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Honeywell Turbine Control Solution Parameter
Reference Guide

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1 About This Document

Provides information about turbine control solution parameters associated with configuration forms for function blocks in Control Builder.

Revision history

Revision	Date	Description
A	February 2015	Initial release of document.

2 Overview

This publication defines the user-visible parameters that exist in the Experion System. It also provides a listing of the parameters, and their attributes that are applicable to various Experion function blocks.

Use this publication as you build control strategies and during operation, when detailed information about function block parameters is required.

2.1 Parameter Definition Format

In this dictionary, the parameter definitions are listed in alphabetical order. Refer to Figure for an example of the Parameter Definition Format.

ABORTALM.FL

Specific to Block(s)	SCM
Description	Abort Alarm Flag
Data Type	Boolean
Range	Off (0) On (1)
Default	Off (0)
Config Load	No
Access Lock	View Only
Residence	CEE
Related Parameters	ABORTALM.PR, STATE
Remarks	When On, indicates that the Abort Alarm condition (SCM's STATE has transitioned to Abort) exists.

2.2 Parameter Attributes Defined

Table 1 defines the information categories of the parameter definition.

Table 1: Parameter Attribute Definitions

Attribute	Definition
Specific to Block(s)	Defines which function block (or blocks) the table applies to. If a parameter has different properties for different function blocks, there will be multiple tables for the parameter.
Description	Includes the full parameter name; additional information describing its basic purpose or function may also be available.
Data Type	Defines how the parameter data is viewed by the system. (Refer to Table 2 for additional details.)
Range	Defines the range of values for the data type (also defines ranges for ViewOnly parameters).
Default Value	Defines the value assigned to the parameter by the system when no selection is made during control building.
Config Load	Determines whether the parameter value is stored to CEE or SR during module load from builder.
Active Loadable	Determines whether the parameter value can be modified and loaded while the strategy is active without inactivating the strategy or setting CEE to IDLE.
Access Lock	Defines who or what can change the parameter's value or option.
Residence	Defines where the parameter physically resides and executes.
Related Parameters	Lists parameters that are related by their use at configurations and operations times.
Remarks	Includes additional information that is important to the understanding, use, and operation of the parameter.

2.3 Access Lock

The Experion system supports six access levels. Each parameter includes an Access Lock attribute that defines what access level a program or operator must have in order to change the value of the parameter. Refer to Table 3 for lists of these access levels and to see the relationship between the access lock and the access level.

Table 2: Supported Parameter Access Lock Levels

Access Lock	Access Level					
	Operator	Supervisor	Engineer	Program	Continuous Control	Application Developer
Operator	X	X	X	X	X	X
Supervisor		X	X	X	X	X
Engineer			X	X	X	X
View Only						
Application Developer Only						X
Engineer/ Application Developer			X			X
Program				X	X	X
Other Function Block				X	X	
Control					X	
Engineer Only			X			

2.4 Data Type

Multiple data types are supported in Experion. Refer to Table 2 for a listing of these data types.

Table 3: Supported Parameter Data Types

Data Type	Data Type
Boolean1	Enumeration
32-Bit Real Number	Connection
64-Bit Real Number	Output Connection
16-Bit Integer	Input Connector
32-Bit Integer	Structure
Constant Integer	Float
8-Bit Unsigned Integer	Float64/Real64
16-Bit Unsigned Integer	String
32-Bit Unsigned Integer	TIME
BlockId2 / Entity ID	Self-Defining Enumeration



Attention

1. Experion Execution Environments that communicate through Control Data Access server (CDA) define the False (Off) and True (On) values of Boolean parameters as follows:
 - False
 - True

For example, this applies to blocks defined within the Control Execution Environment (CEE) hosted by C300, C200 and ACE controllers. In those environments, Boolean parameters take on values limited to the range noted above.

However, some CDA connected blocks may support a higher degree of flexibility. For example, some blocks may interpret non-zero values sent to a Boolean parameter as True. This flexibility is not universally supported within the Experion system. If an application is developed that does not represent True as 1, the application engineer must confirm that the application works properly in all cases. If it does not, the application must be changed.

