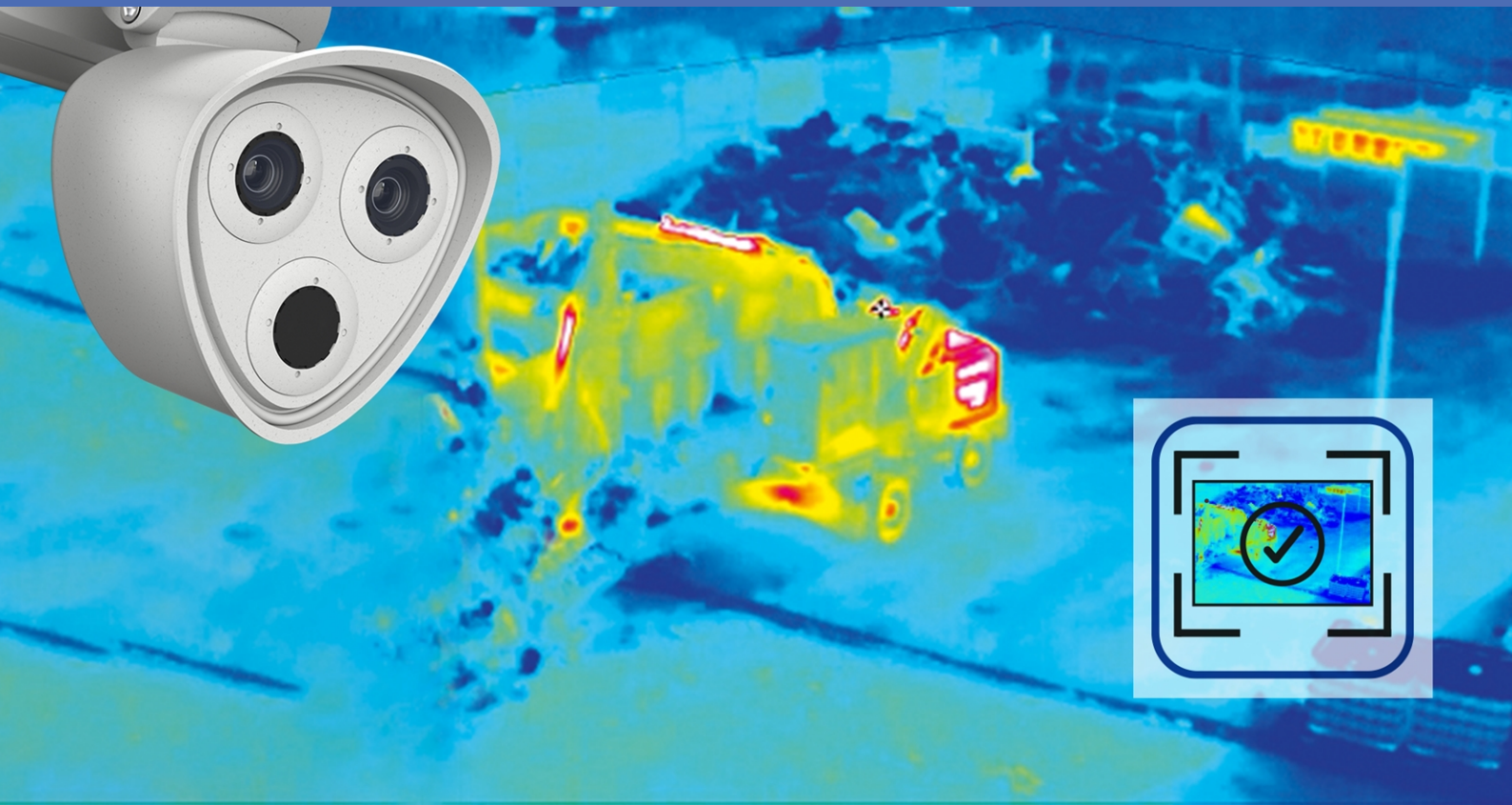


# Guideline

## MOBOTIX Thermal Validation App

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# Table of Contents

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<b>Table of Contents</b> .....	<b>2</b>
<b>Before You Start</b> .....	<b>3</b>
Support .....	4
MOBOTIX Support .....	4
MOBOTIX eCampus .....	4
MOBOTIX Community .....	4
Safety Notes .....	4
Legal Notes .....	5
<b>About MOBOTIX Thermal Validation App</b> .....	<b>7</b>
Smart Data Interface to MxManagementCenter .....	7
<b>Technical Specifications</b> .....	<b>8</b>
<b>Licensing Certified Apps</b> .....	<b>11</b>
License Activation of Certified Apps in MxManagementCenter .....	11
Managing Licenses in MxManagementCenter .....	16
<b>Activation of the Certified App Interface</b> .....	<b>18</b>
<b>Configuration of MOBOTIX Thermal Validation App</b> .....	<b>19</b>
Thermal Validation Profiles .....	19
Drawing a Polygon Area in the Live View .....	20
Analysis Settings .....	21
Visualization Settings .....	21
Data Export Settings .....	22
Storing the Configuration .....	23
<b>MxMessageSystem</b> .....	<b>24</b>
What is MxMessageSystem? .....	24
Facts about MxMessages .....	24
<b>Basic configuration: Processing the automatically generated app events</b> .....	<b>25</b>
Checking automatically generated app events .....	25
Action handling - Configuration of an Action Group .....	26
Action settings - Configuration of the camera recordings .....	28
<b>Advanced Configuration: Processing the meta data transmitted by apps</b> .....	<b>30</b>
Meta data transferred within the MxMessageSystem .....	30
Creating a Custom Message Event .....	31
Examples for message names and filter values of the MOBOTIX Thermal Validation App .....	33

## Before You Start

<b>Support</b> .....	<b>4</b>
MOBOTIX Support .....	4
MOBOTIX eCampus .....	4
MOBOTIX Community .....	4
<b>Safety Notes</b> .....	<b>4</b>
<b>Legal Notes</b> .....	<b>5</b>

# Support

## MOBOTIX Support

If you need technical support, please contact your MOBOTIX dealer. If your dealer cannot help you, he will contact the support channel to get an answer for you as quickly as possible.

If you have internet access, you can open the MOBOTIX help desk to find additional information and software updates.

Please visit [www.mobotix.com](http://www.mobotix.com) > [Support](#) > [Help Desk](#).



## MOBOTIX eCampus

The MOBOTIX eCampus is a complete e-learning platform. It lets you decide when and where you want to view and process your training seminar content. Simply open the site in your browser and select the desired training seminar.

Please visit [www.mobotix.com/ecampus-mobotix](http://www.mobotix.com/ecampus-mobotix).



## MOBOTIX Community

The MOBOTIX community is another valuable source of information. MOBOTIX staff and other users are sharing their information, and so can you.

Please visit [community.mobotix.com](http://community.mobotix.com).



## Safety Notes

- This camera must be installed by qualified personnel and the installation should conform to all local codes.

- This product must not be used in locations exposed to the dangers of explosion.
- Do not use this product in a dusty environment.
- Protect this product from moisture or water entering the housing.
- Install this product as outlined in this document. A faulty installation can damage the product!
- Do not replace batteries of the camera. If a battery is replaced by an incorrect type, the battery can explode.
- External power supplies must comply with the Limited Power Source (LPS) requirements and share the same power specifications with the camera.
- When using a Class I adapter, the power cord shall be connected to a socket-outlet with proper ground connection.
- To comply with the requirements of EN 50130-4 regarding the power supply of alarm systems for 24/7 operation, it is highly recommended to use an uninterruptible power supply (UPS) for backing up the power supply of this product.

## Legal Notes

### Legal Aspects of Video and Sound Recording

You must comply with all data protection regulations for video and sound monitoring when using MOBOTIX AG products. Depending on national laws and the installation location of the cameras, the recording of video and sound data may be subject to special documentation or it may be prohibited. All users of MOBOTIX products are therefore required to familiarize themselves with all applicable regulations and to comply with these laws. MOBOTIX AG is not liable for any illegal use of its products.

### Declaration of Conformity

The products of MOBOTIX AG are certified according to the applicable regulations of the EC and other countries. You can find the declarations of conformity for the products of MOBOTIX AG on [www.mobotix.com](http://www.mobotix.com) under **Support > Download Center > Marketing & Documentation > Certificates & Declarations of Conformity**.

### RoHS Declaration

The products of MOBOTIX AG are in full compliance with European Unions Restrictions of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS Directive 2011/65/EC) as far as they are subject to these regulations (for the RoHS Declaration of MOBOTIX, please see [www.mobotix.com](http://www.mobotix.com), **Support > Download Center > Marketing & Documentation > Brochures & Guides > Certificates**).

## Disposal

Electrical and electronic products contain many valuable materials. For this reason, we recommend that you dispose of MOBOTIX products at the end of their service life in accordance with all legal requirements and regulations (or deposit these products at a municipal collection center). MOBOTIX products must not be disposed of in household waste! If the product contains a battery, please dispose of the battery separately (the corresponding product manuals contain specific directions if the product contains a battery).

