

6.3 Maintenance

The Home/Maintenance page gives detail about device conditions and offers recommendations for maintenance or service via “Service By” dates. The interval or lifespan for devices are set in the Devices / Maintenance pages and reflected on the Home / Maintenance page.

For example, Spectrum sensor service or inspection dates for lamps, dryer pack, and flow cell are shown on the page below. The percentage number for Interval indicates lifespan used. Therefore, lamp life has 51% consumed and 49 percent life remaining. In the example below, Service By dates for the dryer pack and flow cell indicate service should be done immediately.

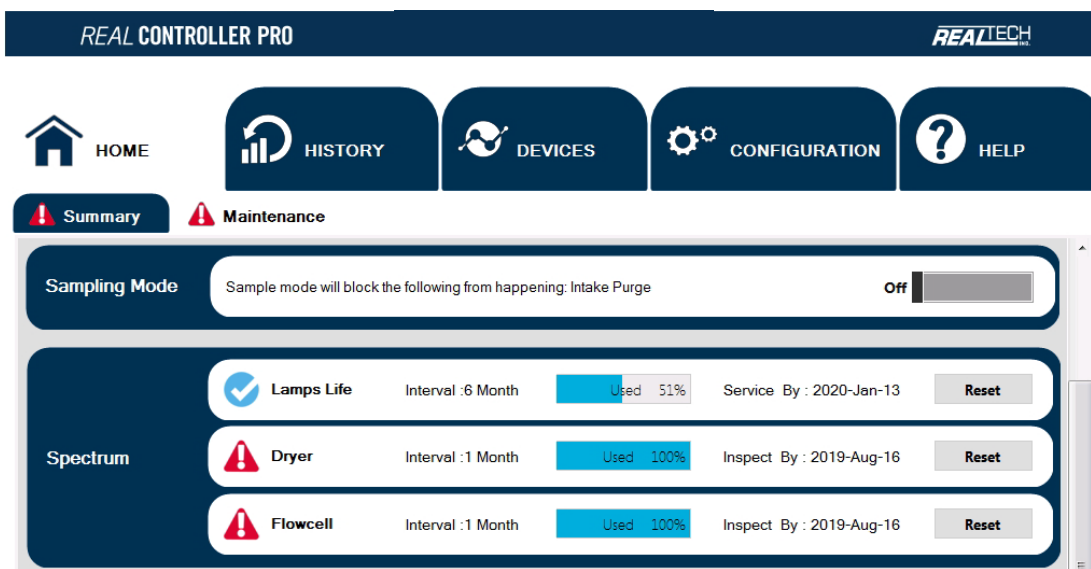


Figure 6.1 (Maintenance Tab)

Go to the Devices / Spectrum / Maintenance page. Here, you can see how Interval dates on the Home / Maintenance page are tied to entries for Total Life for each device. For example, the dryer pack Total Life of 30 days corresponds to the Interval of 1 month on the Home / Maintenance page.

