## Model Name Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Changes Made |
| 1 | YYYY/MM/DD | Torstein Ingebrigtsen Bø | Initial |
|  |  |  |  |

## Model Hierarchy

Central  
> Event Generator

*and*

Electrical system  
> GensetACx  
>> Genset  
>>> power calculation

## Description

The standard setup includes an event where the connected genset vector is instantly altered at a given switching time. This simulates the connection or disconnection of gensets.

Disconnected gensets are run at a no-load frequency corresponding to bus frequency. The phase synchronized by integrating the electrical angle.

## How to build

-

### Implementation details

-

## Parameters (include parameter identification)

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Dimension | Unit | Description |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Input

### Ports

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Name | Dimension | Unit | Description |
| 1 | ConnectedGensets | vector | binary | Initially connected gensets |
| 2 | ConnectedGensetsAfter | vector | binary | Connected gensets after switch |
| 3 | ConnectedGensetsSwitchTime |  |  | Switch time |

### From

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Dimension | Unit | Description | From |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

## Output

### Ports

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Name | Dimension | Unit | Description |
| 1 | Connected |  |  | Connected or disconnected status of gensets |
|  |  |  |  |  |
|  |  |  |  |  |

### Goto

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Dimension | Unit | Description |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Limitation

The model does not include startup procedures and phase synchronization as such. The switching time is assumed to include these aspects and the gensets are assumed to be fully synchronized at the switching instant.

## Validation

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## Comments

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## Reference

Chicago style  
Fossen, Thor I. 2011. *Handbook of Marine Craft Hydrodynamics and Motion Control*. *Handbook of Marine Craft Hydrodynamics and Motion Control*. John Wiley and Sons.