

Simulink version: 10.4

Model version: 1.3

System: NEWCKT

Current run: 26-Mar-2022 10:46:17

Treat as Referenced Model: off

Run Summary

Pass	Fail	Warning	Not Run	Total
✓ 107	✗ 2	⚠ 17	📄 0	126

Modeling Standards for JMAAB**1 Naming Conventions** ✓ 11 ✗ 1 ⚠ 2 📄 0**Check file names**

Abnormal exit: Unrecognized function or variable 'INCOMPLETE'.

Check folder names**Characters allowed for folder names****Warning**

The following folders have invalid names:

- C:\Users\Admin\Downloads\Telegram Desktop
- C:\Users\Admin\Downloads\dstat_4leg (1)
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.0
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.1
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.2
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.3
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.4
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.5
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.6
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\equationrenderer\release\equationrenderer-ui
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\install\product_installer_ui\nls\ja-jp
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\install\product_installer_ui\nls\ko-kr
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\install\product_installer_ui\nls\zh-cn

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Recommended Action

Consider having only alphanumeric characters and underscores in folder name.

Underscore at the beginning**Warning**

The following folders have underscores at the beginning of the folder name:

- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64

Recommended Action

Consider having alphabetic character at the beginning of the folder name.

Single reserved MATLAB word**Warning**

The following folders have reserved MATLAB words as the folder name:

- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\extern
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\bin\win64\connector_bootstrap_plugins\connector
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\bin\win64\connector_plugins\connector
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\bin\win64\connector_plugins\connector\security
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\bin\win64\dialogs\foundation\platform

- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\platform
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\Inline
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\RandStream
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\SimTimeseries
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\appdesigner
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\calendarDuration
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\categorical
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\class
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\codegen
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\datetime
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\demos
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\duration
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\guide
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\interp1
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\interp2
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\interp3
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\interpN
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\libpointer
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\load
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\memmapfile
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\modes
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\mtree
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\print
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\settings
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\table
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\timeseries
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\timetable
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tscollection
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\uiemode
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\voronoin
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\warning
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\xlsread
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\codetools\codegen
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\codetools\private
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\dataTools\preprocessing\tabular
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\graphics\shape\internal\image
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\hg\patch
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\hg\text
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\specgraph\private
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\timeseries\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tscollection\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tsdata\timeseries
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tsdata\tscollection
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tsdata\timemetadata\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tsexplorer\Workspace
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\en\tsguis\corrplot
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\Inline
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\RandStream
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\SimTimeseries
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\appdesigner
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\calendarDuration
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\categorical
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\class
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\codegen
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\datetime
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- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\interp1
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\interp2
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\interp3
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\interpN
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\libpointer
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\load
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\memmapfile
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\modes
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\mtree
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\ja_JP\print

- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\appdesigner
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\calendarDuration
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- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\duration
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- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\interp2
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\interp3
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\interpN
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- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\mtree
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- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\warning
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\xlsread
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\codetools\codegen
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\codetools\private
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\dataTools\preprocessing\tabular
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\graphics\shape\internal\image
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\hg\patch
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\hg\text
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\specgraph\private
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\timeseries\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tscollection\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tsdata\timeseries
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tsdata\tscollection
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tsdata\timemetadata\set
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tseExplorer\Workspace
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\resources\MATLAB\zh_CN\tsGuis\corrplot
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\sys\opengl

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Recommended Action

Consider not having reserved MATLAB word as the folder name.

Number at the beginning

Warning

The following folders have numbers at the beginning of the folder name:

- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.0
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.1
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.2
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.3
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.4
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.5
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\remote\proxy\1.6
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\equationrenderer\release\derived\3p
- C:\Users\Admin\Downloads_temp_matlab_R2021b_win64\ui\install\product_installer_ui\derived\3p

Recommended Action

Consider having alphabetic character at the beginning of the folder name.



Check subsystem names

Identify subsystem names with incorrect characters.

Passed

All the subsystem names use correct characters.

✓ Check port block names

Identify Import or Outport block names with incorrect characters.

Passed

All the Import or Outport block names use correct characters.

⚠ Check character usage in block names

Characters allowed for block names

Warning

The following blocks have invalid names:

- [NEWCKT/20 Ohms Resistor](#)
- [NEWCKT/OFF Case](#)
- [NEWCKT/ON Case](#)
- [NEWCKT/Scope for Battery 1](#)
- [NEWCKT/Scope for Battery 2](#)
- [NEWCKT/Step input](#)
- [NEWCKT/Step input](#)
- [NEWCKT/Switch case for OFF Case](#)
- [NEWCKT/Switch case for ON Case](#)

Recommended Action

Consider having only alphanumeric characters and underscores in block name.