2. A BlockId parameter value is text describing a block's name. Example BlockId values are "SCM3.Step7" and "SCM7".
3. Self-Defining Enumeration (SDEnum) - This data type is just like an Enumeration, except the enumeration members are user-defined. Parameter A being an SDEnum of B means that B (String data type) defines the enumeration members for A (SDEnum data type).



Attention

The numerical suffixes - 16, 32, and 64 - indicate the number of memory bits used to store the value; Real32 is commonly called single-precision, and Real64 is double-precision. The difference in the Integers is just the supported range of values.

2.5 Residence

Parameters in Experion control strategies may reside in several places. Refer to the following table for a listing and definition of these valid residences.

Residence	Description
CEE	Control Execution Environment: Supports execution of a set of function blocks for solving control applications. It runs in the controller as a software layer built on top of the control software infrastructure.
SR	System Repository: The file where all Experion server point data is stored.
Server/SR	Both SR and SCAN
Actual Device/Platform/Controller name	If the parameter resides in the execution environment in the actual device, controller, or any such platform, the residency for that parameter is indicated by the actual device or the controller name. For example, C300, C200, C200E, SIM-C200, PGM, SIM-C200E, SIM-C300, ACE, CPM, IOM, IOP, C300 IOLINK, FTEB, IOLIM, FIM, RM, and so on.



Attention

All Experion parameters have attributes and/or values stored within the Engineering Repository. In addition, parameters of loaded blocks are stored within one or more locations. Those Repositories are the Experion Run Time Repositories; SR, CEE and server. Location within one or more of the Run Time Repositories is described by the residency parameter attribute.

3 Axxx Parameters

Related topics

“ACTLINSEG” on page 20

“ACTUALANGLE” on page 21

“ANGLEOFFSET” on page 22

“APPLYOFFSET” on page 23

3.1 ACTLINSEG

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to select the linearization segment table, whose IN[1..4][0..12] and OUT[1..4][0..12] parameter values are used for PV calculation.
Data Type	INT32
Range	Any real number between 1 to NUMLINSEG
Default	1
Config Load	Yes
Active Loadable	No
Access Lock	Operator
Residence	CEE
Related Parameters	NUMLINSEG, NUMSEGS[1..4], IN, OUT, TEMPIN[1..4][0..12], TEMPOUT[1..4][0..12]
Remarks	<p>This parameter determines the currently active linearization segment table that is used to define the linear function for PV calculation. This parameter can be edited irrespective of the value of ENBTUNE parameter.</p> <p>If the value of ACTLINSEG is changed when CM is ACTIVE and CEE is RUN, an abrupt change occurs in the PV value from its previous value to new value.</p>

3.2 ACTUALANGLE

Specific to Block	SVP_AI channel
Description	Resolver Actual Angle - This parameter is used for calculating the angle offset. You can use this parameter to enter the actual Resolver angle.
Data Type	32-Bit Real Number
Range	0-360 degree
Default	0 degree
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	ANGLEOFFSET, APPLYOFFSET
Remarks	This parameter is visible only when you configure the sensor type as "Resolver." The offset is calculated by calculating the difference of the angle detected and value of this parameter when APPLYOFFSET parameter is set.

3.3 ANGLEOFFSET

Specific to Block	SVP_AI channel
Description	Resolver Angle Offset - This parameter displays the angle offset value calculated when the APPLYOFFSET operation was performed.
Data Type	32-Bit Real Number
Range	0-360 degree
Default	0 degree
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	ACTUALANGLE, APPLYOFFSET
Remarks	This parameter is visible only when you configure the sensor type as "Resolver." This parameter displays the offset in the angle detected by system and the angle entered by you using the ACTUALANGLE parameter.

3.4 APPLYOFFSET

Specific to Block	SVP_AI channel
Description	This parameter is used to perform the angle offset calculation.
Data Type	Boolean
Range	ON
	OFF
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	ACTUALANGLE, ANGLEOFFSET
Remarks	This parameter is visible only when you configure the sensor type as "Resolver." When the actual Resolver position and the system calculated position (PV) is not identical, you can type the actual angle value using the ACTUALANGLE parameter. The typed value can be set using the APPLYOFFSET parameter. The offset value is calculated internally and displayed as the desired angle.

