



by **ENOVATION** CONTROLS



Murphy CONNECT Installation Manual

Initial Release for U.S. Only

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Section 40
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In order to consistently bring you the highest quality, full-featured products, we reserve the right to change our specifications and designs at any time. The latest version of this manual can be found at novationcontrols.com.

Warranty - A limited warranty on materials and workmanship is given with this Murphy product. A copy of the warranty may be viewed or printed by going to www.novationcontrols.com/warranty



BEFORE BEGINNING INSTALLATION OF THIS MURPHY PRODUCT:

- Read and follow all installation instructions.
- Visually inspect this product before installation for any damage during shipping.
- Disconnect all electrical power to the machine. Failure to do this before welding can result in damage to the panel and/or its components.
- It is your responsibility to have a qualified technician install the unit and make sure the installation conforms to local codes including but not limited to double insulation and fire containment.
- Observe all Warnings and Cautions in each section of these instructions.
- The Murphy CONNECT product is a telemetry product designed for use in industrial environments for remote monitoring and control when used with Murphy's PowerCore® family of controllers.

Contact Enovation Controls Technical Service if you have any questions or concerns at: +1 918-317-4100.

IMPORTANT! Improper use and operation of electronic products can be dangerous. It is required that point-of-operation guarding devices be installed and maintained. All such devices must meet OSHA and ANSI Machine safety standards. The manufacturer shall not accept any responsibility for installation, application or safety of systems.

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 **WARNING**



**AUTOMATIC
START**
Keep hands clear
at all times.

The CONNECT device can be used for remotely starting an engine when used in conjunction with Murphy's PowerCore® controllers. Please be cognizant at all times of hands and other objects that are in close proximity to the machine(s) being controlled as they may commence operation suddenly and without warning.

Operations Manual Location

After installation, please review the Murphy CONNECT Telematics Operations Manual prior to placing the module into service. In order to access the Murphy CONNECT Telematics Manual please visit Support.enovationcontrols.com, and then search for Murphy CONNECT Telematics. The current manuals are listed under the Manuals section.

Hardware Installation

Inspecting Package Contents

Before attempting to install the product, it is recommended that you ensure all parts are accounted for and inspect each item for damage (which sometimes occurs during shipping). The items included in the box are:

Murphy CONNECT Telemetry Module – P/N 40-70-0525 includes:

- CONNECT Module
- Dual Antenna with GPS and Cellular, 3 meter (9.84ft) length
- Quick Start Guide