Number at the beginning

Warning

The following blocks have numbers at the beginning of the block name:

- [NEWCKT/20 Ohms Resistor](#)

Recommended Action

Consider having alphabetic character at the beginning of the block name.

✓ Check character usage in signal names and bus names

Identify signal and bus names with invalid characters.

Passed

No invalid characters are used in signal and bus names.

✓ Check character usage in parameter names

Identify parameter names with invalid characters.

Passed

No invalid characters are used in parameter names.

✓ Check length of model file name

Check length of model file name

Passed

Model name is valid.

Check length of folder name at every level of model path

The model file name is: [NEWCKT](#)

Passed

Folder names are valid.

Check length of subsystem names

Check length of subsystem names

Passed

All subsystem names are valid.

Check length of Import and Outport names

Check length of Import and Outport names

Passed

All Import and Outport names are valid.

Check length of signal and bus names

Check length of signal and bus names

Passed

All signal and bus names are valid.

Check length of parameter names

Check length of parameter names

Passed

All parameter names are valid.

Check length of block names

Check length of block names

Passed

All block names are valid.

2 Model Architecture 1 0 0 0

Check for mixing basic blocks and subsystems

Identify levels in the model that include basic blocks and subsystems. Each level of a model must be designed with blocks of the same level (for example, only subsystems or only basic blocks).

Passed

The model does not mix basic blocks and subsystems at the same level.

3 Model Configuration Options 1 0 1 0

Check Implement logic signals as Boolean data (vs. double)

Identify whether **Implement logic signals as Boolean data (vs. double)** is selected.

Passed

Implement logic signals as Boolean data (vs. double) is selected.

⚠ Check diagnostic settings for incorrect calculation results

Identify data validity diagnostic settings which detect incorrect calculation results.

Warning

The model configuration parameters are not set to the recommended values specified in the data file.

Status	Parameter	Current Value	Recommended Values
Warning	Division by singular matrix (CheckMatrixSingularityMsg)	none	error
Warning	Inf or NaN block output (SignalInfNanChecking)	none	error
Warning	Wrap on overflow (IntegerOverflowMsg)	warning	error
Warning	Saturate on overflow (IntegerSaturationMsg)	warning	error

Recommended Action

Follow the links in the result table to modify the model configuration parameters.

☒ 4 Simulink 39 1 14 0

⚠ Check for Simulink diagrams using nonstandard display attributes

Identify nonstandard display attributes in Simulink diagrams.

Check format settings

Identify incorrect model-level format options.

Warning

The following format display options are incorrect.

Display Attribute	Recommended Value	Actual Value
Debug > Information Overlays > Nonscalar Signals	on	off
Modeling > Environment > Model Browser	off	on
Debug > Information Overlays > Show All Links	none	disabled

Recommended Action

Set the format options to the recommended value.

Check block colors

Identify blocks using nonstandard colors.

Passed

All blocks use standard colors.

Check canvas colors

Identify canvases that are not white.

Passed

All diagrams use a white canvas.

Check diagram zoom

Identify diagrams that do not have zoom factor set to 100 %.

Note: Zoom factors can differ for each instance of a model diagram opened in Simulink Editor

Warning

The following diagrams do not have zoom factor set to 100 percent:

- [NEWCKT](#)

Recommended Action

For each listed diagram, select **Modeling > Environment > Zoom > Normal View (100%)**.

✓ Check Model font settings

Identify blocks and charts with different font settings from input parameters.

Passed

Font settings of the blocks and charts and input parameters are same.

✓ Check position of Import and Outport blocks

Identify inappropriately placed Import and Outport blocks.

Passed

No Import or Outport blocks found which are inappropriately placed.

⚠ Check whether block names appear below blocks

Identify blocks where the name is not displayed below the block.