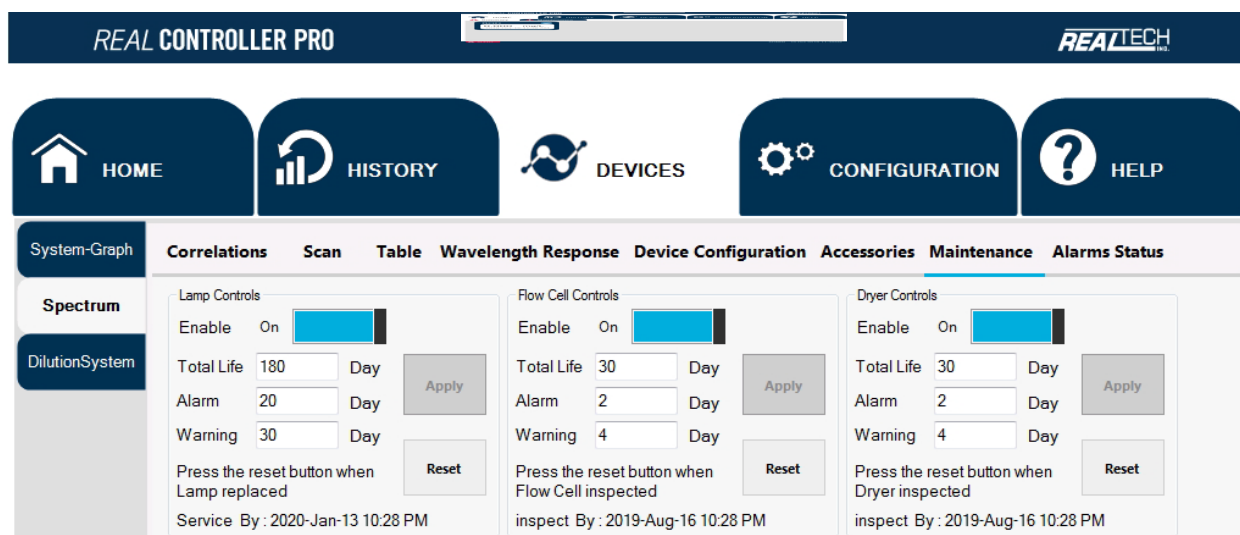


Figure 6.2 (Maintenance Dates and Intervals)

6.3.1 Sampling Mode

Sampling Mode is a feature located on the Home > Maintenance tab to aid in the collection of grab samples. When enabled, processes that could interfere with the process of collecting samples are disabled. For example, air purging of the intake line leading to the Spectrum sensor is shut down during the sample collection period.

If any alarms are in effect, a warning page will appear. It is necessary to remove the source of alarm before proceeding to collect samples.



NOTE: Sampling mode should only be set to “ON” when grab samples are being taken. Otherwise, leave it in the “OFF” position.

6.4 History

The History tab displays a graph of recently measured samples, with the concentration on the Y axis and time on the X axis.

The checkboxes on the left-hand side allow the user to select which measured parameters are displayed on the graph. The user can also configure the scales for the graph with the controls along the top of the graph.