4 Bxxx Parameters

Related topics

“BADCTLFL” on page 26

“BADPVFL” on page 27

“BASEPERIOD” on page 28

4.1 BADCTLFL

Specific to Block	SVP_REGCTL block	
Description	Bad Control flag — Indicates if a Bad Control condition exists.	
Data Type	Boolean	
Range	OFF (0)	Bad Control condition does not exist.
	ON (1)	Bad Control condition exists.
Default	OFF (0)	
Config Load	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters		
Remarks		

4.2 BADPVFL

Specific to Block	SP_DI, SVP_DI, SVP_AI, SVP_DI, SVP_REGCTL, SP_SPEED
Description	Bad Process Variable (PV) Flag-displays that a bad PV has been detected for this data point.
Data Type	Boolean
Range	ON if PV is correct.
	OFF if PV is bad.
Default	OFF if PV is bad.
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOM
Related Parameters	PV, PVSTS
Remarks	The SVP_REGCTL channel does not execute PID algorithm if the BADPVFL is set to "ON."

4.3 BASEPERIOD

Specific to Block	C300-20msCEE block
Description	<p>This parameter defines the execution cycle time for the CEE function block in milliseconds.</p> <p>The Base Period for the CEE block is 50ms by default.</p>
Data Type	Enumeration
Range	20ms (3)
	50ms (4)
Default	50ms (4)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	All platforms that host CEE
Related Parameters	IOLINKTYPE
Remarks	<p>Set the BASEPERIOD parameter value to 20 ms before attempting any configuration change on the associated CEE and IOLINK function blocks.</p> <p>The BASEPERIOD parameter can be changed only if the following conditions are satisfied.</p> <ul style="list-style-type: none"> No Control Modules are assigned to the controller's CEE Function Block. IOLINKTYPE parameter of both new C300-20msCEE IOLINK Function Blocks has been set to NONE. <p>If these conditions are not satisfied, the BASEPERIOD parameter value change fails with a following error message.</p> <p>"BASEPERIOD cannot be changed when link type of an associated IOLINK is configured, or when CMs are assigned to CEE."</p>

5 Cxxx Parameters

Related topics

“CALIBOPT” on page 30

“CALIBSTS” on page 31

“CALIBVAL” on page 32

“COMMFAILFL” on page 33

“COMMIT” on page 34

“CONTAINEDIN” on page 35

“CPUFREEAPPMAXB” on page 36

“CPUFREEAPPMAXA” on page 37

“CPUFREEAPPMINA” on page 38

“CPUFREEIOLAVGA” on page 39

“CPUFREEIOLMAXA” on page 40

“CPUFREEIOLMINA” on page 41

“CTLACTN” on page 42

“CTLEQN” on page 43

“CTLSTATE” on page 44

“CV” on page 45

“CVEUHI” on page 46

“CVEULO” on page 47

5.1 CALIBOPT

Specific to Block	SVP IOM, SP IOM	
Description	This parameter is used to select a particular channel of SP-IOM or SVP-IOM for calibration.	
Data Type	Enumeration	
Range	For Speed IO Module:	
	None	Default
	AISTD	Standard AI Channel
	AOSTD	Standard AO Channel
	For Servo Valve Position (SVP) IO Module:	
	None	Default
	AISTD	Standard AI Channel
	AOSTD	Standard AO Channel
	SERVOOUT	Servo valve output signal calibration
Default	For Speed IO Module: None For Servo Valve Position (SVP) IO Module: None	
Config Load	No	
Active Loadable	No	
Access Lock	Engineer	
Residence	IOLINK, SVP IOM, SP IOM	
Related Parameters	CALIBSTS	
Remarks	This parameter is used to select appropriate channel types for performing calibration on the selected channel, since the SP IOM and SVP IOM support different channel types.	

5.2 CALIBSTS

Specific to Block	SP IOM, SVP IOM	
Description	Calibration status-This parameter defines the calibration status for the SP/SVP IOM.	
Data Type	Enumeration	
Range	ENABLED (1)	Calibration is enabled.
	DISABLED (0)	Calibration is disabled.
	NOT_PERMITTED (2)	Calibration is not permitted because IOP is in RUN.
Default	NOT_PERMITTED (2)	
Config Load	No	
Active Loadable	No	
Access Lock	Engineer/Application Developer	
Residence	IOLINK, SP IOM, SVP IOM	
Related Parameters	CALIBOPT	
Remarks	The IOM must be in the IDLE state prior to enabling calibration.	

