where the information can be viewed.

CO2 & Humidity Monitoring
The Gateway, along with the CO2 Node, is able to read CO2, humidity, exhaust temperature, and pressure. A warning is triggered if the CO2 is above the CO2 set point.

Aeration (VFD or On/Off)
The Gateway, with the addition of the Aeration Control Nodes, is able to control the speed at which the fans are running to aerate the grain, reduce shrink, and save energy.

Pile Aeration

Pile Mode
The Gateway has three Pile Modes: Wind Only, Cool, and Warm. Each pile can be set to a different Pile Mode.

In Wind Only Mode, the speeds at which the fans run are determined by the Local and Web Wind Speed. If the wind speed equals, or exceeds, the Maximum Wind Speed set point the fans will run at 100%. Wind speeds below the Maximum Wind Speed set point will cause the fans to run at a speed between 20% and 99%.

In Cool Mode, the Gateway will analyze the pile and ambient data to determine the fan speed. The Gateway will run the fans at 100% in order to cool the grain if the ambient temperature and humidity is below the Grain Temperature and Humidity set point. If the ambient temperature and/or humidity is above the Grain Temperature and/or Humidity set point, or the pile temperature is below the Gain Temperature set point, the fan speed will be based on the Wind Speed.

In Warm Mode, the Gateway acts in a similar fashion as in the Cool mode. The Gateway will run the fans at 100% in order to warm the grain if the ambient temperature and humidity is above the Grain Temperature and Humidity set point. If the ambient temperature and/or humidity is below the Grain Temperature and/or Humidity set point, or the pile temperature is above the Gain Temperature set point, the fan speed will be based on the Wind Speed.

Fan Modes
The Gateway is able to communicate to a VFD Fan Node and an On/Off Fan Node. The VFD fan has five Fan Modes: Auto, Force Min, Force Max, Fixed %, & Disable. The On/Off Fan Node has three Fan Modes: Auto, On, & Off.

Auto: Adjusts the fan speed based on the Pile Mode.

Force Min: Sets the fan speed to the Min Fan Speed set point.

Force Max: Sets the fan speed to 100%.

Fixed %: Sets the fan speed to the Fixed Fan Speed set point.

Disable: Turns the VFD off. Disabling the VFD will turn off power to the motor but the fan blade may still spin due to the suction of the other fans.

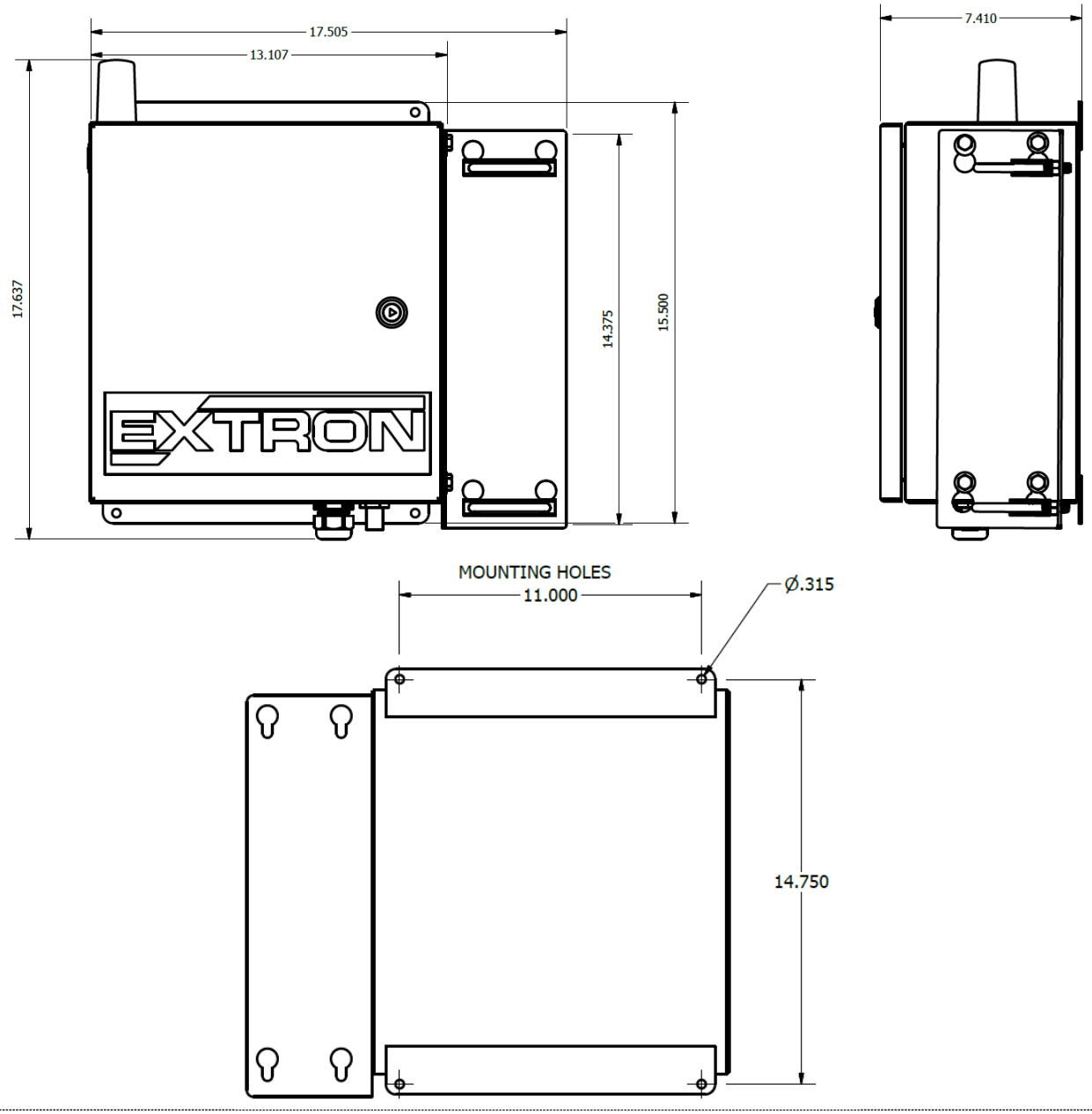
On: Turns the fan on.

Off: Turns the fan off.

Set points

Set point	Range	Units
Max Fan Speed	10 to 40	MPH
Min Fan Percent	20 to 100	%
Fixed Fan Speed	20 to 100	%
Grain Temp	0 to 200	°F
Humidity	10 to 100	%
Pile Mode	Auto, Cool, Warm	

2.7 Dimensions



Gateway

2.8 Troubleshooting

Problem	Possible Causes
Display on Gateway does not turn on.	No input power. Gateway circuit breaker tripped or off.
Gateway does not communicate with Nodes.	External antenna connector disconnected. Internal antenna connector disconnected.
Gateway does not communicate with cloud.	Bad cellular signal strength. Defective cell modem – Contact Extron Co.
Wind speed always reads 0.	Anemometer connector disconnected. Anemometer incorrectly wired.

