TIMKEN

TIMKEN® WIRELESS SENSOR AND MONITORING SOLUTION

QUICK START GUIDE



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INTRODUCTION AND WARNINGS

This Quick Start Guide covers the setup and activation of your Timken® Wireless Sensor and Monitoring Solution. Please visit www.timkensensor.com for more information and resources, including the instruction videos, FAQ, the Terms of Use that apply to your use of this system, safety information, and important product warnings. Please review all available information before installing and using this system.

⚠WARNING

Failure to observe the following warnings could create a risk of death or serious injury.

BEFORE using this product, see the information and warnings at timken.com/warnings.

DO NOT use this product in a location with an explosive environment, or for life- or safety-critical systems.

DO NOT rely solely or primarily upon this product to monitor the condition of equipment.

DO NOT open the sensor or attempt to access its battery.

This product MUST be installed in accordance with and by persons familiar with all installation instructions, applicable laws and codes, and industry practices.

Before installing the sensor, turn off power to equipment onto which the sensor is being installed, allow equipment to cool and USE lock-out-tag-out procedures.

PRODUCT DESCRIPTIONS

Gateway

Timken gateway pre-loaded with software.



Enclosed Gateway

Timken gateway pre-loaded with software. Encased in a protective enclosure rated IP66/IP67 for use in industrial or outdoor environments.



Sensor

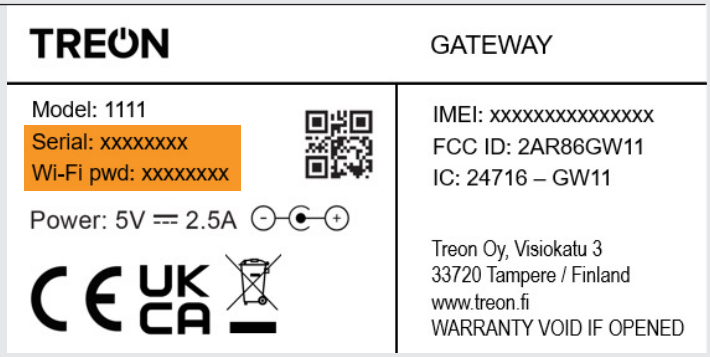
Timken vibration and temperature sensor that comes standard with 1/8-27 NPT bolt.



SERIAL NUMBERS AND PASSWORD

Gateway

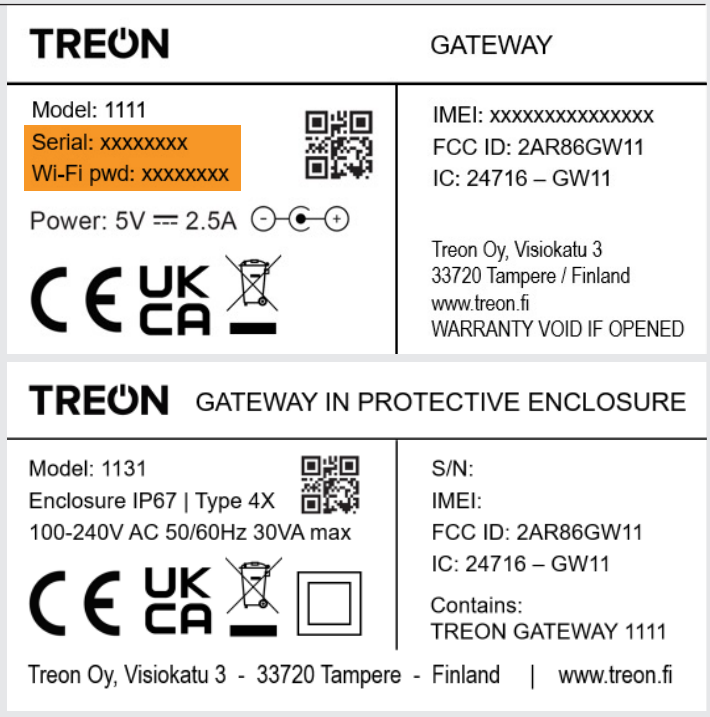
Serial number and Wi-Fi password are listed on the bottom of the gateway.



