Manual No: **577014-326** ● Revision: **B**

INSITE360 FUELQUEST™

Insite360 Connect

Installation And Setup Manual

VEEDER-ROOT™

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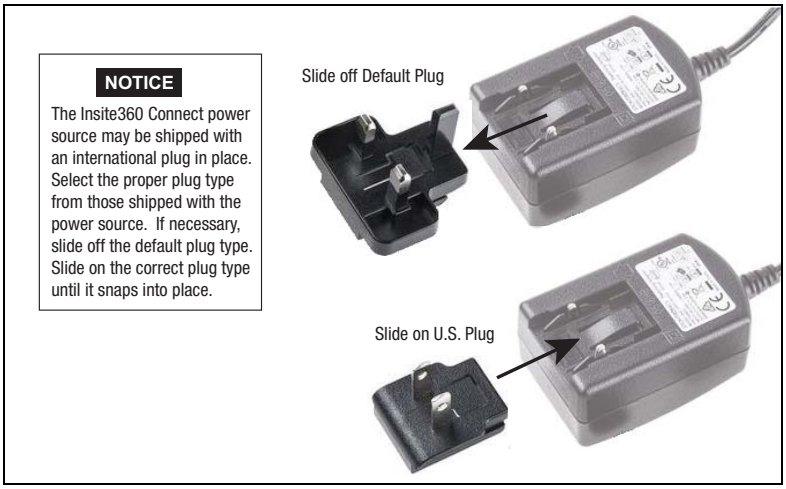
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTICE

The Insite360 Connect power source may be shipped with an international plug in place. Select the proper plug type from those shipped with the power source. If necessary, slide off the default plug type. Slide on the correct plug type until it snaps into place.



Introduction 1

Installation 3

Troubleshooting 13

Figures

Tables

Introduction

The Insite360 Connect transfers station data (such as inventory, alarm history, dispenser volume events, etc.) from an Automatic Tank Gauge (ATG) TLS-300 or TLS-350 having software version 24 or later, to secure Cloud storage where it can be used for Insite360 FuelQuest services such as Insite360 Visibility, Inventory Forecasting, Advanced Variance Analysis services, and more.

The Insite360 Connect communicates with the ATG via a serial connection to either the ATG's Serial Communications port or Electronic Dispenser Interface Module (EDIM) port and to the Cloud storage via a secure hardwired Ethernet connection to the Internet.

Safety Precautions

The safety symbols used in this manual are to alert you to important safety hazards and precautions that must be followed when installing the equipment described herein.

CAUTION
Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

READ ALL RELATED MANUALS
Knowledge of all related procedures before you begin work is important. Read and understand all manuals thoroughly. If you do not understand a procedure, ask someone who does.

⚠ WARNING

The Insite360 Connect is installed in the vicinity of high voltages which can be lethal as well as low power devices that must be kept intrinsically safe.

FAILURE TO COMPLY WITH THE FOLLOWING WARNINGS AND SAFETY PRECAUTIONS COULD CAUSE DAMAGE TO PROPERTY, ENVIRONMENT, RESULTING IN SERIOUS INJURY OR DEATH.

1. **Power to the ATG or to the POS does not have to be turned off when installing this device.**
2. **Do not open the ATG door(s) when installing this device.**

Related Manuals

576013-623	TLS-3XX Setup Manual
577013-776	TCP/IP Interface Module Installation Guide

Insite360 Connect Description

Table 1 lists the kits required for Insite360 Connect installation and Figure 1 describes the Insite360 Connect's communication ports and indicator LEDs.

Table 1. Kits Required For Insite360 Connect Installation

Part Number	Description
330020-833	Insite360 Connect, cables and mounting fasteners for ATG with no POS connection
330020-834	POS Upgrade kit (additional cables and adapters for ATG with POS connection)

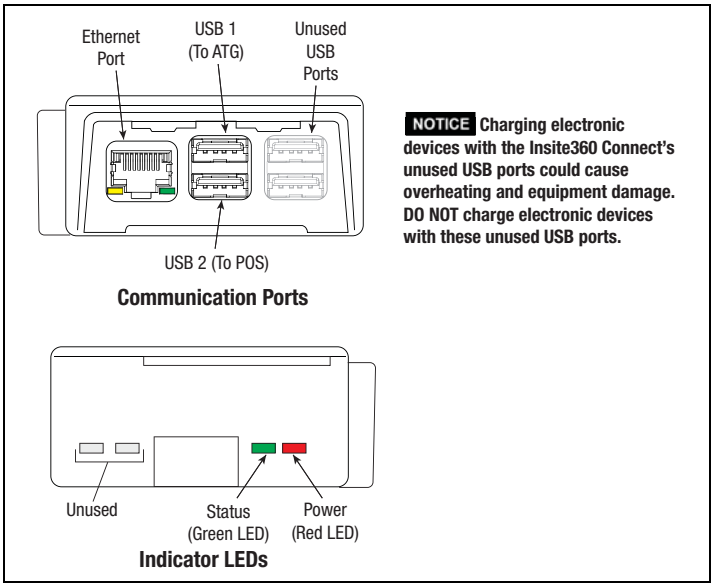
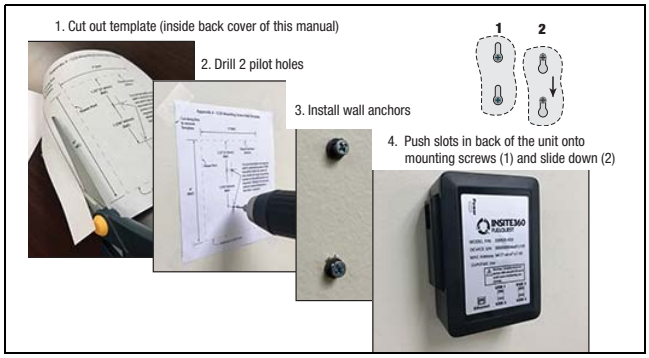


