thermoscientific

DeviceLink™ Connect

Configuration and Installation Instruction Guide

332858H01 • Revision A • February 2022

ThermoFisher SCIENTIFIC

IMPORTANT Read this Configuration and Installation Instruction Guide. Failure to follow the instructions in this manual can result in damage to the unit, injury to operating personnel, and poor equipment performance.

CAUTION All internal adjustments and maintenance must be performed by qualified service personnel.

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Date	Revision	Description
02/10/2022	A	Initial release for DeviceLink Connect

Contents

Introduction

The DeviceLink Connect remote monitoring system captures key system and reliability parameters enabling anytime-anywhere monitoring of your device via the Thermo Connect cloud platform. The DeviceLink Connect system consists of Wi-Fi modules (motes), serial cables, sensors, and software tools that allow you to monitor your laboratory equipment for key performance and reliability parameters and analyze data. Alarms are issued automatically to users' email and mobile devices when threshold breaches are detected in the system.

Intended Use

This DeviceLink Connect system is intended for:

- Research or General Purpose indoor use only.
- Monitoring overall asset health, detect and alarm on asset malfunction and degradation.
- Service vs. buy decisions.
- Remote system health monitoring and troubleshooting for service providers.
- It is not stated or implied that the system will uplift the intended use of the asset.
- The system will collect, store, and provide analytical data. The data analytics collected from multiple assets (fleet) will provide the operator with supporting data for efficiency and cost reduction recommendations.
- To monitor the performance of the asset to meet the asset's intended use and assess overall health using trend analysis from baseline and other comparable units.

Non-Intended Use

The DeviceLink Connect system is not considered as medical device and has therefore not been registered with a medical device regulatory body (e.g. FDA).

- These devices are not to be used for any medical purposes.

Environmental Operating Conditions

The DeviceLink Connect mote is designed and intended for reliable operation at normal indoor ambient temperature and humidity.

- Motes and sensors shall not be placed in environmental conditions beyond recommended specifications.
- The mote or any sensors are not submersible.
- Operating temperature range: 0ºC to +45ºC.
- Operating humidity range: 0-85% RH, non-condensing.

CAUTION: Follow local regulations concerning disposal of packaging, unused wireless devices and their accessories, and promote their recycling.

Backup Battery

The DeviceLink Connect contains a factory installed Li-ion battery which cannot be replaced. The Li-ion battery is selected and designed to operate throughout the life of the DeviceLink Connect system. The Li-ion battery must be shipped via ground per IATA regulations.

Charging cycles and charge current are managed by a Power Management System (PMS) within the DeviceLink Connect. The charge rate is determined by system load, ambient temperature, battery temperature and battery charge state.

Maintenance and Firmware Updates

While there is no annual maintenance required for the DeviceLink Connect, Thermo Fisher Scientific may periodically make firmware updates available for the device. Users will be notified of available firmware updates as they are available and upon written acceptance by the user, an over-the-air (OTA) firmware update of the device will be initiated.

Safety Considerations

Safety Instructions

- Do not use this product for protection or as part of an automated emergency system or for any other application that involves protecting people and/or property.
- Customers and users of Thermo Fisher Scientific products are responsible for making sure that the product is fit for the intended usage. Do not open the product casing and do not disassemble or modify internal components in any manner.
- Thermo Fisher Scientific products do not contain any internal components that require user intervention or repair. If the device shows signs of improper operation, disconnect it immediately from its power source and contact Thermo Fisher Scientific technical services.

Electrical Warnings

- The DeviceLink Connect must be powered by IEEE 802.3af compliant Power Sourcing Equipment (PSE). If powered via Power Injector, always use the specific Power Injector (adapter) provided by Thermo Fisher Scientific.
- Do not open the adapter yourself and do not dismantle internal components or modify them in any manner. The adapter does not contain any user-repairable parts. If the adapter shows any sign of malfunction, unplug it immediately and contact Thermo Scientific for repair or replacement.
- Do not connect the adapter to a device or peripheral other than the DeviceLink Connect for which it was intended. Unplug the power cable from the electrical outlet when the adapter is not in use.
- Do not cause a short circuit with the electrical plug. Do not force either the AC or DC plug.
- Before removing the connector from any DeviceLink Connect or unplugging power cables, unplug the cable from the power outlet.
- Do not subject the adapter to physical shock, as it may cause serious malfunction or damage. Do not use or place the adapter in a wet or humid location. This adapter is not waterproof.

CAUTION: Follow your facility's safety guidelines and wear required Personal Protective Equipment (PPE) during installation and/or troubleshooting.

Compliance and Certifications

FCC Compliance
Supplier's Declaration of Conformity
47 CFR 2.1077 Compliance Information
Unique Identifier: Generation 3 Mote
Authorized Components Used in Assembly:
Raspberry Pi 3B+ Module, FCC ID: 2ABCB-RPI3BP

FCC Compliance Statement:

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.

Responsible Party:
KLATU Networks, Inc.
4174 NE Lookout Lane
Poulsbo, WA 98370
(619) 684-3115
www.klatunetworks.com

Compliance Information Statements for Raspberry Pi 3B+, FCC ID: 2ABCB-RPI3BP:

FCC Caution: Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This device is installed to be operated with a minimum of 20 cm distance between the antenna and user.

ISED Compliance:

This device complies with ISED's license-exempt RSS standard(s). 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.

This radio transmitter (IC: 20953-RPI3P) has been approved by ISED Canada to operate with the antenna on board (the antenna on board is a Dual band (2.4 GHz and 5 GHz) PCB niche antenna design licensed from Proant with Peak Gain: 2.4 GHz 3.5 dBi) with the maximum permissible gain indicated. Antenna not included in this list, having gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

The operation of the device in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems. This equipment complies with ISED RSS 102 radiation exposure limits set forth for an uncontrolled environment. This equipment installed to be operated with a minimum of 20 cm distance between the antenna and the user.

Note that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and these radars can cause interference and/or damage to License Exempt Local Area Network (LELAN) devices.

General Recommendations

It is recommended that all AC powered devices be connected to an uninterruptible power supply (UPS) in addition to any backup power sources that may already be in place.

Applicable Equipment Models

The DeviceLink Connect system can be connected via serial/USB cable to select laboratory equipment. However, the DeviceLink Connect can also be used with independent sensors to monitor other equipment where serial/USB connection is not available or applicable.

Note: The DeviceLink Connect is designed to monitor a single instrument via a serial/USB port connection and/or with independent sensors. Connecting multiple instruments via serial/USB connection on a single DeviceLink Connect is not supported.

Table 1. Equipment Models

Equipment Type	Brand	Equipment Series Name	Applicable DeviceLink Connect Kit Part Number
Ultra-Low Temperature Freezers (-10°C to -40°C and -50°C to -80°C)	Thermo Scientific	TSX Series, TDE Series, TLE Series TSU Series	DLCKTULTS101
	Thermo Scientific Revco	RDE Series, RLE Series, UxF Series	
	Thermo Scientific Forma	FDE Series, 89000 Series, 88000 Series	
	Thermo Scientific HERAfreeze	HDE Series, HLE Series, HFU-T Series	
High Performance Refrigerator (+2°C to +8°C)	Thermo Scientific	TSX Series	DLCKTLRFZ101
High Performance Freezer (-20°C to -30°C)	Thermo Scientific	TSX Series	DLCKTLRFZ101
CO_2 Incubators	Thermo Scientific Heracell	150i and 240i Series	DLCKTCO2I101
	Thermo Scientific Heracell VIOS	160i and 250i Series	DLCKTCO2I102
	Thermo Scientific Forma	i160, i250, and 4100 Series	DLCKTCO2I102

* For a complete list of compatible equipment by model number, go to www.thermofisher.com/DLCequipment.

DeviceLink Connect Independent Sensors

Type/Application	DeviceLink Connect Model Number	Additional cable connections (required)
Temperature (PT100)	DLCPTTEMP001	DLCPTSMRT001
CO_2	DLCPTCO2A001	
Current (0-50 A)	DLCPTCURT001	DLCPTSMRT002
Current (0-80 A)	DLCPTCURT002	DLCPTSMRT002
Temp/RH (<90% humidity)	DLCPTHUMI001	
Temp/RH (up to100% humidity)	DLCPTMRHI002	
Door Switch (analog)	DLCPTDOOR001	

Technical Specifications

Mote Specifications

Networking:

- Wi-Fi or Ethernet connectivity. Supports wireless security protocols WPA Enterprise (802.1x) and WPA2.
- 802.11n/ac Wi-Fi Radio - Contains FCC ID: 2ABCB-RPI3BP/Contains IC:20953-RPI3P.
- DHCP or Static IP and DNS.
- NTP local or externally sourced.
- Open port access to api.traxxekg.com on port 80 (HTTP) or 443 (HTTPS). An explicit HTTP proxy is configurable.
- Device transmits via HTTP(S) periodically, as configured by customer. Sampling is configurable at 1, 5,10, 30, and 60-minute intervals.

Power over Ethernet (PoE):

- DC Voltage: 56 VDC; Load 0 A Min, 0.275 A Max; Regulation Line/Load 4%;
  Minimum supply power 15.4 W.
- IEEE Standards: Complies with 802.11af standard.
- Safety Approvals: cUL/UL, SAA,CE, C-Tick.
- The power supply must conform to the PoE (Power over Ethernet) 802.3af standard.