## Disclaimer

MOBOTIX AG does not assume any responsibility for damages, which are the result of improper use or failure to comply to the manuals or the applicable rules and regulations. Our General Terms and Conditions apply. You can download the current version of the **General Terms and Conditions** from our website at [www.mobotix.com](http://www.mobotix.com) by clicking on the corresponding link at the bottom of every page.

It is the User's responsibility to comply with all applicable local, state, national and foreign laws, rules, treaties and regulations in connection with the use of the Software and Product, including those related to data privacy, the Health Insurance Portability and Accountability Act of 1996 (HIPPA), international communications and the transmission of technical or personal data.

# About MOBOTIX Thermal Validation App

## MOBOTIX Thermal Validation App

The MOBOTIX Thermal Validation app detects and filters out warm objects that appear in the camera image but are not critical to the application at hand; one example of this would be a vehicle with a hot engine driving through the monitored area.

- Expands on the temperature measurement functions of MOBOTIX TR cameras
- Filters out vehicles as a non-critical heat sources (e.g. hot body parts or exhaust)
- Up to 20 temperature measurement ranges within the camera's field of view
- Each temperature measuring range (e.g., emissivity) can be calibrated individually
- Detects physical manipulations of the thermal sensor (e.g. covering the sensor)
- MOBOTIX events using MxMessageSystem
- Temperature data and threshold value status of the measuring ranges are transmitted via MODBUS/TCP and JSON/XML via HTTP(S)

**NOTE!** this app can only be used with thermal sensors in linear operating mode. If an event profile is defined for a sensor that is either not a thermal sensor or is not in linear mode, the corresponding definition has no effect. If supported by the thermal sensor, you can activate the linear mode in the Thermal Sensor Settings of the camera.

## Smart Data Interface to MxManagementCenter

This app has a Smart Data interface to MxManagementCenter.

With the MOBOTIX Smart Data System, transaction data can be linked to the video recordings made at the time of the transactions. Smart Data source can be e.g. MOBOTIX Certified Apps (no license required) or general Smart Data sources (license required) like POS systems or license plate recognition systems.

The Smart Data System in MxManagementCenter enables you to quickly find and review any suspicious activities. The Smart Data Bar and the Smart Data View are available for searching and analyzing transactions. The Smart Data Bar provides a direct overview of the most recent transactions (from the last 24 hours) and for this reason it is convenient to use it for reviews and searches.

**NOTE!** For information on how to use the Smart Data System, see the corresponding online help of the camera software and MxManagementCenter.

# Technical Specifications

## Product Information

Product Name	MOBOTIX Thermal Validation App
Supported MOBOTIX Cameras	M73, S74 (Thermal Radiometry Sensor required)
Minimum Camera Firmware	V7.3.2.x
MxManagementCenter Integration	<ul style="list-style-type: none"><li>min. MxMC v2.7</li><li>Advanced Config license required</li><li>Event Search: Smart Data Interface license included</li></ul>
MOBOTIX HUB compatibility	<ul style="list-style-type: none"><li>min. MOBOTIX HUB version: 2021 R1</li><li>min. MOBOTIX HUB license level for Analytics Events: L2</li><li>min. MOBOTIX HUB license level for MOBOTIX Event Search Plug-In: L4</li></ul>
Trial license	30-day trial license pre-installed

---



## Product Features

App Features	<ul style="list-style-type: none"> <li>■ App optimizes MOBOTIX Thermal Radiometry cameras for use in the fields of waste management and logistics</li> <li>■ Enables filtering of vehicles (e.g. construction vehicles and forklifts) as a non-critical source of high temperatures (e.g. by measuring hot body parts such as the exhaust or engine cover)</li> <li>■ Extension of the temperature measurement functions of MOBOTIX Thermal Radiometry cameras</li> <li>■ Definition of up to 20 temperature measurement areas within the field of view of the camera</li> <li>■ individual calibration of each temperature measurement area (e.g. emissivity values)</li> <li>■ Temperature events when defined temperature thresholds are exceeded</li> <li>■ Detection of physical manipulation of the thermal sensor (e.g. sensor covered)</li> <li>■ MOBOTIX events via MxMessageSystem</li> <li>■ Reporting of temperature data and threshold status of each area via MODBUS/TCP and JSON / XML via HTTP(S)</li> </ul>
Maximum number of measurement areas	20
Supported thermal sensor types	Thermal Radiometry
Meta Data / Statistic formats	JSON
Integration Interfaces	<ul style="list-style-type: none"> <li>■ Milestone X-Protect (via XML)</li> <li>■ Generic 3rd party integration through XML, JSON and MODBUS/TCP</li> </ul>
MxMessageSystem supported	Yes
MOBOTIX events	Yes
ONVIF Events	Yes (Generic Message events)
Trial license	30-day trial license pre-installed

## Scene Requirements for Object Recognition

Recommended camera position no restrictions

---

## Technical App Specifications

Synchronous / Asynchronous  
Asynchronous App

Simultaneous execution of other apps Yes (depending on performance expectations)

---

# Licensing Certified Apps

The following licenses are available for the MOBOTIX Thermal Validation App:

- **30-day test license** pre-installed
- **permanent commercial license**

The usage period begins with activation of the app interface (see )

**NOTE!** For buying or renewing a license, contact your MOBOTIX Partner.

**NOTE!** Apps are usually pre-installed with the firmware. In rare cases, apps must be downloaded from the website and installed. In this case see [www.mobotix.com](http://www.mobotix.com) > **Support** > **Download Center** > **Marketing & Documentation**, download and install the app.

## License Activation of Certified Apps in MxManagementCenter

After a test period commercial licenses must be activated for use with a valid license key.

### Online-Activation

After receiving the activation IDs, activate them in MxMC as follows:

1. Select from the menu **Window > Camera App Licenses**.
2. Select the camera on which you want to license apps and click **Select**.