Figure 1. Insite360 Connect's Ports And LEDs

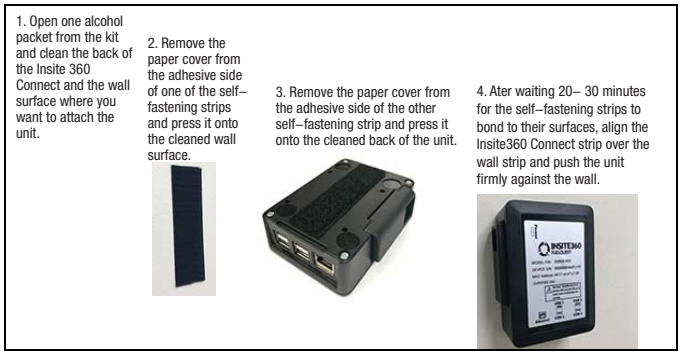
Mounting The Insite360 Connect

The Insite360 Connect must be installed within 7 feet of, and in the same area and environment as, your ATG. The Insite360 Connect requires access to a 100 to 240Vac wall outlet for its power supply. Mount the Insite360 Connect using either the provided screws (Method A) or the hook and loop self-fastening strips (Method B).

Method A



Method B



Insite360 Connect Installation Option - Scenario 1

Scenario 1 applies to sites where the Insite360 Connect connects to a free serial port in the TLS-300 or TLS-350. If the TLS-350 has the optional BIR and a Dispenser Interface Module (DIM), Dispenser Volume Events will be sent to the GVR cloud. The steps in this Insite360 Connect installation require cables contained in kit 330020-833.

All wiring should be installed and connected in accordance with local regulations. To avoid injury or property damage, use only the power supply provided with the Insite360 Connect.

1. Connect the Insite360 Connect's USB 1 Port to an available RS232 serial port on the ATG, using the USB to Serial Adapter cable connected to either the DB9 female / DB9 male 6' cable (Figure 2) or the DB9 female / DB25 male 6' cable (Figure 3), depending on the ATG's available serial port connector type.

   NOTICE The USB to Serial Adapter cable's thumb screws need to be fully threaded into the 6' cable's standoffs, and the 6' cable's thumb screws need to be fully threaded into the RS232 serial port.

2. Connect the Ethernet Port on the Insite360 Connect to a modem, router, or network switch on your local area network (LAN) using the kit's Ethernet cable.
3. Plug the power supply into the Insite360 Connect. Use the cable clamps and cable ties from the kit as needed to properly route and secure the cables.
4. Plug the power unit of the Insite360 Connect power supply into an available wall outlet.
5. Review the Insite360 Connect Configuration section on page 12 to confirm device activation

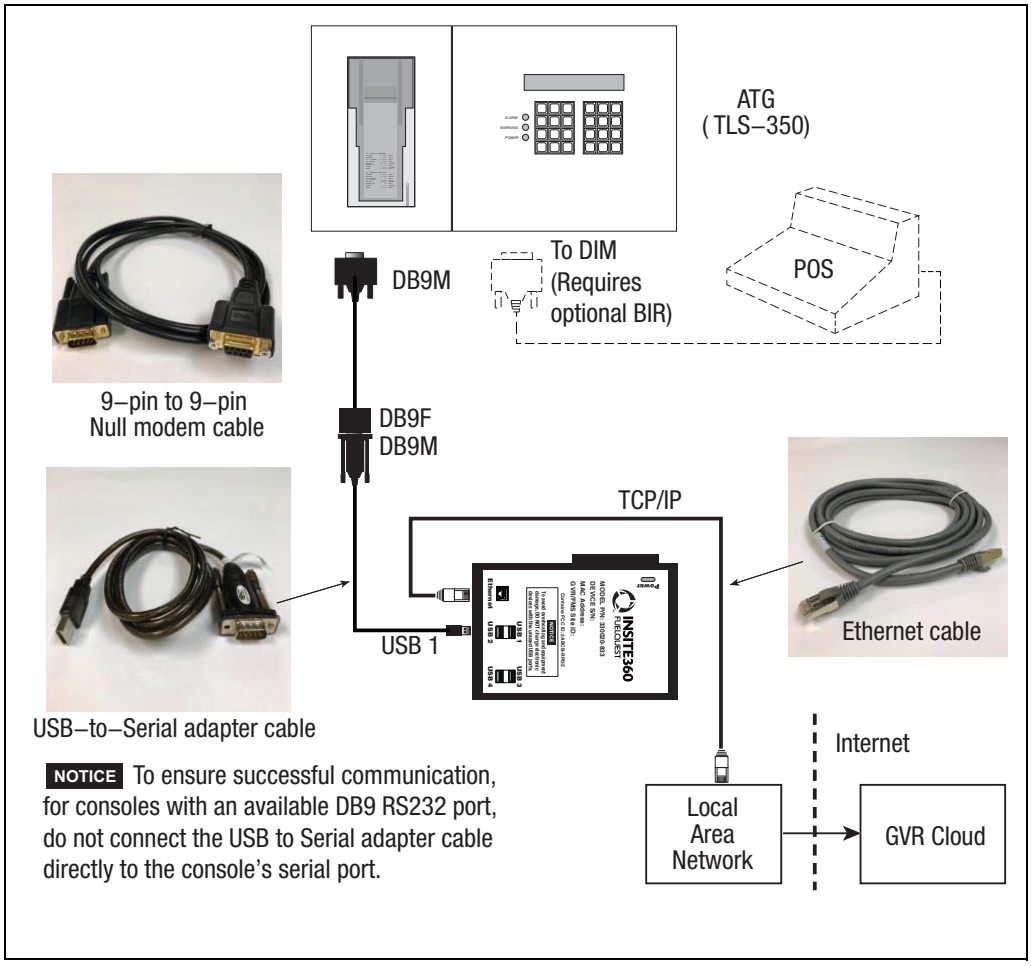


Figure 2. Scenario 1 Insite360 Connect Hookup - TLS-350 With DB9 Serial Port Connection