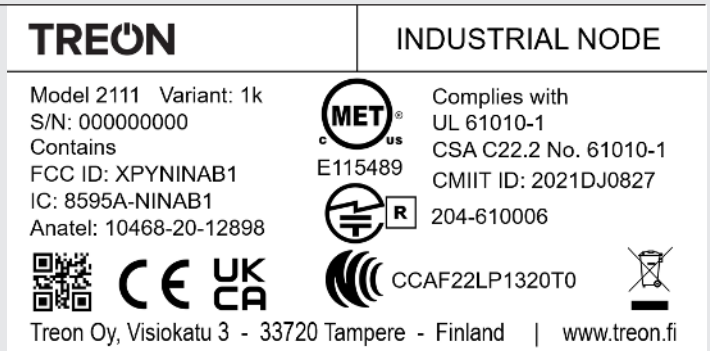
Enclosed Gateway

Serial number and Wi-Fi password are listed on the bottom of the gateway.

The enclosure lid must be unscrewed and opened to access the gateway itself.



Sensor

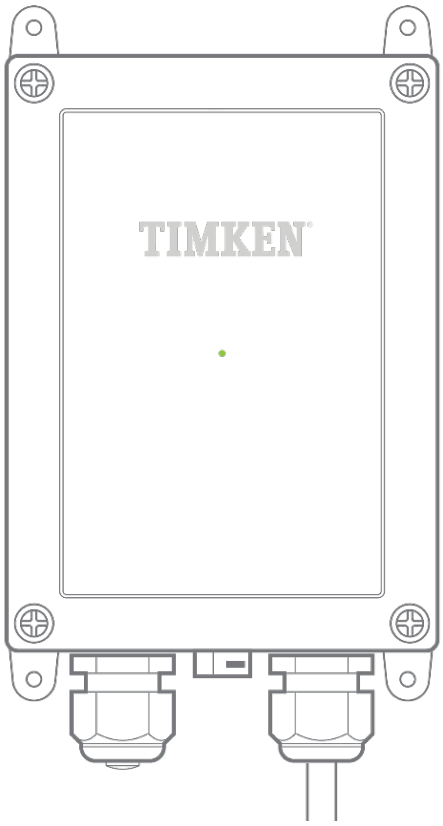


GATEWAY SETUP

Plan a location for the gateway near where the sensors will be mounted. It will require an electrical outlet and an ethernet port (for ethernet connection mode).

An ethernet connection is required to access the gateway through a local network or to use the email alert and time server functions.

The Enclosed Gateway has the capability to be wall mounted if desired. The plastic tabs on the bottom of the gateway rotate outwards and can be nailed or screwed into a wall or other surface (hardware not included). See diagram to the right.



Power Connection

Plug the gateway power cable into a standard electrical outlet. The gateway will power on and take approximately 4-6 minutes to boot up. The gateway indicator light will be blue when the power is connected and will change to green once the gateway is online.

WiFi Mode

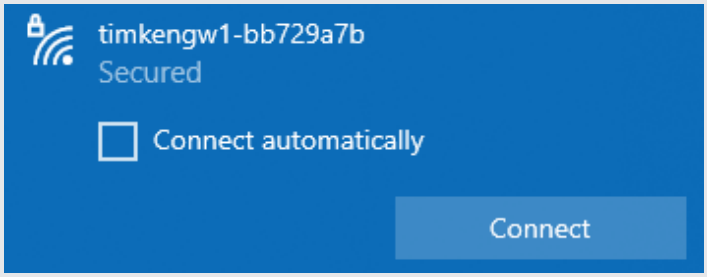
Next, you will need to connect to the gateway via the WiFi access point. This step applies whether you plan to use ethernet mode or not.