Installation

Preparation

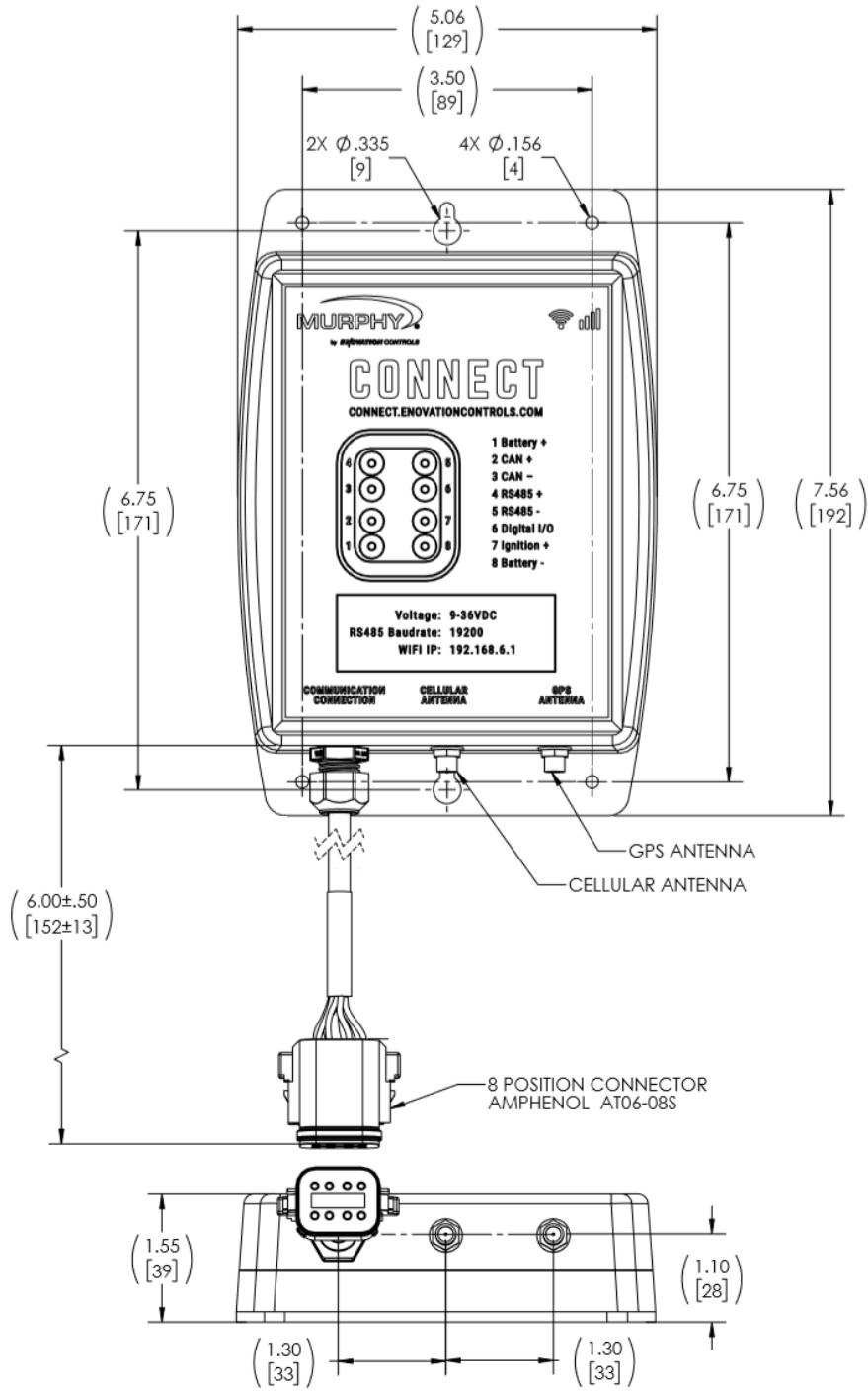
Determine the location of where the CONNECT module will be installed. Ensure there is proper room for the module to be mounted and the harnessing to be properly connected. Ensure the supplied antenna is mounted in a location exterior to an enclosed area where cellular and GPS signals are readily accessible to the antenna.

Dimensional drawings are not sized to print and appropriate measurement instruments should be used when designing and mounting the Murphy CONNECT hardware.