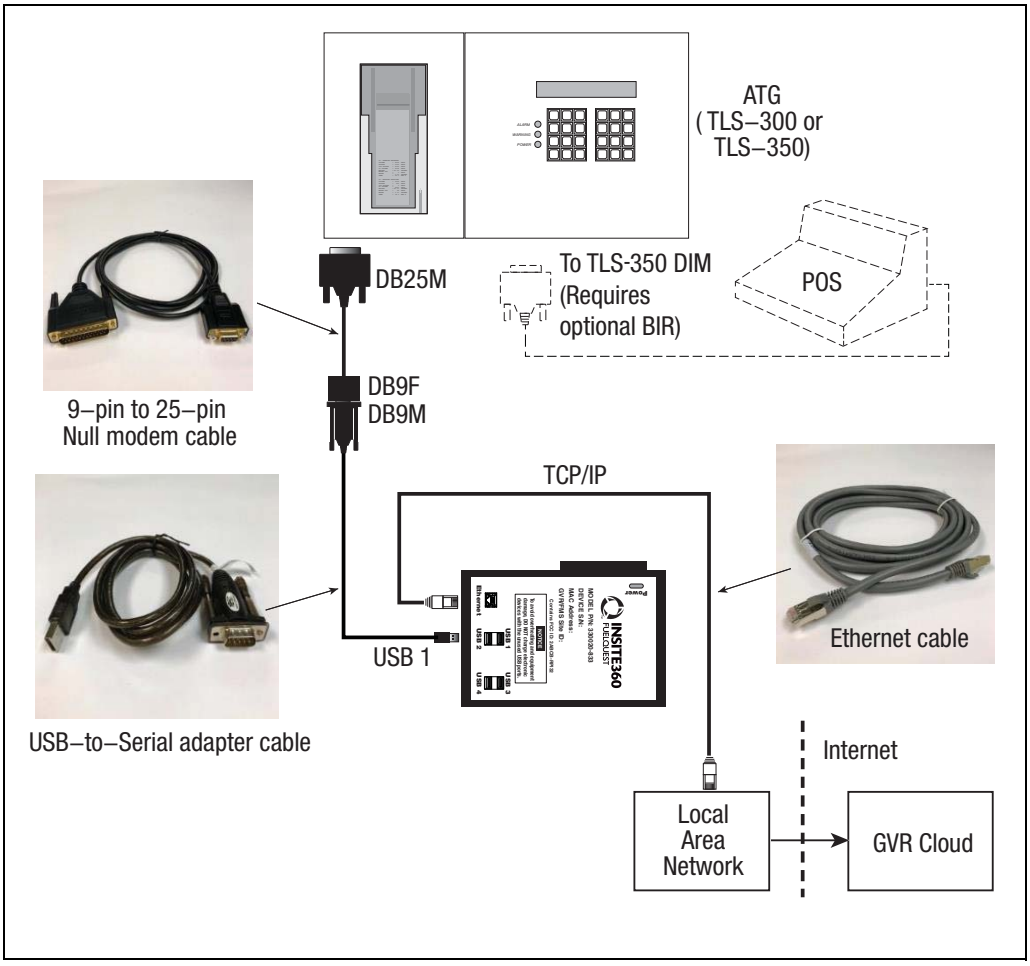


Figure 3. Scenario 1 Insite360 Connect Hookup - TLS-300/350 With DB25 Serial Port Connection

Insite360 Connect Installation Option - Scenario 2

Scenario 2 applies to sites where the ATG has an EDIM module connected to a POS and no free serial port for a dedicated connection to Insite360 Connect. In this scenario, the Insite360 Connect communicates with the ATG through the EDIM to retrieve data to be pushed to the Cloud, while allowing normal communications between the EDIM and the POS to pass through uninterrupted. The steps in this Insite360 Connect installation require cables contained in kit 330020-833 and kit 330020-834.

All wiring should be installed and connected in accordance with local regulations. To avoid injury or property damage, use only the power supply provided with the Insite360 Connect.

1. At the ATG EDIM board, disconnect the existing DB25M connector of the POS cable.
2. Plug this disconnected POS cable into the DB25F end of the DB25 female / DB9 female mini gender changer adapter (330020-834 kit) (see Figure 4).

   NOTICE The POS cable's thumb screws (if equipped) need to be fully threaded into the gender changer adapter's standoffs.
3. Connect the DB9M end of the USB to Serial Adapter cable (330020-834 kit) to the DB25 female / DB9 female mini gender changer adapter connected to the POS cable.

   NOTICE The USB to Serial Adapter cable's thumb screws need to be fully threaded into the gender changer adapter's standoffs.
4. Connect the USB end of the USB to Serial Adapter cable to the Insite360 Connect's USB port 2.
5. Connect the Insite360 Connect's USB 1 Port to the EDIM serial port on the ATG, using the USB to Serial Adapter cable (330020-833 kit) connected to the DB9 female / DB25 male 6' cable (330020-833 kit).