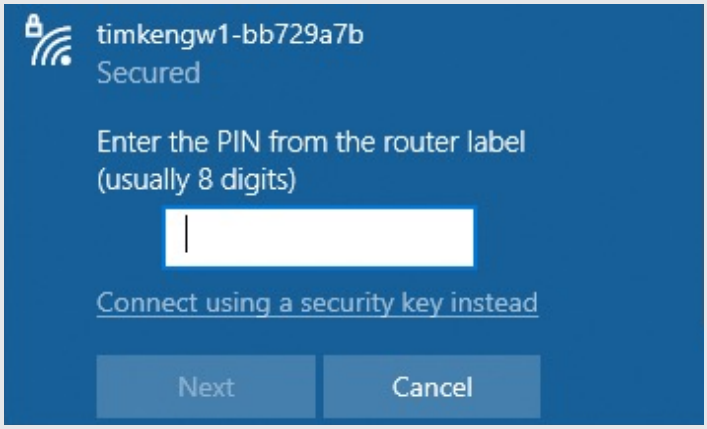
On a Computer

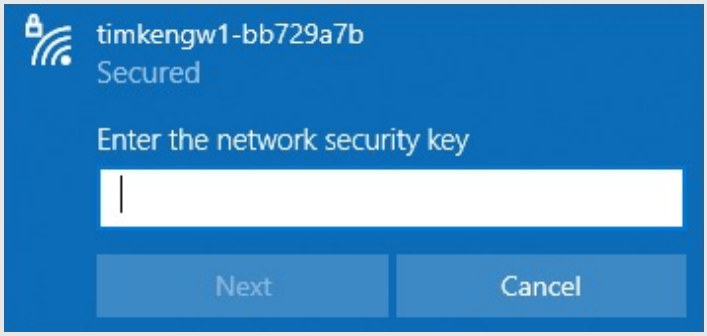
The Timken Gateway will appear as a WiFi access point named “timkengw1-[serial number of your gateway].”

Press Connect. The gateway password will need to be entered as a security key. If the menu prompts you for a PIN, click “Connect using a security key instead.”

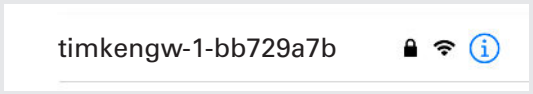
Note: A laptop or mobile device can only connect wirelessly to one device/network at a time. If there is no alternate internet signal to the device (cellular data, ethernet cable, etc.) then the connecting device will temporarily be ‘offline’ while connecting to the gateway. See the **User Manual** for further details.