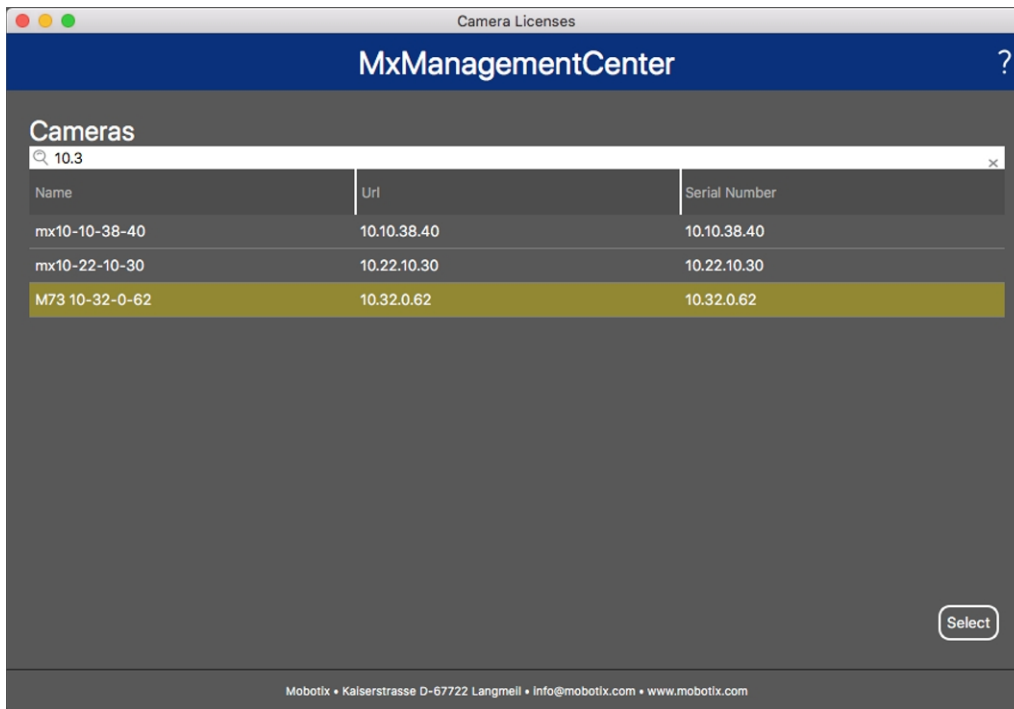


Fig. 1: Overview of Camera App Licenses in MxManagementCenter

**NOTE!** If necessary, correct the time set on the camera.

1. An overview of the licenses installed on the camera may be displayed. Click **Activate License**.

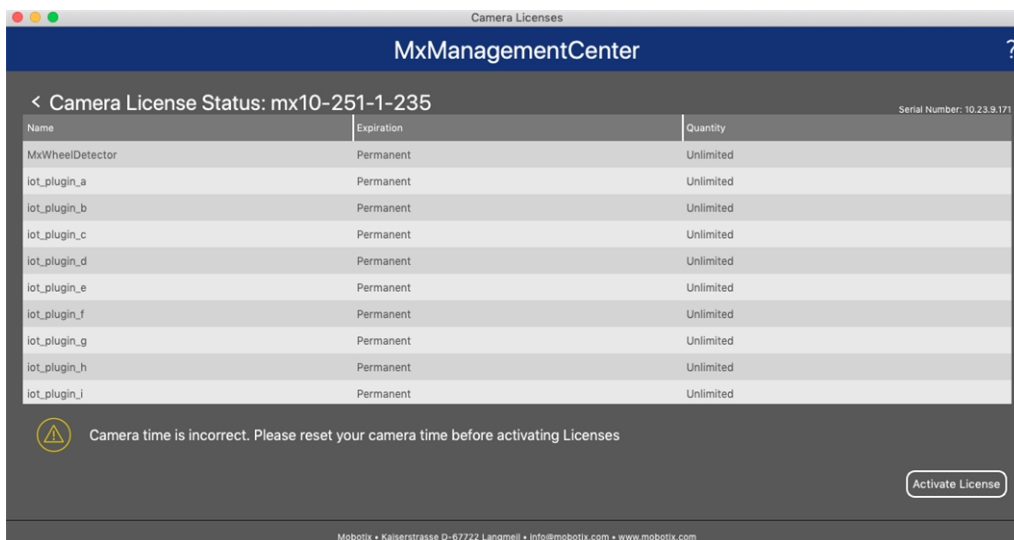

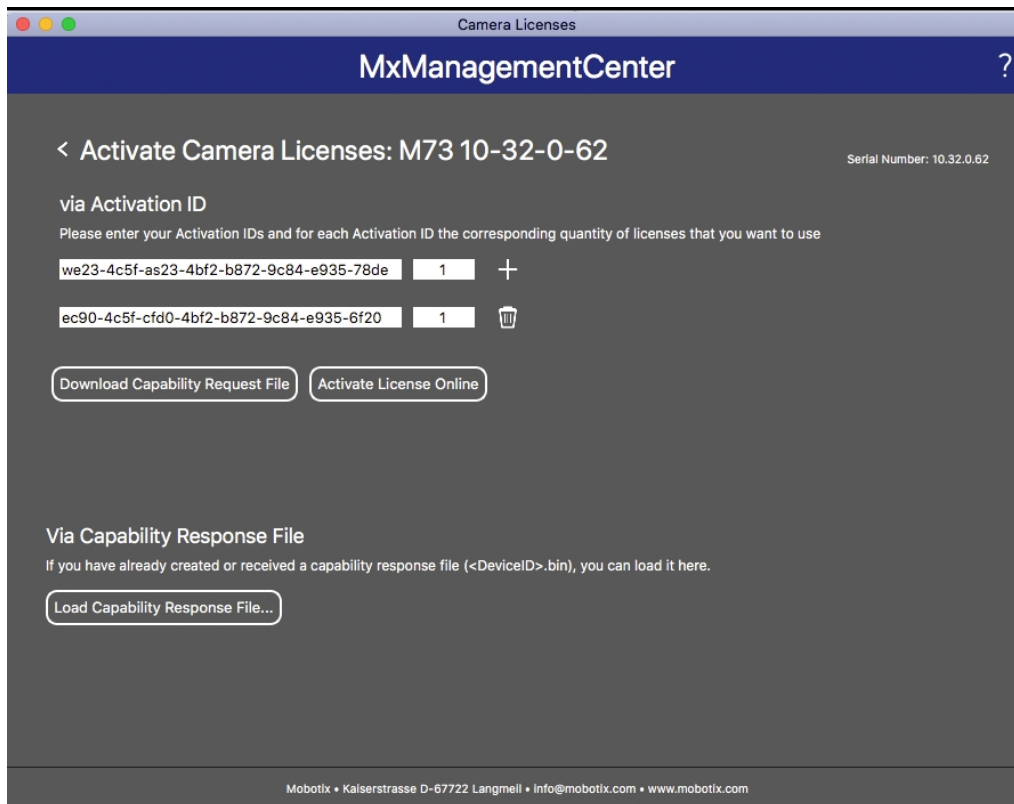


Fig. 2: Overview of the licenses installed on the camera

**NOTE!** If necessary, correct the time set on the camera.

2. Enter a valid Activation ID and specify the number of licenses to install on this computer.
3. If you want to license another product, click on . In the new row, enter the appropriate Activation ID and the number of licenses you want.

4. To remove a line click .
5. When you have entered all Activation IDs, click **Activate License Online**. During activation, **MxMC** connects to the license server. This requires an Internet connection.



**Fig. 3: Adding licenses**

### Successful activation

After successful activation, a new log in is required to apply the changes. Alternatively, you can return to license management.

### Failed activation (missing internet connection)

If the license server cannot be reached, e.g. due to a missing internet connection, apps can also be activated offline. (see [Offline Activation](#), p. 13).

## Offline Activation

For offline activation, the partner/installer from whom you purchased the licenses can generate a capability response (.bin file) on the license server to activate their licenses.

1. Select from the menu **Window > Camera App Licenses**.
2. Select the camera on which you want to license apps and click **Select**.