Warning

The following blocks have names that do not display below the blocks:

- [NEWCKT/20 Ohms Resistor](#)
- [NEWCKT/Battery/Model](#)
- [NEWCKT/Battery/Model/E_NL](#)
- [NEWCKT/Battery/Model/E_dyn_Charge](#)
- [NEWCKT/Battery/Model/E_dyn_Discharge](#)
- [NEWCKT/Battery/Model/Exp](#)
- [NEWCKT/Battery/Model/Exp/Li-Ion](#)
- [NEWCKT/Battery/Model/Exp/Exp](#)
- [NEWCKT/Battery/Model/current](#)
- [NEWCKT/Battery/Model/current2](#)
- [NEWCKT/Battery/+](#)
- [NEWCKT/Battery/-](#)
- [NEWCKT/Battery/m](#)
- [NEWCKT/Battery1/Model](#)
- [NEWCKT/Battery1/Model/E_NL](#)
- [NEWCKT/Battery1/Model/E_dyn_Charge](#)
- [NEWCKT/Battery1/Model/E_dyn_Discharge](#)
- [NEWCKT/Battery1/Model/Exp](#)
- [NEWCKT/Battery1/Model/Exp/Li-Ion](#)
- [NEWCKT/Battery1/Model/Exp/Exp](#)
- [NEWCKT/Battery1/Model/current](#)
- [NEWCKT/Battery1/Model/current2](#)
- [NEWCKT/Battery1/+](#)
- [NEWCKT/Battery1/-](#)
- [NEWCKT/Battery1/m](#)
- [NEWCKT/Bus Selector](#)
- [NEWCKT/Bus Selector1](#)
- [NEWCKT/Scope for Battery 1](#)
- [NEWCKT/Scope for Battery 2](#)

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Recommended Action

Change the location such that the block name is below the block.

Check the display attributes of block names

Identify whether to display block names.

Check for non-descriptive displayed block names

Identify block names that are displayed but should be hidden due to a lack of a descriptive name.

Passed

All displayed names provide descriptive information.

Check for missing block names

Identify block names that are hidden but should be displayed to show a descriptive name.

Passed

All displayed names provide descriptive information.

Check for blocks with hidden names and obvious function

Identify block names that are displayed but can be hidden due to obvious behavior.

Warning

The following block names can be hidden:

- [NEWCKT/OFF Case](#)
- [NEWCKT/ON Case](#)
- [NEWCKT/Switch case for OFF Case](#)
- [NEWCKT/Switch case for ON Case](#)

Recommended Action

Hide the block name by selecting (**Format > Auto Name > Hide Automatic Block Name**).

Check for nondefault block attributes

Identify blocks that use and fail to display nondefault values.

Passed

Model displays all block parameter values that are not default values.

Check trigger signal names

Identify trigger blocks where the origin of the trigger signal and the destination have dissimilar names.

Passed

No violation of the guideline for use of trigger signal names.

Check for unconnected signal lines and blocks

Check for unconnected subsystems and basic blocks

Warning

The following blocks in the model are not connected:

- [NEWCKT/Ideal Switch1](#)
- [NEWCKT/Ideal Switch2](#)

Recommended Action

Connect the blocks to the correct source or destination block.

If the destination block is not known, use a Terminator or Ground block to terminate the line.

Check for unconnected signal lines

Warning

The following signal lines in the model are not connected:

- [NEWCKT](#)
- [NEWCKT](#)

- [NEWCKT](#)
- [NEWCKT](#)
- [NEWCKT](#)
- [NEWCKT](#)

Recommended Action

Connect the signal lines to the correct source or destination block.

If the destination block is not known, use a Terminator or Ground block to terminate the line.

⚠ Check usage of Switch blocks

Identify Switch blocks that do not use Boolean inputs for the switch condition (input 2), and do not use $u2 \approx 0$ for the **Criteria for passing first input** block parameter.

Check Switch block parameters

Identify Switch blocks with the parameter **Criteria for passing first input** not set to $u2 \approx 0$.

Warning

The block parameter **Criteria for passing first input** is not set to $u2 \approx 0$ for the following blocks:

- [NEWCKT/Switch case for OFF Case](#)
- [NEWCKT/Switch case for ON Case](#)

Recommended Action

Set the block parameter **Criteria for passing first input** to $u2 \approx 0$. This might require reworking the logic associated with the Switch block.

Check for Boolean switch condition

Identify blocks that do not use Boolean signal switch conditions (input 2).

Warning

The following Switch blocks use non-Boolean signals for the switch condition:

- [NEWCKT/Switch case for OFF Case](#)
- [NEWCKT/Switch case for ON Case](#)

Recommended Action

Convert the input condition to a Boolean signal.

✓ Check usage of Relational Operator blocks

Identify Relational Operator blocks that connect to constants with the first (upper) input value.