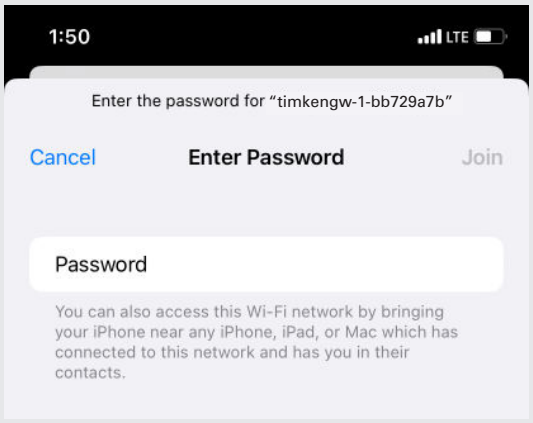


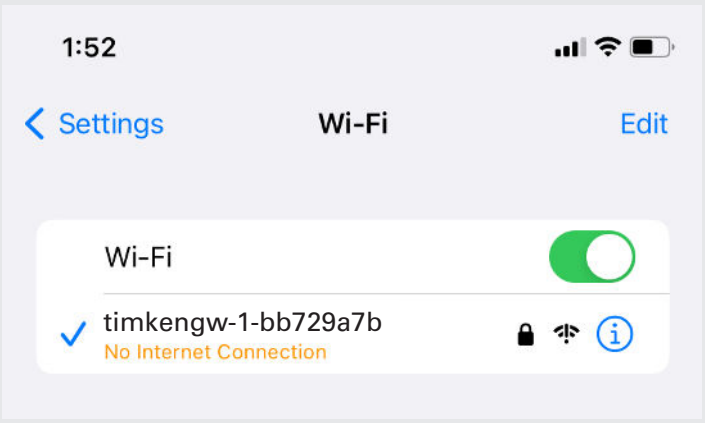




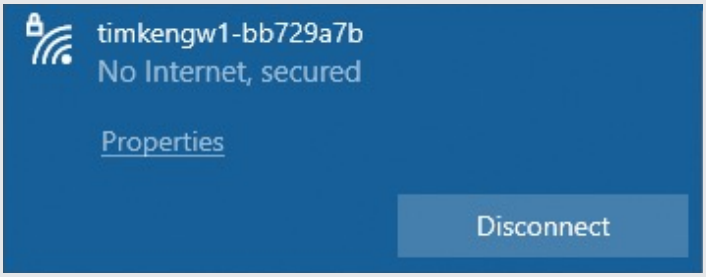
On a Mobile Device





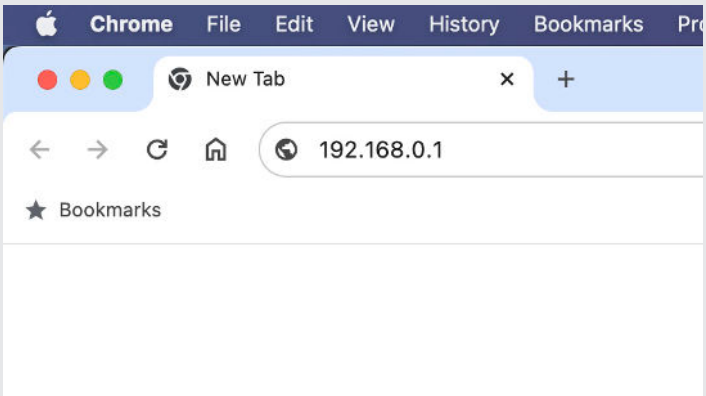


Once the password has been entered, the computer will be connected to the gateway.



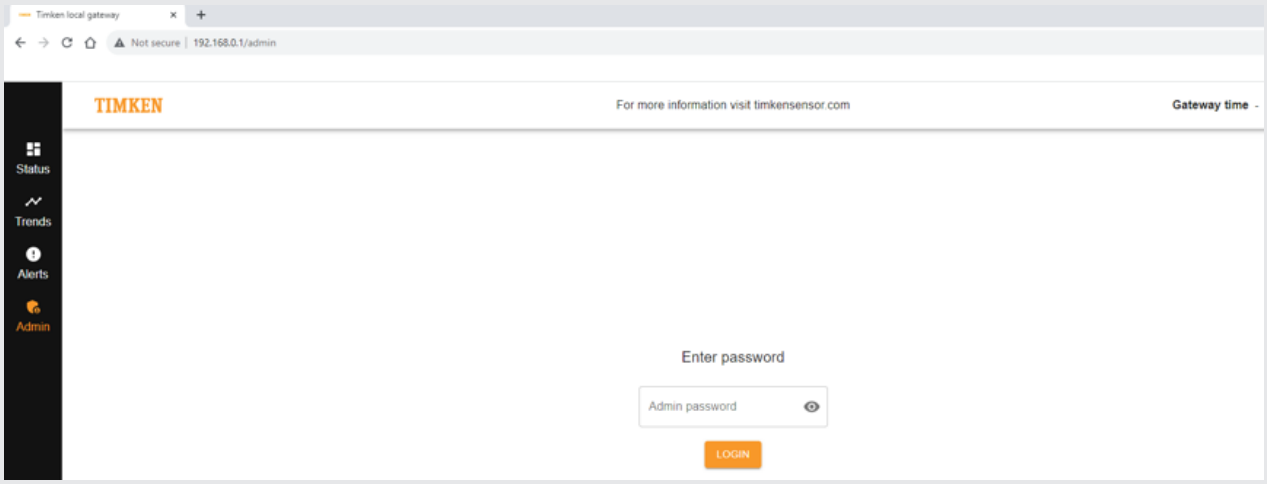
Dashboard Access

To access the dashboard, go to a browser (Chrome, Safari, Edge) and type **192.168.0.1** in the address bar. Press enter and the dashboard will load.



Dashboard Settings

Next, log into the Admin Menu by using the same password from the bottom of the gateway.



Time Settings

Setting the gateway time is required for either mode. It will impact what time is reported for data that is gathered from sensors.

Manual

This method must be used for WiFi mode. It can be used in ethernet mode if a timeserver is not available.

Either manually populate the date/time in the “Gateway time” field or press “Get Time From This Device” to match the time of the device (phone or computer) connected to the gateway.