## Licensing Certified Apps

### License Activation of Certified Apps in MxManagementCenter

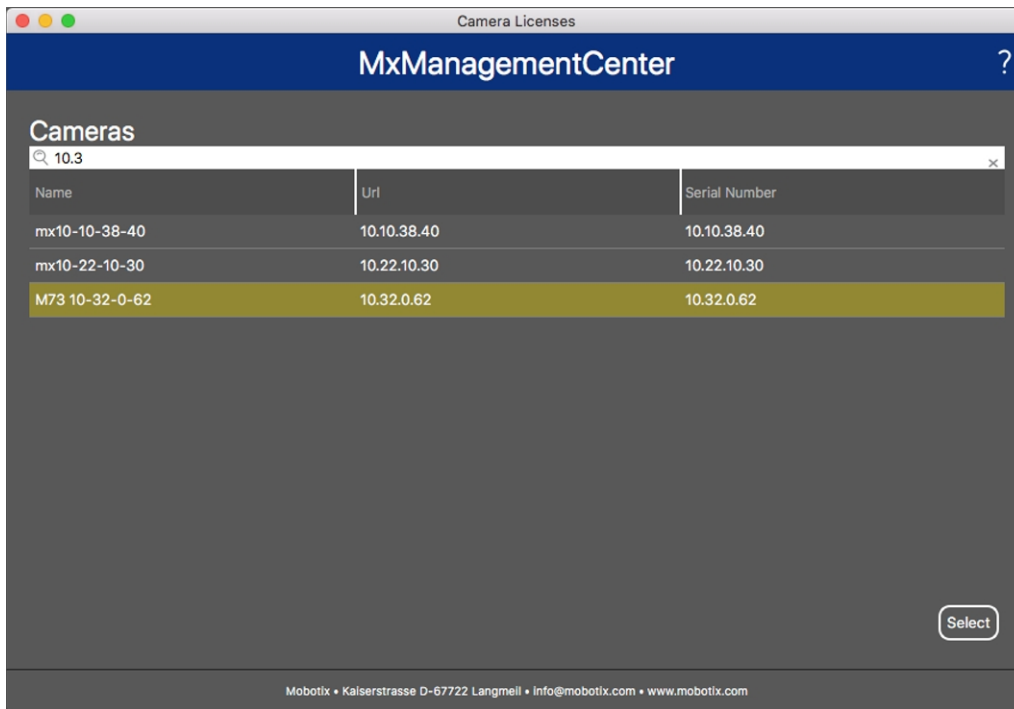


Fig. 4: Overview of Camera App Licenses in MxManagementCenter

**NOTE!** If necessary, correct the time set on the camera.

3. An overview of the licenses installed on the camera may be displayed. Click **Activate License**.

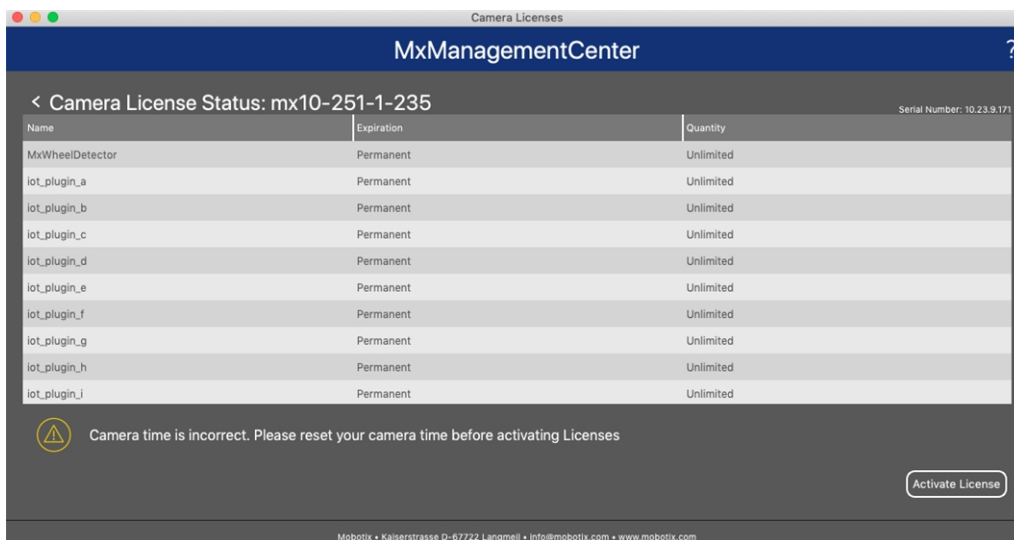


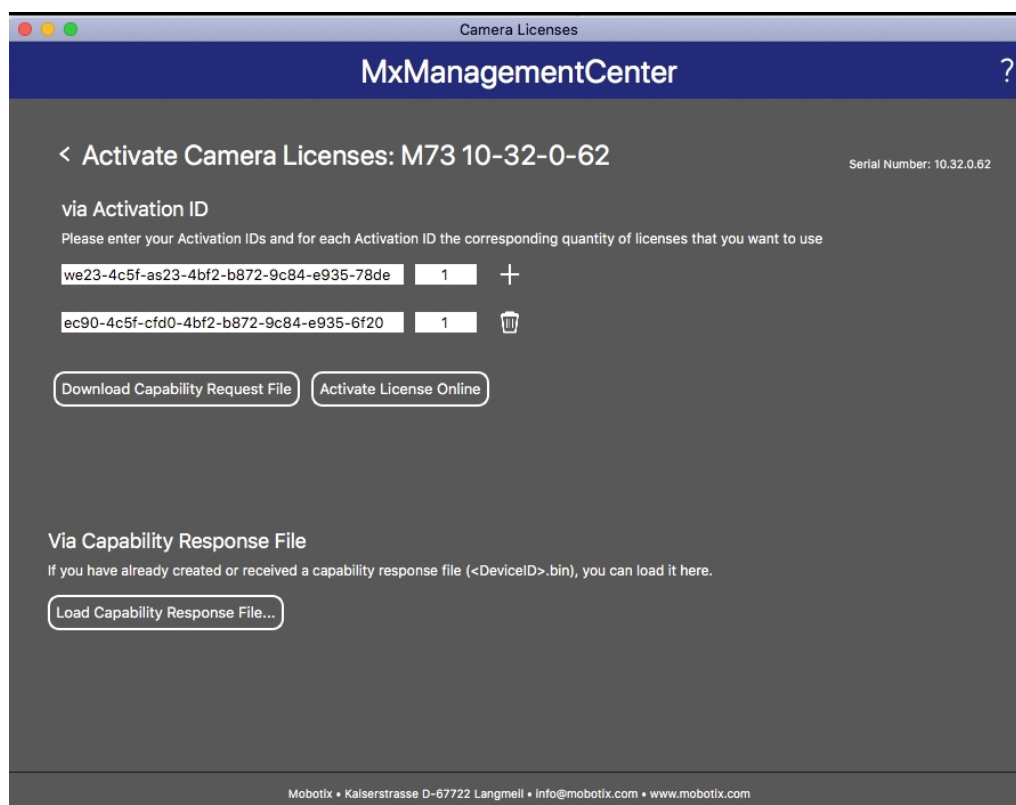


Fig. 5: Overview of the licenses installed on the camera

**NOTE!** If necessary, correct the time set on the camera.

4. Enter a valid Activation ID and specify the number of licenses to install on this computer.
5. If you want to license another product, click on . In the new row, enter the appropriate **Activation ID** and the number of licenses you want.
6. If necessary, click  to remove a line.
7. When you have entered all Activation IDs, click **Download Capability Request File (.lic)** and send it to your partner/installer.

**NOTE!** This file allows the partner / installer from whom you purchased the licenses to generate a capability response file (.bin ) on the license server.



**Fig. 6: Adding licenses**

8. Click Load Capability Response File and follow the instructions.

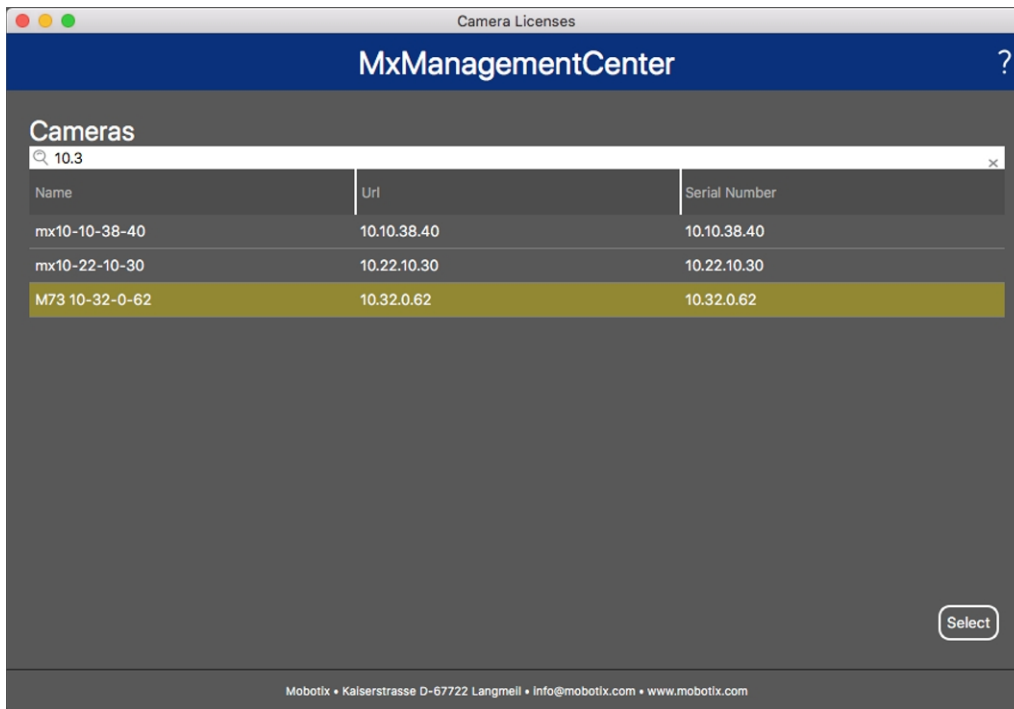
### Successful activation

After successful activation, a new log in is required to apply the changes. Alternatively, you can return to license management.

# Managing Licenses in MxManagementCenter

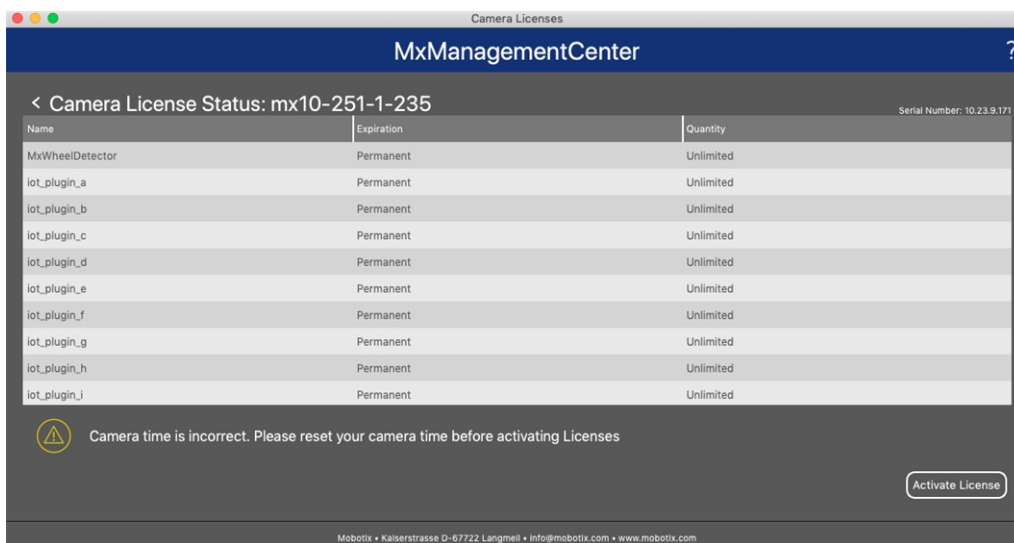
In MxManagementCenter you can comfortably manage all licenses that have been activated for a camera.

1. Select from the menu **Window > Camera App Licenses**.
2. Select the camera on which you want to license apps and click **Select**.



**Fig. 7: Overview of Camera App Licenses in MxManagementCenter**

An overview of the licenses installed on the camera may be displayed.



**Fig. 8: Overview of the licenses installed on the camera**



**NOTE!** If necessary, correct the time set on the camera.

Column	Explanation
Name	Name of the licensed app
Expiration	the time limit of the license
Quantity	Number of licenses purchased for a product.
Serial Number	Unique identification determined by MxMC for the device used. If problems occur during licensing, please have the device ID ready.

