



Linear Scaling Assistant

For HOBOWare® Pro Software

User's Guide

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About Data Assistants

Data assistants are plug-in utilities for HOBOWare Pro. They let you create new data series by combining data recorded by the logger with additional data that you enter before you display the plot.

If your logger or datafile contains data that supports a data assistant, you will see a Data Assistants section at the bottom of the Plot Setup dialog. Select an assistant and click **Process** to continue. Some Data Assistants are also available when launching the logger.

For information about installing and managing data assistants, refer to the following page at the Onset web site:

<http://www.onsetcomp.com/dataAssistants>

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Introduction

The Linear Scaling Assistant converts a data series from a compatible sensor to some other measurement when you enter two raw values and their corresponding measurement values. The conversion must be based on a linear relationship. Nonlinear scaling is not supported.

Supported Sensors

This assistant is available for the following sensors:

- CABLE-2.5-STEREO Voltage Input Cable (for U12 loggers)
- CABLE-4-20-mA Input Cable (for U12 loggers)
- CABLE-ADAP5 (for U12 loggers)
- CABLE-ADAP10 (for U12 loggers)
- S-CIA-xxxx 12-bit 4-20mA Input Adapter
- S-VIA-xxxx 12-bit Voltage Input Adapter
- S-FS-CVIA FlexSmart™ Analog Module
- S-FS-TRMSA FlexSmart TRMS Module
- U30 Analog Sensor Port
- S-LWA-xxxx Leaf Wetness
- S-SMx-xxxx Soil Moisture

The Linear Scaling Assistant can be applied only to logged data from these sensors.

Other Types of Scaling

There are also other types of scaling available within HOBOWare Pro that may apply to your configuration:

- FlexSmart modules are set up for scaling prior to launch, as part of the module configuration process. (Consult the *HOBOWare User's Guide* for details.) You can later rescale these scaled series using the Linear Scaling Assistant if you need to create a different measurement.
- The Pulse Scaling Assistant is similar to the Linear Scaling Assistant, but only allows scaling of pulse data. Consult the *Pulse Scaling Assistant User's Guide* for compatible adapters.

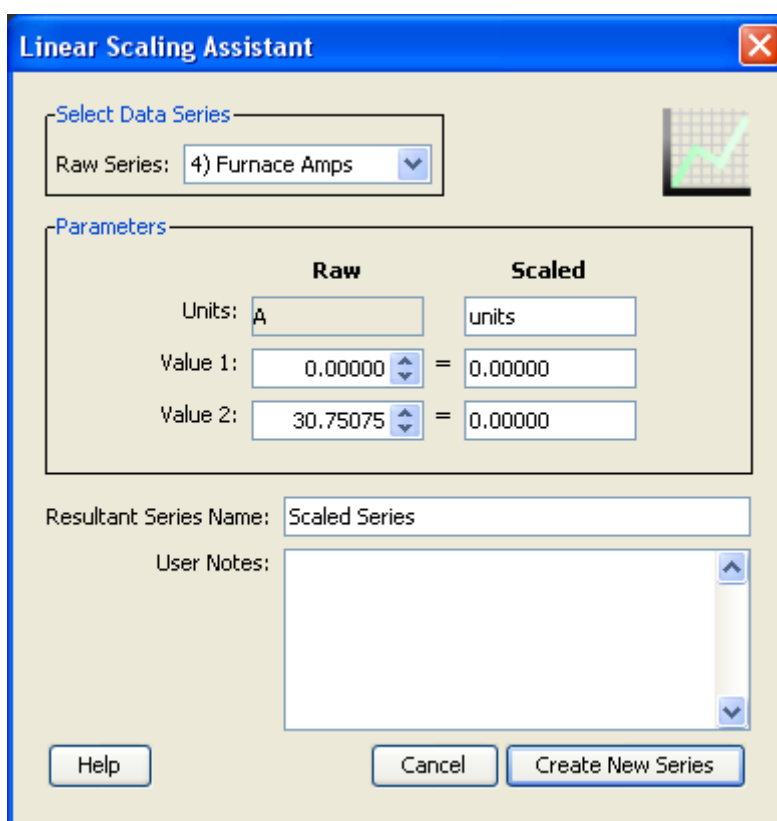
Using the Linear Scaling Assistant

Running the Assistant

1. **At launch time:** Using a logger with a sensor that supports scaling at launch time, click the Launch icon on the toolbar. Click the Scaling button. Double click the assistant name or select the assistant and click the Create button.