Save and Reboot

Once all settings are in place, press “Save.” The gateway will reboot.

Please note that the WiFi connection will be dropped any time the gateway completes a reboot. You can either check “Connect automatically” or manually reconnect to the gateway.

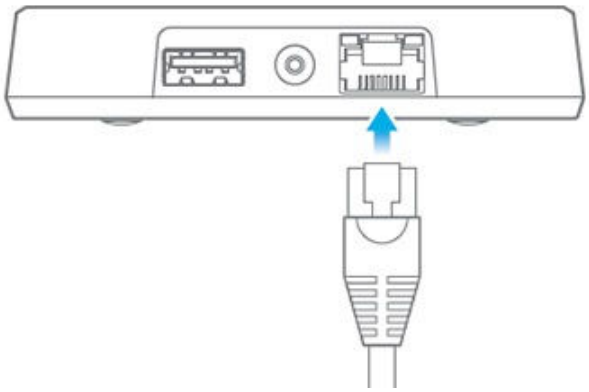
If you are only using Wifi mode, gateway setup is complete. **Skip ahead to sensor setup now on page 13.**

Ethernet Mode

If you will only be accessing the gateway via WiFi access point, skip to the next section.

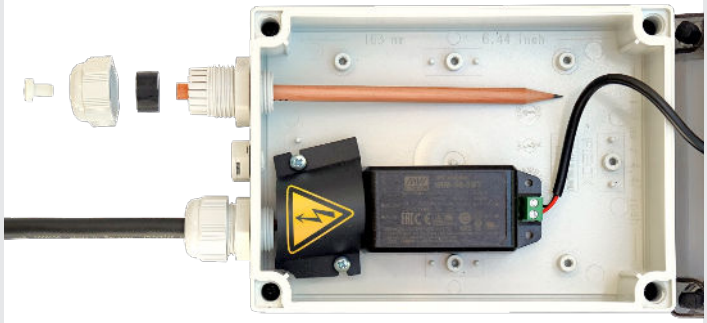
The ethernet cable must connect the gateway directly to a local network port. **Please note that connecting to a personal computer or laptop instead will not work.**

The ethernet port is on the back of the gateway as shown to the right.

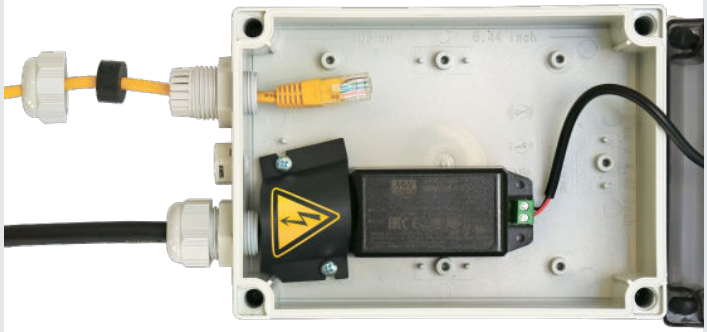


Enclosed Gateway

For the enclosed gateway, first unscrew the outer cap. Remove the sealing rubber and plug by pushing from the inside with an object such as a pen.

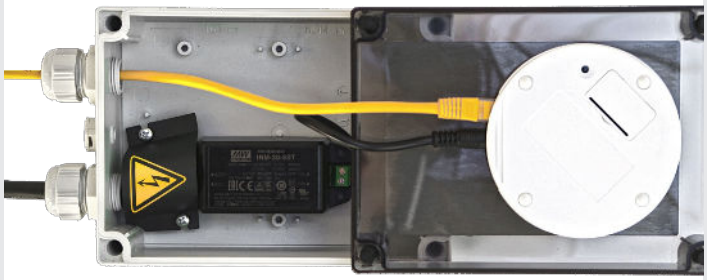


Thread the cable through the cap, then pull it through the opening and fit the rubber sealing around it. Push the rubber sealing back into place, and then connect the cable to the gateway. Adjust the cable to the appropriate length and tighten the outer cap when you're done.



