Access to the Messana App

The Messana app is a user friendly graphic interface to operate a Messana control system (mControl).
Messana has developed a cross-platform mobile app that is available for the web (via browser) or native iOS or Android.

The App can be utilized in three different ways:

1. Mobile App (iOS or Android).

2. Web app within a local network (only from the local network where the Messana control system is installed).

3. Web app through the Messana portal service.radiantcooling.com (requires Internet access).
Local network (Web App)

This App access allows to interface with the control system only from a PC, or smart device that is connected (wifi and/or Ethernet LAN) to the same local network of the Messana control system (mBox).

Open a new window or tab in your web browser¹ and type the Messana control local IP address in the address bar and press enter.

Since this access to the Messana controls comes from a computer that is connected to the same network, no login or password are requested.

¹. Compatible browsers: Chrome, Safari, Firefox, Edge.
Messana portal service.radiantcooling.com (Web App)

This App access allows to interface with the control system via browser from any PC, or smart device with Internet connection. The access to the Messana portal, also allows you yo change your password ².

Open a new window or tab in your web browser ¹, type the following url address https://service.radiantcooling.com and enter your username and password ².

Click on the on the actions to open the Messana app for a specific system.

In case access to multiple control systems, they will all be listed in the VPN Status list.

If a system is not connected to the Internet or has a temporary Internet connection problem, it will not show in the VPN Status list.

How to change your password ²

Click on Main Menu  My User and re-enter the password.

Note: Login username can not be changed by user.

2. Login and password to access the Messana portal and Messana App are the same and are given at the time of commissioning of the system.
Mobile app (Web App)

This access to the control system works from any iOS or Android device with an Internet connection.

Download the latest Messana App from the Apple Store at the following link:

https://apple.co/2KZsL0I

Download the latest Messana App from the Google Play Store at the following link:


When the app is opened for the first time, you will be asked to enter your email (username) and password 1.

1. Login and password to access the Messana portal and Messana App are the same and are given at the time of commissioning of the system.
Graphic interface

The main elements of the Messana App’s graphic interface are the Main page (sometime also refereed as Dashboard, since in the main page there is customizable dashboard), the Status bar that shows the actual status of the control system and the Your Zones page where you can access to all the zones of the controlled hydronic system.

Color legend
- Heating functions
- Cooling functions
- Energy saving functions
- Warning messages
- Alarm messages
- Messana App main color
Main page

The Main page offers outdoor weather and air quality conditions with a three day forecast. On the top right there is the status bar (see Status Icons) that give you a quick overall understanding of the actual system conditions.

From the Main page there are the access to the Your Zones page and the Main menu.

Legend

1. Access to the Main menu.
2. System status icons. For more information see Status Icons at the end of this guide.
3. Warnings and alarms notification bar.
4. System name and address.
5. System local time and day based on an internal clock that is synchronized.
7. Outdoor temperature based on AccuWeather.com or outdoor temp sensor when present.
8. Outdoor relative humidity based on AccuWeather.com or outdoor relative humidity sensor when present. Can be visualized in % (RH) or dewpoint temperature (go to Main Menu ▶ Settings ▶ User Preferences).
  - Good (0 - 50).
  - Unhealthy for sensitive group (101 - 150).
  - Moderate (51 - 100).
  - Unhealthy (151 - 200), Very Unhealthy (201 - 300) and Hazardous (301 - 500).
11. Enter Your Zones page to set and view macrozones and zones.
Main page (dashboard area, scroll down)

If you scroll down the forecast view there is a customizable dashboard that provides at-a-glance view of the status each component of the system. The dashboard area can be personalized under **Main menu ▶ Settings ▶ User preferences**.

<table>
<thead>
<tr>
<th>Legend</th>
<th>Main page details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Access to the <strong>Main menu</strong>.</td>
</tr>
<tr>
<td>2.</td>
<td>System status icons.</td>
</tr>
<tr>
<td>3.</td>
<td>Hydronic system for the radiant floor. It is supplied by a boiler. Target temperature is the temperature evaluated by the logics that need to be supplied to the hydronic loop. The system in order to achieve this temperature adjust the positioning of a 3-way mixing valve (0-100%) mixing the fluid between supply and return. The actual supply (S) and return (R) temperatures are indicated.</td>
</tr>
<tr>
<td>4.</td>
<td>Hydronic system for the ATU (Air Treatment Unit). It is supplied by an air to water Heat Pump (HP MHRC2).</td>
</tr>
<tr>
<td>5.</td>
<td>ATU is an Air Treatment Unit to control the indoor air quality.</td>
</tr>
<tr>
<td>6.</td>
<td>HX-1 is a heat exchanger between the boiler and the hydronic radiant system.</td>
</tr>
<tr>
<td>7.</td>
<td>Air to water Heat Pump (HP MHRC2) dedicated to the air units (ATUs).</td>
</tr>
<tr>
<td>8.</td>
<td>List of Daikin fan coils.</td>
</tr>
<tr>
<td>9.</td>
<td>Enter <strong>Your Zones</strong> page to set and view macrozones and zones.</td>
</tr>
</tbody>
</table>
Main menu

The **Main menu** is accessible only from the **Main page** (dashboard). From this menu there is the access to all functionalities and the setup of the Messana control system.

1. Back to the **Main page** (dashboard).
2. To power On/Off the conditioning system or, when present, the DHW Domestic Hot Water system. From the **System Power** page there is access to a sub-menu to reboot the system or restart the logics.
3. **Settings** menu: General setting, User preferences and Network settings.
4. **Systems** menu: Hydronic systems, DHW, Buffer tanks, Air units, Fan coils and Zones setting.
5. **Heating/Cooling changeover** menu to set manual, automatic or scheduled heating and cooling changeover.
6. **Schedules** menu to create or edit weekly schedules (On/Off or variable temperature) and H/C changeover schedules.
7. **Timers** menu to set timers and triggers for events.
8. **Energy saving** menu to set energy saving and setback features.
9. **Backup/Restore** menu to manage configuration backup and restore.
10. **Graphs (Beta)** new powerful feature to create graphs and analyze historical data to evaluate system performance.
11. **Select your system** menu to switch between multiple systems controlled by the same user. Only when more than one system is available.
12. **Logout** menu to set energy saving and setback features.
13. **About** Messana support information and software versions.