5.3 CALIBVAL

Specific to Block	SVP_AI
Description	Calibration Value for Linear Variable Differential Transformer (LVDT) / Rotary Variable Differential Transformer (RVDT) sensors.
Data Type	Enumeration
Range	None 0 percentage (%) 100 percentage (%)
Default	None
Config Load	No
Access Lock	Engineer
Active Loadable	No
Residence	IOLINK, SVP IOM
Related Parameters	CALIBOPT, SENSRTYP
Remarks	This parameter is only used to calibrate LVDT/RVDT sensors.

5.4 COMMFAILFL

Specific to Block	SVP_AO, SP_AO, SP_DO	
Description	Communications Failure - Notification whether an error occurred while reading OP data from the SVP_AO channel.	
Data Type	Boolean	
Range	OFF (0)	The OP data for the channel was successfully read.
	ON (1)	Error occurred upon reading the OP data from the SVP_AO channel.
Default	OFF (0)	
Config Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	IOLINK	
Related Parameters	Not applicable	
Remarks		

5.5 COMMIT

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to copy and "COMMIT" TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] parameter values of all the linearization segment tables to corresponding IN[1..4][0..12] and OUT[1..4][0..12] parameter values.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	None
Related Parameters	ENBTUNE, TEMPIN[1..4][0..12], IN[1..4][0..12], TEMPOUT[1..4][0..12], OUT[1..4][0..12]
Remarks	<p>This parameter is enabled only when ENBTUNE is "ON." COMMIT operation is effective only if TEMPIN[1..4][0..12] and IN[1..4][0..12] parameter values or TEMPOUT[1..4][0..12] and OUT[1..4][0..12] values are different.</p> <p>TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] values are copied to the corresponding IN[1..4][0..12] and OUT[1..4][0..12] parameter values as long as the COMMIT parameter is "ON."</p> <p>This parameter is disabled if ENBTUNE is "OFF."</p> <hr/> <p>! Attention</p> <ul style="list-style-type: none"> The linearization algorithm is run on old data before committing and is run on new data after committing. The service routine for COMMIT operation in the controller performs the requisite operation on IN[1..4][0..12] and OUT[1..4][0..12] parameters, and resets the COMMIT parameter to "OFF."

5.6 CONTAINEDIN

Specific to Block	SP_AI, SP_DI, SP_AO, SP_DO, SP_SPEED, SP_SPDVOTE, SVP_AI, SVP_DI, SVP_AO, SVP REGCTL
Description	Contained in.
Data Type	String
Range	Not Applicable
Default	Null
Config. Load	Yes
Active Loadable	No
Access Lock	View Only
Residence	SR
Related Parameter	Not Applicable
Remarks	The name of CM block to which the IOC is assigned. It appears on the Main tab.

5.7 CPUFREEAPPMAXB

Specific to Block	SVP IOM, SP IOM
Description	Maximum CPU Free for Application Processor of Partner A/ Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	32-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEAPPAVGA / CPUFREEAPPAVGB, CPUFREEAPPMINA / CPUFREEAPPMINB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the maximum percentage of CPU free of Application Processor of the partner A/B IOM for all preceding cycles.

5.8 CPUFREEAPPMAXA

Specific to Block	SVP IOM, SP IOM
Description	Maximum CPU Free for Application Processor of Partner A/ Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	32-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEAPPAVGA / CPUFREEAPPAVGB, CPUFREEAPPMINA / CPUFREEAPPMINB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the maximum percentage of CPU free of Application Processor of the partner A/B IOM for all preceding cycles.

5.9 CPUFREEAPPMINA

Specific to Block	SVP IOM, SP IOM
Description	Minimum CPU Free for Application Processor of Partner A/ Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	32-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEAPPAVGA / CPUFREEAPPAVGB, CPUFREEAPPMAXA / CPUFREEAPPMAXB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the minimum percentage of CPU free of the partner A/B IOM for all preceding cycles.