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### Synchronize licenses with server

When the program starts, there is no automatic comparison of the licenses between the computer and the license server. Therefore, click **Update** to reload the licenses from the server.

### Update licenses

To update temporary licenses, click **Activate Licenses**. The dialog for updating/activating licenses opens.

**NOTE!** You need administrator rights to synchronize and update licenses.

# Activation of the Certified App Interface

**CAUTION!** The MOBOTIX Thermal Validation App does not consider obscure areas defined for the live image. Therefore there is no pixelation in obscure areas while configuring the app and during image analysis by the app.

**NOTE!** The user must have access to the setup menu ([http\(s\)://<camera IP address>/control](http(s)://<camera IP address>/control)). Therefore check the user rights of the camera.

1. In the camera web interface, open: **Setup Menu / Certified App Settings** ([http\(s\)://<camera IP address>/control/app\\_config](http(s)://<camera IP address>/control/app_config)).

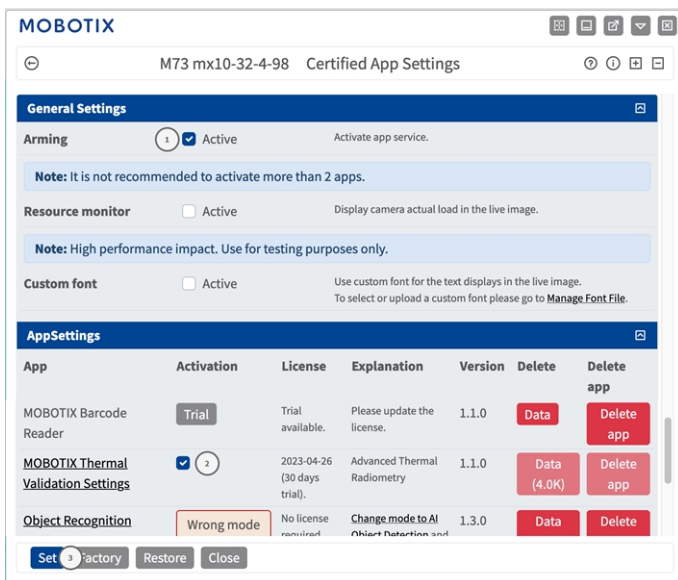


Fig. 9: Certified App: Settings

2. Under **General Settings** activate the **Arming** ① of the app service.
3. Under **App Settings** check the **Active** option ② and click **Set** ③ .
4. Click on the name of the App to be configured to open the Apps user interface.
5. For configuration of the App see [Configuration of MOBOTIX Thermal Validation App, p. 19](#).

# Configuration of MOBOTIX Thermal Validation App

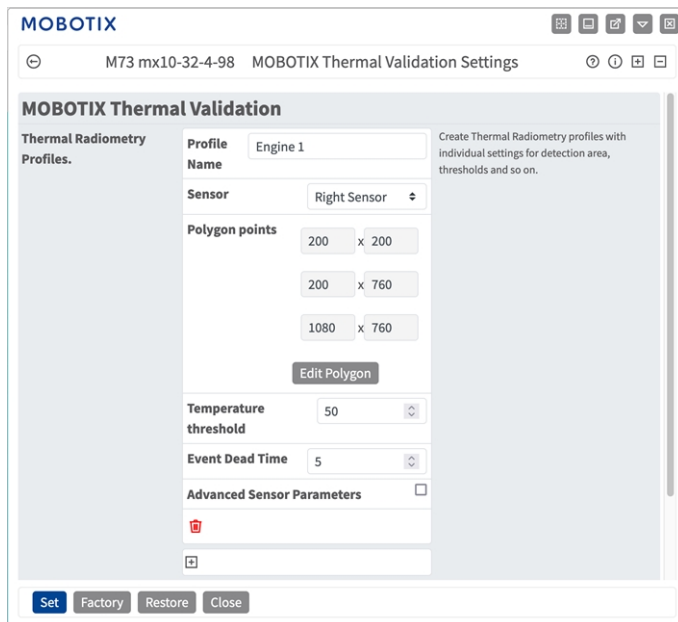
**NOTE!** The user must have access to the setup menu ([http\(s\)://<camera IP address>/control](http(s)://<camera IP address>/control)). Therefore check the user rights of the camera.

1. In the camera web interface, open: **Setup Menu / Certified App Settings** ([http\(s\)://<camera IP address>/control/app\\_config](http(s)://<camera IP address>/control/app_config)).
2. Click on the name of the **MOBOTIX Thermal Validation App**.

The configuration window of the app appears with the following options:

## Thermal Validation Profiles

You can create multiple Thermal Radiometry Profiles with individual settings. The following configurations should be taken into account:



The screenshot shows the 'MOBOTIX Thermal Validation Settings' web interface. The main configuration area is titled 'MOBOTIX Thermal Validation' and includes the following fields and controls:

- Profile Name:** Engine 1
- Sensor:** Right Sensor
- Polygon points:** 200 x 200, 200 x 760, 1080 x 760
- Temperature threshold:** 50
- Event Dead Time:** 5
- Advanced Sensor Parameters:** (unchecked)

At the bottom of the configuration area, there are buttons for 'Set', 'Factory', 'Restore', and 'Close'.

**Profile Name:** Enter a meaningful name for the Thermal Radiometry Profile.

**Sensor Selection:** If the camera has multiple image sensors, select the one that provides the video stream to be analyzed for the current Detection Area.

**Polygon Points:** The corner points of the Detection Area. Click **Edit Polygon** to draw the Detection Area in the Live View (see [Drawing a Polygon Area in the Live View, p. 20](#)).

**Temperature Threshold:** This temperature in degrees must either be exceeded or not reached in order to trigger an event.

**Event Dead Time:** to be clarified

Advanced Sensor Parameters: When activated the following parameter are available to configure:

**Emissivity (percent):** Set a percentage value that indicates which part of the heat radiation emitted by an object actually originates from this object and is not due to reflections. This value depends on the material of the object that is being measured. Reflective surfaces have a low emissivity, matte surfaces have a high emissivity.

A value of "100" disables this correction. In this case, no correction is made based on emissivity.

**Humidity):** A percentage value for the (air) humidity that refers to the area between the sensor and the object to be measured. The relevance of this parameter increases with higher atmospheric temperature and greater distance between camera and object.

**Distance to scene:** Set the distance to the scene in meters

A value of "0" disables this correction. In this case, no correction is made based on distance, air humidity and air temperature.

**Background temperature:** Set the temperature of other objects near the object being measured. This value is relevant if the emissivity of the object to be measured is low and the objects in the environment have a significantly higher or lower temperature.

**Atmospheric temperature (degrees):** Set the temperature of the air between the sensor and the object. The relevance of this parameter increases with higher humidity and distance from the object.

### Adding a Profile

1. Click the **plus icon** ① to add a profile.

### Deleting a Profile

1. Click the **bin icon** ② to delete the current profile.

## Drawing a Polygon Area in the Live View

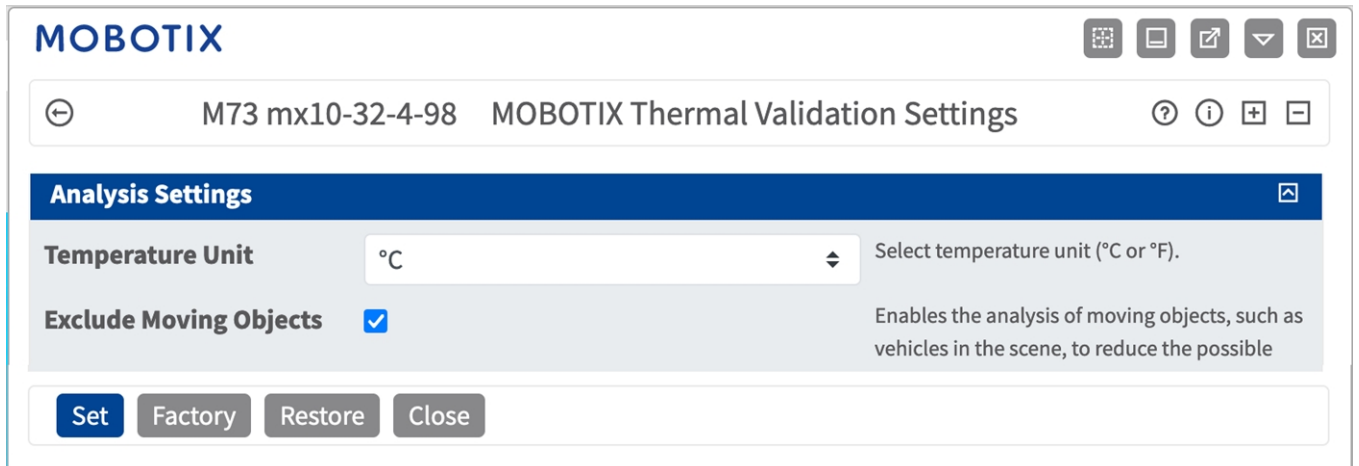
In Live View, there you can draw areas based on polygons depending on the App. These areas are e.g. Detection Areas, Excluded Areas, Reference Areas, Ignore Areas etc.