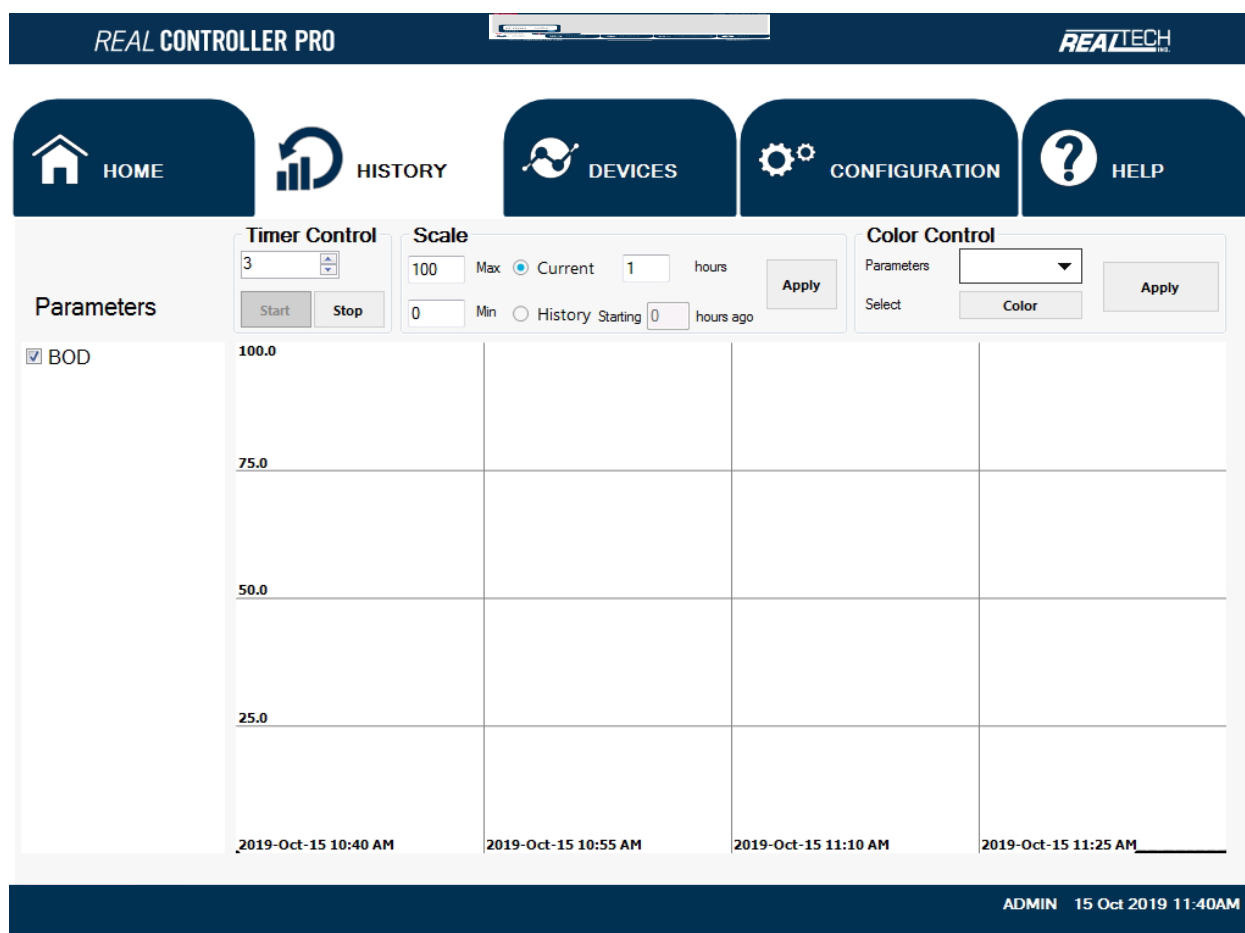


Figure 6.3 (History Graph)

6.5 Devices

The Devices tab allows the user to view and configure each device that is connected to the controller. Click the Devices tab and the installed devices in the system are then listed in the vertical menu. In the example below, you can see a system composed of a UviTec Controller Pro, a Spectrum sensor, and a Cleaning System.

A selected device is identified by black type on a white background. In the illustration, System-Graph is selected and displayed in the window.

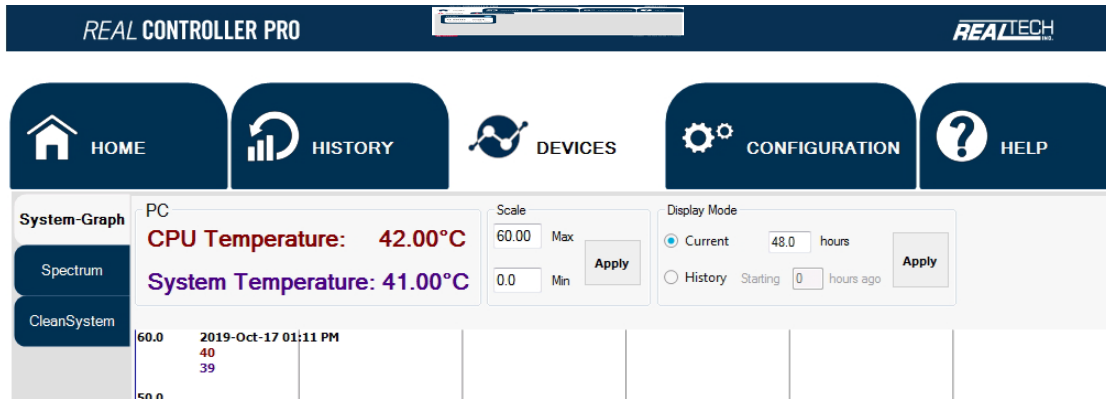


Figure 6.4 (Devices Tabs)

ABB ships systems to a customer's location with all the devices connected to the controller and listed in the horizontal menu.

Occasionally, a device may be added after a system has been installed, for example, a probe sensor or accessory. If so, the user can add a sensor or accessory from the Configuration>Devices and Sensors Configuration Tab. See next page.

6.5.1 Adding / Enabling / Removing Devices

6.5.1.1 Adding Sensors / Devices

The middle portion of the Configuration>Devices and Sensors Configuration Tab is repeated below with popups tied to the addition of sensors or accessories.

Once the Add Sensor or Add Device button is pressed, the popup appears. Click the dropdown box, make your selection (adding any settings, sensor name, and version number), and then click the Add button. No message will tell you an addition has been made; however, if you click the Devices tab, you will see the device has been added to the vertical menu. Refer to individual sensor or device manuals for more detail on adding / enabling.