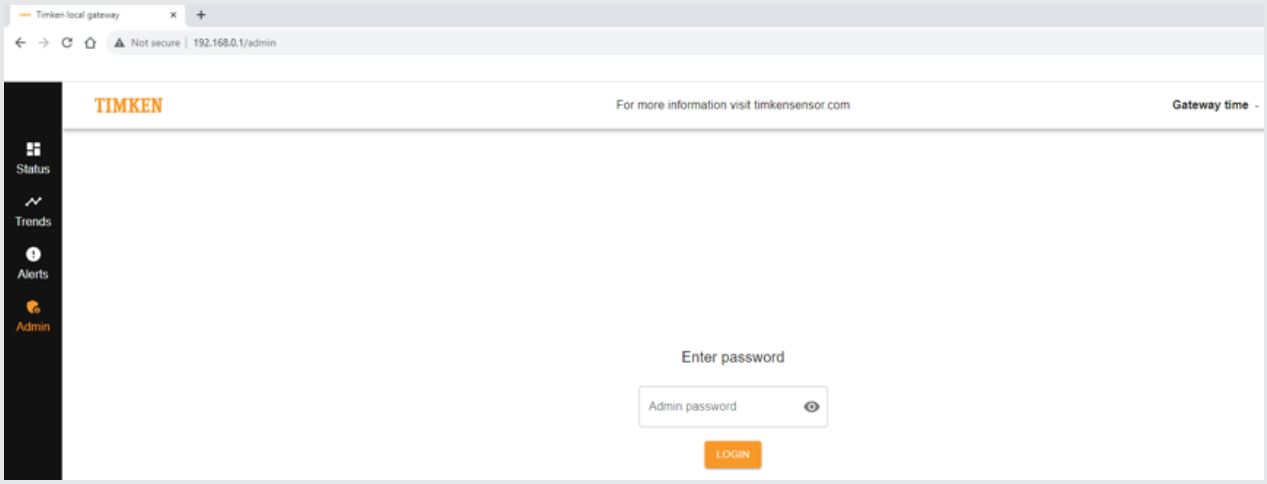
Next, connect the ethernet cable into the port on the gateway.

Finally, close the lid and retighten the screws.



DASHBOARD SETTINGS

Next, log into the Admin Menu by using the same password from the bottom of the gateway.



Contact IT for Support

If you are using the ethernet mode, you will need to consult your IT department for the best way to connect the gateway to your local network.

If you are using WiFi mode only, skip to the “Time Settings” section.

Ethernet Settings

There are two main connection options:

First, if the network has a DHCP server available, the gateway can receive network settings automatically by leaving the DHCP server setting enabled.

Alternatively, the DHCP-server setting can be disabled and the network settings, including a fixed IP-address, can be configured manually.

Your IT department can tell you which settings to use.

Email Settings

Similar to the ethernet settings, your IT department will have to help with the correct email settings. All setups will require an email server and at least one receiver email address. Multiple receiver addresses can be added if they are separated with semicolons.

Time Settings

Setting the gateway time is required for either mode. It will impact what time is reported for data that is gathered from sensors.

Two methods are available:

Timeserver

Only available when the gateway is connected via ethernet. It's the most accurate method but it will require a timeserver from your IT department.

Manual

This method must be used for WiFi mode. It can be used in ethernet mode if a timeserver is not available.

Either manually populate the date/time in the "Gateway time" field or press "Get Time From This Device" to match the time of the device (phone or computer) connected to the gateway.

Save and Reboot

Once all settings are in place, press "Save." The gateway will reboot.

Please note that the WiFi connection will be dropped any time the gateway completes a reboot. You can either check "Connect automatically" or manually reconnect to the gateway.

SENSOR SETUP

Power on each sensor by pressing and holding the power button until the status light turns green.

As you plan a location for each sensor, make note of the sensor serial numbers and locations. This will be how you identify the sensors during the registration process.