2.9 Electrical Specification

Parameter		Min	Typical	Max	Units
Input Voltage (Single Phase)	N1111010740 N1111010742	85 300	115/230 480	265 575	VAC VAC
Operation Current	N1111010740 N1111010742		0.3 0.1		A A
Operation Temperature		-40 -40		140 60	°F °C

2.10 Ordering Information

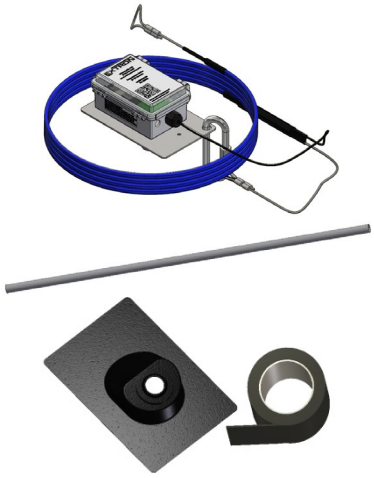
Description	Part Number
Gateway 115/240 VAC, Cell	N1111010740
Gateway 480 VAC, Cell	N1111010742
Gateway 115/240 VAC, Ethernet	N1111010744
Gateway Power Loss Indicator	N1306010760
Gateway Wind Speed Kit (Anemometer)	N1111010751
ERM Subscription: 2 Year	N1111010714
ERM Subscription: 3 Year	N1111010715
ERM Subscription: 5 Year	N1111010713

3.0 TEMPERATURE PROBES

The Temperature Probes are mainly installed in Bunkers or Piles. It periodically reads the temperature of the grain and then sends the data to the Gateway which sends the data to the ERM cloud.

3.1 Parts List

1) Probe Assembly
    a. Probe Head w/ Cable
    b. Conduit
    c. Tape
    d. Rubber Boot
2) Install Kit
    a. (1) Bottom Rod w/ driving tooth
    b. (4) Extension Rods w/ threaded ends
    c. (1) Hammer Cap
    d. Anti-Seize
    e. Flexseal

Probe Assembly	Install Kit
	

3.2 Required Tools

1) Phillips screwdriver
2) Two 7/8" open ended wrenches
3) Utility Knife
4) Post Driver
5) Post Puller
    a. Wood Board approximately 8"x16"x1.5"

Post Driver	Post Puller
	

3.3 Probe Installation

Guidelines

1) Do not install the Probes in a depression where water can collect.
2) Place Probes 40 to 80 feet apart.
3) Avoid placing Probes above ductwork. If the probe must be above ductwork, use caution when installing to prevent puncturing the duct.

Installation

1) Remove Probes from storage tote and verify that the probe cable length is the correct size for the pile.
2) Install the batteries into the probes.
3) Verify that the probes communicate to the Gateway.
4) Apply anti-seize compound to the threads of the extension rods.
5) Unbundle the probe cable and place the end of the cable into the driving rod. Refer to **Figure 4: Driving Rod**.

Figure 4: Driving Rod

6) Place rubber boot in desired probe location.
7) Insert the driving rod and the cable through the rubber boot, piercing through the tarp.
8) Push the rod into the pile until a foot is remaining outside the pile. If it is difficult to push the rod into the pile, install the Hammer Cap to the end of the rod and then use the Post Driver.
9) Attach an Extension rod to the driving rod that's in the pile. If the Hammer Cap was installed in the previous step, remove the hammer cap and then attach the Extension rod. Use the 7/8" wrenches to tighten the rods together.
10) Push the rod into the pile. If it is difficult to push the rod, install the Hammer Cap and then use the Post Driver.
11) Repeat until the desired depth has been reached. Leave 2 feet of the final rod exposed.

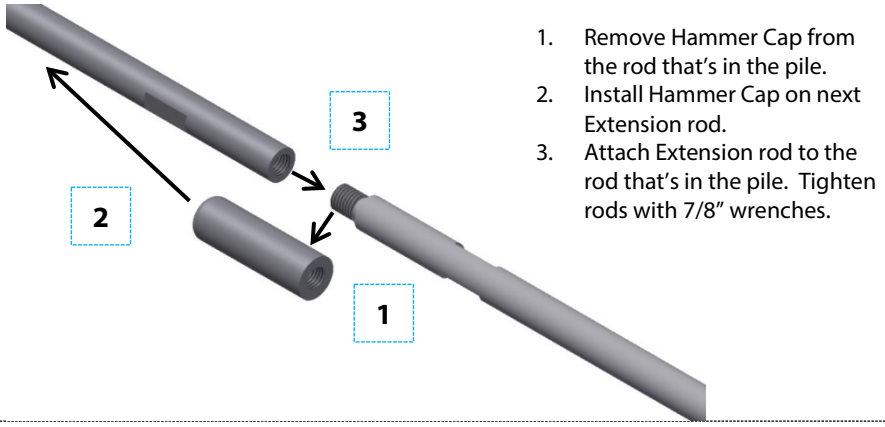


Figure 5: Rod Installation Sequence

12) Pull all rods out of the pile with the Post Puller leaving the cable in the pile. Unscrew the rods at each section using the 7/8" wrenches.
13) Insert the Conduit into the pile in the same hole that the cable is in. Leave 2-3 feet of conduit exposed out of the pile.
14) Loosen the #10-32 screw on the Probe Head and place the Probe onto the Conduit. Tighten the screw to secure the Probe to the Conduit. Refer to **Figure 6: Conduit & Probe Head**.

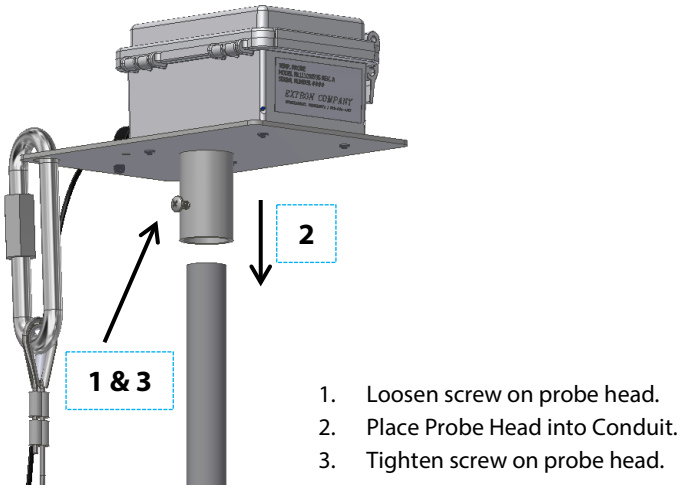


Figure 6: Conduit & Probe Head

15) Tape edges of the rubber boot to seal the probe to the pile.
16) Then tape where the cable and conduit stick out of the rubber boot.
17) Make sure you completely seal off and do not hear any air movement
18) It is recommended to check the seal periodically throughout the storage season to make sure it is still in place and working properly. **NOTE**: The seal must be watertight.