Backup Battery:

- The DeviceLink Connect mote contains a standby rechargeable Li-Ion battery. In the event of power outage, the battery operates for upto 3 hours of continuous operation and recharges in 5 hours or less.
- 2600 mAH, 3.6 V
- Compliant with UL 2054, second edition dated 10-29-2004, including revisions through 2-11-2011.
- The DeviceLink Connect mote contains a Li-Ion battery which IATA regulations require be shipped via ground.
- As an additional safety precaution, the battery charge is limited to 40%-65% of its capacity of shipment. Storage for periods of more than 6 months without charging is not recommended.
- Charging cycle and charge current are managed by a Power Management System (PMS). The charge rate is determined by system load, ambient temperature, battery temperature and battery charge state.

  Battery Operating Temperatures:

  - Operating Temperature: Min 0°C, Max 40°C.
  - Storage and Shipping Temperature: Min -20°C, Max 45°C.

  Battery Care:

  - Refer to documentation for important information.

Mechanical Specifications:

- Material: ABS plastic
- Dimensions: 4.821" x 3.776" x 1.496"
  (122.45 mm x 95.91 mm x 38.00 mm) (L x M x W)

LAN Ports (2):

- LAN (Port 1): 10/100 Ethernet
- LAN (Port 2): 10/100 Ethernet with PoE

Sensor and Cable Ports:

- USB 2.0 Ports (4)
- RS232/485 port (1)

Indicators and Buttons:

- LED Indicators (3 bi-color red/green): Power/Status, Network, Sensor
- Action Button: Manually sends sensor data to Thermo Connect cloud
- Power Switch: Power mote off and on.

Independent Sensor Specifications

	Temperature (RTD)	Amperage (Current Transducer)	Auxiliary Sensor/Door Switch or Dry Contact
Interface	USB	USB	RS485 (RJ45)
Type	3 Wire, 100 Ohm Platinum RTD (TC = 3850 ppm/K)	Split core current transducer with built-in transient voltage suppression.	Dry Contact / Door Switch
System Accuracy	±0.5°C (0.0% full scale)	±2%	n/a
Operating Range	-200°C to +600°C	0-50 A or 0-80 A	n/a
Display Resolution	0.1	0.1	n/a
System Resolution	0.01	0.01	n/a

	Temperature/RH	Temperature/RH	CO_2
Interface	USB	RS485 (RJ45)	RS485 (RJ45)
System Accuracy	Temp: ±1°C RH: ±3% RH	Temp from +10°C to +30°C: ±0.5°C Temp from -40°C to +10°C: ±0.6°C RH at temps from 0°C to +40°C and 0% to 90% RH: ±3% RH RH at temps from 0°C to +40°C and 90% to 100% RH: ±5% RH RH at temps from -40°C to 0°C, +40°C to 60°C and 0% to 90% RH: ±5% RH RH at temps from -40°C to 0°C, +40°C to 60°C and 90% to 100% RH: ±7% RH	Temp at 25°C, Pressure at 1013 hPa, and CO_2 at 5% = ±0.1% CO_2 CO_2 at 0% to 8% = ±0.2% CO_2 CO_2 at 8% to 20% = ±0.4% CO_2
Operating Range	Temp: -17°C to +49°C RH: 2% to 95% RH (non-condensing)	Temp: -40°C to +60°C RH: 0% to 100% RH	0% to 20% CO_2
Display Resolution	0.1	0.1	0.1
System Resolution	Temp: 0.01 RH: 0.01	Temp: 0.01 RH: 0.01	0.01

Getting Started

Prerequisites for getting started

- If using Wi-Fi for network connection:
  - Wi-Fi Network Information
    - Name (SSID) and Password
    - Authentication Security Type
    - Digital certificate (if necessary based on authentication type)
- If using Ethernet (LAN) for network connection:
  - Ethernet connection and cable
- Computer or mobile device with a supported web browser application and Wi-Fi or Ethernet port.

Installing the DeviceLink Connect

Step 1: Setup Your Hardware

- Connect your DeviceLink Connect mote to the instrument being monitored via the provided serial to USB or USB to USB cable. Plug into the RS232/485/USB port at the rear of your instrument. Plug the (other) USB end of the cable into one of the four USB ports on the mote.

Note: You can use any of the 4x USB ports for this connection. Record which port you have used as this will be needed later in Step 3.

Figure 1. USB connected to DeviceLink Connect mote

- Supply power to your DeviceLink Connect mote by connecting the provided PoE ethernet cable to the “Out” port on the PoE wall adapter and the PoE LAN port on the back of the mote. Plug the PoE wall adapter into standard wall outlet.

Figure 2. Connecting Supply power to DeviceLink Connect mote

- Install any additional independent sensors desired (See **Installing Independent Sensors** section for added instructions).
- Install provided USB Commissioner dongle into any 1 of the 4 USB ports on the DeviceLink Connect.

Note: If you have 4x sensor plugged into the DeviceLink Connect, unplug one of the sensors and insert the USB commissioner dongle. You can re-insert your USB sensor after Step 3 is complete and you remove the USB commissioner dongle.

Figure 3. Installing USB Commissioner dongle to DeviceLink Connect mote

- (Optional) If you are connecting your DeviceLink Connect via Ethernet cable to your network, connect your Ethernet cable to the “In” port on the PoE wall adapter and the other end to your Ethernet/LAN port from your facility.

  Note: You will have two Ethernet cables. One Ethernet cable (purchased separately) connected from your network to the PoE wall adapter - In, and then the provided PoE Ethernet cable from the PoE wall adapter - Out to the PoE LAN port on the DeviceLink Connect Box.

- During the commissioning (setup) process, you will also need an Ethernet cable connected directly from your computer to the LAN port on the back of the DeviceLink Connect highlighted in the figure below.

  Note: The LAN port is ONLY used during commissioning of the device. PoE LAN connection described above with the PoE wall adapter is used for the static connection to the facility’s network over Ethernet.

Figure 4. LAN port on DeviceLink Connect Mote

- Turn your DeviceLink Connect mote on, by sliding the power switch on the front of the mote to the ON position.

Figure 5. Mote OFF/ON Switch

Step 2: Establish Your Thermo Connect Account

- On your computer or mobile device, navigate to apps.thermofisher.com
- Navigate to Create Account and establish your Thermo account credentials

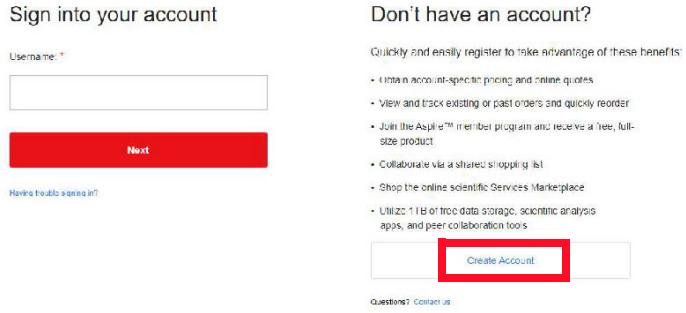


Figure 6. Create Thermo Connect Account

Note: You will use the email associated with your Thermo Connect account during Step 3 and 4.

Step 3: Configuring Your Network (Commissioning)

1. On your computer or mobile device disable existing network connections and connect to the SSID (network name) in the form of **mote-XX-XX-XX**.

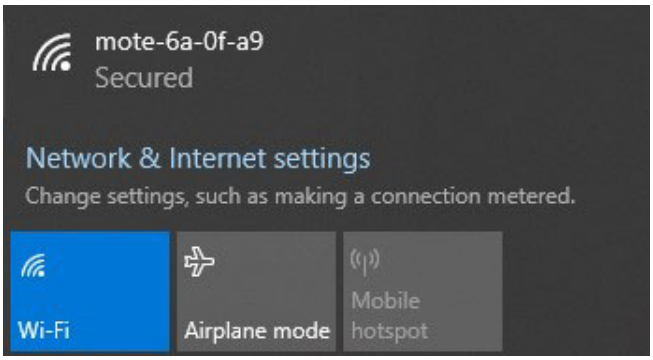


Figure 7. Configuring Network

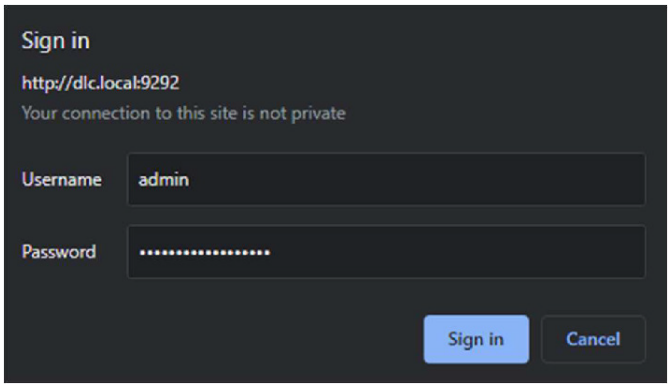
Note: The exact name will be different from the example above but will be of the same form.

2. When prompted, the network security password will be identical to the network name **mote-XX-XX-XX**.

Note: After entering the network password, you will notice the connection indicate “Secured.” At this point you are connected, even if it appears as though it is still trying to establish a connection.

3. Using a web browser navigate to **http://dlc.local:9292**. You will be prompted to enter credentials:

   a. Username: **admin**



   b. Password: **changeThisPassword**

Note: After you login the first time, you will be prompted to change the generic password. Enter your own password and you will be prompted to re-login with that new password. Record your password for future use.

Once logged in, you will see the DeviceLink Connect commissioning welcome screen. You will note there are 3x mandatory steps for basic setup: **Wi-Fi**, **Sensors**, and **DeviceLink Connect**.