1. In the Live View simply click and drag a rectangular area.
2. Drag the corner points to the desired position.
3. To add another corner point, drag a smaller point between two corner points on the contour of the area.

4. In the top right corner of the live view click **Submit** to adopt the coordinates of the polygon.
5. Optionally click the **bin** icon to delete the recognition area.

## Analysis Settings

The following configurations should be taken into account::



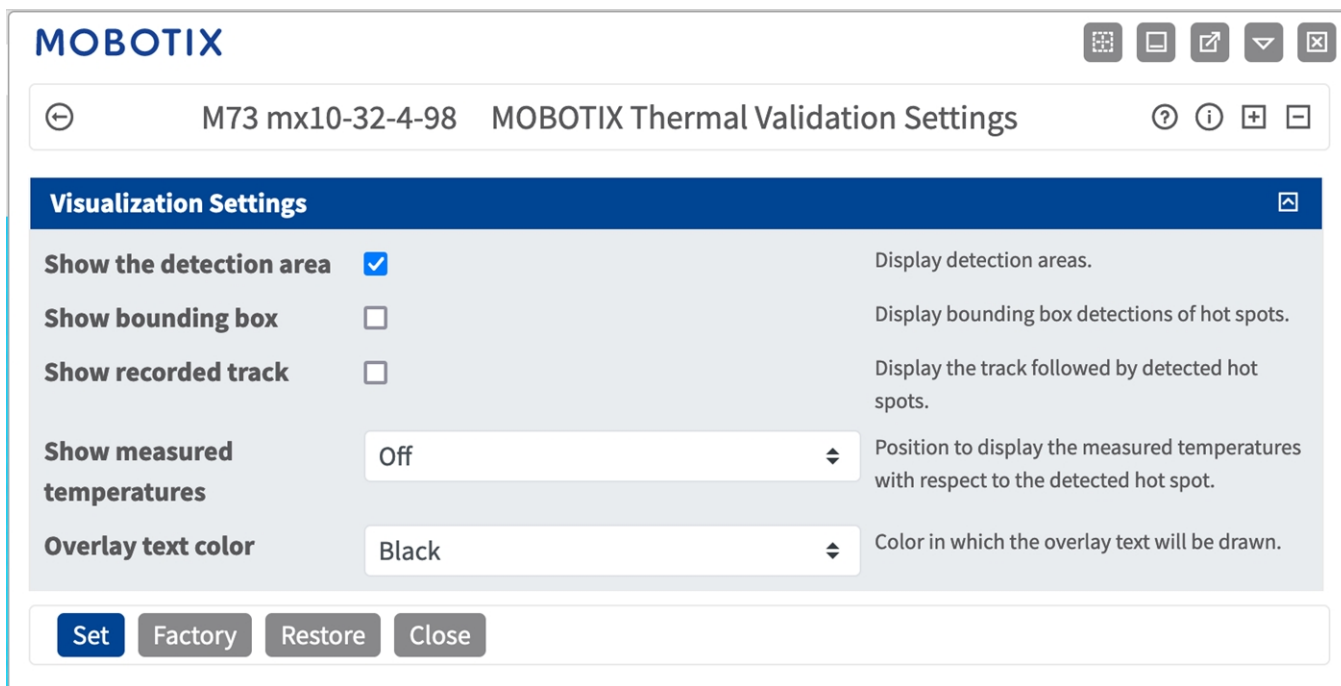
The screenshot shows a settings dialog for the MOBOTIX Thermal Validation App. The dialog title is "MOBOTIX M73 mx10-32-4-98 MOBOTIX Thermal Validation Settings". The "Analysis Settings" section is highlighted in blue. It contains two settings: "Temperature Unit" is set to "°C" and "Exclude Moving Objects" is checked. Below the settings are four buttons: "Set", "Factory", "Restore", and "Close".

**Temperature Unit:** Select temperature unit (°C or °F).

**Exclude Moving Objects:** Enables the analysis of moving objects, such as vehicles in the scene, to reduce the number of false alarms.

## Visualization Settings

The following configurations should be taken into account::



**Show the Detection Area:** Check to display the Area in the Camera Image.

**Show bounding box:** Check to display bounding boxes around detected hot spots.

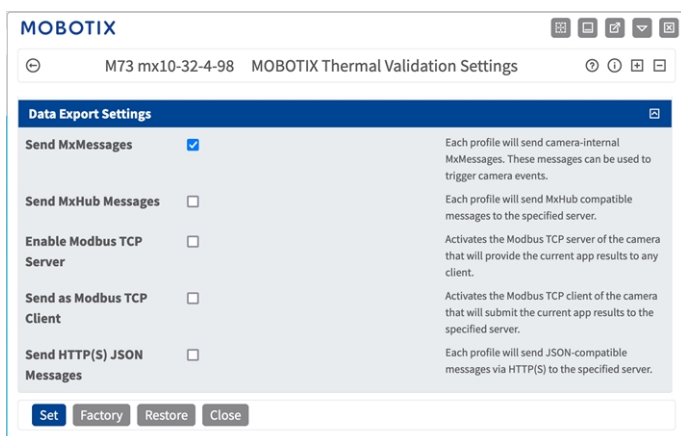
**Show recorded track:** Check to display the track followed by detected hot spots.

**Show measured temperatures:** Select a position within the camera image to display the measured temperatures with respect to the detected hot spot.

**Overlay text color:** Select the overlay text color.

## Data Export Settings

The following configurations should be taken into account:



**Send MxMessages:** When activated, each profile will send &camera-internal MxMessages which can be used to trigger camera events.

**Send Hub Messages:** When activated, each profile will send MxHub compatible XML messages containing the current temperature values to the specified server.

**Use the camera as a Modbus TCP client:** When activated, the camera can establish a client connection via Modbus TCP and submit the current temperature values to the server.

**Use the camera as a Modbus TCP server:** When activated, the camera hosts a server to be addressed via Modbus TCP and will provide the current temperature values to any client.

## Storing the Configuration

To store the configuration you have the following options:



- Click **Set** to activate your settings and to save them until the next reboot of the camera.
- Click **Factory** to load the factory defaults for this dialog (this button may not be present in all dialogs).
- Click **Restore** to undo your most recent changes that have not been stored in the camera permanently.
- Click **Close** to close the dialog. While closing the dialog, the system checks the entire configuration for changes. If changes are detected, you will be asked if you would like to store the entire configuration permanently.

After successfully saving the configuration, the event and meta data are automatically sent to the camera in case of an event.

# MxMessageSystem

## What is MxMessageSystem?

MxMessageSystem is a communication system based on name oriented messages. This means that a message must have a unique name with a maximum length of 32 bytes.

Each participant can send and receive messages. MOBOTIX cameras can also forward messages within the local network. This way, MxMessages can be distributed over the entire local network (see Message Area: Global).

For example, a MOBOTIX 7 series camera can exchange a MxMessage generated by a camera app with an Mx6 camera that does not support certified MOBOTIX apps.

## Facts about MxMessages

- 128-bit encryption ensures privacy and security of message content.
- MxMessages can be distributed from any camera of the Mx6 and 7 series.
- The message range can be defined individually for each MxMessage.
  - **Local:** Camera expects a MxMessage within its own camera system (e.g. through a Certified App).
  - **Global:** the camera expects a MxMessage that is distributed in the local network by another MxMessage device (e.g. another camera of the 7 series equipped with a certified MOBOTIX app).
- Actions that the recipients are to perform are configured individually for each participant of the MxMessageSystem.

