Sources Section

Sources Configuration Page

In the **System Explorer** window configuration tree, expand the **Power Electronics Add-On** custom device and select **Circuit Model >> Sources** to display this page. After a model is successfully loaded in the **Circuit Model Section**, this page is added to the configuration tree and populated with a named list of the **Source** components found in the circuit model. An incoming signal must be mapped to each Source to drive its voltage or current as it is simulated in the eHS solver.

For each Source, the following information and mapping options are available at edit-time.

Type	Displays the type of source:	
	• **Voltage Source**	The Source will output a voltage during the simulation. The magnitude of this voltage is determined by the magnitude of the signal mapped to the Source.
	• **Current Source**	The Source will output a current during the simulation. The magnitude of this current is determined by the magnitude of the signal mapped to the Source.
Group	Filters the list of available elements to be mapped to the Source. The available options are defined by the selected **Hardware Configuration**, however it is typical to see the following options by default:	
	• **CPU (VeriStand)**	VeriStand custom device channels on the CPU. If this Group is selected, the **Element** dropdown is populated with a single option displaying the name of the custom device channel whose value is mapped.
	• **Sinewaves**	Sinewave outputs of the **Sinewave Generators**. In the **Element** dropdown, select the index of the Sinewave Generator whose output signal to map.
	• **Machine**	Output channels of the **Machine Model**. In the **Element** dropdown, select the name of the channel to map.
	• **Analog Inputs**	**Analog Input** channels of the PXI card. In the **Element** dropdown, select the index of the AI channel to map.
Element	The name or index of the signal to be mapped to the Source. The options available in this dropdown depend on the selected Group.	

Sources Section Channels

After a model has been loaded in the **Circuit Model Section**, the Sources section of the Configuration Tree is populated with a list of channels corresponding to each Source component found in the circuit model. If a Source is mapped to the **CPU (VeriStand)** Group described above, then the value of its corresponding channel defines the magnitude of the Source during the simulation. If the **CPU (VeriStand)** Group is unused, then the value of the channel does not affect the circuit simulation.

Power Electronics Add-On

- Circuit Model 1
  - Measurements
  - PMSM SH 1
  - PMSM SH 2
  - PWM Generators
  - Sinewave Generators
  - Sources
    - U01 Va
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  - SPWM Generators
  - Switches
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- Hardware Configuration

Sources Description

Sources are input signals to the eHS electrical circuit model. They are either current or voltage sources whose output signals can be be driven by custom device channels, analog inputs, signal generators, and more. In the electrical circuit model, it is recommended (but not necessary) to denote the sources of the model with the *UXX* prefix as seen in the circuit model diagram below. See **Supported Circuit Editors** for a list of supported Source components in the circuit model.