**Legend**

1. Back to the Main page (dashboard).
2. To power On/Off the conditioning system or, when present, the DHW Domestic Hot Water system.
4. Systems menu: Hydronic systems, DHW, Buffer tanks, Air units, Fan coils and Zones setting.
5. Heating/Cooling changeover menu to set manual, automatic or scheduled heating and cooling changeover.
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7. Timers menu to set timers and triggers for events.
8. Energy saving menu to set energy saving and setback features.
9. Backup/Restore menu to manage configuration backup and restore.
10. Graphs (Beta) new powerful feature to create graphs and analyze historical data to evaluate system performance.
11. Allows to switch between multiple systems controlled by the same user. Only when more than one system is available.
12. User logout when you access remotely with the Messana app. When access directly through the local network, logout is disabled.
13. Messana support information and software versions.
General settings (1/3)

Go to Main menu » Settings » General to open this page. Here you find all the general settings of the system. These settings are stored locally in the main control unit (mBox) and are shared with all the system’s users.

Legend
1. Back to the Settings menu.
2. System name. This name is used in the main dashboard.
3. House/Building address. This is the address where the Messana control system is installed.
4. The green line indicates a field that has been entered.
5. The blue line indicates the field that has been edited (is the line where the cursor is positioned).
General settings (2/3)

Go to Main menu > Settings > General to open this page. Here are all the general settings of the system. This settings are stored locally in the main control unit (mBox) and are shared with all the system’s users.

AccuWeather Location Key

Go to AccuWeather.com and search for your location (zipcode/country). Your location key is the code you find in the address of the browser navigation bar. Example: accuweather.com/en/us/san-francisco-ca/94103/weather-forecast/347629
San Francisco location key is 347629.

2167587

Temperature unit

Fahrenheit (F)  
Celsius (C)

Airflow unit

Cubic meter per hour (m³/h)
Cubic feet per minute (cfm)

Max room humidity

Stop humidification if humidity in a room exceed

- Max room dewpoint  (60.0 °F)
- Max room RH  (60 %)

Selected rooms

Lobby, Sales Area, Meeting Room, Bunker Room, Mech...

Legend

1. Back to the Settings menu.
2. In the Main page (dashboard) the control system shows the outdoor weather conditions and the 3-day forecast. This information is based on the AccuWeather.com. If there is no Internet connection this service is not available.
3. To provide AccuWeather.com the correct position of the house/building, it requires a unique Location key. The easiest way to find the correct key to uniquely localize your house/building, is to access the AccuWeather.com website and enter the address information. Sometimes with the same address there are different choices, in different states, or countries. Make sure you select the right address. Once AccuWeather.com is positioned to the correct location, open the url in the navigation bar and copy the code (the last digits from the right until the first “/”).
   As an example the location key for Soquel, CA is 2167587 (https://www.accuweather.com/en/us/soquel-ca/95073/weather-forecast/2167587).
4. The Messana control system is available native in Celsius (and cubic meter per hour) or Fahrenheit degrees (and cubic feet per minute). To switch from one to the other, the control software must be reinstalled. This setting is offered at system level and is not possible to have different users on the same system with different temperature and airflow units. Contact Messana support if you need to change your temperature units.
5. Max room humidity is a safety feature available in systems with humidifiers. In the case that the humidity in any of the Selected rooms goes over the set Max room dewpoint/RH limit, the logic will stop the humidifier to prevent possible water damage.
6. The green line indicates a field that has been entered.
General settings (3/3)

Go to Main menu ➤ Settings ➤ General to open this page. Here are all the general settings of the system. This settings are stored locally in the main control unit (mBox) and are shared with all the system's users.

1. Go to Main menu ➤ Settings ➤ General

Zone temperature setpoints

Setpoints can be maintained separated (dual) between heating and cooling modes or unified (common), one unique setpoints for both heating and cooling.

- **Dual setpoints**
  - (not selected)

- **Common setpoints**
  - (selected)

  With common setpoints and independent heating and cooling terminals that can be activated simultaneously, a differential between heating and cooling setpoints must be maintained to avoid simultaneous activations.

  **Differential between H and C setpoints**
  - (1.0)

Humidity setpoints for humidification

- **Managed by air units**
  - (not selected)

- **Managed by zones**
  - (selected)

Humidity setpoints for dehumidification

- **Managed by air units**
  - (not selected)

- **Managed by zones**
  - (selected)

Air quality setpoints

- **Managed by air units**
  - (not selected)

- **Managed by zones**
  - (selected)

Return to dashboard after inactivity

- **After**
  - (Never)

Legend (1)

1. Back to the setting menu.
2. Zone temperature setpoints can be maintained separated between heating and cooling modes (dual, two set of setpoints) or unified (common, one unique set of setpoints for both heating and cooling). Dual setpoints is the default setting and it is preferred in areas where summer and winter are two well defined seasons. This allows to use lower temperature setpoints in heating, during the winter season, and higher temperature setpoints in cooling during the summer. Alternately, the system can be run with common setpoints. When the system it is switched from dual to common setpoints, the heating setpoints are used and the cooling setpoints are lost (the heating setpoints are copied into the cooling setpoints and maintained unified). All variable schedules applied to heating only or cooling only will be available to both modes. When switched from common to dual, all heating setpoints are copied to the cooling setpoint and maintained separated.
3. With common setpoints and independent heating and cooling terminals that can be activated simultaneously, a differential between heating and cooling setpoints must be maintained to avoid that both heating and cooling terminals are activated simultaneously. This differential is added to the cooling setpoints.
4. Humidity setpoints can be set at air unit (humidifier) level or can be set individually in each zone connected to the humidifier.
5. Humidity setpoints can be set at air unit (dehumidifier) level or can be set individually in each zone connected to the dehumidifier.
6. Air quality setpoints can be set at air unit (HRV) level or can be set individually in each zone connected to the HRV.
7. For systems equipped with an mPad, it is advised to set an automatic return to the Main page (dashboard) to automatically reposition the touch screen back to the Main page (dashboard).
8. Set the time to return to the Main page choosing from 1 minute, 5 minutes, 1 hour and never.
User preferences

Go to Main menu ➤ Settings ➤ User Preferences to open this page and access all the user’s settings. This settings are stored in the web storage locally within the user's browser and are domain depended. For more information search "web local storage".