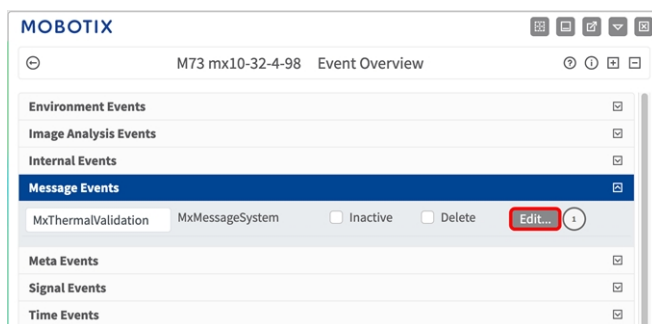


# Basic configuration: Processing the automatically generated app events

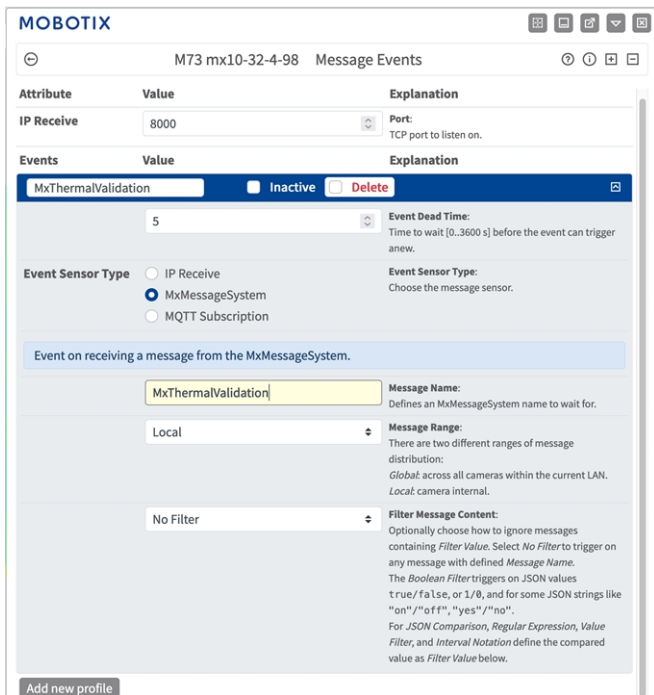
## Checking automatically generated app events

**NOTE!** After successfully activating the app (see [Activation of the Certified App Interface](#)), a generic message event for this specific app is automatically generated in the camera.

1. Go to **Setup-Menu / Event Control / Event Overview**. In section **Message Events** the automatically generated message event profile is named after the application (e.g. MxAdvancedRadiometry).



2. Click **Edit** ① to display and configure the event properties in detail.

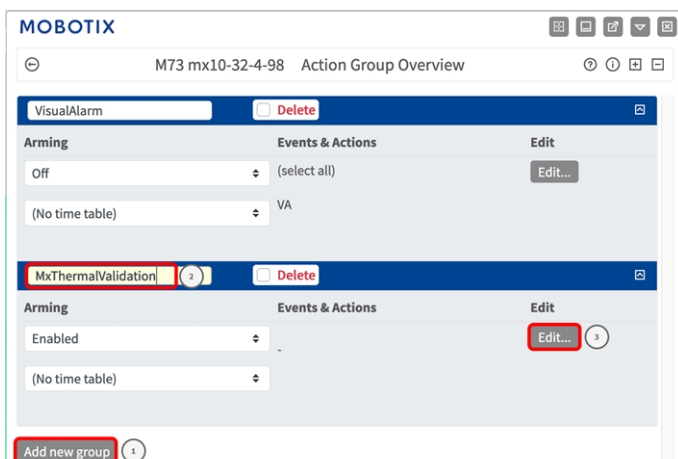


## Action handling - Configuration of an Action Group

**CAUTION!** To use events, trigger Action Groups or record images the general arming of the camera must be enabled ([http\(s\):<camera IP address>/control/settings](http(s):<camera IP address>/control/settings))

An Action Group defines which action(s) is (are) triggered by the MOBOTIX Thermal Validation App event.

1. Go to **Setup-Menu / Event Control / Action Group Overview** ([http\(s\)://<camera IP address>/control/actions](http(s)://<camera IP address>/control/actions)).



- Click **Add new group** ① and give a meaningful name ② .
- Click **Edit** ③ , to configure the group.

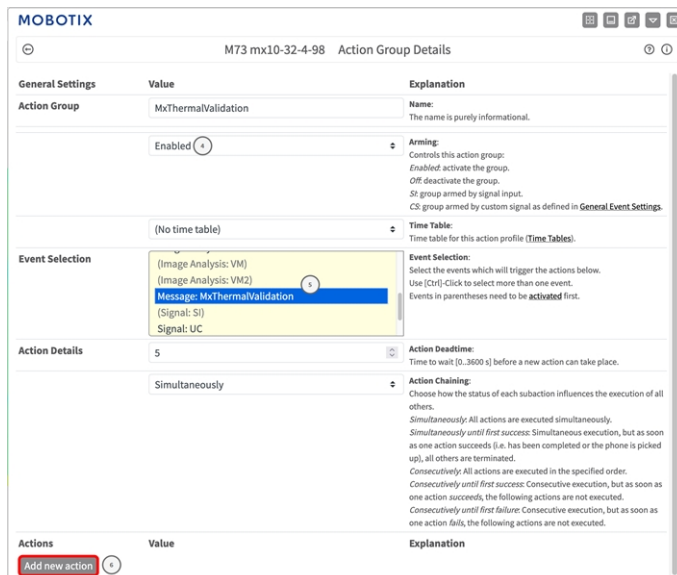


Fig. 10: Configuring an Action Group

- Enable **Arming** ④ of the Action Group.
- Select your message event in the **Event selection** list ⑤ . To select multiple events, hold the shift key.
- Click **Add new Action** ⑥ .
- Select a proper action from list **Action Type and Profile** ⑦ .

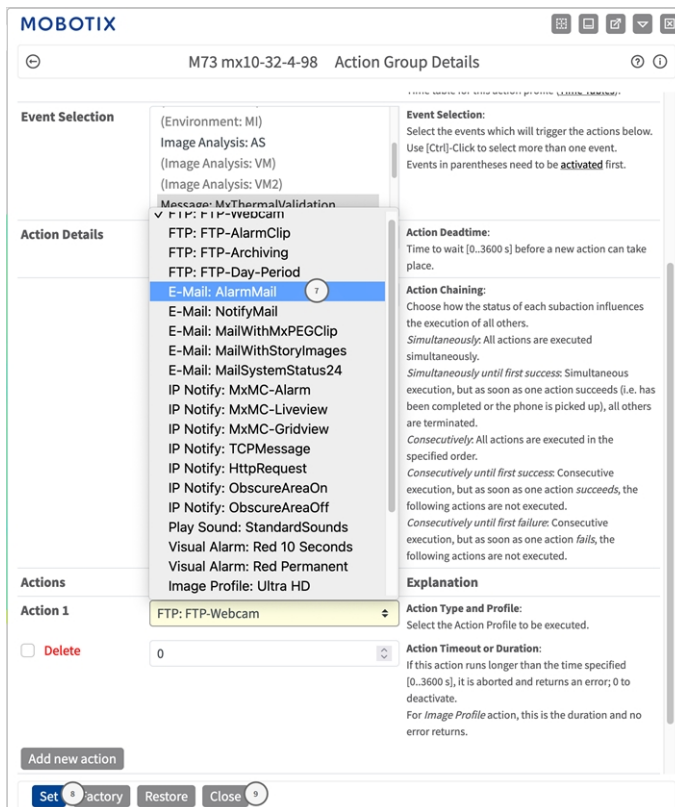


Fig. 11: Select Action Type- and Profile

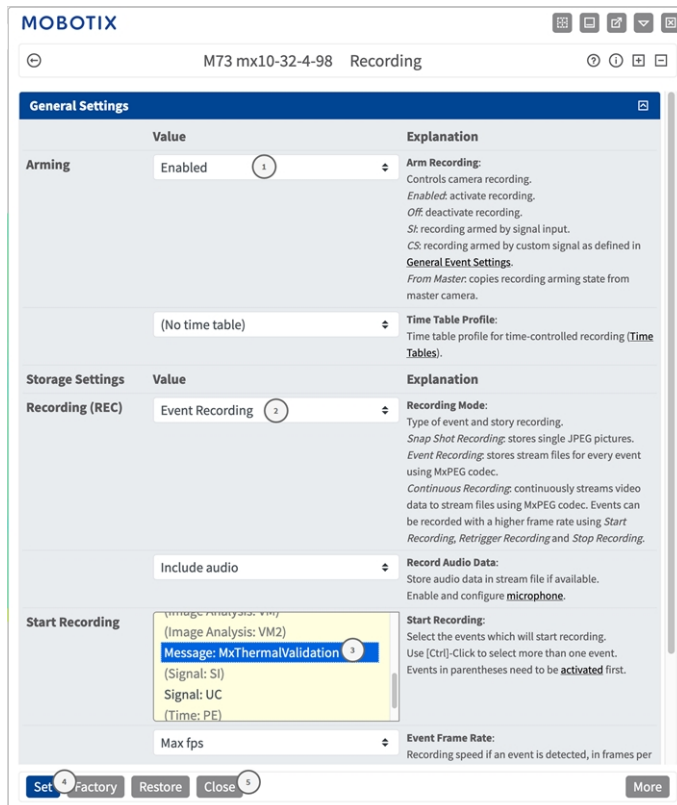
**NOTE!** If the required action profile is not yet available, you can create a new profile in the Admin Menu sections "MxMessageSystem", "Transfer Profiles" and "Audio and VoIP Telephony".

If necessary, you can add further actions by clicking the button again. In this case, please make sure that the "action chaining" is configured correctly (e.g. at the same time).

8. Click on the **Set** button at the end of the dialog box to confirm the settings.
9. Click on **Close** to save your settings permanently.