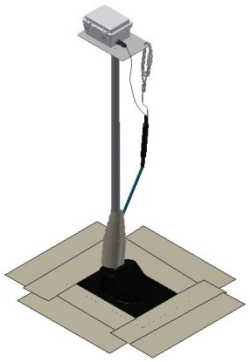


Figure 7: Probe Sealing

19) Repeat installation steps for all probes.
20) Verify that the probes are still communicating to the Gateway.

3.4 Probe Removal & Storage

1) Loosen the screw securing the Probe Head to the Conduit and then remove the Probe Head. Tighten the screw on the Probe Head.
2) Use a utility knife to remove the tape securing the conduit and cable together.
3) Pull the cable out of the pile.
4) Open the Probe Head and remove all the batteries. Leave the batteries inside the probe and then close the probe lid.
5) Coil up the probe cable and place the Probe Assembly inside the plastic tote.
6) Store in a cool dry area.

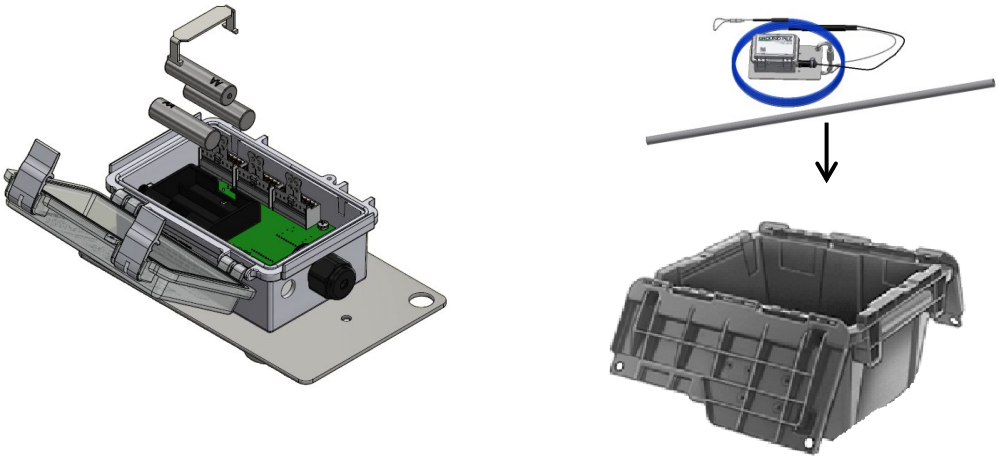
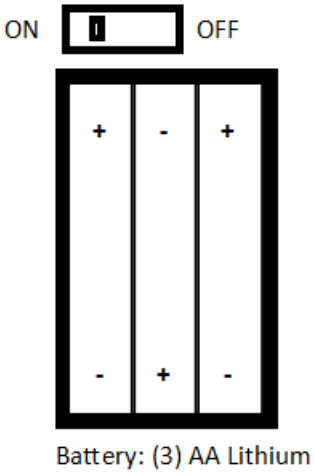


Figure 8: Probe Storage

3.5 Connections



Battery: (3) AA Lithium

Typical Wire Colors

CON3	21	Purple
	20	Clear
	19	Yellow
	18	Red
	17	Green
	16	Blue
	15	Black
	C	Orange (Constantan)
CON2	14	Purple
	13	Clear
	12	Yellow
	11	Red
	10	Green
	9	Blue
	8	Black
	C	Brown (Constantan)
CON1	7	Purple
	6	Clear
	5	Yellow
	4	Red
	3	Green
	2	Blue
	1	Black
	C	White (Constantan)

3.6 Troubleshooting

Problem	Possible Causes
Does not communicate with the Gateway.	Battery not installed or installed backwards. Low battery. Probes not programmed into Gateway. Probes not within range of Gateway.
Does not read a temperature.	Probe cable not connected to Probe Head. Defective probe cable.

3.7 Electrical Specification

Parameter	Min	Typical	Max	Units
Battery Voltage - Use 3 (AA) Lithium Ion Batteries.		1.5		VDC
Operation Temperature	-40 -40		140 60	°F °C
Measurement Range	-40 -40		140 60	°F °C

3.8 Ordering Information

Length (Ft)	External Antenna	Part Number
25		N1111010730 (Obsolete)
25	X	N1111010731 (Obsolete)
30		N1111010732 (Obsolete)
25		N1505020721
30		N1505020730
60		N1505020760

Description	Part Number
Probe Storage Tote	14931000
Probe Batteries	40000310
Post Puller	3000018200
Probe Installation Kit	N1111010019

4.0 CO2 NODE

The CO2 Node adds the ability to monitor CO2, Humidity, and Static Pressure of the grain.

4.1 Mechanical Installation

Guidelines

1) Place the CO2 Sensor within line of sight of the Gateway.
2) The furthest CO2 Sensor must be within 1000 feet of the Gateway if a repeater is not present (another CO2 or Aeration Node).

Installation

1) Mount the CO2 Sensor next to a fan exhaust so that the antenna is facing up. Refer to Section **4.3** for dimensions.
2) Install the Intake Hose in the fan ductwork. Install the Exhaust hose in the fan housing. Refer to **Figure 9: CO2 Hose**.
    a. Drill a 1″ diameter hole into the fan ductwork and housing.
    b. Insert the muffler into the hole and secure using self-tapping screws.
3) Mount the CO2 Power Supply in the desired area. Refer to Section **4.3** for dimensions.