1. Back to the setting menu.
2. Select the language between US English and Italian. Additional languages will be added in the future.
3. Select how to express the humidity between relative humidity (%) or dewpoint temperature (F/C).
   Dew point is a better representative of the amount of moisture in the air. A dewpoint temperature between 50F and 60F feels comfortable for most of us and it is ideal for a radiant cooling system (Messana suggested humidity target temperature in cooling mode is between 52 and 54F). Dewpoint temperature above 65F feels sticky and makes us feel hotter. Dewpoint below 45 feels dry.
   Relative humidity is ‘relative’ and need to be expressed at a certain air temperature (example: RH 50% at 70F air temperature, this is equivalent to 55F dewpoint). Messana strongly suggest to get familiar with dewpoint temperatures.
   Note: In a radiant cooling system when a surface temperature goes below the dewpoint temperature, condensation starts forming on the surface.
4. Dashboard personalization. This section allows the user to personalize the dashboard area in the Main page.
   The toggle buttons allow to show (on) or hide (off) each item in the dashboard area.
   More advanced user tend to have all the system details under control and prefer to include all the dashboard items. However, for users less expert it is advise to hide all the dashboard element to avoid confusion.

Legend

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Your Zones

This page summarizes all of your zones. Each zone displays temperature, setpoint, relative humidity and the zone status bar. The status bars gives you an overall idea of the current conditions of the zone.

<table>
<thead>
<tr>
<th>Zone</th>
<th>Temperature In</th>
<th>Temperature Out</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Room</td>
<td>70.2 °F</td>
<td>72.0 °F</td>
<td>37.0 %</td>
</tr>
<tr>
<td>Mediaroom</td>
<td>71.7 °F</td>
<td>72.0 °F</td>
<td>33.5 %</td>
</tr>
<tr>
<td>Hall 7th Floor</td>
<td>72.4 °F</td>
<td>72.0 °F</td>
<td>35.8 %</td>
</tr>
<tr>
<td>Dining Room</td>
<td>72.2 °F</td>
<td>72.0 °F</td>
<td>35.9 %</td>
</tr>
<tr>
<td>Family Room</td>
<td>71.1 °F</td>
<td>72.0 °F</td>
<td>37.7 %</td>
</tr>
<tr>
<td>Girls Bedroom</td>
<td>72.3 °F</td>
<td>72.0 °F</td>
<td>35.4 %</td>
</tr>
</tbody>
</table>

Legend
1. Back to the Main page.
2. System name.
3. Zones/Macrozones pop-up menu.
4. Macrozone All allows you to make multiple setting for all zones.
5. System status.
7. Zone operative temperature.
8. Zone setpoint (click on the zone to enter and make zone settings).
9. Zone relative humidity (can be visualized as RH or dewpoint temperature).
10. Zone status.
11. Zone OFF. When a zone is set OFF, it becomes gray color. A zone set off it is not conditioned.
12. Swipe left the zone to rename it. Alternatively, open the zone page by click on the zone and access to the zone pop-up menu (top right corner).
13. Search and filter for zones name.
Macrozone All settings (only available if no other macrozones are created by the user)

The Macrozone All is a predefined macrozone that contains all the zones of the system. It allows multiple settings for different area of your home. If other macrozones are created, it becomes inactive, and not further global setting to ‘all zones’ are allowed. It only shows the average temperature and humidity for all the zones.

Legend:
1. Back to Your Zones.
2. Shortcut to the Main page (dashboard).
3. Name of macrozone.
4. Macrozones navigation (if there are additional macrozones).
5. Turn all zones On/Off.
7. Macrozone temperature setpoint adjustment (for all zones).
8. Macrozone temperature setpoint (for all zones).
9. Zone operative temperature (average of all zones).
10. Zone relative humidity (average for all zones).
11. Macrozone All schedule selection.
12. Macrozone All schedule On/Off to activate or deactivate a schedule. Schedules can be created/edited in the Main menu ▶ Schedule.
13. Zone exceptions from the setting of the Macrozone All.
Create a new Macrozone

Macrozones allow multiple setting for different areas of your home. To create a new Macrozone open the Zone/Macrozone pop-up menu and click on New Macrozone. Once you create the new macrozone, add zones. One zone can only belong to one macrozone. To rename, cancel or add/remove zones, enter the macrozone and click on the Macrozone pop-up menu.

Legend

1. Back to Your Zones.
2. System name.
3. Zones/Macrozones pop-up menu access.
4. Newly created Macrozone without zones associated yet. Click Add Zones to insert available zone to the new macrozone.
5. Zones/Macrozones pop-up menu to create new macrozones, reorder macrozones and zones (new zones can not be created by user).
6. Click to Add Zones to insert zones into the macrozone. Zones of a macrozone must belong to the same H/C group. One zone che belong only to one macrozone.
Macrozones

Macrozones allows multiple setting for different areas of your home.

<table>
<thead>
<tr>
<th>Macrozone</th>
<th>Operative Temperature</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Messana Residence</td>
<td>Day: 71.5 °F</td>
<td>10 Zones</td>
</tr>
<tr>
<td>Garage</td>
<td>Garage: 69.9 °F</td>
<td>2 Zones</td>
</tr>
</tbody>
</table>

Legend

1. Back to Your Zones.
2. System name.
3. Zones/Macrozones pop-up menu access.
4. Macrozone All. Predefined macrozone that contains all the zones in the system. If other macrozones are created, becomes inactive, and not further global setting to ‘all zones’ are allowed. It only shows the average temperature and humidity for all the zones.
5. User created macrozones. Each macrozone must have at least one zone.
6. Number of zone in the macrozone.
7. The red dot indicated that in the macrozone there is at least one zone with at least one exception (setting that differ from the macrozone). Enter the macrozone to check.
8. Zone operative temperature (average of all zones in the macrozone).
10. Macrozone relative humidity (average for all zones).
11. Macrozone status.
12. Swipe left to add zones or rename a user created macrozone. Alternatively click on the macrozone to enter it and open its pop-up menu.
13. Swipe right to delete a user created macrozone. Alternatively click the macrozone to enter and access its menu.
14. Zone/s not associated to any macrozone.
Zone setting

Here you can set the zone desired temperature (setpoint), turn the zone On/Off and check its status. The zone can also be set up under a weekly schedule (see the schedule section to learn more).