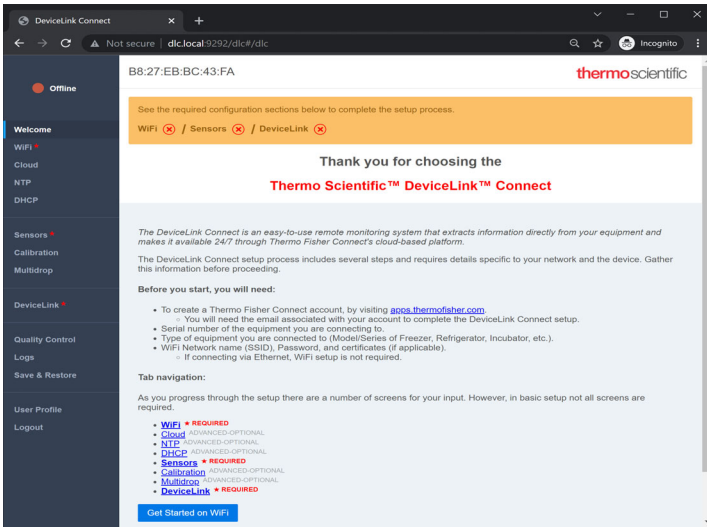


Figure 8. DeviceLink Connect commissioning welcome screen

Note: If you have connected your device via LAN (ethernet cable), the WiFi section will appear as "-" in the status bar at the top of the commissioner screen. You can proceed directly to the Sensors setup.

4. Navigate to the WiFi screen using the left navigation bar or links on the welcome screen.

   a. Click the "Scan WiFi. Networks" button to scan for available networks.

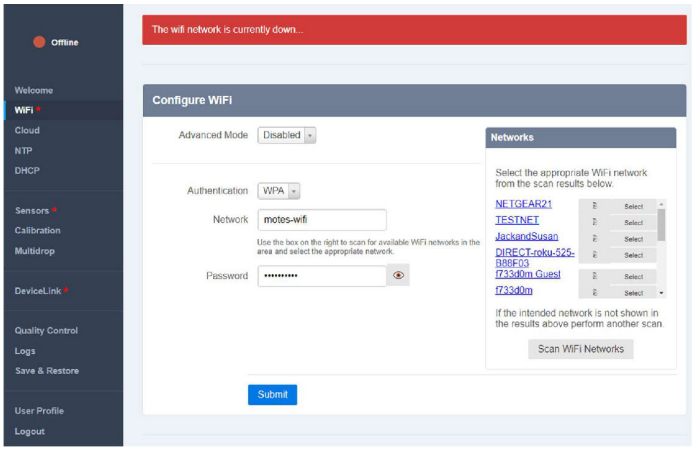


Figure 9. Configuring Wi-Fi

Note: If the intended network is not shown, us "Scan WiFi Networks" to perform another scan.

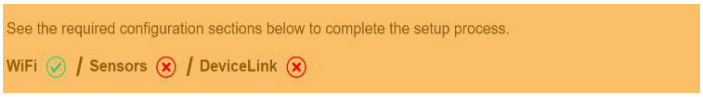
   b. Select your Authentication type.

   c. Select your desired network from the network list. Click on either the network name or the Select button.

   d. Enter you network password in the Password field.

   e. Submit.

Once the network is established, you will see a ✓ appear in the commissioner status bar.



Note: For Advanced network setup, See **Advanced Network Configuration Setup** section of this manual.

5. Navigate to the **Sensors** screen using the left navigation bar or **Sensors** link on the commissioner status bar.

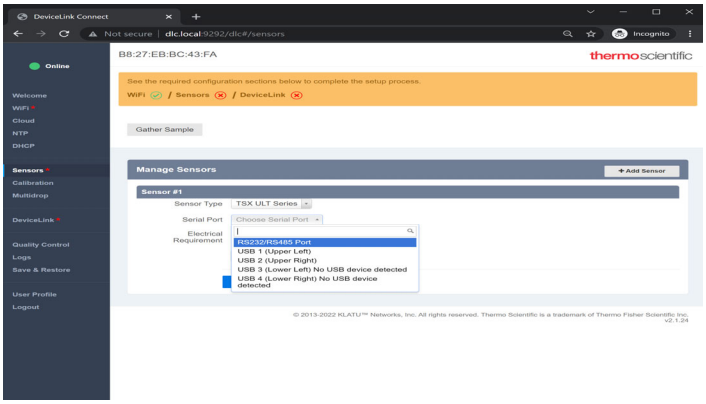


Figure 10. Configuring Sensors

   a. Click the "Add sensor" button to add a sensor.

   b. From the "Sensor Type" drop down menu, select the type of sensor or asset which you are connecting to.

c. Some sensors require indication of which USB port on the DeviceLink Connect they are attached to.

d. Finally, indicate the sample frequency which you would like to receive your sensor data. “Every Minute” is recommended.

e. Click “Submit”.

f. Repeat this process for additional sensors needing to be added.

Note: Use the “Gather Sample” button to manually pull a data set from your sensors in order to ensure established connection with your sensors/equipment.

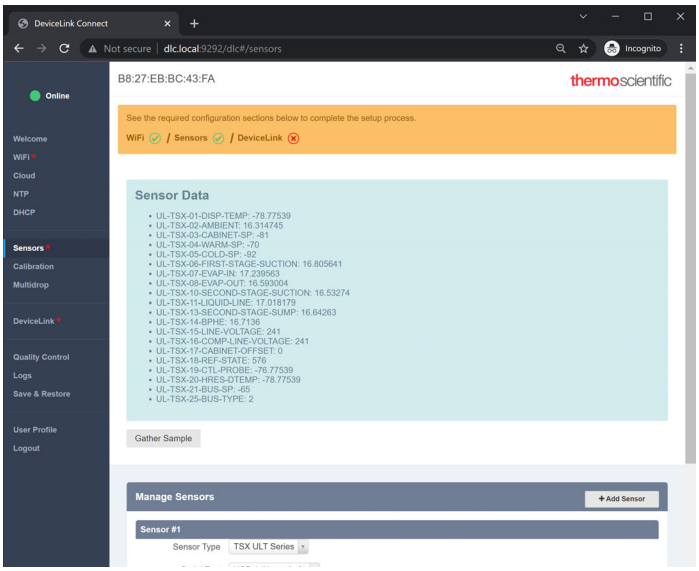
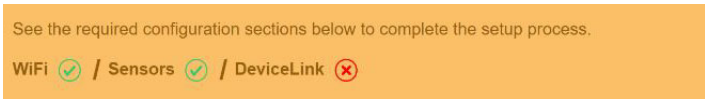


Figure 11. Sensor configured

Once the sensor(s) are saved, you will see a ✓ appear in the commissioner status bar.



6. Navigate to the DeviceLink screen using the left navigation bar or **DeviceLink** link on the commissioner status bar.

   a. Enter your Thermo Connect account email address.

   b. Enter your asset serial number. This refers to the equipment you are monitoring (i.e. the refrigerator, freezer, incubator, etc.). The asset serial number is used for associate and link data coming from the equipment for display on Thermo Connect.

   c. Click “Deploy”.

Once the deployment is complete, you will see the commissioner status bar go completely green. You are now finished with commissioning of the DeviceLink Connect.

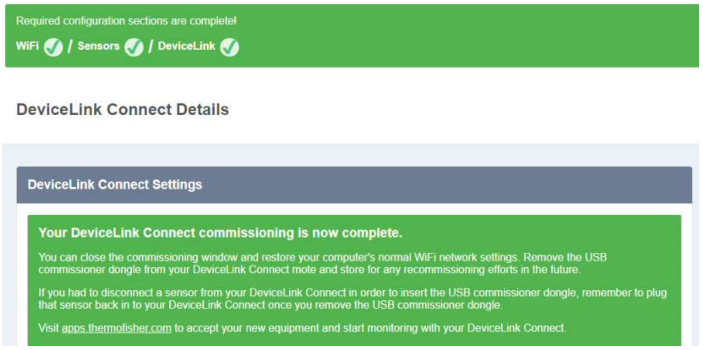


Figure 12. DeviceLink Connect commissioned

7. Disconnect your computer/mobile device from the mote network. Reestablish your normal computer/mobile network.

8. Remove the USB commissioner dongle from the DeviceLink Connect mote.

Note: If you had to disconnect a sensor from the DeviceLink Connect during the commissioning process, reconnect that sensor now.

Note: If you are using an Ethernet cable connection, you can now remove the cable between your computer and the LAN port at the DeviceLink Connect.

Step 4: Accepting Your Thermo Connect Connection

1. Navigate to apps.thermofisher.com and login using your username/password established in step2.

2. From the left navigation bar, click on the InstrumentConnect icon.

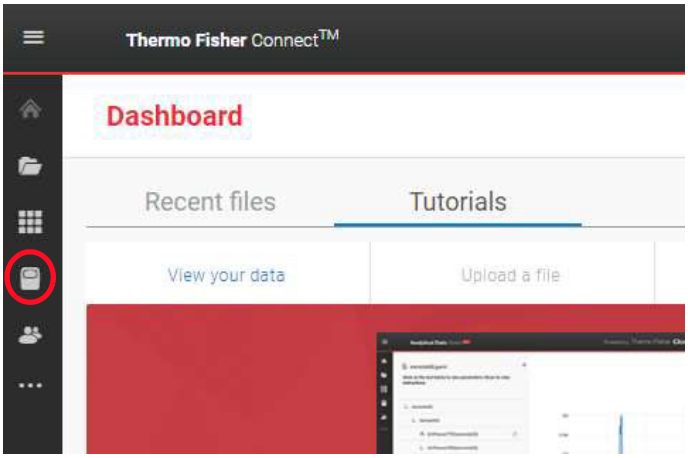


Figure 13. Connecting to ThermoConnect

3. You should see a Request Pending at the top of the screen. If you do not have the request initially, wait 60 seconds and refresh the page. Click on the Pending Request banner.