Passed

This model does not contain Relational Operator blocks.

✓ Check Indexing Mode

Identify blocks and charts with inconsistent Indexing mode.

Passed

No inconsistent Indexing mode used in the model.

✓ Check usage of tunable parameters in blocks

Identify tunable parameters used to specify expressions, data type conversions, or indexing operations.

Passed

Tunable parameters are not used in the model.

⚠ Check definition of signal labels

Identify blocks that require labeled signals. A subset of source and destination blocks require labeled signals.

Check source block labels

Warning

The following signals have no label:

- [NEWCKT/From/](#)
- [NEWCKT/From1/](#)
- [NEWCKT/From2/](#)
- [NEWCKT/Constant/](#)
- [NEWCKT/Constant1/](#)
- [NEWCKT/Constant2/](#)
- [NEWCKT/Constant3/](#)

Recommended Action

Add a new or propagated label to the signal line.

Identify blocks that require labeled signals. A subset of source and destination blocks require labeled signals.

Check destination block labels

Warning

The following signals have no label:

- [NEWCKT/OFF Case/](#)
- [NEWCKT/ON Case/](#)

Recommended Action

Add a new or propagated label to the signal line.

Check Signal name propagation

Identify incorrect signal propagation.

Passed

All subsystems and connection blocks display propagated signals.

Check usage of Discrete-Time Integrator block

Check usage of recommended settings for Discrete-Time Integrator blocks to prevent unexpected results.

Passed

All Discrete-Time Integrator blocks have recommended settings.

Check settings for data ports in Multiport Switch blocks

Identify Multiport Switch blocks that violate data port settings.

Passed

No Multiport Switch blocks found with inappropriate data port settings.

Check usage of fixed-point data type with non-zero bias

jc_0643: Fixed-point setting

Identify blocks with a fixed-point data type whose bias is not zero.

Passed

No blocks found with the Data Type Assistant mode set to "Fixed point" and a bias value other than zero

Check input and output datatype for Switch blocks

Identify Switch blocks with mismatched input and output data types.

Passed

No Switch blocks found with mismatched input and output data types

✓ Check signs of input signals in product blocks

jc_0611: Input sign for multiplication and division blocks

Identify blocks that perform division whose inputs have different sign bit.

Passed

No product block with division of different sign bits found.

✓ Check Signed Integer Division Rounding mode

jc_0642: Integer rounding mode setting

Identifies blocks with block parameter 'Integer Rounding Mode' set to 'Simplest' when the configuration parameter 'Signed integer division rounds to' is set to 'Undefined'.

Passed

Configuration parameter 'Signed integer division rounds to' is not set to 'Undefined'.

✓ Check type setting by data objects

jc_0644: Type setting

Identify blocks that violate signal data type setting if signal objects are used.

Passed

No blocks found that violate signal data type setting if signal objects are used.

✓ Check usage of the Saturation blocks

jc_0628: Usage of Saturation blocks

Identify the Saturation and Saturation Dynamic blocks that perform type casting.

Passed

No Saturation and/or Saturation Dynamic blocks perform type casting

✓ Check usage of Merge block

jc_0659: Usage restrictions of signal lines input to Merge blocks

There must not be any block between a Conditional Subsystem block and a Merge block.

Passed

No Merge block found.

✓ Check usage of Memory and Unit Delay blocks

Identify Memory blocks not using a continuous sample time

Passed

No Memory blocks found with inappropriate sample time

Identify Unit Delay blocks with non-discrete sample time

Passed

No Unit Delay blocks found with non-discrete sample time

Check block orientation

Check block orientation

Warning

The following blocks have rotated or reversed orientation:

- [NEWCKT/20 Ohms Resistor](#)
- [NEWCKT/Battery](#)
- [NEWCKT/Bus Selector](#)
- [NEWCKT/Scope for Battery 1](#)

Recommended Action

Flip/rotate the blocks to be oriented towards the right.

Check if blocks are shaded in the model

Check if blocks are shaded in the model

Passed

Blocks in the model are not shaded.

Check operator order of Product blocks

Operator order for Product blocks.

Passed

All Product blocks have valid operator order.

Check icon shape of Logical Operator blocks

Icon shape of Logical Operator blocks.

Passed

All Logical Operator blocks have consistent icon shape.