5.10 CPUFREEIOLAVGA

Specific to Block	SVP IOM, SP IOM
Description	CPU Free Average for IOLINK Processor of Partner A/Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	64-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEIOLMINA / CPUFREEIOLMINB, CPUFREEIOLMAXA / CPUFREEIOLMAXB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the average percentage of IOLINK processor CPU free time for the partner A/B IOM in the preceding 2 minutes.

5.11 CPUFREEIOLMAXA

Specific to Block	SVP IOM, SP IOM
Description	Maximum CPU Free for IOLINK Processor of Partner A/Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	32-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEIOLAVGA / CPUFREEIOLAVGB, CPUFREEIOLMINA / CPUFREEIOLMINB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the maximum percentage of CPU free of the partner A/B IOM for all preceding cycles.

5.12 CPUFREEIOLMINA

Specific to Block	SVP IOM, SP IOM
Description	Minimum CPU Free for IOLINK Processor of Partner A/Partner B for Series-C SVP-IOM and SP-IOM.
Data Type	32-Bit Real Number
Range	0.0 - Minimum
	100.0 - Maximum
Default	0.0 - Minimum
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM, SP IOM
Related Parameters	CPUFREEIOLAVGA / CPUFREEIOLAVGB, CPUFREEIOLMAXA / CPUFREEIOLMAXB, STATRESETAPPA / STATRESETAPPB
Remarks	This parameter is used to display the minimum percentage of IOLINK processor CPU free of the partner A/B IOM for all preceding cycles.

5.13 CTLACTN

Specific to Block	SVP_REGCTL Channel
Description	Control Action - The output direction of a regulatory channel (direct or reverse).
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	CTLEQN, EQNEUNITSOPT
Remarks	

5.14 CTLEQN

Specific to Block	SVP_REGCTL Channel
Description	Control Equation Type
Data Type	Enumeration
Range	EqA (0)
	EqE (4)
Default	EqA (0)
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer / Application Developer
Residence	SVP IOM
Related Parameters	
Remarks	

5.15 CTLSTATE

Specific to Block	SVP_REGCTL Channel
Description	Control State - Displays the control state of the channel.
Data Type	Enumeration
Range	(0) FWD
	(1) Hold
	(2) INIT
	(3) MAN
Default	(2) INIT
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	<p>The parameter performs as follows:</p> <ul style="list-style-type: none"> • In the FWD state, the algorithm performs normal forward calculation. • If the point is in INIT state, the algorithm must perform initialization. • If the point is in MAN, the operator controls the output but CV should still be computed for proper handling of bad control. <p>The Hold state is not supported at this time.</p>

5.16 CV

Specific to Block	SVP_REGCTL Channel
Description	Calculated Value - The result (calculated value) of the function blocks.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config. Load	No
Active Loadable	No
Access Lock	Other Function Block
Residence	SVP IOM
Related Parameters	
Remarks	The value of this parameter may be in Percent or Engineering Units, depending on the function block.

5.17 CVEUHI

Specific to Block	SVP_REGCTL Channel
Description	Calculated Variable (CV) High Range (in Engineering Units) - This value corresponds to 100% of full-scale value.
Data Type	64-Bit Real Number
Range	Greater-than or equal-to CVEULO
Default	100.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	CVEULO
Remarks	<p>If NUMSEC = 0, CV high and low ranges are configured for PID; otherwise, they track the ranges of the secondary's input (i.e. , the other end of the control output connection).</p> <p>If NUMSEC = 0, CV high and low ranges track the XEUHI and XEULO in the blocks which have X input.</p>

5.18 CVEULO

Specific to Block	SVP_REGCTL Channel
Description	Calculated Variable (CV) Low Range (in Engineering Units) - This value corresponds to 0% of full scale.
Data Type	64-Bit Real Number
Range	Lesser than or equal to CVEUHI
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	CVEUHI
Remarks	<p>If NUMSEC = 0, CV high and low ranges are configured for PID; otherwise, they track the ranges of the secondary's input (i.e., the other end of the control output connection).</p> <p>If NUMSEC = 0, CV high and low ranges track the XEUHI and XEULO in the blocks, which have X input.</p>

6 Dxxx Parameters

Related topics

“DEFMPULFL” on page 50

“DIFFVALUE” on page 51

“DITHERAMPL” on page 52

“DITHERFREQ” on page 53

“DOTYPE” on page 54

6.1 DEFMPULFL

Specific to Block	SP_SPEED Channel Block
Description	Deformed Pulse Flag: This parameter flag is used to display the status of the deformed pulse flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	MISGPULFL
Remarks	This parameter is set to "ON" if the deformed pulse is detected, else it is set to "OFF."