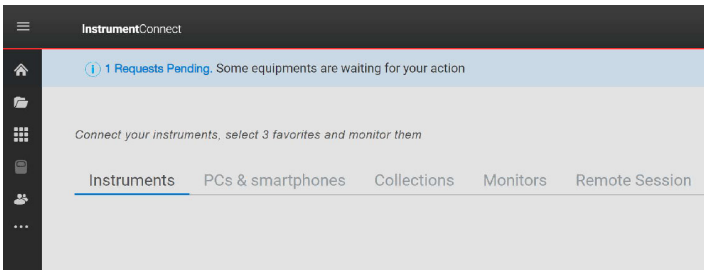


Figure 14. Pending Request on InstrumentConnect screen

4. Accept the request.

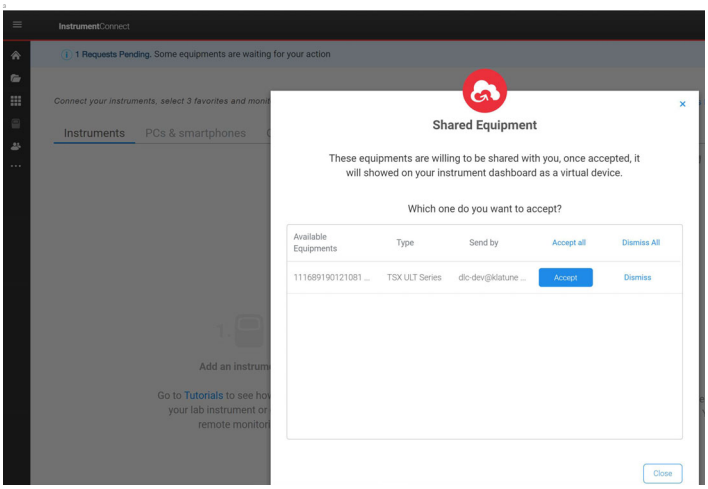


Figure 15. Accepting request connects to InstrumentConnect

This completes your DeviceLink Connect setup. To view your equipment data, select the instrument tile from your InstrumentConnect dashboard.

Installing Independent Sensors

Smart Sensor Assembly (RTD and Current Transducer)

PT100 (Temperature RTD) sensors and current transducers require the use of an intermediate connection cable called a Smart-Cable. Each Smart-Cable connects to the DeviceLink Connect via one of the four available USB ports. The following information describes the connection and wire removal process for Smart-Cables.

Figure 16. Yellow: 2-wire CT sensor

Figure 17. Blue: 3-wire PT100 RTD sensor

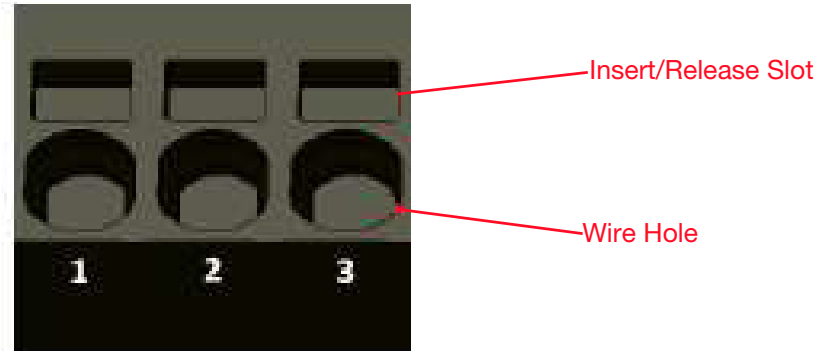


Figure 18. Smart-Cable terminal block (RTD shown)

Wire Insertion

1. The wires can be pushed in by hand. Place the wire fully into the circular Wire Hole. The wire should easily insert to a depth of about 7/16 of an inch.

   CAUTION: If inserting stranded wire, ensure that all the strands are fully inserted into the hole and not allowed to float free. Loose strands could easily short to adjacent conductors.

2. Pull lightly on the wire to ensure that the wire is being retained by the terminal block.

Wire Removal

CAUTION: The Insert/Release slot can be easily damaged by using too much downward force or tweaking of the micro-screwdriver.

1. Insert the micro-screwdriver into the rectangular Insert/Release slot for the wire that you want to remove. Inserting the micro-screwdriver into the slot requires some additional downward pressure to actually open the wire clamp that retains the conductor. You will notice that the tool will bottom out when initially inserted; then with a small amount of additional applied pressure, penetrate into the slot an additional 10%. This additional penetration will open a clamp allowing for the easy removal of the conductor.

2. With the micro-screwdriver fully inserted, pull up on the wire to remove it. The removal of the wire should not require any significant pull force. After the wire is removed, remove the micro-screwdriver from the Insert/ Release slot.

Temperature Sensor Installation

The mote is compatible with 3-wire RTD PT100 sensors. See **Installing Independent Sensors** table for required temperature sensor specifications. Temperature sensor connections are color coded BLUE.

Pre-requisites:

- 3/32" flat head screwdriver
- PH1 Phillips head screwdriver
- PH2 Phillips head screwdriver
- Wire cutters/strippers
- Portable drill with ¼" drill bit
- Silicone (or other) sealant rated for temperatures down to -86°C.

Follow the Safety Precautions listed below for Temperature Sensor Installation:

CAUTION: Incorrectly or improperly connecting sensors to a mote can cause damage to the mote. Ensure you connect the sensors and power to the properly designated connections on the motes.

CAUTION: Sensors should never be routed through a door. Sensors should only be routed through access ports or through the port where the control sensor enters the cabinet. Never drill through the freezer wall.

CAUTION: Do not tie the temp sensor in a knot around the freezer rack, as this may break the sensing element inside the sensor tip.

CAUTION: Avoid mounting the temp sensor or running the sensor cable where it can be damaged by product sliding in and out of the freezer.

CAUTION: To ensure accuracy, the sensor should always be located near the control sensor.

CAUTION: The sensor should never be in contact with exposed metal inside the cabinet. This could result in false readings.

CAUTION: When installing sensors in cold cabinets, use the appropriate PPE to protect your skin form exposure to the very cold temperatures.

CAUTION: Sensor installation will require the temporary relocation of product. Make prior arrangements with the facility to relocate the product during installation, and the return of product after installation.

CAUTION: Temperature sensor-Mote pairs are not factory calibrated. Calibration is typically not necessary in non-validated environments, but if calibration is done follow instructions as needed.

CAUTION: RTD sensors are not submersible beyond the stainless steel sheath.

Access Port Installation:

1. Examine the unit where the sensor is going to be installed to determine point of entry into the cabinet. Most units will have an access port either on the back or top or the unit. In the event no access ports are available, you will need to route the sensor through the port where the control sensor enters the cabinet (See **Control Sensor Port Installation**).
2. For installation through an available access port, remove the access port caps and bore a ¼" hole in the center of the access caps.
3. The access port in the cabinet will be plugged. You will need to either remove the plug or bore a ¼" hole through the plug.
4. Route the sensor through the access port into the cabinet.
5. Route the sensor and wire down the backside of the cabinet, ensuring it will not be damaged during normal and expected access by the users.
6. Replace the interior access port cap.
7. Locate the control sensor and remove the protective cover.
8. Secure the temperature sensor next to the control sensor. In some units, use of grommets may be necessary to ensure the sensor tip does not come in contact with exposed metal surfaces inside the cabinet.
9. Replace the control sensor protective cover (may not be applicable to all makes/models).
10. Coil and secure any excess sensor wire inside the cabinet, ensuring it will not be damaged during normal and expected access and by the users.

11. If you bored a hole in the access port plug, seal the both the interior and exterior holes with silicone or Permagum cord.
12. If you removed the access port plug, replace it or seal the access port with insulation.
13. Replace the access port caps.
14. Using the RTD Smart Sensor Cable, insert and secure the sensor wires. See instructions above.
15. Connect the sensor to the desired USB port on the mote.
16. Secure any loose sensor cable to the exterior of the unit.

Control Sensor Port Installation

1. For installation through the control sensor port, you will need to gain access to the control sensor port location.

CAUTION: Since this procedure requires thawing, it may result in water dripping near electrical components. To protect from electrical exposure and shock, arrange to have the unit disconnected from the main power source until installation is complete and the risk of electrical exposure and shock has been eliminated.

CAUTION: This procedure will require the unit to be disconnected from the power source for a period of time, make prior arrangements with the facility to relocate the product during this procedure.

2. With the unit disconnected from the electrical source, use a heat gun to warm and thaw the Permagum cord sealing the control sensor access port.

CAUTION: Use caution not to damage the existing sensor wires during the procedure.

3. Once thawed, remove the Permagum from the access port.
4. Route the temperature sensor into the cabinet.
5. Locate the control sensor and remove the protective cover.
6. Secure the temperature sensor next to the control sensor. In some units, use of grommets may be necessary to ensure the sensor does not come in contact with exposed metal surfaces inside the cabinet.
7. Coil and secure any excess sensor wire inside the cabinet, ensuring it will not be damaged during normal and expected access by the users.
8. Replace the control sensor protective cover.
9. Seal the control sensor access port with Permagum cord.
10. Route the sensor wire to the exterior of the cabinet.
11. Clean any residual water that may have resulted from thawing the control sensor access port.
12. Restore power and restart the unit.
13. Using the RTD Smart Sensor Cable, insert and secure the sensor wires. See instructions above.
14. Connect the sensor to the desired USB port on the mote.
15. Secure any loose sensor cable to the exterior of the unit.

Current Transducer (CT) Sensor Installation

The mote is compatible with 2-wire split core current transducer (CT) sensors. See **Independent Sensor Specifications** table for required CT specifications.