Check if tunable block parameters are defined as named constants

Check if tunable block parameters are defined as named constants

Passed

All tunable block parameters are defined as named constants

Check default/else case in Switch Case blocks and If blocks

Check if default/else case in Switch Case blocks and If blocks are set to 'on'

Passed

Conditional Control blocks are valid.

Check usage of Lookup Tables

Check usage of recommended settings for Lookup Table blocks to prevent unexpected results.

Passed

All Lookup Table blocks have recommended settings.

Check for parentheses in Fcn block expressions

Identify order of parentheses in Fcn block expressions.

Passed

All Fcn blocks use parentheses to mark operator precedence.

Check undefined initial output for conditional subsystems

Identify undefined initial output for Outports/Merge blocks in conditional subsystems

Passed

The initial output setting for all Conditional Subsystems are valid.

Check for avoiding algebraic loops between subsystems

jc_0653: Delay block layout in feedback loops

Identify delay blocks usage in feedback loops.

Passed

No delay blocks in feedback loops violate the guidelines for avoiding algebraic loops between subsystems.

Check comparison of floating point types in Simulink

jc_0800: Comparing floating-point types in Simulink

Equivalence comparison should not be used for floating point numbers.

Passed

No Equivalence comparison done on floating point numbers.

Check duplication of Simulink Data names

Simulink Data names should be unique across base workspace, model workspace and data dictionary.

Passed

All Simulink Data names are unique.

Check unused data in Simulink Model

Identify unused data in model workspace and data dictionary.

Passed

No unused data found in model workspace and/or data dictionary.

Check output data type of operation blocks

jc_0651: Implementing a type conversion

Identify operation blocks that specify output data type.

Warning

Following operation blocks explicitly specify output data type:

- [NEWCKT/Step input](#)
- [NEWCKT/Step input](#)

Recommended Action

Instead of explicitly specifying output data type on operation blocks, use 'Data Type Conversion' block when changing the data type of the block output signal.

Check Model Description

Identify layers in the model having inconsistent description format.

Warning

Following layers do not have consistent model description format:

- [NEWCKT](#)

Recommended Action

Consider having a consistent format for the model description

Example: If description tags are 'Input:, Description:, and Output:' then format should be as following:

Input: add input information here

Description: add model description here

Output: add output information here

✓ Check for consistency in model element names

Check if model elements connected to a signal are following consistent naming.

Passed

Model elements connected to a signal are following consistent names.

✓ Check for sample time setting

Check if sample time property of a block is set to -1 (inherited).

Passed

All permitted blocks have sample time set to -1 (inherited).

✓ Check usage of Sum blocks

Identify Sum block usage that can affect readability.

Passed

No violations of the guideline found with the usage of the Sum block.

⚠ Check position of signal labels

Check position of signal labels

Warning

The following signals have labels placed at the top of signal line:

- [NEWCKT/<Voltage \(V\)>](#)
- [NEWCKT/<SOC \(%\)>](#)
- [NEWCKT/<Current \(A\)>](#)

Recommended Action

Consider placing the labels underneath the signal lines.

Check overlap of signal labels

Warning

The following signals have labels which overlap other objects:

- [NEWCKT/<SOC \(%\)>](#)

Recommended Action

Consider placing the signal label so that it is readable.

✓ Check for missing ports in Variant Subsystems

Check for number of inputs/outputs to a Variant Subsystem.

Passed

No Variant Subsystems found having different number of inputs/outputs in the Variant Subsystem choices.

✓ Check for cascaded Unit Delay blocks

Identify cascaded and tapped pattern of Unit Delay blocks.

Passed

No cascaded Unit Delay blocks found that can be changed to Tapped Delay/Delay block.

✓ Check for usage of Data Store Memory blocks

Identify the usage of Data Store Memory blocks.

Passed

Usage of Data Store Memory blocks is correct.

✓ Check fundamental logical and numerical operations

Identify the usage of logical and numerical operations.

Passed

No numerical operation blocks found with boolean inputs.
No logical operation blocks found with non-boolean inputs.

⚠ Check signal flow in model

Check placement of sequential blocks

Warning

The placement of blocks in the following subsystems can be improved:

- [NEWCKT/Battery](#)
- [NEWCKT/Battery1](#)
- [NEWCKT/Ideal Switch](#)
- [NEWCKT/Ideal Switch1](#)
- [NEWCKT/Ideal Switch2](#)
- [NEWCKT](#)

Recommended Action

Ensure that the signal flow in the mentioned subsystems is from left to right.