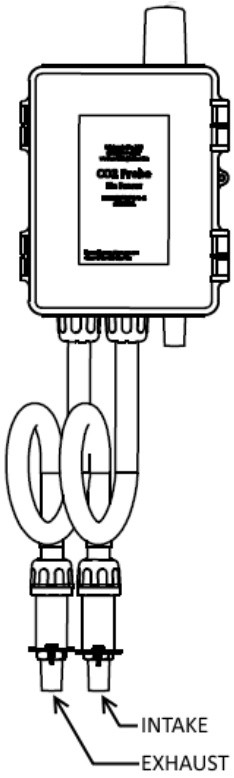


Figure 9: CO2 Hose

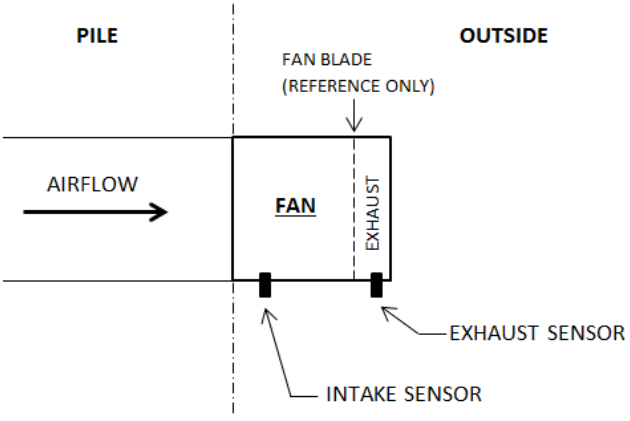


Figure 10: CO2 Intake and Exhaust

4.2 Electrical Installation

 **WARNING**	Electrical Installation should be done by qualified personnel. DISCONNECT POWER BEFORE INSTALLATION.

1) Verify that the input voltage matches the CO2 Power Supply.
    a. N1711010800: 480 VAC
    b. N1711010801: 115/240 VAC
2) Drill two holes in the CO2 Power Supply. One hole will be for the input power cables and the other will be for the CO2 Sensor. Use the appropriate fittings to seal the hole once drilled (i.e. conduit fitting, cord grip…etc.).
3) Pass the power cable through one of the holes and connect L1 to L1, L2 to L2 and Ground to the Ground Terminal.
4) Pass a two conductor cord though the other hole and connect one conductor to TB1 (+) and the other to TB2 (-).
5) Drill one hole in the CO2 Sensor. Use the appropriate fittings to seal the hole once drilled (i.e. conduit fitting, cord grip…etc.).
6) Pass the two conductor cord through the hole in the CO2 Sensor and connect it to TB1. The wired connected to TB1 (+) on the Power Supply should get connected to TB1-1 (+) on the Sensor. The wire connected to TB2 (-) on the Power Supply should get connected to TB1-2 (-) on the Sensor.
7) Turn on power.

Multiple Sensors per Power Supply

The CO2 power supply can support up to 3 CO2 Sensors. Connect additional CO2 Sensors to TB1 (+) and TB2 (-) on the CO2 Power supply. Reference the electrical installation procedure above.