   NOTICE The USB to Serial Adapter cable's thumb screws need to be fully threaded into the 6' cable's standoffs, and the 6' cable's thumb screws need to be fully threaded into the EDIM serial port.
6. Connect the Ethernet Port on the Insite360 Connect to a modem, router, or network switch on your local area network (LAN) using the Ethernet cable (330020-833 kit).
7. Plug the power supply into the Insite360 Connect. Use the cable clamps and cable ties from the kit as needed to properly route and secure the cables.
8. Plug the power unit of the Insite360 Connect power supply into an available wall outlet.
9. Review the Insite360 Connect Configuration section on page 12 to confirm device activation

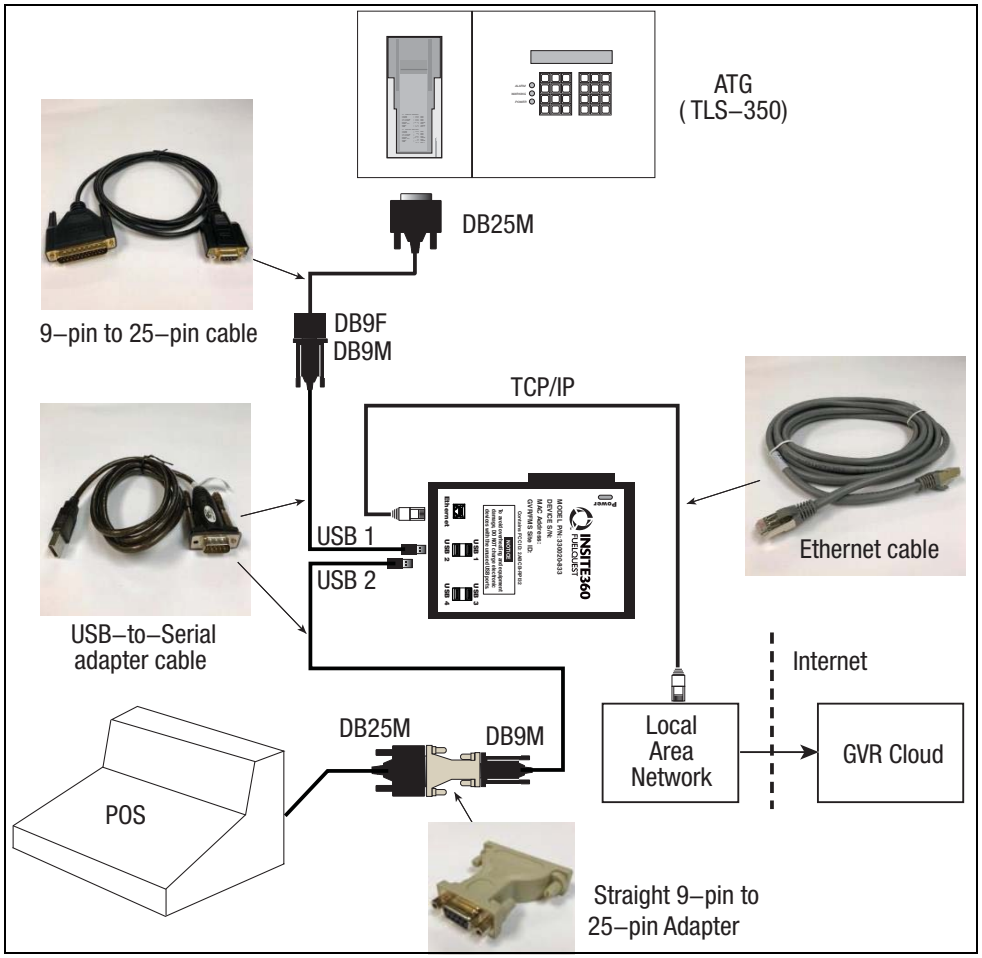


Figure 4. Scenario 2 Insite360 Connect Hookup - TLS-350 With EDIM Connection To POS

Insite360 Connect Installation Option - Scenario 3

Scenario 3 applies to sites where the ATG has an RS232 serial comm port connected to a POS and no additional free serial port for a dedicated connection to the Insite360 Connect. In this scenario, the Insite360 Connect communicates with the ATG through the RS232 serial comm port to retrieve data to be pushed to the Cloud, while allowing normal communications between the RS232 serial comm port and the POS to pass through uninterrupted. In this configuration, there is no BIR performed and no sales data is processed or transmitted. The steps in this Insite360 Connect installation require cables contained in kit 330020-833 and kit 330020-834.

All wiring should be installed and connected in accordance with local regulations. To avoid injury or property damage, use only the power supply provided with the Insite360 Connect.

1. At the ATG RS232 serial comm port, disconnect the existing DB9M or DB25M connector of the POS cable, if applicable.
2. Plug the end of this POS cable into either the DB25F end of the DB25 female / DB9 female mini gender changer adapter (if the POS cable end is a DB25M, see Figure 5) or into either side of the DB9 female / DB9 female mini gender changer adapter (if the POS cable end is a DB9M, see Figure 6). Both adapters are included in the 330020-834 kit.

   NOTICE The POS cable's thumb screws (if equipped) need to be fully threaded into the gender changer adapter's standoffs.
3. Connect the DB9M end of the USB to Serial Adapter cable (330020-834 kit) to the DB9 female end of the mini gender changer adapter connected to the POS cable.