Pre-requisites:

- 3/32" (2.4 mm) flat head screwdriver
- PH1 and PH2 Phillips head screwdriver
- 90° (right) angle PH1 Phillips head screwdriver
- Wire cutters/strippers
- Multimeter.

The following steps are for CT installation on an asset (freezer, refrigerator, etc.):

CAUTION: The CT sensor must be installed by qualified technicians only.

CAUTION: All units must be powered off, locked out and disconnected from any power source before installation of the CT sensor.

CAUTION: Plugging a sensor or power into the wrong part can damage the mote. To ensure correct connection of sensor and power wiring to mote, match the color coding on the Smart Sensor Cable with the color coding on the sensor. The color coding for CT is YELLOW.

1. Determine if the asset is rated for 115 V or 208 V.
2. Remove any panel(s) on the asset required to access the incoming power cord.
3. Find the area where the individual wires of the power cord have been exposed, immediately after the power cord enters the asset.
    a. For 115 V systems there will be one ground wire (green), one neutral wire, and one hot wire (colors vary). The hot wire carries the electrical current.
    b. For 208 V systems there will be one ground wire (green) and two hot wires (colors vary). The hot wires carry the electrical current.
4. The CT will be clamped around only one individual 'hot' wire.
    a. For 208 V systems, choose either hot wire.
    b. For 115 V systems, choose the hot wire.
5. The CT must be attached to the hot wire after it enters the asset, but before it interfaces with the control board of the equipment.
6. To attach the CT:
    a. Unlock the clasp on the CT.
    b. Open up the CT. One side will remain attached via the hinge.
    c. Carefully slide the CT around the hot wire.
    d. Close the CT around the wire.
    e. Make sure the clasp is securely closed.
7. Run the CT wire out of the back of the asset to the wireless mote on top of the asset.
8. Insert the CT sensor wires into the Smart Sensor Cable.
9. Insert the CT Smart Sensor Cable into the USB port on the mote and secure all loose cables.

Magnetic Door Switch Installation

The magnetic-type switch consists of several parts, such as:

- One threaded magnet
- Four locking nuts
- Two sensor brackets
- Alcohol pad for mounting surface prep

Both of the mounting brackets ship with industrial strength adhesive tape. The installation can be made more permanent by using Loctite® Epoxy Plastic Bonder. The mounting surface must be thoroughly cleaned and dried with the included alcohol pad prior to affixing the brackets to the asset.

Pre-requisites:

- Paper towels
- 70% alcohol solution in spray bottle or prep pads.

Perform below tasks to install door switch on any asset:

CAUTION: Plugging a sensor or power into the wrong part can damage the mote. To ensure correct connection of sensor and power wiring to mote, match the color coding on the label above the mote's ports with the color coding on the sensor and power wires.

CAUTION: Throughly clean and dry the mounting surface on the door and body of the asset. If the mounting surface is not clean and dry, the adhesive tape will fail.

CAUTION: The two magnets must be mounted as close to in-line as possible to ensure correct operation.

CAUTION: The ends of the magnet facing each other should be separated by no more than 0.1 inch to ensure correct operation.

CAUTION: The mounting brackets must be mounted so that the adhesive tape is in 100% contact with the mounting surface.

- Do not mount the brackets such that either part overhangs the gap between the door and body of the asset. This will cause the adhesive tape to fail.

1. See **Figure 19** & **Figure 20** for sample installation of the door switch.
2. Determine the mounting location such that it does not interfere with normal everyday operation.
3. Simulate the door switch installation before removing the tape backing to ensure that the faces of the two magnets are separated by the correct distance of less than 0.1" (2.54 mm).
    a. The flat vertical part of the brackets must face each other.
    b. The magnets are threaded, so loosen/tighten the nuts to adjust the horizontal distance between the two magnets.
    c. The magnets can be vertically adjusted in the bracket slot by loosening/tightening the nuts.
    d. The two magnets should never touch when the door is closed.

e. When the asset door is closed, the two magnet faces should be no more than 0.1" (2.54 mm) apart.

f. When the asset door is closed, the two magnets should be as close to in-line with each other as possible.

4. Secure the magnets in the brackets by hand-tightening the supplied locking nuts.
   a. Do not over tighten nuts to avoid stripping the magnet threads.
5. Thoroughly clean and dry the mounting surfaces with alcohol.
6. Remove the tape backing on one of the sensor brackets.
7. Mount the bracket to the asset door. Press down firmly with at least 15 psi for 30 seconds to make a good seal.
   a. Top of the door is best.
   b. All of the adhesive tape must be flush and in contact with the mounting surface.

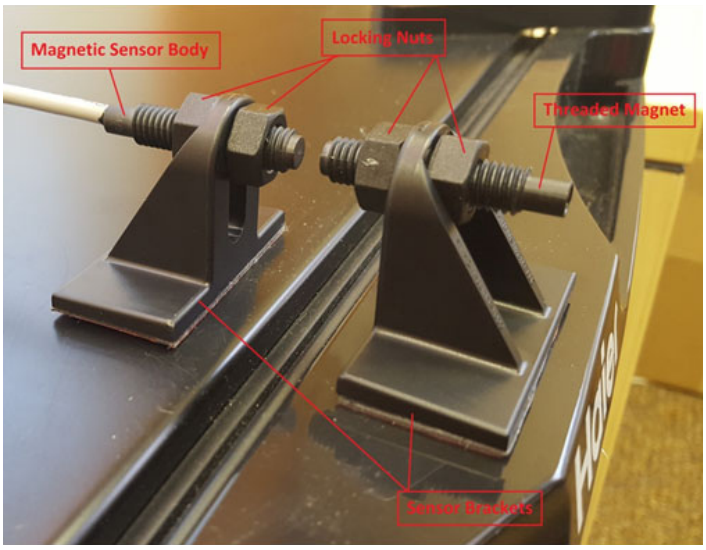


Figure 19. Magnetic door switch sensor installation

8. Remove the tape backing on the second sensor bracket.
9. Mount the sensor bracket to the asset body. Press down firmly with atleast 15 psi for 30 seconds to make a good seal.
10. All of the adhesive tape must be flush and in contact with the mounting surface.
11. Run the door switch wire to the mote mounting location.

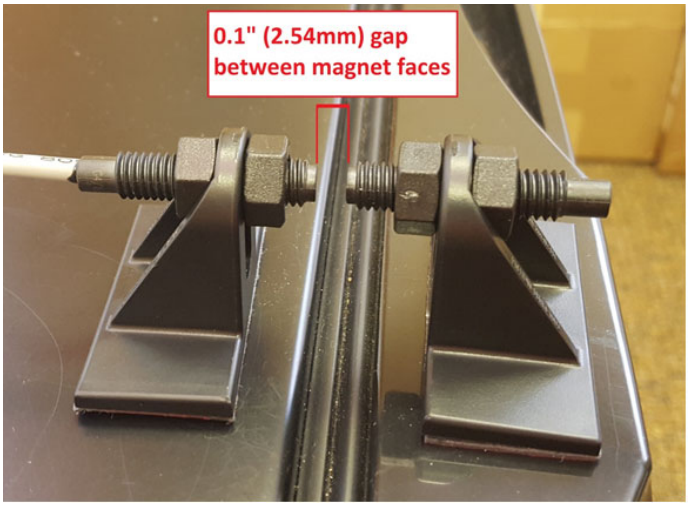


Figure 20. Magnetic door switch maximum magnet gap

12. Insert the RJ-45 connector of the door switch sensor into the mote's RS232/RS485 connector.

Advanced Network Configuration Setup

CAUTION: Advanced Mode is a specialized 802.1x security feature intended for IT professionals only.

For more information regarding 802.1x, please reference official WPA Supplicant docs available at https://w1.fi/wpa_supplicant/

1. For networks that require 802.1x security authentication set Advanced Mode to “Enabled.”
2. If the network requires 802.1x, then:
   - Certs can be uploaded. Use the Drag/Drop box to add a cert file.
   - The WPA Supplicant configuration can be edited in the “Supplicant Conf” box.

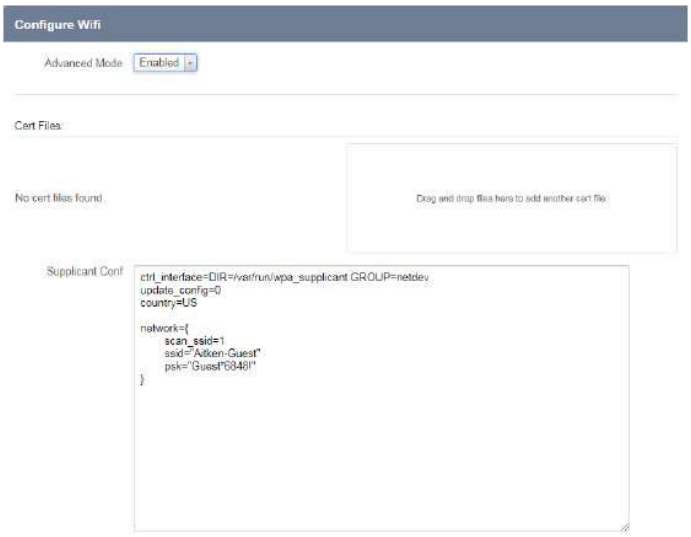


Figure 21. Configuring Wi-Fi advanced mode

3. Supported WPA/IEEE 802.11i features:
   - WPA2-PSK
   - WPA with EAP (e.g., with RADIUS authentication server) (“WPA-Enterprise”)
   - Key management for CCMP and TKIP
   - WPA and full IEEE 802.11i/RSN/WPA2
   - RSN: PMKSA caching, pre-authentication
   - IEEE 802.11r
   - EEE 802.11w
   - Wi-Fi Protected Setup (WPS)
4. Supported EAP methods (IEEE 802 Supplicant):
   - EAP-TLS
   - EAP-PEAP/MSCHAPv2 (both PEAPv0 and PEAPv1)
   - EAP-PEAP/TLS (both PEAPv0 and PEAPv1)
   - EAP-PEAP/GTC (both PEAPv0 and PEAPv1)
   - EAP-PEAP/OTP (both PEAPv0 and PEAPv1)
   - EAP-PEAP/MD5-Challenge (both PEAPv0 and PEAPv1)
   - EAP-TTLS/EAP-MD5-Challenge
   - EAP-TTLS/EAP-GTC
   - EAP-TTLS/EAP-OTP
   - EAP-TTLS/EAP-MSCHAPv2
   - EAP-TTLS/EAP-TLS
   - EAP-TTLS/MSCHAPv2
   - EAP-TTLS/MSCHAP
   - EAP-TTLS/PAP
   - EAP-TTLS/CHAP
   - EAP-SIM
   - EAP-AKA
   - EAP-AKA'
   - EAP-PSK
   - EAP-FAST
   - EAP-PAX
   - EAP-SAKE
   - EAP-IKEv2
   - EAP-GPSK

HTTP Proxy

In some organizations, HTTP and HTTPS traffic require an explicit proxy. If a proxy is required:

1. Select “Cloud” from the menu in the left margin.
2. Enter the HTTP proxy and port (obtained from IT) in the “Proxy URL” box (e.g. https://170.24.76.125:2012).
3. Click Submit.