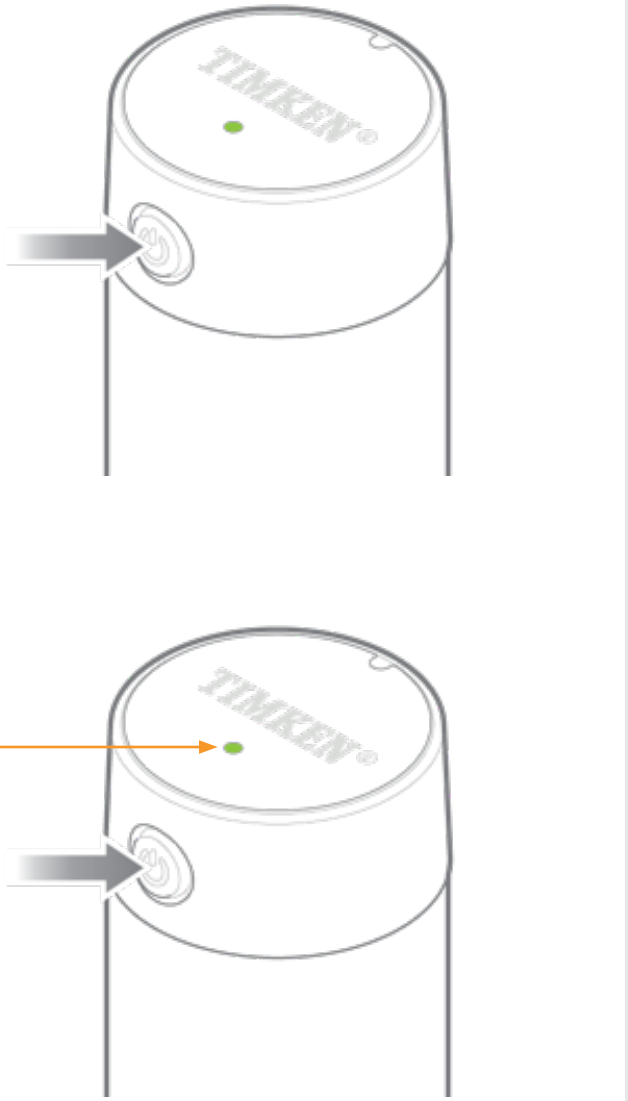
Mounting Sensors

Before installing any sensors, turn off power to equipment onto which the sensor is being installed, allow equipment to cool, and use lock-out-tag-out procedures.

Once you're ready, mount your sensors to the bearings or other applications you wish to monitor. Adapters (sold separately) are available to help the sensors fit a wide range of applications.

Connectivity Check

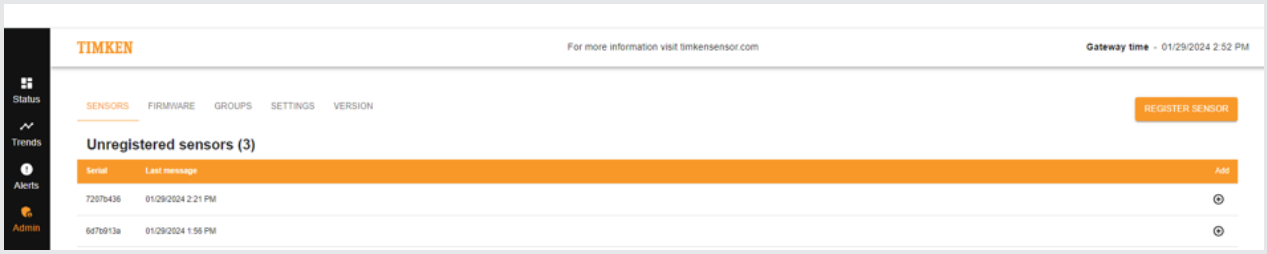
Once sensors are mounted, perform a connectivity check by pressing the button on the sensor briefly. The status light should turn green, blink off, and then turn green again.



Register Sensors

Now it's time to register the sensors in the Admin -> Sensors section of the dashboard.

Refer to your notes on the sensor serial numbers and locations. Begin with the sensor closest to the gateway and work outward from there.



Name Sensors

Names and location notes can be added to each sensor as they're registered.