   NOTICE The USB to Serial Adapter cable's thumb screws need to be fully threaded into the gender changer adapter's standoffs.
4. Connect the USB end of the USB to Serial Adapter cable to the Insite360 Connect's USB port 2.
5. Connect the Insite360 Connect's USB 1 Port to the RS232 serial comm port on the ATG, using the USB to Serial Adapter cable connected to either the DB9 female / DB9 male 6' cable (Figure 5) or the DB9 female / DB25 male 6' cable (Figure 6), depending on the ATG's available serial port connector type.

   NOTICE The USB to Serial Adapter cable's thumb screws need to be fully threaded into the 6' cable's standoffs, and the 6' cable's thumb screws need to be fully threaded into the RS232 serial port.
6. Connect the Ethernet Port on the Insite360 Connect to a modem, router, or network switch on your local area network (LAN) using the Ethernet cable (330020-833 kit).
7. Plug the power supply into the Insite360 Connect. Use the cable clamps and cable ties from the kit as needed to properly route and secure the cables.
8. Plug the power unit of the Insite360 Connect power supply into an available wall outlet.
9. Review the Insite360 Connect Configuration section on page 12 to confirm device activation.

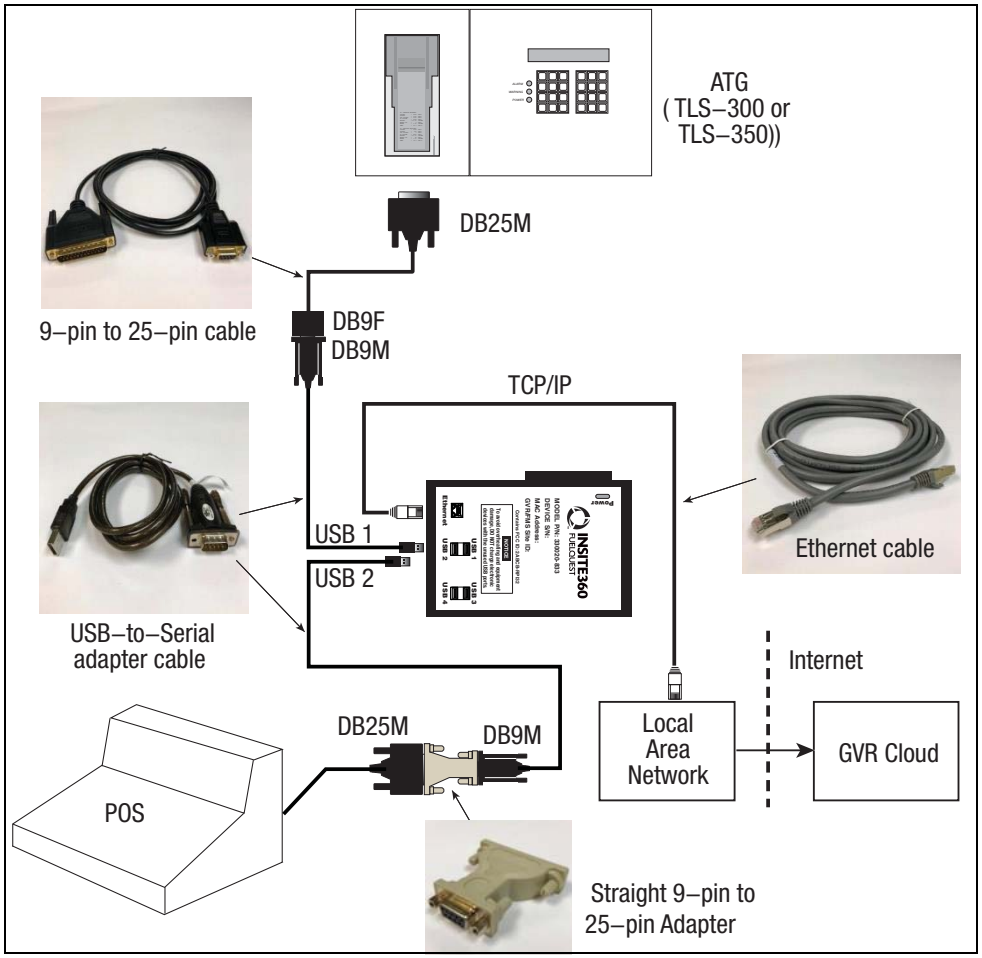


Figure 5. Scenario 3 Insite360 Connect Hookup - TLS-3XX With DB25 Serial Comm Port And POS