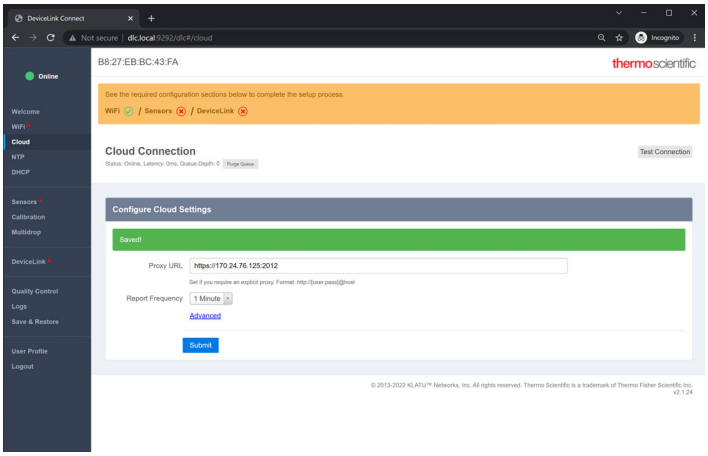


Figure 22. Configuring Cloud connection

4. Click the “Test Connection” button at the top right corner of the screen. If the proxy is correct and the device has network connection, then you will see a cloud connectivity successful message as shown in the figure below.

NTP

Network Time Protocol (NTP) is a networking protocol for clock synchronization between computer systems and devices. The mote needs to communicate with at least one NTP server in order to maintain the correct time. The default NTP server URLs built-in to the mote may work, or the customer IT group may provide their own NTP server URL(s).

1. Select “NTP” from the menu in the left margin.
2. Click “Submit” to see if the default NTP server URLs will work.
3. Verify that the “Device Time” at the top of the screen is correct based on the local time zone (refer **Figure 23**).
4. If the “Device Time” is incorrect, a simple workaround is to enter the Gateway Server IP address into the “NTP Server #1” field. Contact customer support if necessary.
   a. Click the “Submit” button and verify that the “Device Time” updates to the correct local time.
   b. If the “Device Time” is incorrect, the mote may fail to connect to the cloud servers and the “Test Connection” feature located in the “Cloud” menu may be unsuccessful.

Note: NTP stands for Network Time Protocol, which synchronizes time with accurate clocks around the world.

Figure 23. Configuring NTP servers

DHCP or Static IP

The mote is configured by default to acquire an IP address via the facility's DHCP server. Most installations will not require any changes on this screen. Unless specifically directed by your IT department, keep both boxes checked.

In some instances, your IT department may request that motes be configured with a Static IP address.

1. If the mote is connecting via the Wi-Fi network, then uncheck the box directly under "Wlan Adapter Configuration."
2. If the mote is connecting via an Ethernet connection, then uncheck the box directly under "PoE Adapter Configuration."
3. When either box is unchecked, a form will appear with several blank fields.
4. The customer IT contact will provide the installer with all of the information needed to fill out the fields.
5. Click the "Submit" button when all fields have been filled out.
6. Go to the "Cloud" menu and click the "Test Connection" button to make sure the mote can connect to the cloud servers.
    a. If a success message is displayed, then everything is configured correctly, and the mote is able to talk to the cloud servers.
    b. If a fail message is displayed, then the fields should be double-checked for accuracy.

Figure 24. DHCP Menu and Static IP fields

InstrumentConnect Monitoring Application

InstrumentConnect is the monitoring application found on the Thermo Connect cloud platform. You can access InstrumentConnect either on the web or through the InstrumentConnect mobile application, available for both iOS and Android devices.

Navigate to InstrumentConnect by first logging in to your Thermo Connect account at https://apps.thermofisher.com. And then selecting the InstrumentConnect section via the left-side navigation menu.

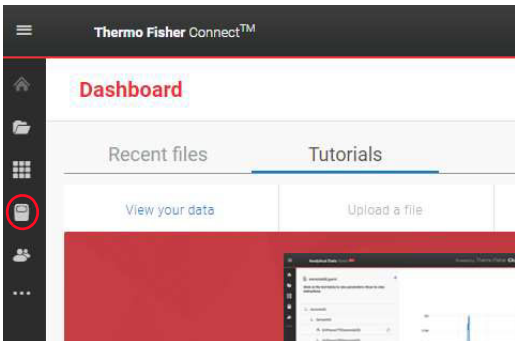


Figure 25. Connecting to ThermoConnect

This will bring you to your InstrumentConnect dashboard. From this dashboard you are able to see all the instruments connected to your Thermo Connect account.

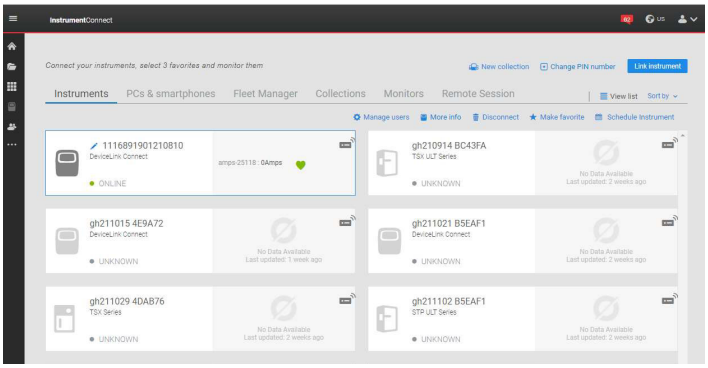


Figure 26. InstrumentConnect dashboard

Managing Users

The first user to connect to an instrument is made the Admin for the instrument (default). An admin then can share the instrument with other individuals who have a Thermo Connect account and designate them as basic users or admin. From the Manage User menu, an Admin can designate and remove users for the instrument.

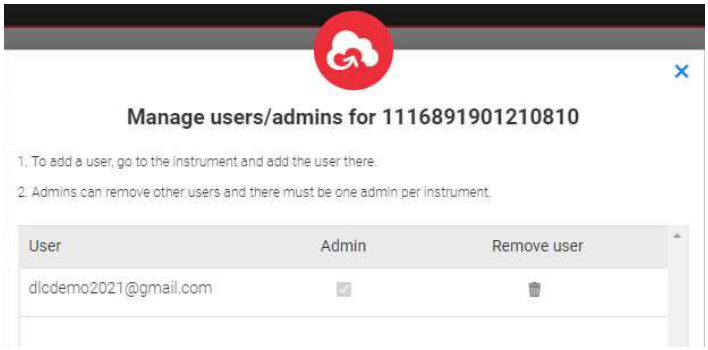


Figure 27. Managing Users

Favorites

You can designate up to 3x favorite instruments to keep at the top of your dashboard. Single click the instrument tile in your dashboard. Then select Make Favorite from the top-right menu. To remove the instrument from your favorites list, repeat the process selecting Unfavorite from the menu.

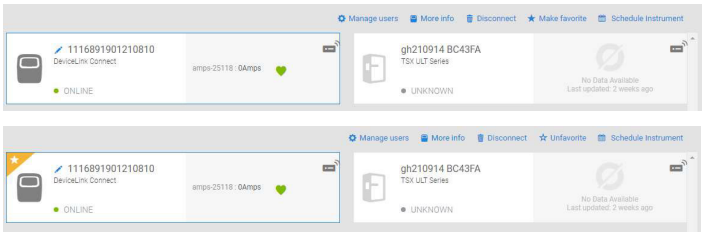


Figure 28. Adding Favorite instruments

Disconnecting Instruments

You can disconnect your Thermo Connect account from the instrument by first single clicking on the instrument tile, then selecting Disconnect. This operation cannot be undone. To reconnect to the instrument, you will need either re-commission the instrument or have it shared with you by another admin connected to the instrument.

Scheduling an Instrument

This scheduling calendar is a way to designate time with an instrument if those connected to the instrument wish to use Thermo Connect as a reservation calendar. This application does not associate scheduled events with the actual instrument's audit log. It is merely for reference by the users of the instrument.