1. Back to Your Zones.
2. Shortcut to the Main page (dashboard).
3. Access to the zone pop-up menu.
4. Name of the zone.
5. Left and right scroll to navigate all the zones of the system.
6. Turn the zone On/Off. Once the zone is turned OFF, it will not be conditioned anymore unless there is an anti-freezing alarm active to prevent zone temperature to drop too low when the system is in heating mode. When a zone is OFF, its settings become gray.
7. Zone status.
8. Zone temperature setpoint adjustment.
9. Zone temperature setpoint.
10. Zone air quality.
11. Zone operative temperature.
12. Zone relative humidity.
13. Zone schedule.
14. Zone schedule On/Off to activate or deactivate a schedule. Schedules can be created/edited in the Main page menu under schedules.
15. Schedule visualization (if a schedule is applied).
16. Hydronic system serving the zone.
17. Air unit serving the zone.
18. Fan coil serving the zone.
19. Zone status icons.
Reorder zones and macrozones lists

Zones and macrozones can be reordered by user. This feature allows, for example, to arrange them by floor or alphabetically.

On the Your Zone page, click on the top right to open the Zones/Macrozones pop-up menu select Reorder zones or Reorder macrozones to access this page. This new order will be used anywhere zones/macrozones are listed.

Legend

1. Back to Your Zones.
2. List of zones or macrozones to be reordered.
3. Click and hold on the three lines icon to grab a zone or macrozone item, then move the item into its new position and drop it.

<table>
<thead>
<tr>
<th>Zones/Macrozones List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Living Room</td>
</tr>
<tr>
<td>Mediaroom</td>
</tr>
<tr>
<td>Family Room</td>
</tr>
<tr>
<td>Hall 7th Floor</td>
</tr>
<tr>
<td>Dining Room</td>
</tr>
<tr>
<td>Girls Bedroom</td>
</tr>
<tr>
<td>Girl’s bathroom</td>
</tr>
<tr>
<td>Nursery</td>
</tr>
<tr>
<td>Hall 6th Floor</td>
</tr>
<tr>
<td>Playroom</td>
</tr>
<tr>
<td>Boys Bedroom</td>
</tr>
<tr>
<td>Master Bedroom</td>
</tr>
<tr>
<td>Hall 5th Floor</td>
</tr>
<tr>
<td>Office</td>
</tr>
<tr>
<td>Master Dressing</td>
</tr>
</tbody>
</table>
Weekly zone schedule (On/Off)

A weekly schedule allows to select specific times of each day of the week when the zone must follow the setpoint (ON). When the schedule is Off the zone remains off unless other circumstances arise (setback feature or anti-freezing).

Legend

1. Selection of weekly schedule. Schedule can be created under the menu available in the Main page.
2. On/Off button to enable or disable schedules. Once the schedule is enable, a schedule must be selected.
3. Show weekly schedule.
4. Go to previous day of the week.
5. Time when schedule is OFF.
6. Day of the week.
7. Time when schedule is ON.
8. AM and PM day times.
9. Actual time of the current day.
Weekly schedules (create new)

Schedules are powerful tools to create custom 7-day programs. There are three different schedule types: general purpose On/Off, variable temperature and heating and cooling changeover.

Legend:
1. Back to the Main menu.
2. List of custom made schedules. Click on a schedule to edit it.
3. Type of schedule (General On/Off, variable temperature or H/C changeover).
4. Swipe right to delete a schedule that is not in use. Alternately enter the schedule and access the schedule pop-up menu.
5. Swipe right a schedule in use to investigate where it is applied. Alternately enter the schedule and access the schedule pop-up menu.
6. Swipe left to rename or duplicate a schedule. Alternately enter the schedule and access the schedule pop-up menu.
7. Create a new schedule.
8. Name of the new schedule.
9. Select the type of weekly schedule:
   • On/Off schedules specify when it is on within 30m intervals. It is a general purpose schedule that can different applications: zone activations, air function (ventilation, free cooling, humidification and dehumidification) and timers.
   • Variable temperature schedules allow to set different temperatures (up to 5) within a 30m interval.
   • H/C changeover schedules allow to select when the system is either in heating or cooling within 1h interval.
On/Off weekly schedules

Can be applied to zones (when the schedule is set On, the zone follows the setpoint), air units and heating and cooling sources (set On or Off depending on the schedule). Green timeframes is when the schedule is On. New schedule timeframes can be created by clicking on the top left and bottom right of the timeframe rectangular area.

Legend

1. Back to the schedule menu.
2. Name of the schedule being edited (active schedule).
3. Active schedule option menu. To activate the option pop-up menu of the active schedule.
4. Day of the week. If you click on a day it allows to Copy the day schedule to other days or Reset the day.
5. White timeframe area is when the schedule is Off.
6. Green timeframe area is when the schedule is On.
7. To add or edit a new timeframe rectangular area with a From/To pop up menu.
8. To approve a new ‘On’ timeframe created by clicking on to the top left and bottom right of the timeframe rectangular area.
9. To erase (set ‘Off’) a timeframe created by clicking on to the top left and bottom right of the timeframe rectangular area.
10. To cancel an active selection of a timeframe rectangular area.
Schedule option pop-up menu

It is the sub-menu of the schedule being edited (active schedule). This sub-menu can be opened clicking on the right top corner (three dots option menu icon) available on the active schedule edit page.

Legend

1. Back to the schedule menu.
2. Name of the schedule being edited (active schedule).
3. Rename the schedule.
4. A schedule can be used with different items: Air units, H/C sources and zones. If the schedule is applied only to the zones, the schedule will not be available in the applicable schedule list. Variable temp schedules are only applicable to zones, and H/C changeover schedules are only applicable to H/C changeover.
5. To add or edit a new timeframe rectangular area with a From/To pop up menu.
6. Reset the schedule by turning all timeframes into off.
7. Delete the schedule.
8. Close this pop-up menu.
Apply schedule to specific categories

From the schedule option menu click on the option "Apply to" to open the pop-up to select the categories to make the schedule visible and therefore applicable to. The schedule below is an example of a schedule created to run an HRV unit on and off every one hour. This schedule will not be applicable to a zone or an H/C source.