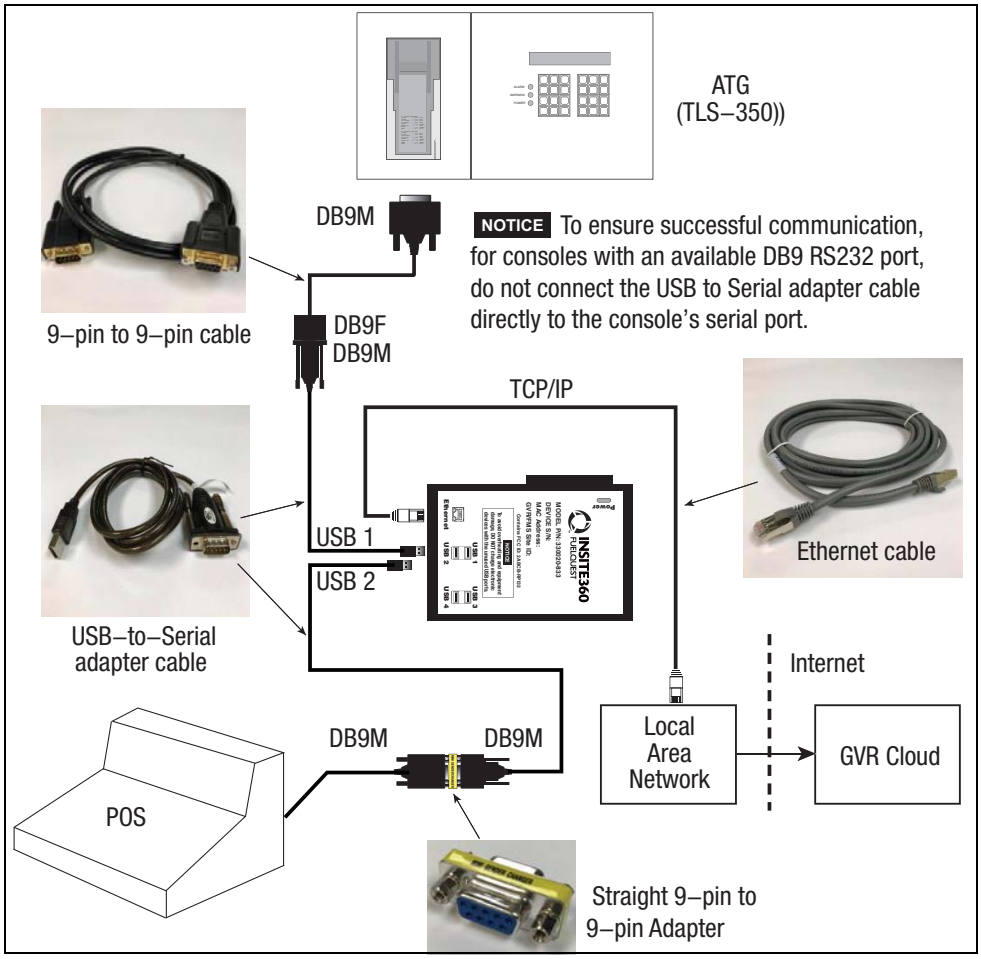


Figure 6. Scenario 3 Insite360 Connect Hookup - TLS-350 With DB9 Serial Comm Port And POS

Insite360 Connect Configuration

After physically setting up the Insite360 Connect and powering it up, the device will boot and if the device has already been commissioned for your site (indicated by the presence of a GVR/FMS Site ID number on the Insite360 Connect's label [see Figure 7]), it will automatically connect to the GVR Cloud to register and configure itself within several minutes. Refer to Table 2 (Insite360 Connect LED Status Lights) in the Troubleshooting guide on the following page to confirm device activation. If the activation does not complete automatically as indicated by the status LEDs, please contact Insite360 FuelQuest Fuel Management Services at 800-997-7725.

If the GVR/FMS Site ID number on the Insite360 Connect's label is blank (indicating the device has not already been commissioned for your site [See Figure 7]), please contact Insite360 FuelQuest Fuel Management Services at 800-997-7725.

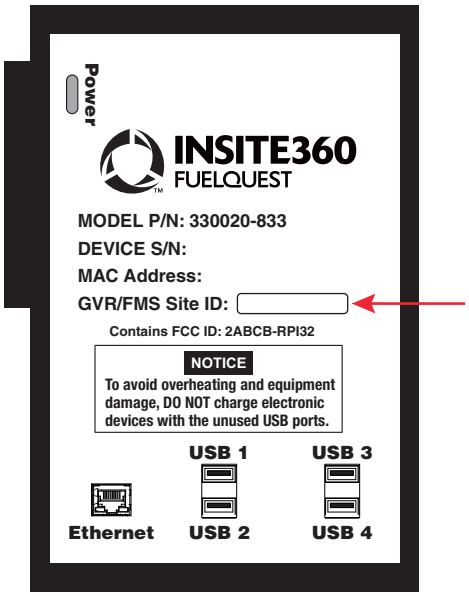


Figure 7. Locating Insite360 Connect's GVR/FMS Site ID Number

LED Status Lights

The Insite360 Connect's LED status lights indicate operational status (see Table 2).

Table 2. Insite360 Connect's LED Status Lights

LED	Status	Description
Power (Red)	On	Power is connected.
Status* (Green)	On	Insite360 Connect fully booted, registered and running.
	Off	Insite360 Connect application not running, reboot Insite360 Connect.
	1 blink pattern	No GVR Cloud communication. Check Internet connection.
	2 blink pattern	No ATG communication. Check connection between Insite360 Connect and ATG.
	3 blink pattern	No POS communication. Check connection between Insite360 Connect and POS.
	4 blink pattern	Insite360 Connect not registered. Check label on front of Insite360 Connect for correct GVR/FMS Site ID and address. Call 800-997-7725 if missing.
	5 blink pattern	Insite360 Connect software download in progress.

*The blinking patterns for all codes occur in series, repeating. For example, if there is no GVR Cloud communication (1 blink) ***and*** no ATG communication (2 blinks), the pattern would be: [1 blink, pause, 2 blinks, pause] and will repeat until one of both of those issues are resolved.

ATG Serial Port Setup

The ATG serial port settings must be configured to 9600 Baud, Data Bits 7, Parity Odd, Stop Bits 1. At the console's front keypad press the MODE key until the display reads **System Setup** in the display.

Press FUNCTION until you see the message:

COMMUNICATIONS SETUP
PRESS <STEP> TO CONTINUE

Press STEP until you see the message:

PORT SETTINGS
PRESS <ENTER>

This display allows you to access the communication settings–Baud Rate, Parity, Stop Bit and Data Length–for any Comm board installed in the console's Comm Bay.