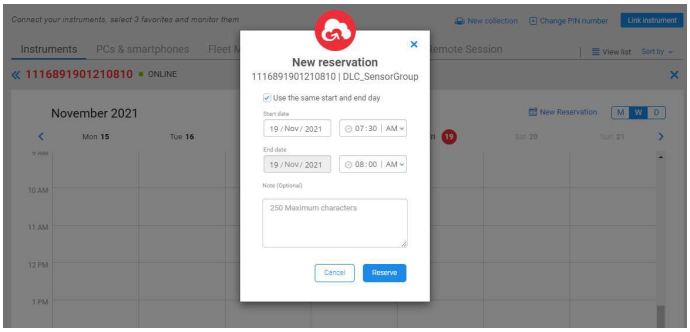
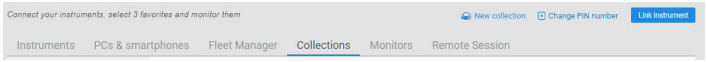


Figure 29. Scheduling an Instrument

Collections

From the top menu, go to the Collections tab. This tool allows an Admin to group instruments and share them with other users on Thermo Connect.



Creating a New Collection

1. Click on the **New Collection** link at the top of the screen.
2. Enter a name for your new collection.
3. Select the instrument(s) you wish to add to your new collection.
4. Select **Next**.

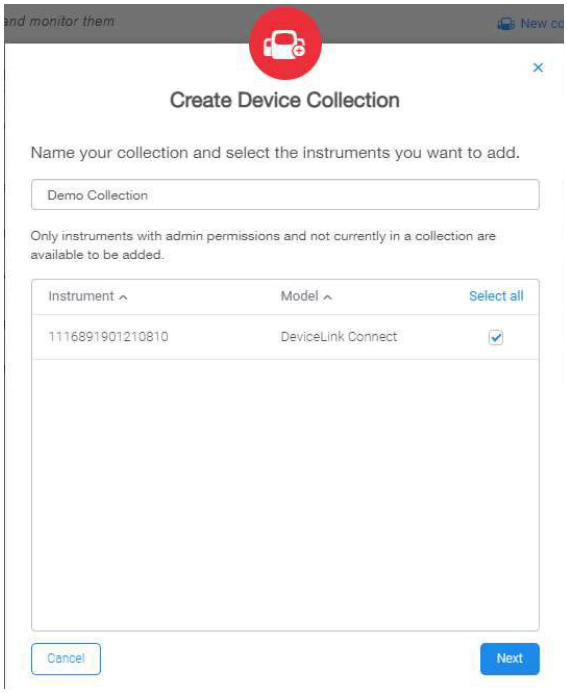


Figure 30. Creating Device Collection

5. Enter the email address of the users you wish to share the collection with.
6. Select **Confirm**.

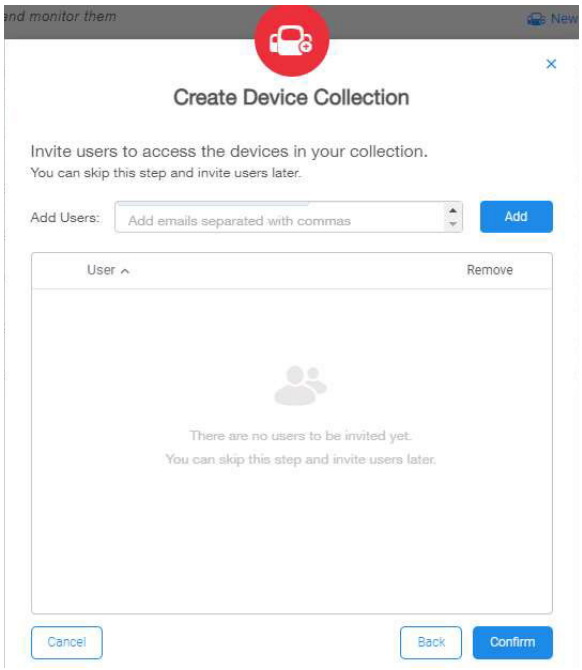


Figure 31. Access users to Device Collection

This will send a collections request to the users indicated. They will have to **Accept** the request. Once accepted, the instruments will now appear in those user's individual dashboards. These users are unable to re-share these instruments or collection, unless the original Admin for the instruments/collection makes the basic user into an Admin on the specific units within the collection. See **Managing Users**.

Viewing Instrument Data

Double clicking on an instrument tile in the dashboard, will bring you to the instrument details page. From this page you have:

- Summary Card: Indicates top parameters and current sensor readings for the instrument. Health status (normal, alarm, warning) as well as connection states are also indicated.
- Notifications: This window will show the most recent active events for the instruments.
- Parameters Graph: Scalable and customizable graph of your monitored sensors/telemetry data.
- Event Log: Filterable history of the events, alarms, etc. provided by the unit.

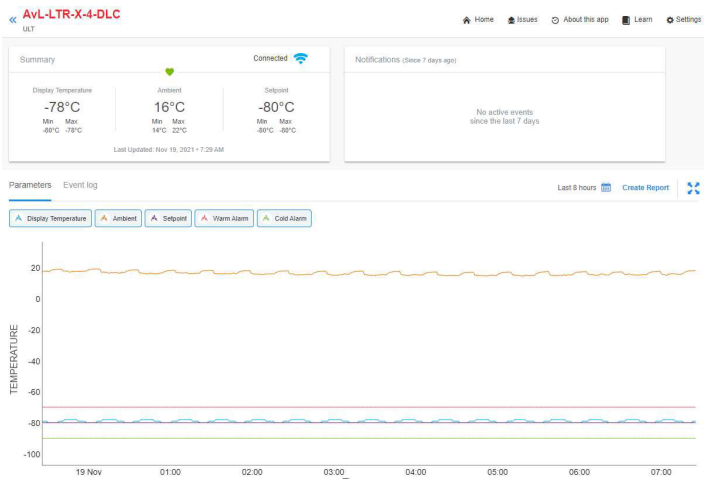


Figure 32. Instrument parameters

Downloading Data / Creating Report

Select the **Create Report** link at the top of the graph/event log container. Indicate which report type is desired: CSV or PDF.

Figure 33. Create Report

You will see a notice at the top of the screen indicating your report generation is in process. Once the report is ready you will receive a notification to download the report.

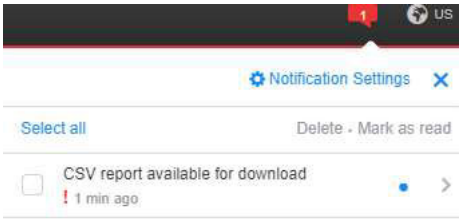
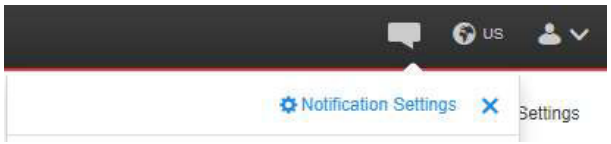


Figure 34. Download report

You can follow the link to download your report.

Notification Settings



Access the notification settings window by clicking on the Notification icon at the top-right of the InstrumentConnect window. These settings apply globally to all instruments a specific user is connected to.

From the settings window, you have the option of specifying which alarms or events you will receive notifications for and also the method preference for notification.

Note: Some alarms/events are designated as critical and thus notifications for these specific alarms/events cannot be turned off.

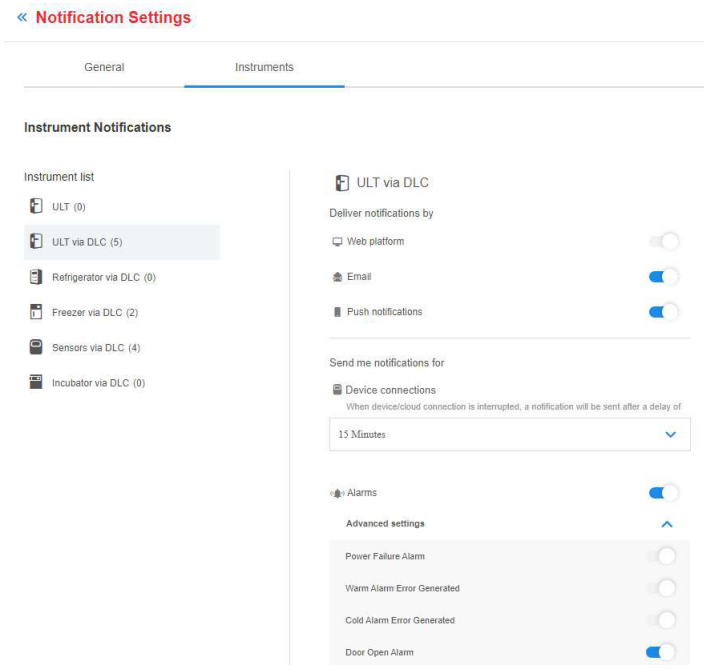


Figure 35. Notification Setting Window

Troubleshooting

This section is a guide to troubleshooting general operational problems.

Symptom	Issue	Potential Cause	Solution
Data Transmission	The frequency at which data is reported from my serial cable connected instrument is 1 min, but I have selected a different frequency during the setup/ commissioning process.	Serial port connected instrument.	This is expected. When using a serial connection to extract information from your instrument, the data transmission is restricted to the logging frequency of the information on the instrument itself. The logging frequency on instruments is every 1 minute and cannot be changed, regardless of selection during the commissioning process.
Data Transmission	I am missing data after a network disruption.	Data backfill delay.	When the network connection is interrupted (power outage/network loss), the DeviceLink Connect mote logs data internally. Once the network connection is restored, this logged data is pushed to the cloud. Depending on the duration of the network outage and subsequently the amount of data needing to be backfilled to the cloud, the backfill process may take several hours to occur.
Deployment / Commissioner	I press “Deploy” and the system will not complete (go Green).	Network ports not open.	Ports 80 and 443 must be open on the network for inbound/outbound to allow for the communication between the DeviceLink Connect and the Thermo Fisher Cloud. Configuring the ports open on outbound only may still yield an issue as the device must receive a confirmation, inbound, from the network.
		Network is intermittently down.	Return to the Wi-Fi screen to ensure the network is active.
		No sensor connected.	You must have at least one active sensor connected and transmitting data to complete commissioning. Ensure at least one sensor is connected.
		Other.	Contact technical support.
Factory Resetting Device	I need to factory reset my DeviceLink Connect.	Factory Reset Procedure via Commissioner Application.	Follow the **Getting Started** section to access your Commissioner Application. From the left navigation menu in the application, open the “Quality Control” section. From this section you will see the perform Factory Reset option. Once a Factory Reset is conducted, it is recommended to power cycle the device.