Group Sensors

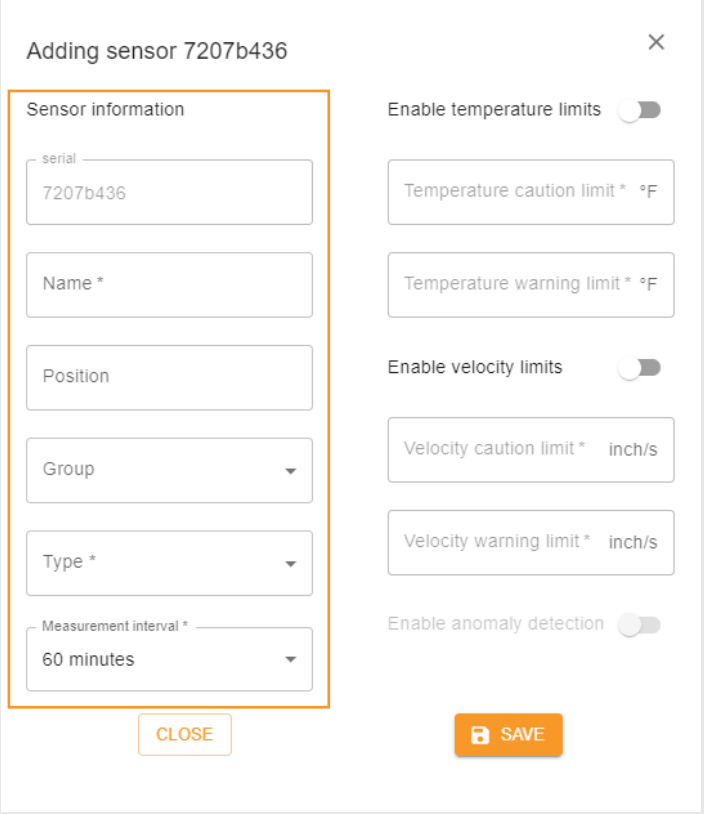
Groups can be created separately to help organize sensors. See the User Manual for more details.

Measurement Interval

A 5-minute measurement interval can be used to speed up the initial data collection and help determine whether all sensors are transmitting data. This measurement interval will drain the sensor battery much more quickly than the others, so it's only intended as a temporary option.

Alternatively, you can start with the 30-minute/60-minute/12-hour intervals if desired.

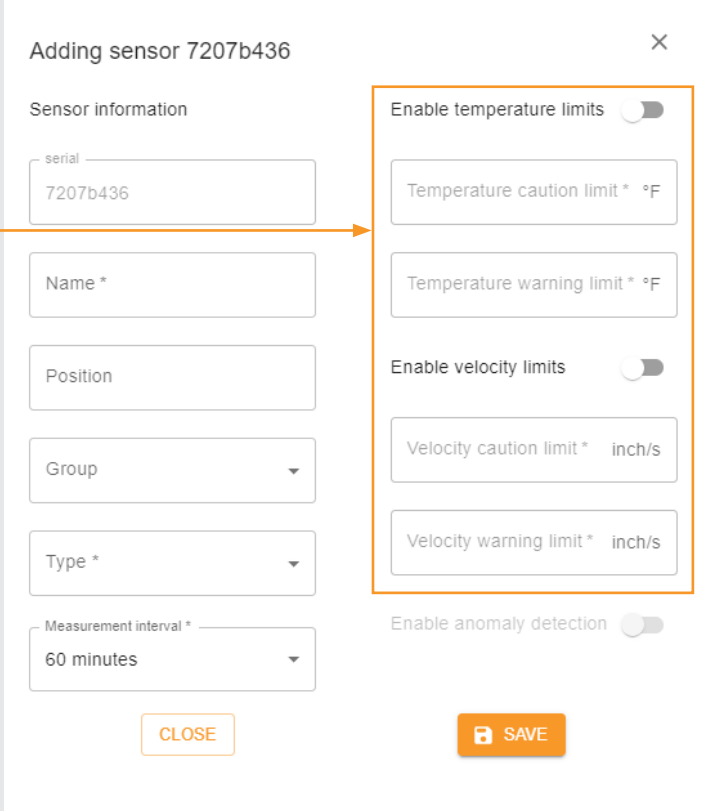
Register each sensor and press "Save" when finished.



Setting Alert Limits

Allow the sensors to gather data over a period of normal operation. The amount of time necessary varies by application, but it could be a few days or up to a week.

Return to the Sensor menu and enable temperature and/or vibration limits once enough data has been collected. See the **User Manual** for more details.



TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.

Stronger. By Design.

www.timkensensor.com

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