4.3 Dimensions

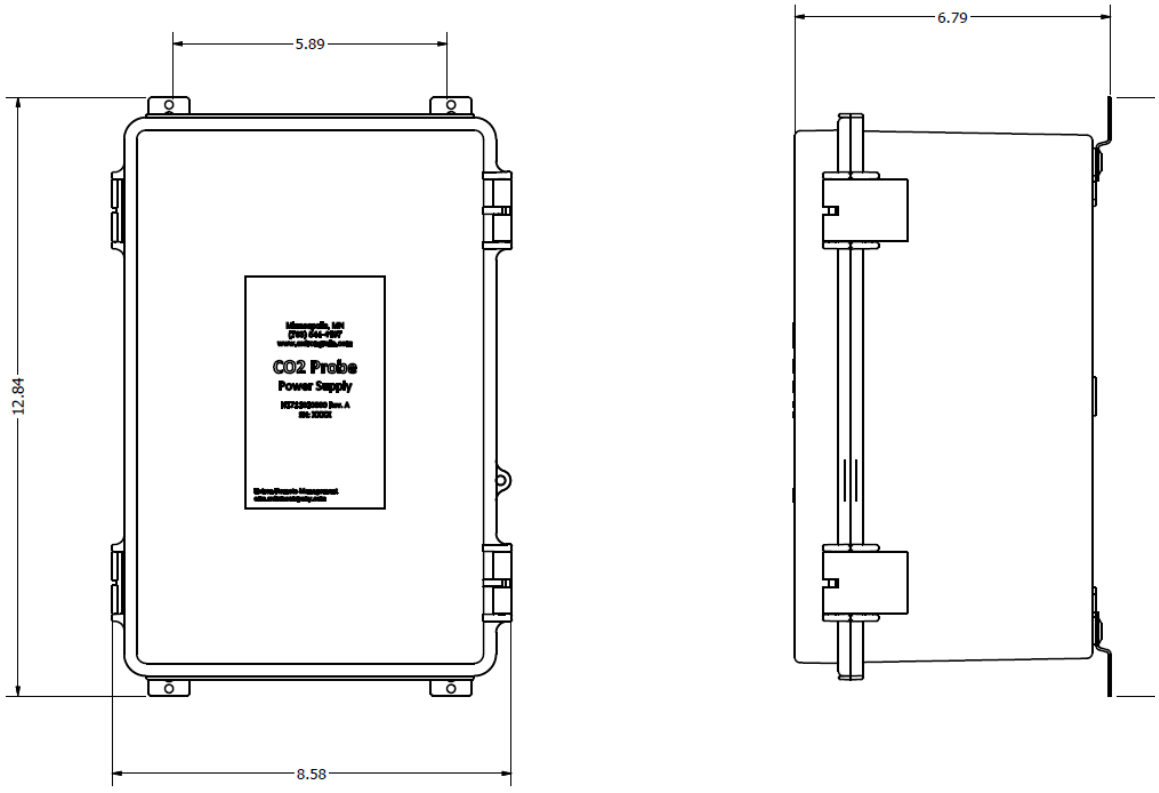


Figure 10: CO2 Power Supply

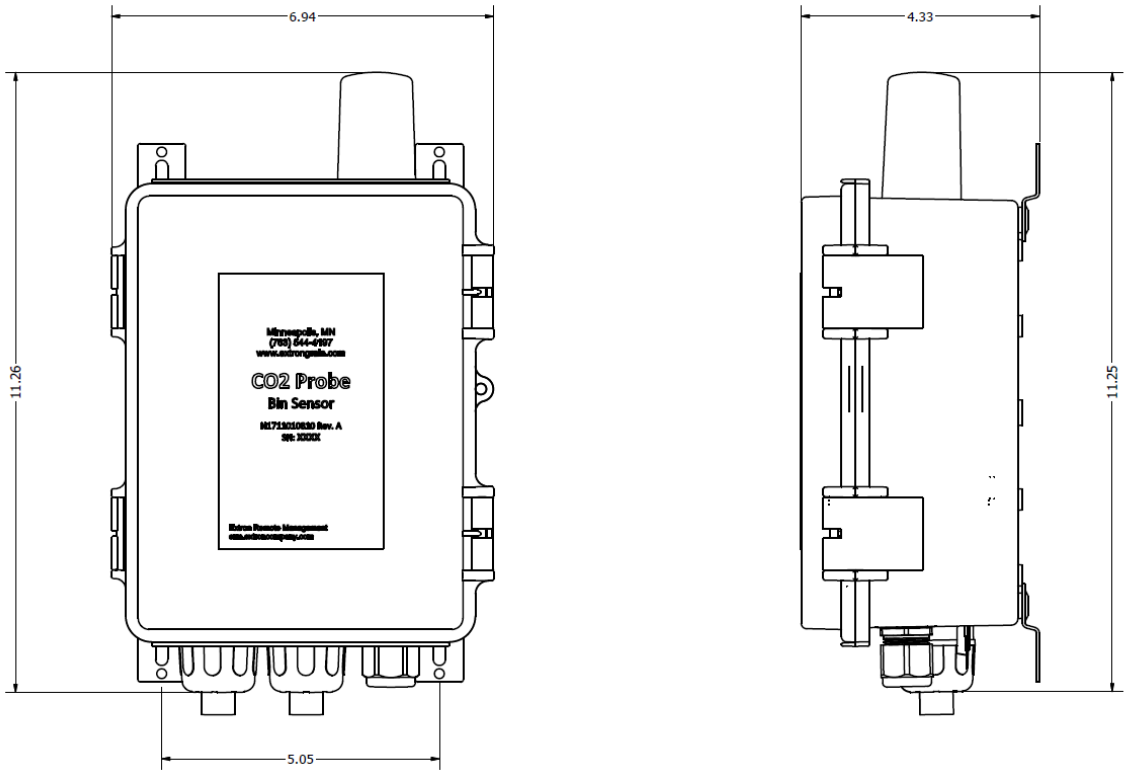


Figure 11: CO2 Sensor

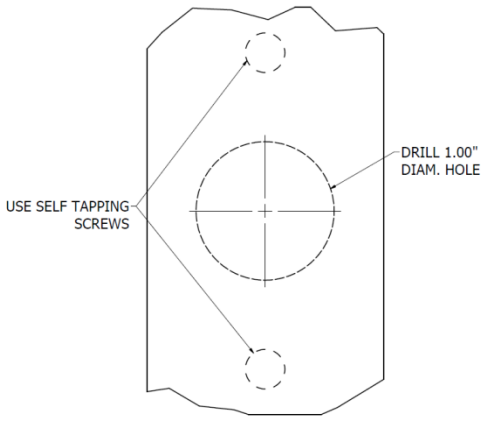


Figure 12: Muffler

4.4 Troubleshooting

Problem	Possible Causes
Does not communicate with the Gateway.	No Power. CO2 not programmed into Gateway. CO2 not within range of Gateway
Does not read correct CO2.	Exhaust Hose not connected to the fan housing.
Does not read pressure.	Intake Hose not connected to the fan ductwork.

4.5 Electrical Specification

Parameter		Min	Typical	Max	Units
Input Voltage (Single Phase)	N1711010800 N1711010801		480 115/240		VAC VAC
Operation Current	N1711010800 N1711010801		0.5 1/0.5		A A
Operation Temperature[1]		32 0		140 60	°F °C

4.6 Ordering Information

Description	Part Number
480VAC Power Supply	N1711010800
115/240VAC Power Supply	N1711010801
Pile CO2 Sensor	N1711010811

[1] The CO2 sensor is rated down to 32°F (0°C), the pressure sensor is rated down to -4°F (-20°C) and the exhaust temperature is rated down to -40°F (-40°C).

5.0 AERATION CONTROL: VFD

The VFD Aeration Control is able to control the speed at which the fans are running to aerate the grain, reduce shrinkage, and save energy.

5.1 Mechanical Installation

Guidelines

1) Do not mount the VFD Aeration Control enclosure on a high vibration surface.
2) The VFD Aeration Control enclosure must be mounted vertical and not at an angle.
3) The VFD Aeration Control that is closest to the Gateway should be no more than 1,000 feet away unless a repeater is present.

Installation

1) Mount the enclosure on a flat surface next to the fan. Refer to Section **5.4** for enclosure dimensions.
2) Connect the Intake hose to the fan ductwork. If the unit has the CO2 package, attach the Exhaust Hose to the fan housing.
    a. Drill a 1" diameter hole into the ductwork or housing. Insert the muffler into the hole and secure with two self-tapping screws.

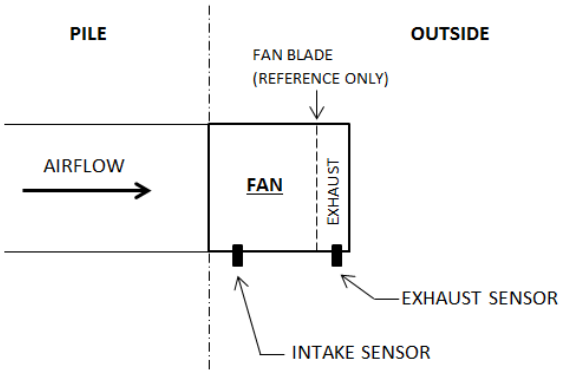


Figure 13: Fan Intake and Exhaust

3) If the unit has the Anemometer option:
    a. Pass the bolts on the anemometer pole through the opening on the bracket of the enclosure.
    b. Slide the anemometer pole down so it fits in the groves of the bracket.
    c. Tighten the bolts on the anemometer pole to secure it to the bracket.
    d. Attach the Anemometer Connector to the enclosure.
    e. Extend the pole to the desired length.
        i. Note: Do not extend each section more than 3.5 Ft.

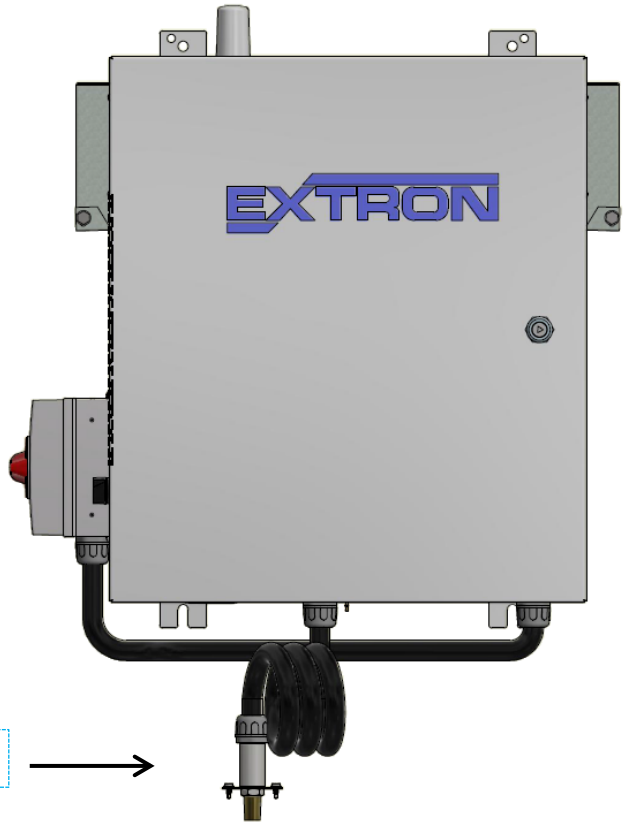


Figure 14: VFD Aeration Control

5.2 Electrical Installation

Guidelines

1) It is recommended to use shielded VFD cable to connect the AC drive to the motor. This will reduce the amount of noise emitted from the AC Drive and help protect the motor. Use Belden 29502 or equivalent.
2) When connecting the motor to the VFD, verify that the motor is turning in the correct direction. Reference the fan manufacturer's documentation for correct motor direction. If the direction is incorrect, switch U and V wires on the output of the VFD. For units that have the bypass option, set the unit into Bypass and verify if the direction is correct. If the direction is incorrect, switch the L1 and L2 wires on the disconnect.
3) Verify that the motor does not vibrate throughout the entire frequency range (12Hz to 60Hz). Reference the N1306010953 document for instructions on adjusting the frequency. Vibration may occur after the fan has been running due to matter build up on the fan blades causing the fan to be unbalanced. Periodically clean and verify that the fan is balanced.
4) **If present, bypass existing motor starters and overloads but maintain fusing according to local electrical codes.**
5) It is recommended to use an Inverter Duty motor which is more suitable to be controlled by a VFD.

 **WARNING**	Electrical Installation should be done by qualified personnel. DISCONNECT POWER BEFORE INSTALLATION.

Installation

1) Verify the line voltage matches the VFD Aeration Control specification.
2) With power turned off, connect line power to the Fan Node.

