

# Coverage Report for Version4

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## Analysis Information

### Coverage Data Information

Collected in version (R2021a)

### Model Information

Model version 1.14  
Author shahk  
Last saved Sat Mar 26 16:13:49 2022

### Simulation Optimization Options

Default parameter behavior tunable  
Block reduction forced off  
Conditional branch optimization on

### Coverage Options

Analyzed model Version4  
Logic block short circuiting off

## Tests

Test	Started execution	Ended execution
<a href="#">Run_1</a>	26-Mar-2022 16:37:14	26-Mar-2022 16:37:17

## Summary

Model Hierarchy/Complexity	<a href="#">Run 1</a>
	Execution
1. <a href="#">Version4</a>	100% <div></div>
2. . . . <a href="#">3 phase to dq</a>	100% <div></div>
3. . . . <a href="#">Induction Motor</a>	100% <div></div>
4. . . . . <a href="#">Calculation of Ids</a>	100% <div></div>
5. . . . . <a href="#">ElectroMagnetic Torque subsystem</a>	100% <div></div>
6. . . . . <a href="#">Idr Calculation subsystem</a>	100% <div></div>
7. . . . . <a href="#">Iqr Calculation Subsystem</a>	100% <div></div>
8. . . . . <a href="#">Iqs Calculation Subsystem</a>	100% <div></div>
9. . . . . <a href="#">Speed Calculation</a>	100% <div></div>
10. . . . <a href="#">dq to 3 Phase Subsystem</a>	100% <div></div>
11. . . . . <a href="#">Subsystem To calculate Va</a>	100% <div></div>
12. . . . . <a href="#">Subsystem To calculate Vb</a>	100% <div></div>
13. . . . . <a href="#">Subsystem To calculate Vc</a>	100% <div></div>

## Details

### 1. Model "Version4"

**Child Systems:** [3 phase to dq](#), [Induction Motor](#), [dq to 3 Phase Subsystem](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (61/61) objective outcomes

#### Full Coverage

Model Object	Metric
Sin block " <a href="#">Vas</a> "	Execution
Sin block " <a href="#">Vbs</a> "	Execution
Sin block " <a href="#">Vcs</a> "	Execution

### 2. SubSystem block "[3 phase to dq](#)"

[Justify or Exclude](#)

**Parent:** [/Version4](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (8/8) objective outcomes

## Full Coverage

Model Object	Metric
Gain block " <a href="#">Alpha</a> "	Execution
Gain block " <a href="#">Beta</a> "	Execution
Gain block " <a href="#">Gain4</a> "	Execution
Gain block " <a href="#">Gain5</a> "	Execution
Gain block " <a href="#">Gain6</a> "	Execution
Gain block " <a href="#">Gain7</a> "	Execution
Sum block " <a href="#">Logic to obtain Vd</a> "	Execution
Sum block " <a href="#">Logic to obtain Vq</a> "	Execution

### 3. SubSystem block "[Induction Motor](#)"

#### [Justify or Exclude](#)

Parent:	<a href="#">/Version4</a>
Child Systems:	<a href="#">Calculation of Ids</a> , <a href="#">ElectroMagnetic Torque subsystem</a> , <a href="#">Idr Calculation subsystem</a> , <a href="#">Iqr Calculation Subsystem</a> , <a href="#">Iqs Calculation Subsystem</a> , <a href="#">Speed Calculation</a>

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (38/38) objective outcomes

### 4. SubSystem block "[Calculation of Ids](#)"

#### [Justify or Exclude](#)

Parent:	<a href="#">Version4/Induction Motor</a>
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Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (7/7) objective outcomes

## Full Coverage

Model Object	Metric
Gain block " <a href="#">Lm</a> "	Execution
Gain block " <a href="#">Lr</a> "	Execution
Gain block " <a href="#">Ls*Lr-Lm^2</a> "	Execution

Gain block " <a href="#">Rs</a> "	Execution
Sum block " <a href="#">Add</a> "	Execution
Sum block " <a href="#">Add1</a> "	Execution
Integrator block " <a href="#">Integrator</a> "	Execution

## 5. SubSystem block "[ElectroMagnetic Torque subsystem](#)"

[Justify or Exclude](#)