Add/Edit Real Sensors

Select Sensor: ML1500, ML2000, ML3000, ML4000

Sensor Name: ML1500

Slave ID: [Red box highlights field]

Controller Based Cleaning: Off

Show ON Summary: ☐ UVA ☐ UVT ☐ Correlation

Add Cancel

Add an ABB ML sensor.

Adding your own sensor

Add/Edit External Sensor

Sensor Name: Ns

Sensor Type: 4-20mA ADAM, 4-20mA REAL, Real Probe, ION Meter, Slave Sensor, Other

Unit: [Red box highlights field]

Connection Type: Serial-RTU

Port: [Red box highlights field]

Value At 20mA: 1.0

Value At 4mA: 0

Devices and Sensors Configuration

COM-Ports Setting Program Co

ML-Sensors: Add Sensor, Edit Sensor, Remove Sensor

Configurations (Master Controls): Add Sensor, Edit Sensor, Remove Sensor

Smart-Sense Correlation: Add, Edit, Remove

Real Accessories: Add Device, Edit Device, Remove Device

Record External Sensor Log: Save Log Globally: Off, Every 1 Minutes, Apply

Add an ABB sensor.

AddEditRealSensors

Selected Sensor: S Probe, SA Probe, PH Probe, DO Probe, TURB Probe, CONDI Probe, SL Series

Sensor Name: SA Probe

Slave ID: PH Probe

Version Number: TURB Probe

Add Cancel

Add an ABB accessory.

Add/Edit Real Devices

Selected Device: [Red box highlights field]

Selected Type: Real Clean System, Real Flow Detector, Real Dilution System, Adam 420mA Output, Real Pump Controller, Real Digital I/O, Real 420mA Output, Real Standalone Air Purge

Device Name: [Red box highlights field]

Slave ID: [Red box highlights field]

Version Number: [Red box highlights field]

Add Cancel

The Slave ID is entered automatically into the Slave ID field. This ID should not be changed by the user unless requested by ABB.

Version Number – if only one exists, the field is greyed out. If more than one version exists, select Version 2 (most recent) over Version 1 (oldest).

AddEditRealSensors

Selected Sensor: CONDI Probe

Sensor Name: Conductivity

Slave ID: 30

Version Number: Version-1

Add Cancel

6.5.1.2 Other Controls

Note the provision of simple enable/disable slider buttons on the right side of the Devices and Sensors Configuration page. These are for certain devices that cannot be added through the previously described method.

Similarly, for a system with a Spectrum sensor, the Spectrum slider will need to be set to the On position for Spectrum operation. Once enabled, Spectrum configuration settings and current readings will appear under Devices > Spectrum.

The Lab Sample mode slider is identical to the Sample Mode slider on the Home > Maintenance tab.

The Dual Feed accessory requires the DIO board to be attached to the controller, and the Dual Feed slider pictured below to be enabled. Once enabled, timing settings will appear under Devices > Dual Feed.