Single Phase

a. Connect L1 to L1 the Disconnect.
b. Connect the L2/N to L2 on the Disconnect.
c. Connect ground to the ground terminal on the Disconnect.

3-Phase

d. Connect L1, L2, and L3 to the Disconnect.
e. Connect ground to the ground terminal on the Disconnect.

3) Connect the motor wires to U, V, and W on the VFD. Connect the motor ground to the ground on the VFD.
    a. For Fan Nodes with the Bypass option, connect the motor to the U, V, and W terminals. Connect the motor ground to the GND terminal (next to the U, V, & W terminal).
4) Turn on power. The Node board LED should be blinking once per second.
5) The fan will turn on and be set to a speed that is determined by the Gateway. If the Gateway is not powered on or not within rage of the Node, the fan will run at 100% unless the Node is in a mode other than Auto or Force Max.
6) Verify that the fan is turning in the correct direction. If the fan is turning backwards, turn off power and switch the wires connected to U and V.

For Fan Nodes with the Bypass Options

7) Turn off power and set the Auto/Bypass switch to the Bypass position.
8) Wait until the motor stops and then turn on power.
9) Verify that the fan is turning in the correct direction. If the fan is turning backwards, turn off power and switch the wires connected to L1 and L2 on the disconnect.
10) Turn off power and set the Auto/Bypass switch to the Auto position.

5.3 Enclosure Size

HP	Voltage	Enclosure Size
5	480VAC	1 (Obsolete)
7.5	480VAC	1 (Obsolete)
10	480VAC	1 (Obsolete)
7.5	480VAC	1.1
10	480VAC	1.1
15	480VAC	2
20	480VAC	2
25	480VAC	2
30	480VAC	2
40	480VAC	3
50	480VAC	3
60	480VAC	3

