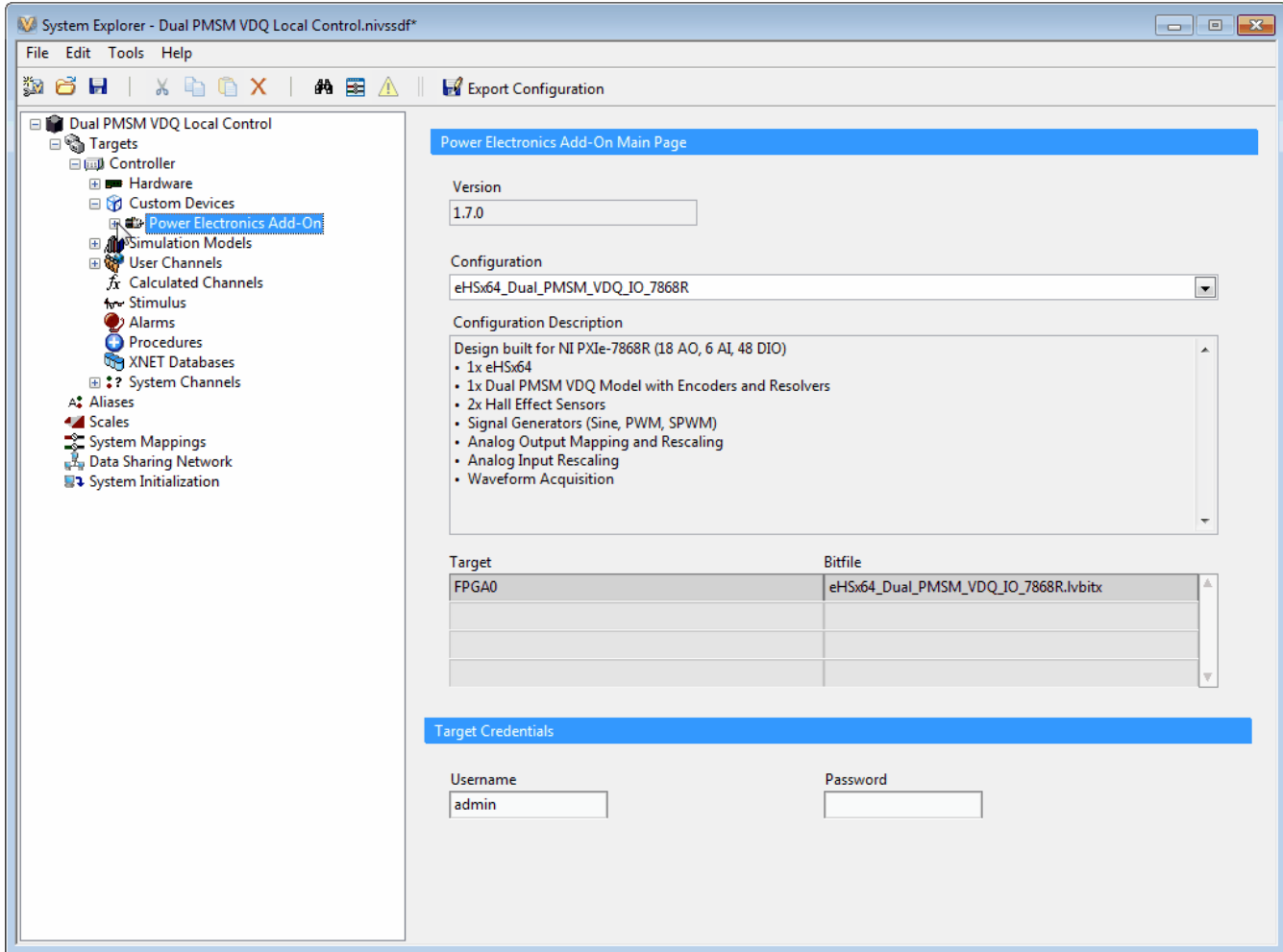


# 3.3 Configuring the Electrical Models

The circuit model file has been loaded into the example project already, although the steps below can be used to reload the circuit model. This is typically only necessary if the circuit has been modified. For more information, please refer to [How to Add a Circuit Model to the System Definition](#).

- In the Configuration Tree, under **Power Electronics Add-On**, click **Circuit Model**.
- In the configuration page, click to **Browse** for the **Circuit Model File Path**.
- Select the model (.mdl) file at the **Circuit Model File Path** shown below. This automatically triggers a model update in the System Definition.
- Wait for the update to complete.
- (optional) Click the **Refresh** button to see additional model information.
- Click **Save**.

**Circuit Model File Path:** <Public Documents>National Instruments\NI VeriStand 20XX>\Examples\OPAL-RT\Power Electronics Add-On\PMSM VDQ Local Control\Circuit Model\PMSM\_eHS\_UB.mdl



## Configuring the PMSM Model

In this example, the PMSM model and associated sensors have been pre-configured. For more information related to machine configuration, please refer to the [PMSM BLDC Section](#). Explore the configuration of the machine by following the steps below.

- In the Configuration Tree, expand **Circuit Model >> Machines** and click **PMSM BLDC 1** to open the configuration page for the machine.
- Observe the configured machine parameters. The Input Mapping subsection allows the outputs of the circuit model to be easily connected to the inputs of the machine.
- In the Configuration tree, expand **PMSM BLDC 1** and click **Mechanical Model** to view the mechanical model parameters.
- Confirm that the parameter values match those in the table below.

**Motor Configuration**

<b>Motor Type</b>	PMSM Constant Ld/Lq
<b>Direct Inductance (H)</b>	0.002984
<b>Quadrature Inductance (H)</b>	0.004576
<b>Permanent Magnetic Flux (Wb)</b>	0.25366
<b>Phase A Resistance (Ohm)</b>	0.12
<b>Phase B Resistance (Ohm)</b>	0.12
<b>Phase C Resistance (Ohm)</b>	0.12
<b>Pole Pairs</b>	3
<b>Direct Quadrature Transform Angle Offset</b>	Aligned
<b>Sample Time (s)</b>	1.2E-7
<b>Mechanical Model Configuration</b>	
<b>Viscous Damping</b>	0.3665
<b>Static Friction</b>	0.0019
<b>Inertia</b>	0.0167
<b>Mechanical Model Mode (VeriStand Channel)</b>	1

? Unknown Attachment