At plot setup: Read out a logger or open a file that supports linear scaling. Select the Linear Scaling Assistant and click the Process button.

2. In the Linear Scaling Assistant dialog, choose the data series you want to convert from the Raw Series drop-down list.



The image shows the 'Linear Scaling Assistant' dialog box. It has a title bar with a close button. The dialog is divided into several sections. At the top, there is a 'Select Data Series' section with a dropdown menu labeled 'Raw Series' showing '4) Furnace Amps'. To the right of this is a small icon of a line graph. Below this is a 'Parameters' section. Inside 'Parameters', there are two columns: 'Raw' and 'Scaled'. Under 'Raw', there is a 'Units' field with 'A', and two 'Value' fields: 'Value 1' with '0.00000' and 'Value 2' with '30.75075'. Under 'Scaled', there is a 'units' field and two corresponding 'Value' fields, both showing '0.00000'. Below the 'Parameters' section is a 'Resultant Series Name' field with 'Scaled Series'. Below that is a 'User Notes' text area. At the bottom, there are three buttons: 'Help', 'Cancel', and 'Create New Series'.

Parameters	
Raw	Scaled
Units: A	units
Value 1: 0.00000	= 0.00000
Value 2: 30.75075	= 0.00000

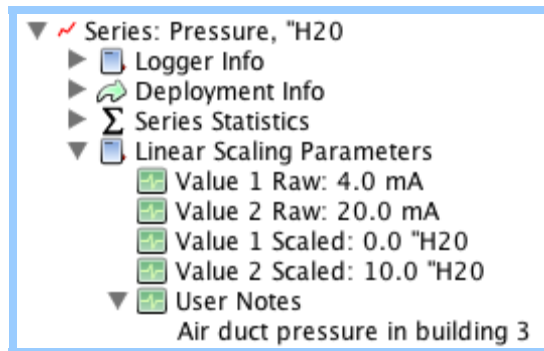
Resultant Series Name: Scaled Series

User Notes:

Buttons: Help, Cancel, Create New Series

3. In the Scaled column of the Parameters panel, type the units name for the scaled series and enter the scaled values in the Scaled column to correspond with the numbers in the Raw column. (The default values in the Raw column are based on the high and low values supported by the sensor, but you may use different values, as long as those values fall within the sensor's range.) These numbers establish a linear relationship between raw and scaled values.
4. In the Resultant Series Name field, keep the default name or type a new one.
5. Type any User Notes concerning the series you are creating (optional).
6. Click the Create New Series button.

7. If you ran the assistant from the Launch window, the Scaling button displays the number of newly created series. If using this assistant while plotting, the new series is listed and selected in the Plot Setup dialog. Click the Plot button to display the series.
8. The scaled series will appear in the plot immediately or when you read out the logger if configuring this at launch time. The settings for the scaled series are listed in the Details pane of the plot:



Available Filters

After the plot is displayed, you may apply minimum, maximum, and average filters to the scaled series as you would for any sensor data series in HOBOWare Pro.

Software Updates

If you have an Internet connection, HOBOWare Pro can periodically ask if you would like it to check the Onset website for software updates. This includes updates to your data assistants.

The default is to check once per week, but you can configure HOBOWare Pro to check daily or monthly. In Preferences, go to the General pane. **Check for HOBOWare updates** is located under the Startup heading.

You may check for updates manually at any time. Choose **Check for Updates** from the Help menu.