5.4 Dimensions

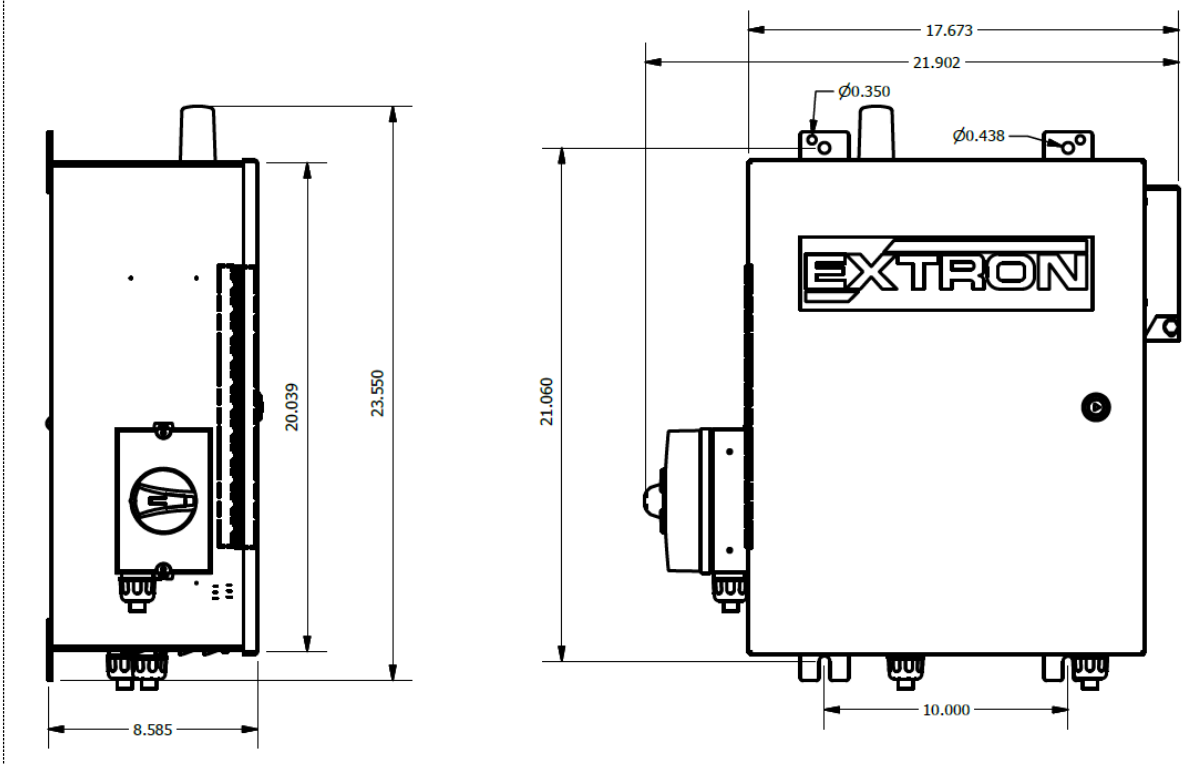


Figure 15: Enclosure Size 1

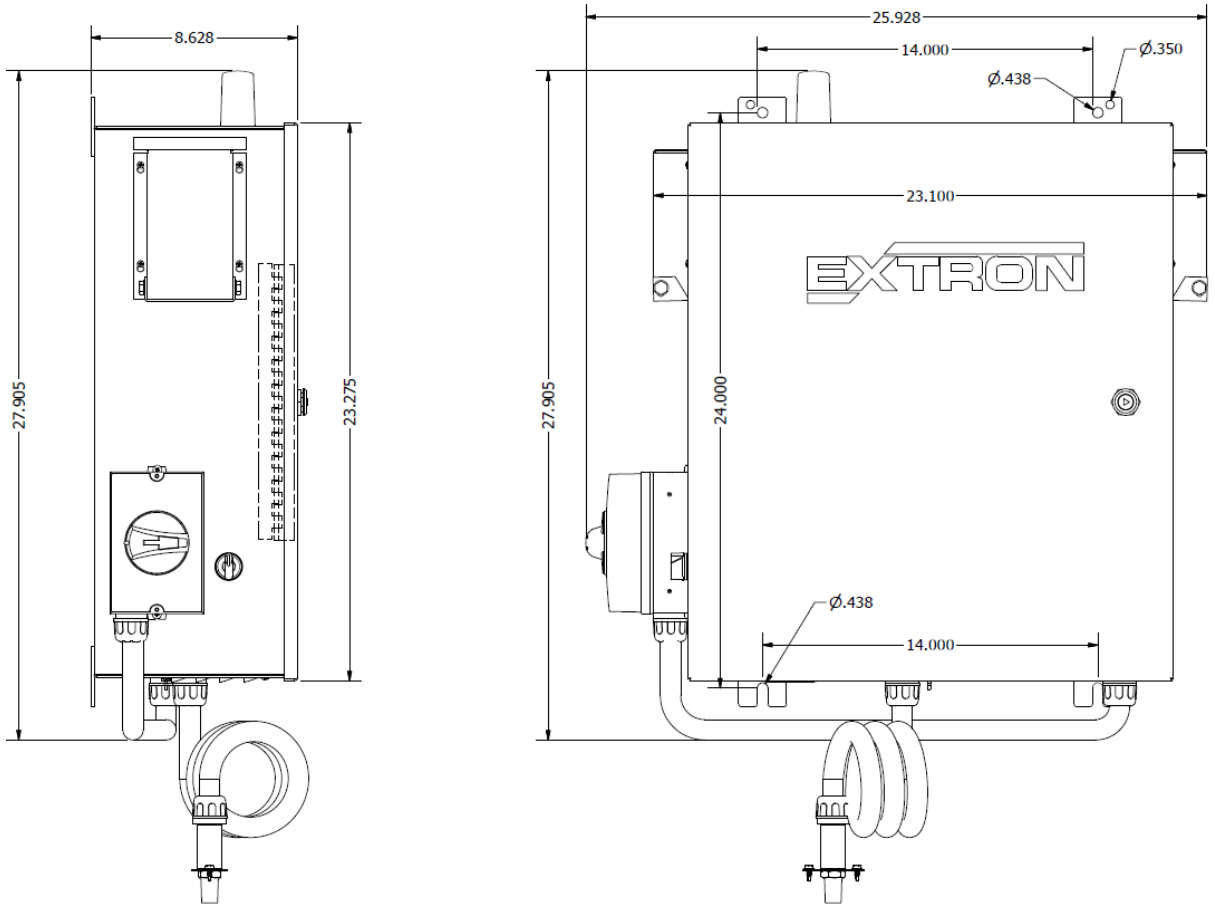


Figure 16: Enclosure Size 1.1

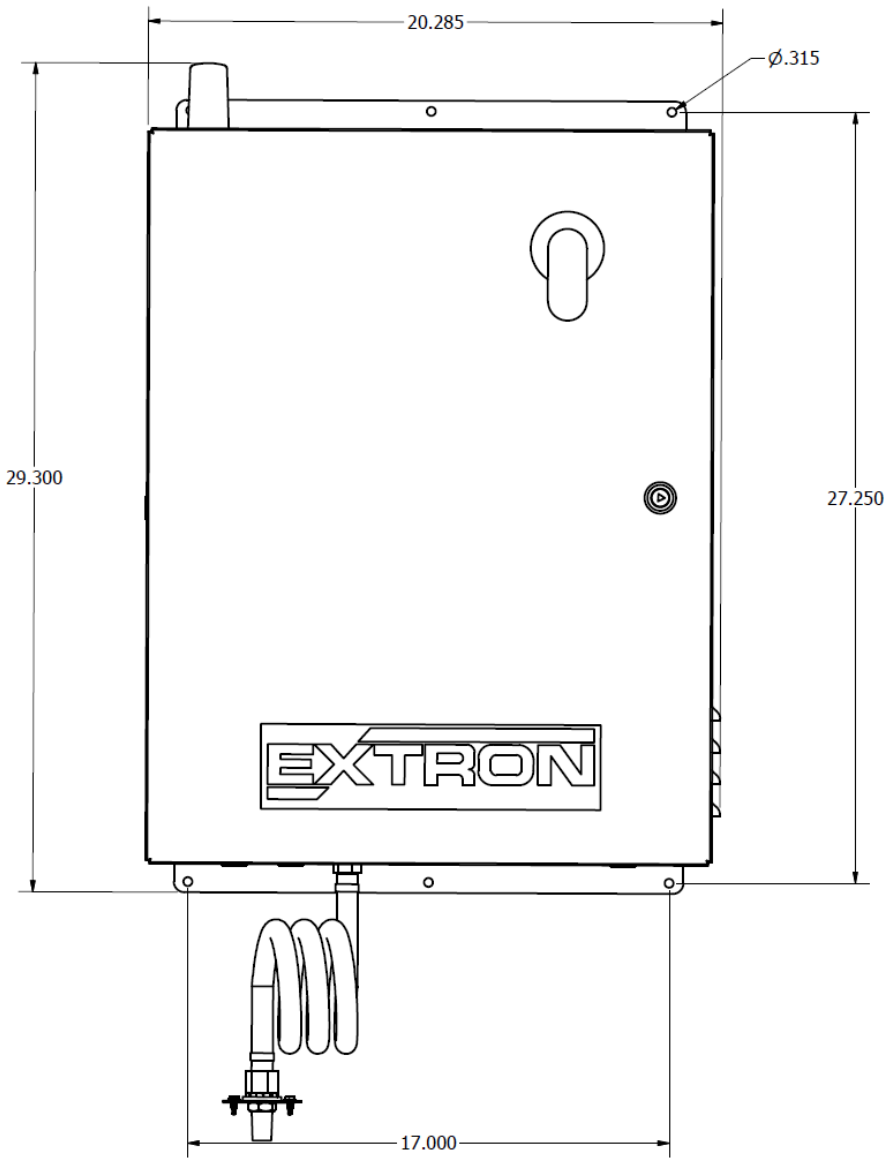


Figure 17: Enclosure Size 2

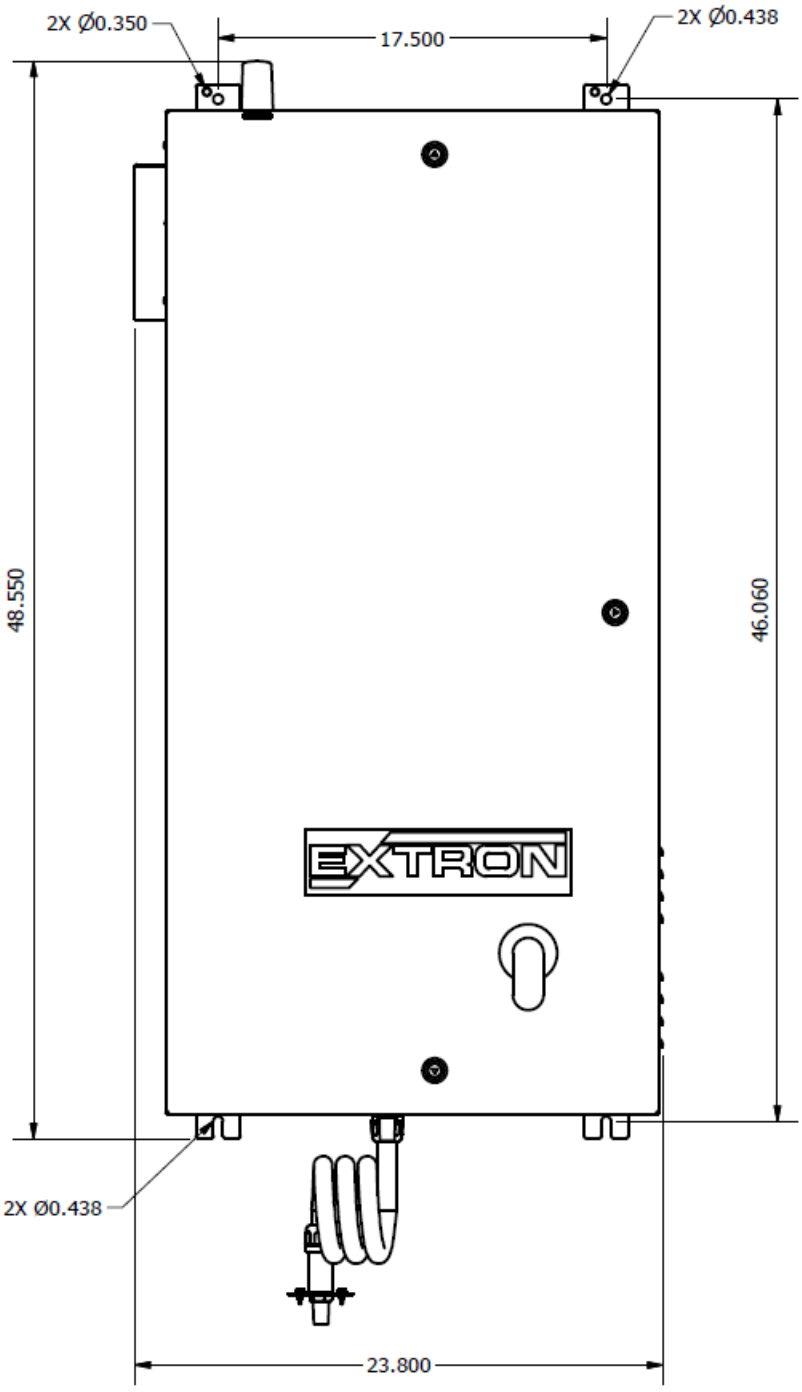


Figure 18: Enclosure Size 3

5.5 Troubleshooting

Problem	Possible Causes
Does not communicate with the Gateway.	No Power. Fan not programmed into Gateway.
Fan does not turn on (always at 0 RPM).	No Power. Fan disabled in Gateway. Gateway not powered on and fan recently lost power.
Does not read pressure.	Intake Hose is not connected to the fan ductwork.
Does not read wind speed (Wind Option)	Anemometer cable not connected. Anemometer wired incorrectly.
Does not read the correct CO2 (CO2 Option)	Exhaust Hose is not connected to the fan exhaust.
Node LED: 2 Flash Fault	Communication error to the VFD.
Node LED: 3 Flash Fault	Communication error to the Gateway.
Node LED: 4 Flash Fault	Communication error to the VFD and Gateway.

5.6 Electrical Specification

Parameter		Min	Typical	Max	Units
Input Voltage	N1706XXX2XX N1706XXX4XX	200 380	240 480	264 515	VAC
Operation Temperature[1]		-40 -40		122 50	°F °C
Vibration		1 mm (0.03 in) at 5…13.2 Hz (0.07…0.2 s) 0.075 mm (0.003 in) at 10…57 Hz (0.01 …0.1 s)			

[1] If the temperature, inside the enclosure, is above 104°F (40°C), the VFD output rating decreases by 2.5% for every additional 1.8°F (1°C).

5.7 Ordering Information

N1706 010 4 1 X

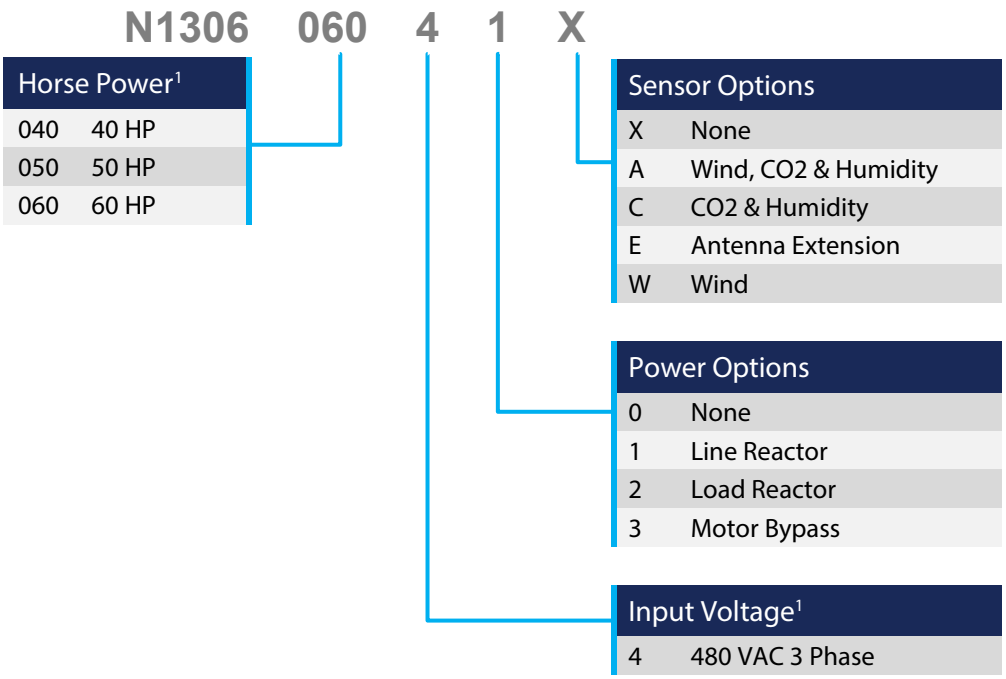
Horse Power[1]	
007	7.5 HP
010	10 HP

Sensor Options	
X	None
A	Wind, CO2 & Humidity
C	CO2 & Humidity
D	CO2, Humidity, Antenna Extension
E	Antenna Extension
W	Wind
3	30 FT Intake Sensor

Power Options	
0	None
1	Line Reactor
2	Load Reactor
3	Motor Bypass
4	Line Reactor & Bypass

Input Voltage[1]	
4	480 VAC 3 Phase