Press ENTER to display the message:

COMM BOARD: X (Type)
BAUD RATE: 1200

The system labels the communications module in the leftmost slot as "COMM BOARD: 1". If this is not the Comm board to which you connected the Insite360 Connect, press TANK/SENSOR until the Insite360 Connect connected Comm board displays.

The correct Baud Rate for Insite360 Connect is 9600. If the rate shown on the display is 9600, press STEP. If the Baud Rate is incorrect, press CHANGE until you see the correct baud rate of 9600. Press ENTER to confirm your choice. The system displays the message:

BAUD RATE: 9600
PRESS <STEP> TO CONTINUE

Press STEP to continue.

COMM BOARD: X (Type)
PARITY: ODD

The choices are NONE, ODD, and EVEN. The correct Parity for Insite360 Connect is ODD. If the Parity shown on the message is ODD, press STEP. To choose the correct Parity setting, press CHANGE until you see the correct selection. Press ENTER to confirm your choice. The system displays the message:

PARITY: ODD
PRESS <STEP> TO CONTINUE

Press STEP to continue.

COMM BOARD: X (Type)
STOP BIT: 1 STOP

The choices are 1 or 2. The correct stop bit selection for Insite360 Connect is 1. If the Stop Bit shown on the message is 1, press STEP. To choose the correct Stop Bit setting press CHANGE and press ENTER to confirm your choice. The system displays the message:

STOP BIT: 1 STOP
PRESS <STEP> TO CONTINUE

Press STEP to continue.

COMM BOARD: X(Type)
DATA LENGTH: 7 DATA

The choices are 7 or 8. The correct Data Length selection for Insite360 Connect is 7. If the Data Length shown in the message is 7, press MODE to exit the System Setup mode. To choose the correct Data Length press CHANGE and press ENTER to confirm your choice. The system displays the message:

DATA LENGTH: 7 DATA
PRESS <STEP> TO CONTINUE

Press Mode to exit the System Setup mode.

ATG EDIM Comm Port Setup

The ATG EDIM Comm port settings must be configured for Insite360 Connect operation. At the console's front keypad press the MODE key until the display reads **Diag Mode** in the display.

Press FUNCTION until you see the message:

SYSTEM DIAGNOSTIC **PRESS <STEP> TO CONTINUE**

Press STEP until you see the message:

DIM DIAGNOSTIC DATA **PRESS <ENTER>**

Press ENTER to display the message:

X1:SWARE#XXXXXX-XXX-X **CREATED - YY-MM-DD-HH-MM**

The first two characters in this display 'X1' indicate the DIM type in Comm slot 1: 'M' for MDIM module; 'E' for any other DIM type. You are looking for the EDIM Comm board (an E type DIM) so If this is not the Comm board to which you connected the Insite360 Connect, press TANK/SENSOR until the correct Comm board displays, e.g., if the Insite360 Connect is connected to the EDIM in slot 3 (3rd from left), then you press TANK/SENSOR until you see E3:)

Press STEP until you see the message:

DISP. MODULE DATA STRING **EDIM X:**

The correct selection depends on the BIR reporting units for your site and if your site has a Gilbarco Protocol or VR Protocol DIM. See Table 3 below for the correct EDIM Data String entry for Insite360 Connect. Table 4 is for reference and defines the letters used in EDIM Data String entries.

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Table 3. EDIM Data String Entries For Insite360 Connect

EDIM Protocol	EDIM Data String Selection		
	For U.S. Units	For Metric Units	For Imperial Units
VR Protocol	**G**	No entry - leave blank	**I**
Gilbarco Passport	**B9OHVG**	**B9OHV**	**B9OHVI**

Table 4. DIM Parameter Definitions (Reference)

Baud		Parity		Stop Bits		Data Bits		Conversion	
String	Rate	String	Type	String	Bits	String	Bits	String	Unit
B9	9600	N	None	H	1	V	7	G	Gallons
B4	4800	E	Even	S	2	D	8	M	Metric
B2	2400	O	Odd					I	Imperial
B1	1200								
B6	600								
B3	300								
BG	***								

If the entry shown in the display is correct for your EDIM protocol/BIR reporting units, press STEP. If the entry is incorrect, press CHANGE and enter the correct entry for your site as shown in Table 3. Press ENTER to confirm your choice. The system displays the message:

EDIM X: G
PRESS <STEP> TO CONTINUE

The display above shows the correct entry **G** for a North American site in which the Insite360 Connect is plugged into a VR protocol EDIM.

Press Mode to exit the System Setup mode.

Changing The Insite360 Connect Configuration

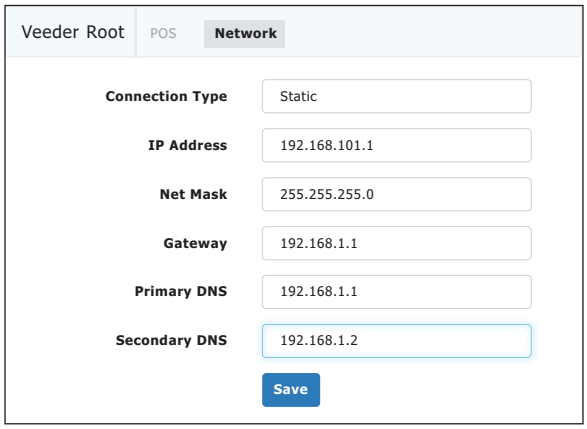
The Insite360 Connect will automatically configure itself. Alternately, you can access an interface that allows you to edit network and POS connection settings.