Legend

1. Back to the schedule menu.
2. Name of the schedule being edited (active schedule).
3. Apply to pop-up to select what categories the active schedule can be applied to.
4. A schedule can be used with different items: air units, H/C sources and zones. If the schedule is applied only to the zones, the schedule will not be available in the applicable schedule list. Variable temp schedules are only applicable to zones, and H/C changeover schedules are only applicable to H/C changeover.
5. To cancel this pop-up.
6. To save this setting.
Variable temperature schedules

A variable temperature schedule allows to set different temperatures (up to 5) for every day of the week within a 30m interval. When the variable temperature schedule is applied to a zone, the user cannot change the temperature setpoint unless the schedule is disabled. Once the schedule is created, in the zone setting can be applied, enabled or disabled.

Legend
1. Back to the schedule menu.
2. Name of the schedule being edited (active schedule).
3. Day of the week. If you click on a day it allows to Copy the day schedule to other days or Reset the day.
4. Indicate that the schedule can be applied to heating (orange) and/or cooling (blue).
   By default a new variable temperature schedule is applicable to both heating and cooling modes. In case of dual setpoints (heating and cooling independent setpoints, see Setpoints under Settings/General), the schedule can be applied to either or both modes.
5. Set temperature.
6. Timeframe with 70F temperature when schedule is OFF.
7. Timeframe with 72F temperature.
8. Timeframe with 74F temperature.
9. Different temperature legend (up to 5). Each temperature can be clicked to set the temperature.
10. To add or edit a new timeframe rectangular area with a From/To pop up menu.
   Alternatively a new timeframe can be created by clicking on the top left and bottom right of the timeframe rectangular area.
11. To approve a new ‘On’ timeframe created by clicking on the top left and bottom right of the timeframe rectangular area.
12. To erase (set ‘Off’) a timeframe created by clicking on the top left and bottom right of the timeframe rectangular area.
13. To cancel an active selection of a timeframe rectangular area.
H/C changeover schedule

Allows to select specific times of the day when the system is either in heating (orange) or cooling (blue). This schedule can only be applied to the hydronic system listed in the Heating/Cooling changeover page. The hydronic system must support the H/C changeover function.

Legend
1. Back to the schedule menu.
2. Name of the schedule being edited (active schedule).
3. Day of the week. If you click on a day it allows to copy the day schedule to other days or reset the day.
4. Timeframe with heating.
5. Timeframe with cooling.
6. To add or edit a new H/C timeframe rectangular area with a From/To pop-up menu.
7. To assign C (cooling) to a timeframe created by clicking on the top left and bottom right of the timeframe rectangular area.
8. To assign H (heating) to a timeframe created by clicking on the top left and bottom right of the timeframe rectangular area.
9. To cancel an active selection of a timeframe rectangular area.
Heating/Cooling changeover modes

There are 3 different H/C changeover modes: manual, auto and schedule. This page can be open in Main menu ▶ H/C changeover. These settings apply to each H/C group. A H/C group is an hydronic system that share the same H/C mode. Each zone and macrozone can be associated only to a specific H/C group (only one).

Legend

1. Back to the Main menu.
2. Name of the H/C group (hydronic systems that share the same H/C mode).
3. Access to the H/C group pop-up menu.
4. Set the group in manual H/C changeover mode.
5. Set the group in auto H/C changeover mode.
6. Set the group in schedule H/C changeover mode.
7. H/C mode setting area. For each of the H/C changeover mode in this area there are its specific settings.
8. To rename the H/C group.
9. To setup the adaptive comfort feature (available for manual mode only).
10. To close the pop-up H/C group menu.
Manual H/C changeover mode

Manual H/C changeover let the user decide when changing the H/C mode. This is the preferred mode for areas where summer and winter seasons are well defined. This manual mode, however, allows also for a temporary automatic changeover useful to during shoulder seasons (Adaptive comfort).

Legend

1. Back to the Main menu.
2. Name of the H/C group (system that share the same H/C mode).
3. Access to the H/C group pop-up menu.
4. Set the group in manual H/C changeover mode.
5. Manual H/C changeover setting area.
6. Choose between heating and cooling mode. After you change the mode, allow for about 10 minutes to make the change.
7. Activate the adaptive comfort. To set this function, open the H/C group pop-up menu and select Adaptive comfort settings.
Auto H/C changeover mode

The auto changeover mode allows the system to automatically switch between heating and cooling. Each zone will try to maintain the temperature at setpoint within a settable neutral range. This range is set by the - Delta T and a + Delta T values and create around the zone setpoint a neutral range +/- Delta T. If the temperature of the zone goes above the neutral zone it will make a call for cooling. If it goes below the neutral zone it will make a call for heating.

Legend

1. Back to the Main menu.
2. Name of the H/C group (system that share the same H/C mode).
3. Access to the H/C group pop-up menu.
4. Set the group in auto H/C changeover mode.
5. Auto H/C changeover setting area.
6. These two values (- Delta T and + Delta T) create the neutral range around each zone setpoints. This neutral range that is created is the temperature range where the zone will remain neutral, i.e. not call for cooling or heating. If the temperature of the zone goes above the neutral zone (setpoint will make a call for cooling. If it goes below the neutral zone it will make a call for heating. However, keep in mind that the entire system is taken into account when switching between heating and cooling. This means that a majority of zones must be calling for heating or cooling for the system to switch from one to the other. Weighting can also be applied to give more priority to a specific zone than others if desired. This ensures priority is given to a specific zone such as bedrooms or a central living space.
Schedule H/C changeover mode

Allows to apply an H/C changeover schedule to a H/C group. The H/C group will automatically switch from heating to cooling and vice-versa, based on the schedule.

Legend

1. Back to the Main menu.
2. Name of the H/C group (system that share the same H/C mode).
3. Access to the H/C group pop-up menu.
4. Set the H/C group in schedule H/C changeover mode.
5. Schedule H/C changeover setting area.
6. Select a H/C changeover schedule. To create a schedule go to Main menu ➤ Schedules.
Create graphs

Click on **Main menu ▶ Graph** option to open this page. From here you can create historical graphs to track the progress of the system. Graph can be created over a three month range of historical data stored in the central unit. Different predefined templates are available. Advanced users can create new custom templates and can also select what data and parameters store in the central unit (up to three months). mConnect clients will also have access to older data.