[1] Contact Extron Co. for applications with different horsepower and voltages.



Accessories	Part Number
Enclosure Mounting Stand	N1306010790

[1] Contact Extron Co. for applications with different horsepower and voltages.

6.0 AGENCY INFORMATION

Contains FCC ID: MCQ-XB900HP

The enclosed device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (*i.*) this device may not cause harmful interference and (*ii.*) this device must accept any interference received, including interference that may cause undesired operation.

7.0 WARRANTY

Extron warrants to the original purchaser all equipment and products manufactured by it and bearing its name to be free of defects in material and workmanship under normal use and service for a period of twelve (12) months from date of purchase from Extron. This warranty is applicable only if the Extron product and/or equipment is installed, operated and maintained in accordance with factory recommendations and procedures.

In the event the Extron product and/or equipment is found to be defective within the above-stated twelve (12) month period, Extron will repair or replace defective parts if the product or equipment is shipped prepaid to Extron's factory and if such product and/or equipment is found by Extron's inspection to be truly defective in workmanship or material. Extron will return-ship such repaired product and/or equipment prepaid within the continental United States. If Extron's inspection does not disclose any defect in workmanship or material, repairs will be made at a reasonable charge.

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The furnishing of advice or other assistance without separate compensation therefore will not subject the company to any liability, either in contract, warranty, tort (including negligence), or otherwise.

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