Parent: [Version4/Induction Motor](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (4/4) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">(3*P/3)*Lm</a> "	Execution
Product block " <a href="#">Multiply</a> "	Execution
Product block " <a href="#">Multiply1</a> "	Execution
Sum block " <a href="#">Add2</a> "	Execution

## 6. SubSystem block "[Idr Calculation subsystem](#)"

[Justify or Exclude](#)

Parent: [Version4/Induction Motor](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (8/8) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">(Ls*Lr-Lm^2)</a> "	Execution
Gain block " <a href="#">Lm</a> "	Execution
Gain block " <a href="#">Lr</a> "	Execution
Gain block " <a href="#">Rr</a> "	Execution

Product block " <a href="#">Multiply3</a> "	Execution
Sum block " <a href="#">Add6</a> "	Execution
Sum block " <a href="#">Add8</a> "	Execution
Integrator block " <a href="#">Integrator3</a> "	Execution

## 7. SubSystem block "[Iqr Calculation Subsystem](#)"

[Justify or Exclude](#)

Parent: [Version4/Induction Motor](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (8/8) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">(Ls*Lr-Lm^2)1</a> "	Execution
Gain block " <a href="#">Lm</a> "	Execution
Gain block " <a href="#">Lr</a> "	Execution
Gain block " <a href="#">Rr</a> "	Execution
Product block " <a href="#">Multiply2</a> "	Execution
Sum block " <a href="#">Add5</a> "	Execution
Sum block " <a href="#">Add9</a> "	Execution
Integrator block " <a href="#">Integrator2</a> "	Execution

## 8. SubSystem block "[Iqs Calculation Subsystem](#)"

[Justify or Exclude](#)

Parent: [Version4/Induction Motor](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (7/7) objective outcomes

### Full Coverage

Model Object	Metric
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Gain block " <a href="#">(Ls*Lr-Lm^2)</a> "	Execution
Gain block " <a href="#">Lm</a> "	Execution
Gain block " <a href="#">Lr</a> "	Execution
Gain block " <a href="#">Rs</a> "	Execution
Sum block " <a href="#">Add3</a> "	Execution
Sum block " <a href="#">Add4</a> "	Execution
Integrator block " <a href="#">Integrator1</a> "	Execution

## 9. SubSystem block "[Speed Calculation](#)"

[Justify or Exclude](#)

Parent: [Version4/Induction Motor](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (4/4) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">Gain1</a> "	Execution
Sum block " <a href="#">Add7</a> "	Execution
Integrator block " <a href="#">Integrator4</a> "	Execution
Step block " <a href="#">Load_Torque</a> "	Execution

## 10. SubSystem block "[dq to 3 Phase Subsystem](#)"

[Justify or Exclude](#)

Parent: [/Version4](#)

Child Systems: [Subsystem To calculate Va](#), [Subsystem To calculate Vb](#), [Subsystem To calculate Vc](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (12/12) objective outcomes

### Full Coverage

Model Object	Metric
Constant block " <a href="#">Constant</a> "	Execution

## 11. SubSystem block "[Subsystem To calculate Va](#)"

[Justify or Exclude](#)

Parent: [Version4/dq to 3 Phase Subsystem](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (3/3) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">Gain6</a> "	Execution
Gain block " <a href="#">Gain9</a> "	Execution
Sum block " <a href="#">Logic for Va</a> "	Execution

## 12. SubSystem block "[Subsystem To calculate Vb](#)"

[Justify or Exclude](#)

Parent: [Version4/dq to 3 Phase Subsystem](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Execution	NA	100% (4/4) objective outcomes

### Full Coverage

Model Object	Metric
Gain block " <a href="#">Gain10</a> "	Execution
Gain block " <a href="#">Gain5</a> "	Execution
Gain block " <a href="#">Gain7</a> "	Execution
Sum block " <a href="#">Calculation for Vb</a> "	Execution

## 13. SubSystem block "[Subsystem To calculate Vc](#)"

[Justify or Exclude](#)

**Parent:**

[Version4/dq to 3 Phase Subsystem](#)

**Metric**

**Coverage (this object)**

**Coverage (inc. descendants)**

Execution

NA

100% (4/4) objective outcomes

### Full Coverage

**Model Object**

**Metric**

Gain block "[Gain11](#)"

Execution

Gain block "[Gain4](#)"

Execution

Gain block "[Gain8](#)"

Execution

Sum block "[Calculation for Vc](#)"

Execution