1. Configure a laptop PC with a static IP address of 192.168.101.2. to ensure it is on the same sub network as the Insite360 Connect. For more detailed instructions, reference Veeder-Root's 577013-776 TCP/IP Interface Module Installation Guide at *www.veeder.com*.
2. Connect the laptop directly to the Ethernet port of the Insite360 Connect using an Ethernet crossover cable (not provided). Power up the Insite360 Connect and use a browser to connect to the static IP address **http://192.168.101.1:8888/** for the Insite360 Connect.

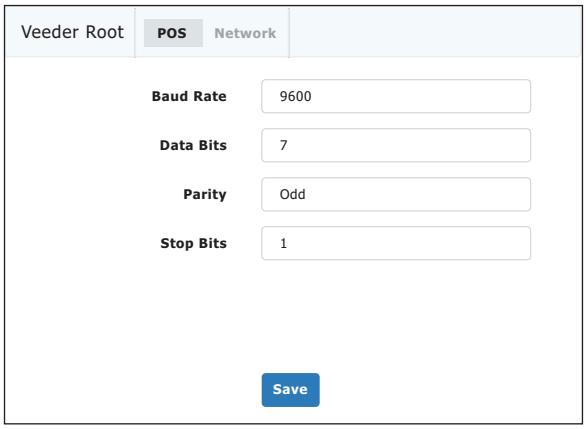
NOTICE For a successful connection, because you are directly connecting two devices (the Insite360 Connect and a laptop), you must use an Ethernet crossover cable (not provided).

The following settings are available via the interface:

Network parameters below are defaults and may have changed - consult the customer's IT department for the site's actual parameters.



The Insite360 Connect's POS communication parameters shown below are defaults and may have changed; these parameters must match the site's POS communication parameters. Consult the customer's IT department for the site's actual POS communication parameters.

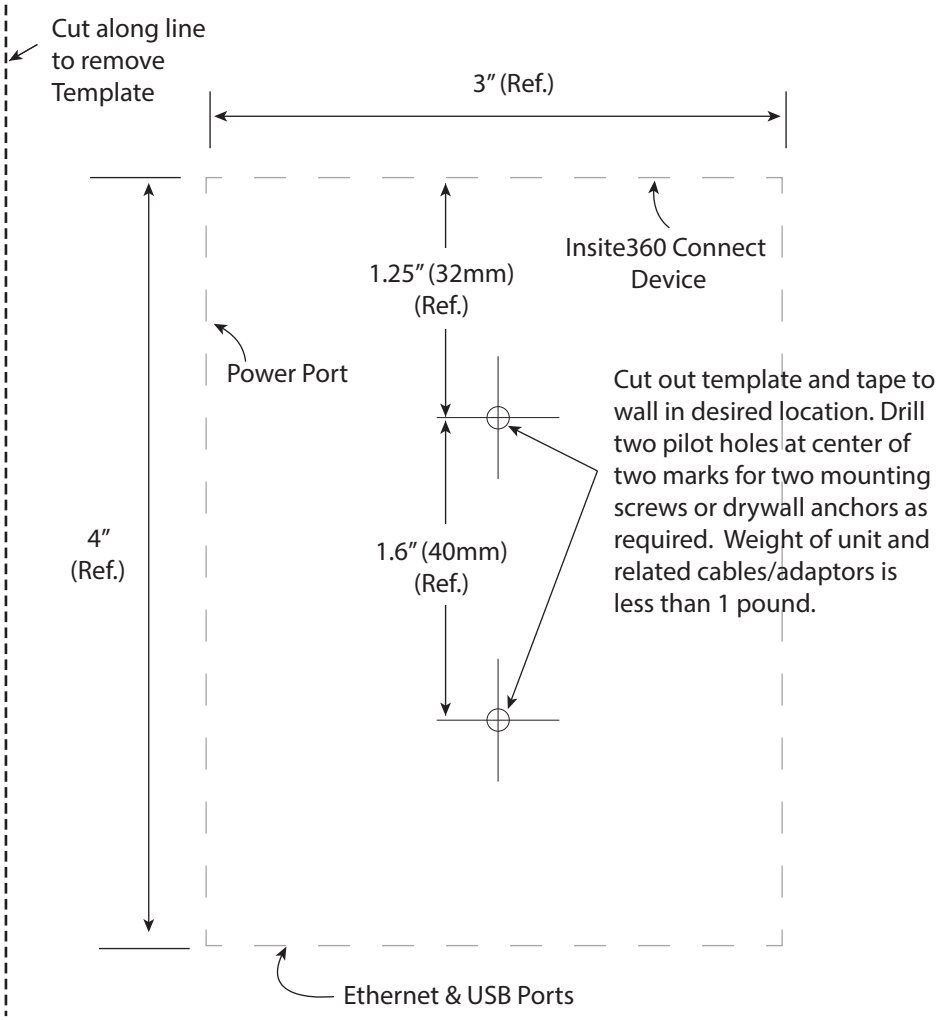


NOTICE Default BIR Protocol EDIM POS communication parameters shown above.
Default Gilbarco EDIM POS communication parameters are: 1200, 7, Even, 1

Replacing The Insite360 Connect

When a Insite360 Connect cannot push information to the cloud, it should be replaced with a similar device that has been pre-configured and registered with the GVR Cloud in the same way the original device was. Any information recorded on the old device that was not sent to the Cloud may be lost or duplicate data may be sent to the GVR Cloud.

Appendix A - Insite360 Connect Mounting Screw Hole Template



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