1. Back to the **Main menu**.
2. **Graph pop-up menu**.
3. Click on the triangle to hide/unhide graph settings and expand the graph plot area.
4. Select a template between pre-defined and custom templates.
5. Select zone/s and other objects (depending on the template) to be analyzed.
6. Select interval time (1 day, 2 days, 7 days, 14 days, weekly, biweekly, monthly and custom).
7. Select dates to plot the graph or use the navigation bottoms (<< < > >>) to change.
8. **Create chart**. Once a change is made, click on create chart to update the chart.
9. Forward > and backward < navigation, to move the time window by one interval time.
10. Forward >> and backward >> navigation, to move the time window to the first or last day available in the stored data history.
11. **Primary Y axes**.
12. **Secondary Y axes**.
13. **Activation area** (all the activations are plotted in this area).
14. **Time X axes**. The time window is specified in the interval time and date.
15. **Graph legend** (roll over with the mouse on a specific line to highlight the related graph, click to hide/unhide).
Graphs pop-up menu

From the Graphs page click on the burger menu on the right top corner to open the Graphs pop-up menu.

1. Back to the Main menu.
2. Access to the Graphs pop-up menu.
3. To select what parameters and data will be stored and can be available for historical graph (up to 3 months). Clients enrolled in the mConnect program, will also have access to older data.
4. To manage predefined and custom templates.
5. To close the Graphs pop-up H/C group menu.

Legend

- Graphs
- Param/Data selection
- Manage templates
- New template
- Cancel

Template

Zones Air Quality (eCO2/eTVOC)

Zones

Lobby

Interval Type

7 Days

Date

March 29, 2019

April 04, 2019
Manage templates

Graph can be created based on templates. There are predefined templates that are built by Messana and are available to all users. Custom templates can be created by the user to satisfy particular needs in tracking historical data.

1. Back to the Main menu.
2. List of pre-defined templates. These templates are created by Messana and can not be deleted or renamed. However can be hide.
3. When a template is hidden it is listed here in gray color. A hidden template doesn't show up in the main graph page as an available template.
4. Swipe left the predefined template to hide it. Pre-defined templates can not be renamed or deleted.
5. My template is a list of user's created custom templates.
6. Swipe left the user's template to hide it or rename it.
7. Swipe right the user's template to delete the template.
8. Click on the "+" button to create a new template.

Legend

1. Back to the Main menu.
2. List of pre-defined templates. These templates are created by Messana and cannot be deleted or renamed. However, they can be hidden.
3. When a template is hidden, it is listed in gray color. A hidden template does not appear in the main graph page as an available template.
4. Swipe left to hide a predefined template. Predefined templates cannot be renamed or deleted.
5. My template is a list of user's created custom templates.
6. Swipe left to hide or rename a user's template.
7. Swipe right to delete a user's template.
8. Click on the "+" button to create a new template.
Energy Saving

Energy saving are features to optimize the overall system efficiency.

Legend

1. Back to the Main menu.
2. The Energy saving function delays cooling (or heating) calls by applying a small temperature differential to all the zone setpoints. When the energy saving feature kicks in a zone, in the zone status bar the leaf icon turns green.
   Example: cooling mode, living room setpoint 74F, energy saving differential set to 0.5F. When the temperature in the living room goes above 74F, the zone doesn't call for cooling (until it is below 74.5F) and the green leaf icon turns on in the living room zone status bar.
3. Energy saving differential. We suggest a value between 0.5F and 1F.
4. The Setback function applies to all zones following an On/Off weekly schedule, when the schedule is off. The setback kicks in when the zone temperature differs from its setpoint by more than the setback differential temperature.
   Example 1: heating mode, master bedroom setpoint 70F setback differential set to 6F, schedule is on only at day time. During the night when the schedule is off, if the zone temperature goes below 64F the setback function kicks in.
   Example 2: cooling mode, setback differential set to 10F, zone setpoint 76F, schedule is off in the early afternoon. During the early afternoon when the schedule is off, in a very hot day of the summer the zone temperature goes above 86F the setback function kicks in.
   Setback function helps saving energy allowing the usage of schedules when you are away, or during the night holding the zone temperatures to still comfortable levels reducing time and energy to bring back the zones temperature to setpoint when the schedule turns back on.
5. Set back differential. We suggest a value between 6F and 10F.
Backup/Restore

To protect your system configuration and data, users can create backups. The backup includes the whole database including user's setpoints, schedules, graphs templates, and system settings. In case of need, a backup copy can be restored.

Legend

1. Back to the Main menu.
2. List of user's created backups.
3. Swipe left the backup to restore or rename it.
4. Swipe right the backup to delete it.
5. Click on the "+" button to create a new backup.
Buffer tanks

From the main menu select the Systems option and then Buffer tanks to open this page. This option is only available if your system features a buffer tanks. Here you can set how to control your buffer tanks and their parameters. Buffer tanks are used as a energy buffer between the hydronic system and the H/C energy sources. A buffer tank can be attached to one energy source or two distinctive energy sources (e.g. boiler and chiller) or a HP with heating and cooling capacity.

Legend

1. Back to the Main menu.
2. Buffer tank name.
3. Buffer tank sub-menu to rename the buffer tank.
4. Buffer tanks can not be turned Off by user, instead turn Off all the hydronic systems associated to the buffer tank.
5. Buffer tank status:
   - gray when the buffer tank target is satisfied or there are not request from the hydronic system,
   - blue when the buffer tank is calling for cooling
   - orange when calling for heating.
6. Select the type of buffer tank control modes:
   - Follow heating/cooling loads
   - Fixed temperature
   - Outdoor temperature compensation
7. The blue dot indicates the buffer tank selected control mode.
8. Setting area for the selected buffer tank mode. Each mode will show different settings and parameters.
Buffer tanks (following heating/cooling mode)

The following heating and cooling mode is the most common mode for hydronic radiant systems. Based on the requesting zone's dewpoint temperatures (cooling only), and their actual loads (evaluated from the difference between zone setpoints and their temperatures), the control logic evaluate a target fluid temperature for the hydronic system. For the system to provide such fluid temperature, the buffer tank must be hold to a slightly lower temperature (in cooling) or higher (in heating). Because the buffer tank constantly modulate its temperature to follow the zones’ needs, this mode is considered the most energy efficient way to control the temperature of buffer tanks.