Dimensions for Installation

Murphy CONNECT Module

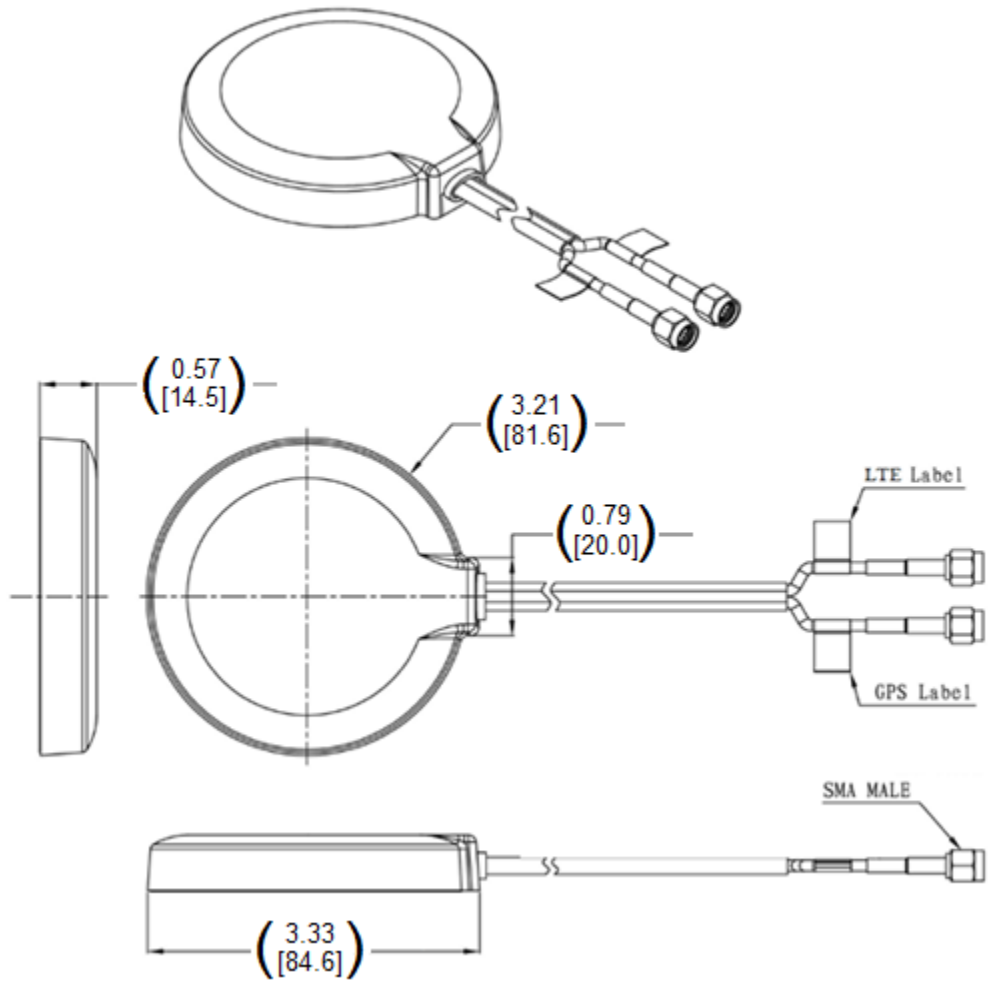
Inches
[mm]



Dimensions for Installation

Antenna

Inches
[mm]



Wiring Instructions

PIN Specifications for 8 Position Amphenol Connection

PIN	8 Pin
1	Battery (+)
2	CAN +
3	CAN -
4	RS485 +
5	RS485 -
6	Digital I/O
7	Ignition +
8	Battery -

Wiring of this device must meet all applicable electrical codes.

When the accessory harness is used, the PowerCore controller in the panel will need the I/O established prior to use:

- TEC-10 and ML1000: Set the Digital Output 2 function to Ignition On (On in Standby).
- ML2000: Set the Digital Output 4 function to Ignition On (On in Standby).

NOTE: If the application is left in Auto mode, a battery maintaining system should be installed for possible battery drain due to parasitic loads of ancillary devices on the system.