- All sequential blocks, except the blocks on feedback path, must be placed from left to right.
- All blocks, except the blocks on feedback path, should be oriented to the right.

⚠ Check usage of vector and bus signals

Check bus signals treated as vectors

Warning

The following configuration parameters are set inappropriately:

Parameter	Current Value	Recommended Values
Bus signal treated as vector (StrictBusMsg)	ErrorLevel1	ErrorOnBusTreatedAsVector

Recommended Action

Consider setting the configuration parameters to the recommended value.

Check usage of bus signals

Warning

The following blocks are not supported for use with bus signals:

- [NEWCKT/Display](#).

Recommended Action

Consider remodeling to use buses only with bus-supported blocks.

Check connections between structural subsystems

Identify connections between structural subsystems.

Passed

All connections to structural subsystems adhere to the guideline.

Check position of conditional blocks and iterator blocks

Identify conditional and iterative blocks that are positioned inconsistently in the model.

Passed

The conditional and iterative blocks are correctly placed in the model.

Check signal line connections

Check signal overlaps

Warning

The following signals overlap with other signals in the diagram:

- [NEWCKT](#)
- [NEWCKT](#)

Recommended Action

Reposition the above listed signals to avoid signal overlaps.

Check signal intersections

Warning

The following signals intersect with other signals in the diagram:

- [NEWCKT](#)

Recommended Action

Reposition the above listed signals to avoid intersections.

Check scope of From and Goto blocks

Identify incorrect scoping of From and Goto blocks. For signal flows, From and Goto blocks must use local scope. Control flow can use global scope.

Warning

The following From and Goto blocks are not configured with local scope:

- [NEWCKT/Battery/Controlled Voltage Source/Goto](#)
- [NEWCKT/Battery1/Controlled Voltage Source/Goto](#)
- [NEWCKT/Ideal Switch/Goto](#)
- [NEWCKT/Ideal Switch1/Goto](#)
- [NEWCKT/Ideal Switch2/Goto](#)
- [NEWCKT/powergui/EquivalentModel1>Status/Goto1](#)
- [NEWCKT/powergui/EquivalentModel1>Status/Goto2](#)
- [NEWCKT/powergui/EquivalentModel1>Status/Goto3](#)
- [NEWCKT/powergui/EquivalentModel1/Yout/Goto1](#)
- [NEWCKT/powergui/EquivalentModel1/Yout/Goto2](#)
- [NEWCKT/powergui/EquivalentModel1/Yout/Goto3](#)
- [NEWCKT/powergui/EquivalentModel1/Yout/Goto4](#)
- [NEWCKT/powergui/EquivalentModel1/Yout/Goto5](#)

[^ Less](#)

Recommended Action

Change the scope of the Goto blocks to local. If the destination From block is on a different level of the model, add routing to that level.

Check for division by zero in Simulink

Error occurred during Simulink Design Verifier analysis.

Simulink Design Verifier cannot be used with a variable-step solver. You must configure the solver options for a fixed-step solver.

[See documentation.](#)

Simulink Design Verifier failed to initialize: 'NEWCKT' is incompatible for design error detection with Simulink Design Verifier.

5 Stateflow ✓53 ✘0 ⚠0 ⌂0

✓ Check transitions in Stateflow flow charts

Identify transitions in Stateflow flow charts that are drawn incorrectly.

Passed

All Stateflow transitions in flow charts are drawn correctly.

✓ Check return value assignments in Stateflow graphical functions

Identify graphical functions with multiple assignments of return values in Stateflow charts.

Passed

No Stateflow charts were found.

✓ Check entry formatting in State blocks in Stateflow charts

Identify missing line breaks between entry action (en), during action (du), and exit action (ex) entries in states. Identify missing line breaks after semicolons (;) in statements.

Passed

All state entries found are correctly formatted.

✓ Check default transition placement in Stateflow charts

Identify all groupings of states that do not have a default transition or do not have the default state as the top-most state.

Passed

No Stateflow charts and states found that violate the guidelines for default transition placement in Stateflow charts.

✓ Check for Strong Data Typing with Simulink I/O

Check whether labeled input and output signals are strongly typed.

Passed

No Stateflow charts have **Use Strong Data Typing with Simulink I/O** cleared.

✓ Check definition of Stateflow data

Identify the Scope value set on Stateflow data defined at machine level.

Passed

All Stateflow data at machine level has been defined as per guideline.