Legend

1. Back to the Main menu.
2. Buffer tank name.
3. Buffer tank sub-menu to rename the buffer tank.
4. Buffer tanks can not be turned Off by user, instead turn Off all the hydronic systems associated to the buffer tank.
5. Buffer tank status: gray when the buffer tank target is satisfied or there are not request from the hydronic system, blue when the buffer tank is calling for cooling and orange when calling for heating.
6. Select the Follow heating/cooling loads.
7. Buffer tank actual temperature based on the reading of an NTC temperature probe insert into the buffer tank.
8. Buffer tank target temperature
   - In cooling mode, this is evaluated as the hydronic system target temperature minus the Delta T in cooling
   - In heating mode, this is evaluated as the hydronic system target temperature plus the Delta T in heating
   - Note: When there are not heating or cooling calls, the buffer tank is inactive (Buffer target temp shows --.--F).
9. Delta T in heating to add to the evaluated target temperature of the hydronic system fluid to create a minimum temperature gap for the mixing valve to mix up. Default value 5F. Reasonable range 5-10F.
10. Delta T in cooling to subtract to the hydronic system fluid evaluated target temperature to create a minimum gap for the mixing valve to mix down. Default value 5F. Reasonable range 0-6F.
Buffer tanks (fixed temperature)

The fixed temperature mode is the easiest way to control an hydronic radiant systems. Whenever a zone or an air unit, or a device connected to the buffer tank makes a heating or cooling call, the buffer tank is activated and brought to setpoint (Setpoint in heating or cooling). In cooling mode, in order to avoid slow “warm starts” and make the hydronic system faster to react, the buffer tank is always hold with a cold temperature below a maximum settable threshold (Always maintain temp below). Fixed temperature is the recommended choice for 4-pipe hydronic systems.

Legend

1. Back to the Main menu.
2. Buffer tank name.
3. Buffer tank sub-menu to rename the buffer tank.
4. Buffer tanks can not be turned Off by user, instead turn Off the hydronic system associated to the buffer tank.
5. Buffer tank status: gray when the buffer tank target is satisfied or there are not request from the hydronic system, blue when the buffer tank is calling for cooling and orange when calling for heating.
6. Select the Fixed temperature.
7. Buffer tank actual temperature based on the reading of a NTC temperature probe insert into the buffer tank.
8. Buffer tank actual setpoint temperature. It is equal to the setpoint temp in heating or cooling when the system is in active heating or cooling mode. When the system is in standby (no heating or cooling calls), in cooling mode the setpoint will be maintained below a maximum threshold (Always maintain temp below), in heating mode will be inactive (Buffer tank setpoint shows --.-F).
9. Temperature set point to follow when the system is in active heating mode (there is at least one heating call from a zone, or an air unit or an other device connected to the buffer tank). Setpoint typically range from 90F to 130F.
10. Temperature set point to follow when the system is in active cooling mode (there is at least one cooling call from a zone, or an air unit or an other device connected to the buffer tank). Setpoint typically range from 40F to 60F.
11. In cooling mode the temperature is alway maintained below this threshold (Always maintain temp below).
Buffer tanks (outdoor temperature compensation)

This buffer tank outdoor linear compensation mode maintains a fixed temperature in cooling and in heating adjusting the temperature based on the outdoor temperature. The controller lowers the buffer tank temperature setpoint when the outdoor temperature is warmer and increases it when the outdoor temperature is colder following a line identified by two points (X1,Y1 and X2,Y2) settable by the user. This is a valuable way to improve the efficiency of the heating systems, in particular is especially useful when a ground source heat pump system is installed.

1. Back to the Main menu.
2. Buffer tank name.
3. Buffer tank sub-menu to rename the buffer tank.
4. Buffer tanks can not be turned Off by user, instead turn Off the hydronic system associated to the buffer tank.
5. Buffer tank status: gray when the buffer tank target is satisfied or there are not request from the hydronic system, blue when the buffer tank is calling for cooling and orange when calling for heating.
6. Select the Fixed temperature.
7. Buffer tank actual temperature based on the reading of a NTC temperature probe insert into the buffer tank.
8. Buffer tank actual setpoint temperature.
9. First point to evaluate the outdoor straight compensation line (X1,Y1).
10. Second point to evaluate the outdoor streetlight compensation line (X2,Y2).
11. In cooling mode the temperature is always maintained below this threshold (Always maintain temp below).
### System Icons

#### Weather conditions and forecast and Air Quality Index (AQI)
Based on the AccuWeather.com service.

<table>
<thead>
<tr>
<th>Weather conditions and forecast icons based</th>
<th><img src="image" alt="Icon" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor air relative humidity or dewpoint temperature</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Good (0 - 50)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Moderate (51 - 100)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Unhealthy for sensitive group (101 - 150)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Unhealthy (151 - 200), Very Unhealthy (201 - 300) and Hazardous (301 - 500)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
</tbody>
</table>

#### Indoor Air Quality
Based on mSense VOC/eCO₂ sensor or SenseAir true CO₂ sensor.

<table>
<thead>
<tr>
<th>Indoor Air Quality</th>
<th><img src="image" alt="Icon" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent (400 - 700 ppm)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Good (701 - 1000 ppm)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Fair (1001 - 1600 ppm)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
<tr>
<td>Fair (1601 - 2100 ppm)</td>
<td><img src="image" alt="Icon" /></td>
</tr>
</tbody>
</table>
### System Icons

#### Heating/Cooling mode
H/C mode can be set under **Main menu ➤ Heating/Cooling changeover.**

<table>
<thead>
<tr>
<th>State</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>H/C changeover mode is not defined</td>
<td>![Gray Icon]</td>
</tr>
<tr>
<td>Manual H/C changeover mode (heating)</td>
<td>![Red Icon]</td>
</tr>
<tr>
<td>Manual H/C changeover mode (cooling)</td>
<td>![Blue Icon]</td>
</tr>
<tr>
<td>Manual H/C changeover mode (cooling with adaptive comfort temporary heating)</td>
<td>![Orange Icon]</td>
</tr>
<tr>
<td>Manual H/C changeover mode (heating with adaptive comfort temporary cooling)</td>
<td>![Purple Icon]</td>
</tr>
<tr>
<td>Schedule H/C changeover mode (heating)</td>
<td>![Green Icon]</td>
</tr>
<tr>
<td>Schedule H/C changeover mode (cooling)</td>
<td>![Light Green Icon]</td>
</tr>
<tr>
<td>H/C changeover in progress</td>
<td>![Gray Icon]</td>
</tr>
<tr>
<td>Auto H/C changeover mode (heating)</td>
<td>![Red Icon]</td>
</tr>
<tr>
<td>Auto H/C changeover mode (cooling)</td>
<td>![Blue Icon]</td>
</tr>
</tbody>
</table>

#### Energy Saving
Reduce setpoints by a small temperature differential and optimize the ventilation. Can be set under **Main menu ➤ Energy saving** and activated individually in each zone.