## Action settings - Configuration of the camera recordings

1. Go to **Setup Menu / Event Control / Recording** ([http\(s\)/<camera IP address>/control/recording](http(s)/<camera IP address>/control/recording)).



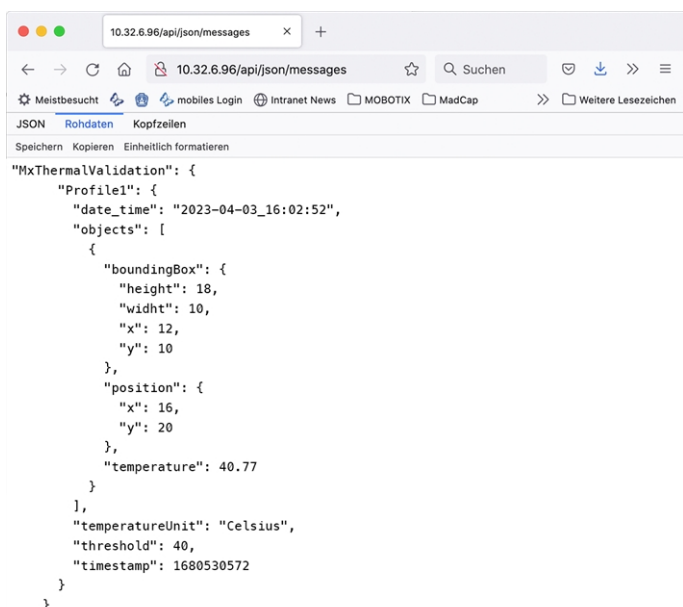
2. Activate **Arm Recording** ① .
3. Under **Storage Settings / Recording (REC)** select a **Recording mode** ② . The following modes are available:
  - Snap Shot Recording
  - Event Recording
  - Continuous Recording
4. In list **Start recording** ③ select the message event just created.
5. Click on the **Set** ④ button at the end of the dialog box to confirm the settings.
6. Click on **Close** ⑤ to save your settings permanently.

**NOTE!** Alternatively, you can save your settings in the Admin menu under Configuration / Save current configuration to permanent memory.

# Advanced Configuration: Processing the meta data transmitted by apps

## Meta data transferred within the MxMessageSystem

For each event, the app also transfers meta data to the camera. This data is sent in the form of a JSON schema within a MxMessage.

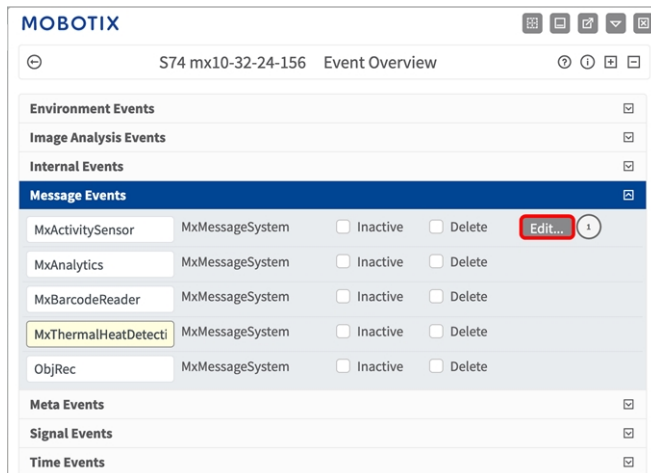


```
"MxThermalValidation": {
  "Profile1": {
    "date_time": "2023-04-03_16:02:52",
    "objects": [
      {
        "boundingBox": {
          "height": 18,
          "width": 10,
          "x": 12,
          "y": 10
        },
        "position": {
          "x": 16,
          "y": 20
        },
        "temperature": 40.77
      }
    ],
    "temperatureUnit": "Celsius",
    "threshold": 40,
    "timestamp": 1680530572
  }
}
```

**NOTE!** To view the meta data structure of the last App event, enter the following URL in the address bar of your browser: [http\(s\)://IPAdresseOfYourCamera/api/json/messages](http(s)://IPAdresseOfYourCamera/api/json/messages)

# Creating a Custom Message Event

1. Go to **Setup-Menu / Event Control / Event Overview**. In section **Message Events** the automatically generated message event profile is named after the application (e.g. MxAdvancedRadiometry).



2. Click **Edit** ① to display and configure the event properties in detail.

**MOBOTIX** M73 mx10-32-4-98 Message Events

Attribute	Value	Explanation
IP Receive	8000	<b>Port:</b> TCP port to listen on.

Events	Value	Explanation
MxThermalValidation ①	<input type="checkbox"/> Inactive <input type="checkbox"/> Delete	

**Event Dead Time:**  
Time to wait [0..3600 s] before the event can trigger anew.

**Event Sensor Type:**  
Choose the message sensor.

Event on receiving a message from the MxMessageSystem.

**Message Name:**  
Defines an MxMessageSystem name to wait for.

**Message Range:**  
There are two different ranges of message distribution:  
*Global:* across all cameras within the current LAN.  
*Local:* camera internal.

**Filter Message Content:**  
Optionally choose how to ignore messages containing *Filter Value*. Select *No Filter* to trigger on any message with defined *Message Name*.  
The *Boolean Filter* triggers on JSON values `true/false`, or `1/0`, and for some JSON strings like `"on"/"off"`, `"yes"/"no"`.  
For *JSON Comparison*, *Regular Expression*, *Value Filter*, and *Interval Notation* define the compared value as *Filter Value* below.

**Filter Value:**  
Define either a valid reference value as a string (in JSON format) without line breaks, or an extended regular expression, a number, or a minimum/maximum interval

Set ④ Factory Restore Close ⑤

3. Click on the event (e.g. MxThermalValidation) to open the event settings.

4. Configure the parameters of the event profile as follows:

- Message Name:** Enter the "Message Name" ② according to the event documentation of the corresponding app (see [Examples for message names and filter values of the MOBOTIX Thermal Validation App, p. 33](#))



- **Message Range:**
  - Local: Default settings for the MOBOTIX Thermal Validation App
  - **Global:** (MxMessage is forwarded from another MOBOTIX camera in the local network).
- **Filter Message Content:**
  - **No Filter:** Trigger on any message according to the defined **Message Name**.
  - **JSON Comparison:** Select if filter values are to be defined in JSON format.
  - **Regular Expression:** Select if filter values are to be defined as regular expression.
- **Filter Value:**③ see [Examples for message names and filter values of the MOBOTIX Thermal Validation App, p. 33.](#)

**CAUTION!** “Filter Value“ is used to differentiate the MxMessages of an app / bundle. Use this entry to benefit from individual event types of the apps (if available).

Choose “No Filter” if you want to use all incoming MxMessages as generic event of the related app.

2. Click on **Set**④ at the end of the dialog box to confirm the settings.
3. Click on **Close**⑤ to save your settings permanently.

## Examples for message names and filter values of the MOBOTIX Thermal Validation App

Event	MxMessage Name	Filter Value (example)	Explanation
Generic Event	MxThermalValidation		
Event with a profile	MxThermalValidation.profile		
Id of the profile	MxThermalValidation.profile.id	“5”	Numeric profile ID
Current time	MxThermalValidation.profile.date_time	“1667573558”	UNIX time stamp
Objects	MxThermalValidation.profile.objects		List of detected hot spots that could be potential fires

## Advanced Configuration: Processing the meta data transmitted by apps

### Examples for message names and filter values of the MOBOTIX Thermal Validation App

---

Event	MxMessage Name	Filter Value (example)	Explanation
	MxThermalValidation.profile.objects.boundingBox		Rectangle of the hot spot
	MxThermalValidation.profile.objects.boundingBox.height	"18"	Height of the hot spot bounding box
	MxThermalValidation.profile.objects.boundingBox.width	"10"	Width of the hot spot bounding box
	MxThermalValidation.profile.objects.boundingBox.x	"16"	X coordinate of the bounding box corner point
	MxThermalValidation.profile.objects.boundingBox.y	"20"	Y coordinate of the bounding box corner point
	MxThermalValidation.profile.objects.position		Center of the hot spot
	MxThermalValidation.profile.objects.position.x	"16"	X coordinate of the center of the hot spot
	MxThermalValidation.profile.objects.position.y	"20"	Y coordinate of the center of the hot spot
	MxThermalValidation.profile.objects.temperature	"40.77"	Temperature of the hot spot
Temperature unit	MxThermalValidation.profile.temperatureUnit	"Celsius"	Temperature unit defined in the profile (Celsius or Fahrenheit)

---

<b>Event</b>	<b>MxMessage Name</b>	<b>Filter Value (example)</b>	<b>Explanation</b>
Temperature threshold	MxThermalValidation.profile.threshold	"40"	Temperature threshold defined for the profile
Time when profile event triggered	MxThermalValidation.profile.timestamp	"1680530572"	UNIX time stamp

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# MOBOTIX

BeyondHumanVision

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