✓ Check for MATLAB expressions in Stateflow blocks

Identify MATLAB expressions that are not suitable for code generation in Stateflow blocks.

Passed

No Stateflow objects found using MATLAB expressions unsuitable for code generation.

Check for pointers in Stateflow charts

Identify pointer operations on custom code variables.

Note: This check applies only to Stateflow charts that use C as the action language.

Passed

No pointer operations were found.

Check Stateflow operators

Identify the usage of operators in Stateflow.

Passed

No Stateflow blocks found with incorrect operator usage.

Check usage of unary minus operations in Stateflow charts

Identify unary minus operations applied to unsigned integers in Stateflow objects.

Passed

No unary minus operations applied to unsigned integers in Stateflow objects were found.

Check usage of Stateflow comments

Identify comments that are nested or contain newline(s) in the middle in Stateflow for action language 'C'.

Passed

No comments found that are either nested or contain newline(s) in the middle.

Check prohibited comparison operation of logical type signals

Identify boolean variables in Stateflow charts using comparison operations.

Passed

No boolean variables use comparison operations of logical type in the model.

Check usage of internal transitions in Stateflow states

Identify Stateflow states using multiple internal transitions.

Passed

No Stateflow states found with multiple internal transitions

Check usage of transition conditions in Stateflow transitions

Identify unconditional Stateflow transitions with higher priority than conditional transitions.

Passed

No unconditional Stateflow transitions found with higher priority than conditional transitions

Check uniqueness of Stateflow State and Data names

jc_0732: Distinction between state names, data names, and event names

Identify Stateflow State and Stateflow Data that have identical names in a given chart.

Passed

No Stateflow charts were found.

Check uniqueness of State names

jc_0730: Unique state name in Stateflow blocks
Identifies identical State names within a Stateflow Chart.

Passed

No Stateflow charts were found.

✓ Check usage of parentheses in Stateflow transitions

jc_0752: Condition action in transition label

Start new line before and after parentheses for condition actions in Stateflow transitions.

Passed

No Stateflow Transitions found that violate the requirement for new line for condition actions.

✓ Check prohibited combination of state action and flow chart

State actions and flow charts should not be combined in states.

Passed

No Stateflow states were found that combine state action and flow chart.

✓ Check condition actions and transition actions in Stateflow

Identify usage of transition actions in Stateflow.

Passed

No Stateflow charts have transition actions.

✓ Check usable number for first index

Identify usage of first index of Stateflow data.

Passed

All Stateflow data first index values are uniform.

✓ Check usage of State names

jc_0731: State name format

Identify state names with '/' at its end.

Passed

No Stateflow states were found.

✓ Check execution timing for default transition path

'Execute (enter) Chart At Initialization' should be set to OFF.

Passed

All Stateflow Charts pass the check.

✓ Check repetition of Action types

jc_0734: Number of state action types

Identifies repeated action types in a Stateflow State.

Passed

No Stateflow States were found.

✓ Check for unused data in Stateflow Charts

Checks if the model parameter 'Unused data, events, messages and functions' is not set to 'none'.

Passed

All constraints on model configuration parameters have been met.

Status	Parameter	Current Value	Recommended Values
Pass	Unused data, events, messages and functions (SFUnusedDataAndEventsDiag)	warning	error, warning

✓ **Check updates to variables used in state transition conditions**

jc_0741: Timing to update data used in state chart transition conditions

Variables used in state transition conditions must not perform an update by "during" state action type.

Passed

No Stateflow states found that violate the guidelines for updating the variables used in state transition conditions.

✓ **Check usage of internal transition**

Internal transition lines should start from the left edge of the state.

Passed

No Stateflow transitions found that violate the guidelines for starting point of internal transition in Stateflow.

✓ **Check usage of parallel states**

Substates of parallel states should not be parallel states.

Passed

All Stateflow Charts pass the check.

✓ **Check scope of data in parallel states**

jc_0722: Local data definition in parallel states

The scope of local variables should be restricted to one parallel state unless it is being used by other parallel states.

Passed

No Stateflow States were found.

✓ **Check indentation of code in Stateflow states**

Identify non-uniform indentation in Stateflow blocks.

Passed

All Stateflow blocks have uniform indentation.

✓ **Check for usage of text inside states**

Identify Stateflow states with text exceeding the boundary of the state.

Passed

No Stateflow states found with text exceeding the boundary of the state.