<table>
<thead>
<tr>
<th>State</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy saving function is set but the function is not triggered</td>
<td>![Green Icon]</td>
</tr>
<tr>
<td>The energy saving function is triggered</td>
<td>![Green Icon]</td>
</tr>
</tbody>
</table>

#### Setback
Maintain each zone within a temperature differential from the setpoint when a zone is off schedule. Can be set on the **Main menu ➤ Energy saving.**

<table>
<thead>
<tr>
<th>State</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setback is set, but there are no conditions to trigger it</td>
<td>![Gray Icon]</td>
</tr>
<tr>
<td>The zone is calling for heating (or cooling) because a setback condition is present</td>
<td>![Gray Icon]</td>
</tr>
</tbody>
</table>
System Icons

Radiant ceiling terminals
Radiant ceiling panels installed in different zones. Can be set under **Main menu ➤ Systems ➤ Zones**.

- Zone setpoint is satisfied and the terminal is OFF (thermal actuator on the manifold is closed)
- Zone is calling for heating and the terminal is ON (thermal actuator open)
- Zone is calling for cooling and the terminal is ON (thermal actuator open)
- Radiant ceiling terminal disabled (check Systems/Zones)

Radiant floor terminals
Radiant floors installed in different zones. Can be set under **Main menu ➤ Systems ➤ Zones**.

- Zone setpoint is satisfied and the terminal is OFF (thermal actuator is closed)
- Zone is calling for heating and the terminal is ON (thermal actuator is open)
- Zone is calling for cooling and the terminal is ON (thermal actuator is open)
- Radiant ceiling terminal disabled (check Systems/Zones)

Fan coils
Fan coils installed in different zones. Can be set under **Main menu ➤ Systems ➤ Fan coils**.

- Visible (OFF)
- Heating ON
- Cooling ON
- Ventilation OFF
- Ventilation ON

Integration and freecooling
Air supplement as integration of radiant terminal of free cooling (cooling only). Can be set under **Main menu ➤ Systems ➤ Air units**.

- Air unit or zone has such function but is not triggered
- Zone is calling for air integration in heating
- Zone is calling for air integration in cooling
- Air unit is in free cooling mode

Heat Recovery Ventilation (HRV)
Fresh air intake. Can be set under **Main menu ➤ Systems ➤ Air units**.

- Air unit or zone has such function but is not triggered
- Air unit or zone is calling for fresh air
System Icons

Sleep mode
Automatic reduction fan speed for quiet running at night. Can be set under Main menu ➤ Systems ➤ Air Units.

- Sleep mode OFF
- Sleep mode ON

Neutral Temperature dehumidification (NTD) and humidification
Dehumidification is only available in cooling, humidification only in heating. Can be set under Main menu ➤ Systems ➤ Air Units.

- Air unit or zone has such function but is not triggered
- Air unit or zone is calling for dehumidification
- Air unit or zone is calling for humidification

Pump status
Pumps are associated to hydronic circuits.

- Pump is OFF
- DHW recirculation pump is ON
- Circulator pump is ON for radiant heating
- Circulator pump is ON for radiant cooling
- Pump is ON

Buffer tank
Can be set under Systems/Buffer tanks.

- The tank is ON and OK (target temperature reached)
- The tank is ON and is producing hot water
- The tank is ON and is producing cold water

Energy sources

- Boiler is OFF
- Boiler is ON
- Chiller is OFF
- Chiller is ON
- Heat Pump is OFF
- Heat Pump is ON for heating
- Heat Pump is ON for cooling
## System Icons

### Domestic hot water (DHW)
Control of DHW tank and recirculation pump. Can be set under **Main menu ▶ Systems ▶ DHW**.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="DHW is OFF" /></td>
<td>DHW is OFF</td>
</tr>
<tr>
<td><img src="image" alt="DHW setpoint is satisfied" /></td>
<td>DHW setpoint is satisfied</td>
</tr>
<tr>
<td><img src="image" alt="DHW tank is calling for hot water" /></td>
<td>DHW tank is calling for hot water</td>
</tr>
</tbody>
</table>

### Window contact
Logic to optimize radiant terminals and air units in case of open windows.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="The open windows logic is enabled but window is closed" /></td>
<td>The open windows logic is enabled but window is closed</td>
</tr>
<tr>
<td><img src="image" alt="Windows is open" /></td>
<td>Windows is open</td>
</tr>
</tbody>
</table>

### Alarm and warning messages

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="No active warnings or alarms" /></td>
<td>No active warnings or alarms</td>
</tr>
<tr>
<td><img src="image" alt="Warning message" /></td>
<td>Warning message</td>
</tr>
<tr>
<td><img src="image" alt="Alarm message" /></td>
<td>Alarm message</td>
</tr>
</tbody>
</table>

### On/Off

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="System OFF" /></td>
<td>System OFF</td>
</tr>
<tr>
<td><img src="image" alt="System ON" /></td>
<td>System ON</td>
</tr>
</tbody>
</table>

### Dashboard

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Temperature" /></td>
<td>Temperature</td>
</tr>
<tr>
<td><img src="image" alt="Target temperature (evaluate by the logics)" /></td>
<td>Target temperature (evaluate by the logics)</td>
</tr>
<tr>
<td><img src="image" alt="Setpoint" /></td>
<td>Setpoint</td>
</tr>
<tr>
<td><img src="image" alt="Supply temperature" /></td>
<td>Supply temperature</td>
</tr>
<tr>
<td><img src="image" alt="Return temperature" /></td>
<td>Return temperature</td>
</tr>
<tr>
<td><img src="image" alt="Mixing valve opening" /></td>
<td>Mixing valve opening</td>
</tr>
</tbody>
</table>