Troubleshooting

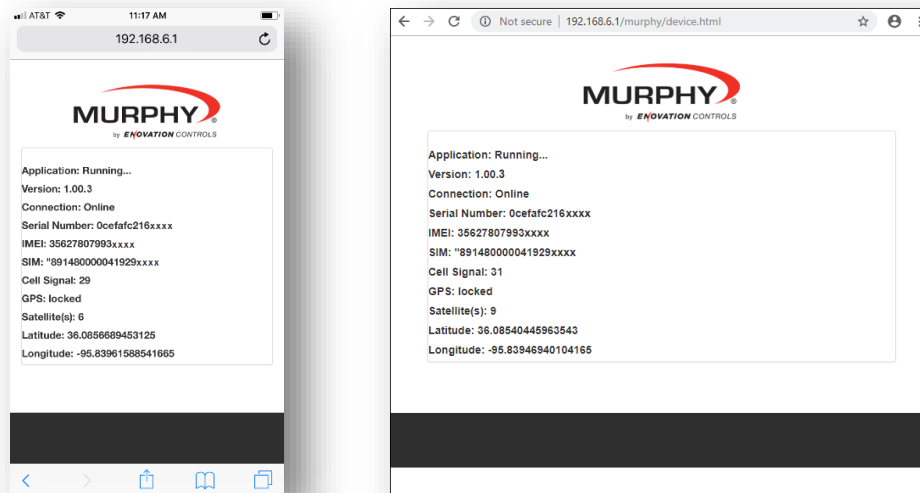
Murphy CONNECT has Wi-Fi communications which allows for minor troubleshooting of the module. This section details the how to log on and interpret the data.

To access the Wi-Fi for troubleshooting ensure the device has the appropriate power to the unit. When the unit is powered on the unit can be found by searching for a new Wi-Fi connection on the PC or smart device.

Wi-Fi Address: CONNECT_XXXX (the XXXX represent the last 4 digits of the MAC address of the device connecting)

Password: Murphy (use Murphy only when required to login)

Once connected to the device Wi-Fi network, open the browser and type in 192.168.6.1 into the URL address to access the modem's page (also shown on the CONNECT front label). The page should resemble the image below and allow one to see the items listed below for troubleshooting hardware and connectivity.



Application: States whether the application is running or not running. This should be running at this stage

Version: Version of the CONNECT device

Connection: States whether the device is connected to a cellular network

Serial Number: Provides Serial Number of device. (Used to register device if device is installed)

IMEI: Provides IMEI of device. (Used to register device if device is installed)

SIM: Provides SIM number.

Cell Signal: Provides range for cellular network. (0-6 = Poor, 7-15 = Okay, 15+ = Good)

GPS: States whether Locked or not locked for GPS positioning.

Satellites: 1-2 will not allow a lock for GPS, 3+ allow locking for GPS location.

Latitude: Once GPS is locked, provides Latitude coordinates for last known location.

Longitude: Once GPS is locked, provides Longitude coordinates for last known location.

Accessories

Part #	Component
40000665	36" CONNECT Harness from PowerCore Panel to CONNECT Module

Specifications

Electrical

Operating Voltage: 9-36 VDC, protected against reverse battery polarity

Max Voltage: -40 to +60 VDC

Power Consumption:

12 VDC: Transmitting: 265 mA

Idle: 135 mA

Off: 0.5 mA (Using IGN to turn off)

On: ~ 175 mA Average

24 VDC: Transmitting: 135 mA

Idle: 90 mA

Off: 0.5 mA (Using IGN to turn off)

On: ~ 115 mA Average

Communications

1-CAN: J1939 (future use)

RS485: Modbus RTU

Wi-Fi: 2.4 GHz 802.11 b/g/n (Troubleshooting)

Cellular: (LTE)

GPS: (Location Services)

Connection: CONNECT Connector: Amphenol AT06-08S

Mating Connector: Amphenol AT04-08PA

Deutsch DT04-08PA

Inputs (1):

(1) **Digital Inputs:** Future Use (Shared with Digital Output)

Outputs (1):

(1) **Digital Output:** Future Use (Shared with Digital Input)

Environmental

Operating Temperature: -30°C to +80°C (-22°F to 176°F)

Storage Temperature: -30°C to +80°C (-22°F to 176°F)

Protection: IP67

Vibration: Random vibration, 8.17 Grms (5-2000 Hz), in 3 axes (Vibration spec was met without the use of rubber isolation mounts)

Shock: 25g in 3 axes (shock specification was met without the use of rubber isolation mounts)

Mechanical

Case Material: Polycarbonate 94V-2

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