Symptom	Issue	Potential Cause	Solution
Factory Resetting Device	I need to factory reset my DeviceLink Connect.	Factory Reset Procedure without Commissioner Application.	**Steps to Factory Reset:** 1. With the mote powered ON and within five (5) minutes of booting the device, press and release the Action button. 2. Wait 1 sec, then press and release the Action button again. 3. Wait 1 sec, then press and hold (do not release) the Action button on this third press. 4. Wait ~25 sec, with the Action button still pressed, then turn the mote OFF via switch. 5. If successful, the lights will turn red and flash as the device returns to factory defaults, then the mote will power off (you can release the Action button once the light sequence begins). 6. If unsuccessful, the mote will just turn off. If this happens, release the action button, turn the mote back on, wait until it is fully booted, and repeat the process.
Instrument Connect	I am unable to share my connected DeviceLink Connect via the Collections method.	User type	Devices can only be shared on InstrumentConnect by Admin users of the device(s).
Instrument Connect	I've accepted my new device per the notification in InstrumentConnect, but I am not seeing the new device.	Page has not been refreshed.	Refresh the InstrumentConnect web browser page and/or application window. If after a refresh, your device does not appear, log out and back into the application. If it still does not appear, contact technical support.
Instrument Connect	I'm seeing "--" for data in my web/ mobile application dashboard.	Data is unavailable.	When data is not received for a given timestamp, it will appear as "- -" in InstrumentConnect. This is by design to present the most accurate depiction of data. This will occur for certain telemetry readings from instruments connected via serial connection. It could also occur on independent sensor readings if/ when the selected frequency of data transmission is greater that 1 minute intervals. Subsequent reading should appear during future timestamps. Refer to the data charts to view the most recently received, actual, data for the data series.
Mobile Application	My mobile application logs me out automatically.	Automatic log out timing for InstrumentConnect mobile application.	There is a 6 hour timeout for the application when there is no activity. However, you will continue to receive push notifications for events and alarms, even if you have been logged out of the application.

Symptom	Issue	Potential Cause	Solution
Network	I am using Ethernet for my network connection, but my device is offline.	Down network	Confirm with your local IT to resolve the network outage.
		LAN port being used for the network Ethernet cable.	The port labeled LAN on the rear of the mote should be used during the Commissioner process. However, after the Commissioning process is complete, the ethernet cable should be disconnected from the LAN port and connected into the PoE IN port on the wall adapter which is plugged into the wall for AC power. See **Getting Started** section for details/images.
Network / Commissioner	My network settings do not conform to the basic settings of the Wi-Fi Commissioner application tab.	Network requires advanced mode setup.	Review the "Advanced Network Configuration Setup" setup in this manual to perform advanced network setup. Contact your local IT department for assistance. Thermo Fisher Scientific technical support can provide assistance on function, but will not be able to facilitate your network setup without your facility's IT assistance.
Network / Commissioner	The settings in the network section of the Commissioner application do not work.	Improperly modified settings on the Cloud, NTP, and/or DHCP tabs of the Commissioner application.	Settings on the Cloud, NTP, and/or DHCP tabs of the Commissioner should not need to be modified during normal setup, unless directed by Thermo Fisher Scientific. If modifications have been made, attempt a factory reset of the mote (see Factory Reset instructions in this table). After reset, try to recommission the device. If the issue persists, please contact technical support to troubleshoot your settings.
Network / Commissioner	My Wi-Fi network does not appear in the Wi-Fi Commissioner window.	Refresh the Wi-Fi networks.	Press the "Scan WiFi Networks" button. This should refresh the visible networks available in the application.
		Desired SSID/network is hidden.	Hidden networks will not appear in the selectable networks in the Wi-Fi window. You can enter the SSID (network) and password directly into the input boxes.
Network / Commissioner	My Wi-Fi network does not require a password but the Commissioner application is asking for a password.	Incorrect Authentication mode selected.	In the Wi-Fi tab of the Commissioner application, select the "Open" authentication mode. This will remove the need for a password to be entered.
Password / Commissioner	I'm unable to change the default Commissioner application password.	Password requirements not met.	**Commission application password requirements:** 1. The password must be between 12 and 32 characters long. 2. The password must not include the username or mac address of the mote. 3. The password must not have more than 5 repeated characters. 4. The password must not be one of the 100,000 common passwords (ex: "password1234")

Symptom	Issue	Potential Cause	Solution
Power	DeviceLink Connect will not power on.	Mote is not connected to AC power.	The device will not start on backup battery alone. It must be connected to AC power. The backup battery is intended to sustain operation during an intermittent loss of AC power for a device that has already been powered on.
		Power-over-Ethernet (PoE) cable (AC power connection) plugged into incorrect ports.	Ensure the PoE cable is connected to the port labeled “Out” on the AC wall adapter. Ensure the other end of the PoE cable is connected to the “POE LAN” port on the back of the DeviceLink Connect mote. (see **Step 1: Setup Your Hardware**).
		DeviceLink Connect mote power switch is in the off position.	See **Step 1: Setup Your Hardware**. After connecting the mote to AC power, you must move the switch on the front-left of the mote to the “On” position. The switch is slightly recessed.
		Loss of AC power at the outlet.	Consult facilities to ensure AC power is provided to the device.
Power	DeviceLink Connect not operating on battery during a power failure.	Battery is dead.	The backup battery is intended to sustain operation of the DeviceLink Connect mote for up to 3 hours during a loss of AC power. The battery will recharge itself when AC power is restored. If you are experiencing battery issues, please contact technical support.
Sensors / Instruments	I have commissioned my device, but I am only seeing one DeviceLink Connect device in InstrumentConnect.	Multiple serial based instruments connected to a single DeviceLink Connect mote.	The DeviceLink Connect system is designed to support one serial based instrument connection. If you connect multiple instruments via serial/USB to the DeviceLink Connect, the data will appear in InstrumentConnect under a single device. This is as expected.

Symptom	Issue	Potential Cause	Solution
Setup / Commissioner	I have commissioned my device but I'm not seeing any data in my InstrumentConnect account.	Commissioned email doesn't match InstrumentConnect account.	If you have not received and accepted the linking notification for the instrument, check the email used during the commissioning process matches the email for your InstrumentConnect account. If mistaken, recommission the device with the correct email address per the **Getting Started** section in this manual.
		Sensors not properly plugged into DeviceLink Connect mote.	Check the connections of the sensors to the DeviceLink Connect mote. Note which sensor is plugged into each of the 4x USB ports and/or RS232/485 port on the mote.
		Sensors not assigned properly in Commissioner setup.	• Reinsert the USB commissioning dongle (this may require you to temporarily remove a sensor if all 4x USB ports are in use.) Follow the steps in the **Getting Started** section to access the Commissioner application. • From the “Sensors” tab in the Commissioner application validate that your sensors are associated with the proper USB port. • Press the “Gather Sample” button to pull current sensor information. • If information is received (you will see sensor readings/information in the commissioner application window), you can close the commissioner device and return to InstrumentConnect to confirm data is now transmitting. • If information is not received in the commission application window after pressing “Gather Sample”, this may indicate a faulty sensor. Please contact technical support.
		Faulty sensor(s)	Contact technical support.

Symptom	Issue	Potential Cause	Solution
Setup / Commissioner	I commissioned my DeviceLink Connect, received a full green status in the Commissioner application, but am not receiving anything in InstrumentConnect.	Delay in database syncing on InstrumentConnect.	Try refreshing the InstrumentConnect page. Sometimes it can take up to several minutes for the notification to “Accept” your new device to appear in InstrumentConnect.
		Incorrect / mismatched email address.	• If you have a Thermo Connect account, return to the Commissioner application (see **Getting Started** section) and redeploy using the email associated with your Thermo Connect / InstrumentConnect account. • If you do not have a Thermo Connect account, visit https://apps.thermofisher.com and establish your account using the same email that was used during your DeviceLink Connect commissioning process. Once your Thermo Connect account is created it may take several minutes for the databases to sync. You should receive a notification in the InstrumentConnect application to “Accept” your new device connection. If you do not receive this notification within 30 minutes, re-commission the device following the steps in the Commissioner application per the **Getting Started** section. • If re-commissioning does not resolve the issue, contact technical support for assistance.
		Only a serial based connection to instrument, and connection is not sending data - Instrument turned off.	Instrument connected via serial port is turned off. The DeviceLink Connect must have data being sent via the serial connected instrument in order to complete the commissioning process. (This assumes no other independent sensors are connected to the DeviceLink Connect.)
		Only a serial based connection to instrument, and connection is not sending data - disconnected serial cable.	Confirm the serial/usb cable is properly connected to both the instrument and the DeviceLink Connect. You must also indicate properly in the “Sensor” tab of the Commissioner application, which USB port is being used for the connection.
		Faulty serial port at the unit.	The lack of communication may be because of a faulty serial port on the instrument itself. Contact technical support.

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Contact Information

Thermo Fisher Scientific products are backed by a global technical support team ready to support your applications. Visit https://www.thermofisher.com/contact or call:

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