
PowerSimulator Basecase Formats

Table of Contents

Overview	2
Case Parameter	3
ControlArea	4
LoadAreaCurve	5
Load	6
GeneratingUnit	7
SynchronousMachine	8
ShuntCapacitor	9
ShuntReactor	10
SVC	11
RatioTapChanger	12
PhaseTapChanger	13
Switch	14

Name

PsmCaseOverview — PowerSimulator Basecase Formats

PowerSimulator Basecase Formats Overview

PowerSimulator Basecase Formats describe a set of comma-separated-value (CSV) files used to transfer the state of an electrical model previously described with PowerSimulator Model Formats.

A separate CSV file is used for each of the object types below. If no objects exist for a given type, that CSV file can be omitted. The first line of each CSV file is a header containing the attribute names for that object as described in this documentation, and each object of that type is written to the file in the subsequent lines.

Usage Guidelines

- Only include information that is actually available from the source data. Any unused attributes can be left blank. If no object in a CSV file uses an attribute, that entire column can be omitted.
- Avoid invented data.
- There can be one file per object type, and the filenames must be exactly as documented.
- Object ID strings must be those previously described in a model transfer using the PowerSimulator Model Formats.
- The import mechanism relies on the name, not the order of the columns.
- Attributes within each file must be spelled exactly as documented.
- Attributes within each file can appear in any order.

Revision History

Revision 1.7	June 4, 2013
rename AreaLoadCurve to LoadAreaCurve to support new LoadArea records	
Revision 1.6	May 28, 2013
Add area load curve	
Revision 1.5	Apr 25, 2013
Add case MVar to synchronous machine	
Revision 1.4	Apr 18, 2013
Remove RegulatingKV since it is a duplicate of AVRMode for synchronous machine .	
Revision 1.3	Apr 17, 2013
Correct synchronous machine operating mode description.	
Revision 1.2	Nov 19, 2012
Add ACE control mode to Control Area record. Add PsmCaseParameter.csv to allow transfer of case metadata such as name, description, and timestamp	
Revision 1.1	May 4, 2012
Add kv setpoint to synchronous machine, add shunt capacitor and shunt reactor	
Revision 1.0	April 25, 2012
Initial Revision	

Name

PsmCaseParameter.csv — File definition for PsmCaseParameter.csv

Description

This file allows for general parameter / value pairs. The file should have two columns described in the "Attributes" section below. Recognized parameters are described in the second section

Attributes

ParameterName Parameter Name

ParameterValue Parameter Value

Allowed Parameters

CaseFormatVersion Version of PowerSimulatorCaseFormat used.

CaseName Name of case

CaseDescription Case description

CaseTimestamp Timestamp of case used. Format is YYYY-MM-DD HH:MM:SS Z

YYYY Year

MM Month

DD Day

HH Hour

MM Minutes

SS Seconds

Z timezone name, abbreviation or offset from UTC

Name

PsmCaseControlArea.csv — File definition for PsmCaseControlArea.csv

Description

Base case information for Control Area measurements

Attributes

ID	Control Area ID
NetInterchange	Area net interchange (MW)
ACEControlMode	ACE Control Mode <ul style="list-style-type: none">• TieLineBias• ConstantNetInterchange• ConstantFrequency

Name

PsmCaseLoadAreaCurve.csv — File definition for PsmCaseLoadAreaCurve.csv

Description

Base case information for Load Area Curves. A curve requires the Load Area MW to be defined at each 5-minute interval for a 24-hour period, or 288 intervals.

Attributes

LoadArea	ID of load area
Interval	Interval number (1-288)
AreaLoad	MW for interval

Name

PsmCaseLoad.csv — File definition for PsmCaseLoad.csv

Description

Base case information for Load Devices

Attributes

ID	Load ID
MW	Load MW
MVAr	Load MVAr

Name

PsmCaseGeneratingUnit.csv — File definition for PsmCaseGeneratingUnit.csv

Description

Base case information for Generating Unit measurements

Attributes

ID	Generating Unit ID
MW	Generator Output MW
GeneratorOperatingMode	Generator Operating Mode
	<ul style="list-style-type: none">• OFF• MAN• AGC• EDC• LFC

Name

PsmCaseSynchronousMachine.csv — File definition for PsmCaseSynchronousMachine.csv

Description

Base case information for Synchronous Machine

Attributes

ID	Synchronous Machine ID
SynchronousMachineOperatingMode	SynchronousMachine Operating Mode <ul style="list-style-type: none">• GEN• CON• PMP
AVRMode	Automatic Voltage Regulation mode <ul style="list-style-type: none">• ON• OFF
KVSetPoint	KV Setpoint if regulating KV is enabled (AVR Mode = ON)
MVArSetpoint	MVAr setpoint used if regulating MVAr (AVR Mode = OFF)
MVAr	case MVAr

Name

PsmCaseShuntCapacitor.csv — File definition for PsmCaseShuntCapacitor.csv

Description

Base case information for Shunt Capacitor

Attributes

ID	Shunt Capacitor ID
Enabled	KV regulation enabled? true or false

Name

PsmCaseShuntReactor.csv — File definition for PsmCaseShuntReactor.csv

Description

Base case information for Shunt Reactor measurements

Attributes

ID	Shunt Reactor ID
Enabled	KV regulation enabled? true or false

Name

PsmCaseSVC.csv — File definition for PsmCaseSVC.csv

Description

Base case information for SVC measurements

Attributes

ID	SVC ID
Mode	<ul style="list-style-type: none">• Volt• MVar
MVarSetpoint	SVC MVar Setpoint.
VoltageSetpoint	SVC Voltage Setpoint.
Slope	kv/MVar, per unit based on Max MVar
MinMVar	Minimum MVar range
MaxMVar	Maximum MVar range

Name

PsmCaseRatioTapChanger.csv — File definition for PsmCaseRatioTapChanger.csv

Description

Base case information for Ratio TapChanger Devices

Attributes

ID	Tap Changer ID
TapPosition	Tap position.
LTCEnable	Has LTC Enabled (true / false)
MinRegKV	Lower voltage setpoint if regulating
MaxRegKV	Upper voltage setpoint if regulating

Name

PsmCasePhaseTapChanger.csv — File definition for PsmCasePhaseTapChanger.csv

Description

Base case information for Phase TapChanger Devices

Attributes

ID	Phase Tap Changer ID
TapPosition	Tap position.
ControlStatus	Control enabled? (true / false)
MinRegMW	Regulated MW lower limit.
MaxRegMW	Regulated MW upper limit.

Name

PsmCaseSwitch.csv — File definition for PsmCaseSwitch.csv

Description

Base case information for Switch Devices

Attributes

ID	Switch ID
SwitchPosition	Switch Position. <ul style="list-style-type: none">• Open• Closed