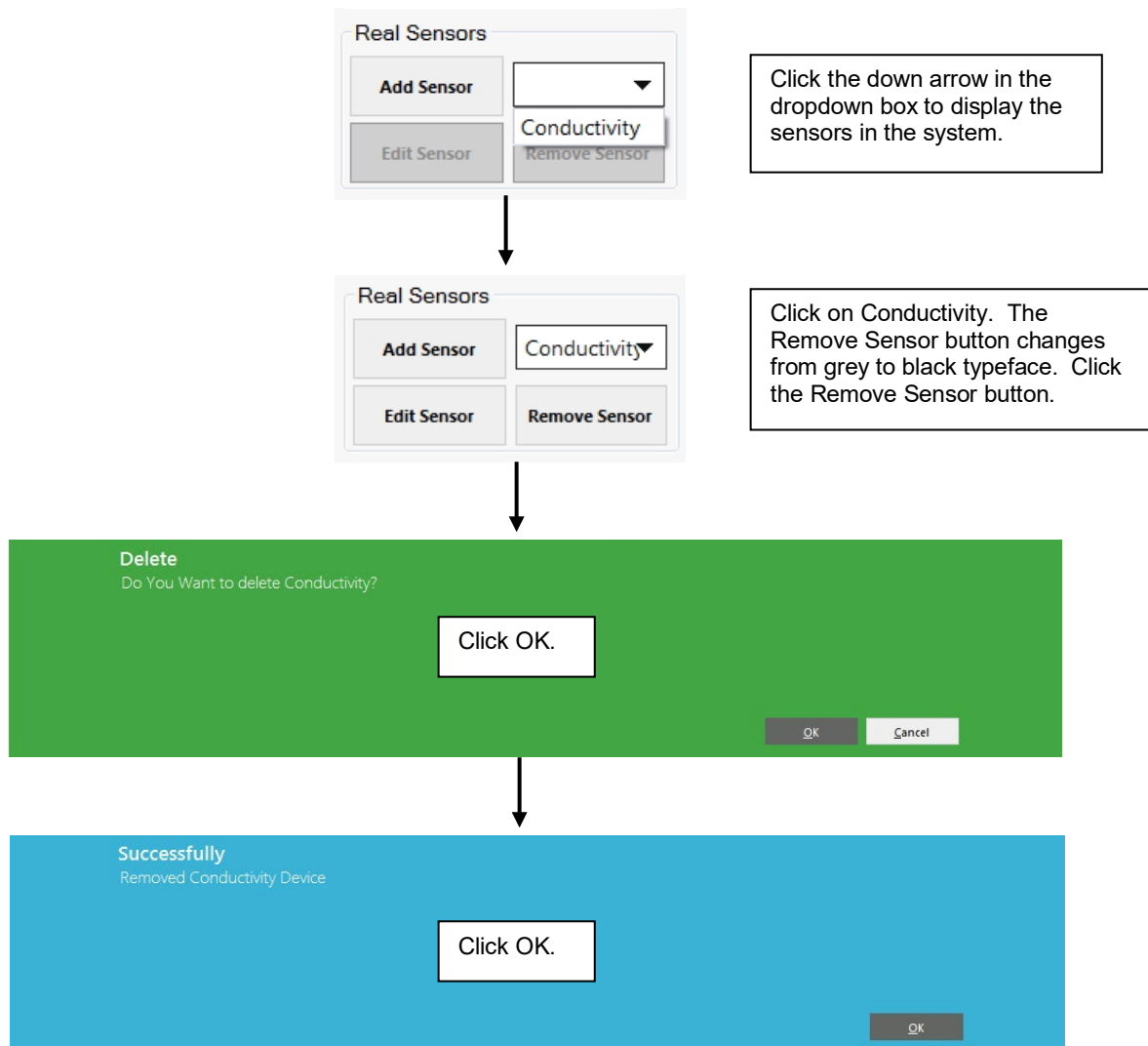
The screenshot displays the 'Devices and Sensors Settings' page with the following sections:

- ML-Sensors:** Includes 'Add Sensor', 'Edit Sensor', and 'Remove Sensor' buttons.
- Smart- Sense Correlation:** Includes 'Add', 'Edit', and 'Remove' buttons.
- Real Sensors:** Includes 'Add Sensor', 'Edit Sensor', and 'Remove Sensor' buttons.
- Configurations (Master Controls):**
 - External Sensors:** Includes 'Add Sensor', 'Edit Sensor', and 'Remove Sensor' buttons.
 - Real Accessories:** Includes 'Add Device', 'Edit Device', and 'Remove Device' buttons.
- Record External Sensor Log:** Includes a 'Save Log Globally' toggle (set to Off), an 'Every 1 Minutes' input, and an 'Apply' button.
- IoT Settings (highlighted in a red box):**
 - Spectrum:** Off (slider)
 - Lab Sample Mode:** Off (slider)
 - Dual Feed:** Off (slider)
 - Booster Pump 420mA Control:** Off (slider)

Figure 6.5 (Other Controls)

6.5.1.3 Remove a Device

Remove a sensor or device (accessory) by selecting the item from the dropdown box of the category it belongs to i.e., UviTec Sensors, UviTec Accessories, or External Sensors. Click the Remove Sensor or Remove Device button. Popups will appear asking you to confirm your selection. An example of removing a Conductivity sensor is shown below.



6.5.2 System Graph

The System-Graph tab displays the system temperature and CPU temperature of the PC over time. The temperature (degrees Celsius) is plotted on the Y axis and time on the X axis.

Scaling for the graph can be adjusted using the control at the top of the graph.