✓ **Check for unexpected backtracking in state transitions**

Identify configuration parameter settings which identify unexpected backtracking in state transitions.

Passed

All constraints on model configuration parameters have been met.

Status	Parameter	Current Value	Recommended Values
Pass	Unexpected backtracking_(SFUnexpectedBacktrackingDiag)	error	error

Check for unconnected objects in Stateflow Charts

Identify dangling transitions and unconnected Stateflow States and Junctions in Stateflow Charts.

Passed

No unconnected transitions, states or junctions found in Stateflow Charts.

Check position of label string in Stateflow transition

Identify placement of label string in Stateflow transition.

Passed

All Stateflow transitions are placed uniformly.

Check Stateflow chart action language

Check if the action language of Stateflow charts is set to 'C'.

Passed

All Stateflow Charts have action language set to 'C'.

Check character usage in Stateflow data names

Identify Stateflow data names with invalid characters.

Passed

No invalid characters are used in Stateflow data names.

Check length of Stateflow data name

Check if the length of Stateflow data names are within limit.

Passed

All Stateflow data names are valid.

Check usage of transitions to external states

Identify transitions ending on external child states.

Passed

No direct transitions found from external state to child state.

Check order of state action types

Identify out of order state action types in Stateflow states.

Passed

No Stateflow states found with out of order state action types

Check usage of numeric literals in Stateflow

Identify use of numeric literals in Stateflow states and transitions.

Passed

No numeric literals found in Stateflow charts.

✓ Check position of comments in transition labels

Identify comments in transition labels that are not positioned uniformly.

Passed

Comments in transition labels are positioned uniformly.

✓ Check terminal junctions in Stateflow

Identify usage of terminal junctions in flow charts.

Passed

Multiple terminal junctions were not found.

✓ Check for implicit type casting in Stateflow

Identify implicit type casting in Stateflow.

Passed

No instances of implicit type casting found.

✓ Check usage of graphical functions in Stateflow

Check for calls between graphical functions.

Passed

No calls between graphical functions were found.

✓ Check if state action type 'exit' is used in the model

Check if state action type 'exit' is used in the model.

Passed

State action type 'exit' is not used in the model.

✓ Check for use of C-style comment symbols

Identify usage of C-style comments in CGT Files and MPT Objects.

Passed

C-style comments are not used in CGT Files and MPT Objects.

✓ Check usage of unconditional transitions in flow charts

Identify unconditional transitions in flow charts.

Passed

All unconditional transitions adhere to the guideline.

✓ Check for comments in unconditional transitions

Identify comments in unconditional transitions without action statements.

Passed

All unconditional transitions without action statements have comments.

✓ Check definition of Stateflow events

Stateflow events should be defined at the smallest possible scope of usage.

Passed

All Stateflow events are defined at their smallest scope.

✓ Check Stateflow transition appearance

Identify Stateflow transitions visually overlapping other Stateflow objects.

Passed

No transition violates the guidelines for Stateflow transition appearance.

✓ Check usage of events in Stateflow charts

Identify undirected event broadcasts in Stateflow.

Passed

No instances of undirected event broadcast were found.

✓ Check usage of Simulink functions in Stateflow

Usage of Simulink Functions in Stateflow.

Passed

All Simulink Functions in Stateflow are defined according to the guideline.

✓ Check for exclusive states in state machines

Identify states which are the only sub-state within a state with OR(exclusive) type decomposition.

Passed

All states with OR(exclusive) type decomposition have more than one sub-state.

✓ Check usage of floating-point expressions in Stateflow charts

Identify equality or inequality operations ($==$, $\sim=$, $!=$) in expressions involving floating-point variables or constants.

Passed

No equality or inequality operations in expressions where at least one side of the expression is a floating-point variable or constant were found.

□ 6 MATLAB Functions

✓ 2 ✘ 0 ⚠ 0 ⏱ 0

✓ Check input and output settings of MATLAB Functions

Identify MATLAB Functions that have inputs, outputs, or parameters with inherited complexity, data type, or size properties.

Passed

No MATLAB Functions found in the model or subsystem.

✓ Check MATLAB code for global variables

Check for global variables in MATLAB code

Check for global variables in MATLAB code used in MATLAB Function blocks

Passed

No MATLAB Function blocks found

Check for global variables in MATLAB functions defined in Stateflow charts

Passed

No MATLAB functions defined in Stateflow charts found

Check for global variables in called MATLAB functions

Passed

No external MATLAB functions found
