Meraki IoT Sensors
FAQs

How do sensors communicate with the Meraki Dashboard?

Sensors uses BLE (Bluetooth Low Energy) to communicate with Meraki IoT gateways. Supported IoT gateway devices are 2nd Generation Smart Cameras and Meraki WiFi 6 (and some WiFi 5) access points.

How does the sensor connect to its gateway?

As long as the sensor is within range of the gateway, it will automatically connect to any gateway that picks up the BLE advertisement of the sensor.

What happens when sensors can't communicate with the Cisco Meraki Dashboard?

Sensors have onboard storage that will retain approximately the last 5 days of data. Upon reconnecting to the Cisco Meraki dashboard, all data points will be uploaded.

Sampling rate and frequency of connections

In order to conserve battery life, sensors are in sleep mode majority of the time. They wake up at a set regular interval to connect and report the data to the gateway which in turn uploads it to the Meraki Cloud. Below is the sampling rate and connections per device type:

MT10	Data Sampling: 2 minutes Connection Interval: 20 minutes
MT11(w/ Temperature Probes)	Data Sampling: 2 minutes Connection Interval: 20 minutes
MT12	Data Sampling: Event Driven Connection Interval: 20 minutes
MT20	Data Sampling: Event Driven Connection Interval: 20 minutes

All sensors will wake up immediately if a configured threshold has been violated or if any event occurs in binary sensors like MT12 or MT20.

How far can the sensors be placed from the (Smart Camera/WiFi AP) gateway?

Sensors use BLE 4.2 to communicate with the gateway. Since BLE operates between 2.402 and 2.480 GHz, the range depends on the same principles as 2.4 GHz Wifi.

How many sensors can be used per gateway?

It is recommended to have a maximum of 32 sensors per gateway to ensure connection quality.

Are sensors rated for outdoor use?

No, the Meraki IoT devices are designed for indoor use only. The MT12 is IPX5 rated (Can resist a sustained, low-pressure water jet spray) and has a rubber liner to separate the power/battery compartment from being splashed or exposed to water. Still recommended NOT to submerge in water as the rating states.

What are the supported temperature and humidity ranges for the MT10?

The temperature sensor supports 0°C - 55°C / 32F - 131F (Accuracy: +/- 0.3°C) while using the included AA batteries. The humidity sensor ranges from 0-95%. That said, it is NOT an outdoor (IP67) or harsh environment rated product.

MT11 Temperature Probes supported range

Below are the specified temperature ranges of the MT11 temperature probes. Note that the operating temperature of the MT11 body is 0°C - 55°C / 32F - 131F.

Bare Metal Probe
Range: -40°C - 55°C
Accuracy:
-10°C - 55°C = +/- 0.5°C
-30°C - 55°C = +/- 1°C
-40°C - 55°C = +/- 2°C

Glycol Probe
Range: -40°C - 55°C
Accuracy:
-10°C - 55°C = +/- 0.5°C
-30°C - 55°C = +/- 1°C
-40°C - 55°C = +/- 2°C

Can MT10 be used to monitor temperature and humidity inside of a freezer?

The sensors are not IP rated and we do not recommend installing them inside of freezers.

Can the MT11 Temperature Probes be used to monitor temperature of fluids?

No. MT11 Temperature probes are not rated to monitor temperature of any fluids, including water.

Does the MT10/MT11 Temperature Sensors need to be calibrated?

No. The MT10 Temperature sensor and the MT11 Temperature probes uses a digital sensor that comes pre-calibrated during the manufacturing process. This means no calibration is required during the setup or installation.

What part of the MT12 is capable of detecting water?

The full length of the cable can detect water as little as 3mL. The included cable is 8ft long, and can be extended to 16ft with an optional second cable attachment.

How are the MT sensors powered?

All sensors come with AA batteries(Alkaline) included, and these batteries will last for about 5 years of powering the unit. That said, if you want a "permanent" powering solution, there is a USB Power adapter available that can be used on the MT10 and MT12. The MT20 ONLY supports battery operation.

NOTE: 5 years of battery life is projected based on the included 2.5V Alkaline batteries. Other types of batteries can be used but the battery life may vary.