6.2 DIFFVALUE

Specific to Block	ENHGENLIN Function Block
Description	This parameter is represented by an LED on the Main page. It is used to indicate the different conditions based on the ON/OFF status of ENBTUNE.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	CEE
Related Parameters	ENBTUNE, TEMPIN[1..4][0..12], IN[1..4][0..12], TEMPOUT[1..4][0..12], OUT[1..4][0..12], RESTORE, COMMIT
Remarks	<p>The parameter color is "GRAY" when ENBTUNE is OFF. The parameter indicates the following conditions based on the color when ENBTUNE is ON:</p> <ol style="list-style-type: none"> 1. YELLOW color is displayed if TEMPIN[1..4][0..12] and IN[1..4][0..12] and/or TEMPOUT[1..4][0..12] and OUT[1..4][0..12] parameter values are different for any of the four linearization segment tables. 2. GREEN color is displayed if TEMPIN[1..4][0..12] and IN[1..4][0..12] and/or TEMPOUT[1..4][0..12] and OUT[1..4][0..12] parameter values are same for all linearization segment tables.

6.3 DITHERAMPL

Specific to Block	SVP_AO Channel Block
Description	Dither Amplitude - This parameter defines the peak-to-peak amplitude for the dither wave superimposed on the servo output channel.
Data Type	64-Bit Real number
Range	0 to 10
Default	0
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM, IOLINK
Related Parameters	DITHERFREQ, OPHICURRENT, OPACTION
Remarks	<p>Dither is a superimposition of a sinusoidal wave on the valve position output to reduce the valve stiction. This parameter is enabled only when OPACTION parameter value is configured as "Incremental."</p> <p>The value specified in this parameter determines the peak-to-peak variation of the sinusoidal dither wave. The peak-to-peak amplitude of the dither wave is specified as a percentage of the highest current range selected in OPHICURRENT parameter. For example, if OPHICURRENT is configured to 320 mA and DITHERAMPL is configured as 10%, the dither current is +/- 16 mA around the driven output.</p>

6.4 DITHERFREQ

Specific to Block	SVP_AO Channel Block
Description	Dither Frequency
Data Type	64-Bit Real Number
Range	25Hz to 60Hz
Default	25Hz
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SVP IOM, IOLINK
Related Parameters	DITHERAMPL
Remarks	Dither is a superimposition of a sinusoidal wave on the valve position output to reduce the valve stiction. The dither frequency value ranges from 25Hz to maximum 60Hz. This parameter is enabled only when OPACTION parameter value is "Incremental."

6.5 DOWTYPE

Specific to Block	SP_DO Channel		
Description	Digital Output (DO) Type - Determines the type of digital output point.		
Data Type	Enumeration		
Range	0	Status	Status output type
	2	OnPulse	Used to drive an on pulse to a field device
Default	Status		
Config Load	Yes		
Active Loadable	No		
Access Lock	Application Developer		
Residence	SP IOM		
Related Parameters	None.		
Remarks	Determines the type of digital output point.		

7 Exxx Parameters

Related topics

“EDGEDETECT” on page 56

“ENBTUNE” on page 57

“EQNEUNITSOPT” on page 58

“EUDESC” on page 59

“EXCITNAMPFL” on page 60

“EXCITNFBAFL” on page 61

“EXCITNFBBFL” on page 62

“EXCITNFREQ” on page 63


“EXCITNFREQDRIFTFL” on page 64

“EXCITNVLTG” on page 65

7.1 EDGEDETECT

Specific to Block	SP_SPEED Channel Block
Description	Edge Detect - This Parameter is used to select pulse edge between the raising edge and falling edge for counting the pulses.
Data Type	Enumeration
Range	RAISING Edge (0)
	FALLING Edge (1)
Default	RAISING Edge (0)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	None
Remarks	This parameter is used to select the pulse edge used for counting pulses, and hence to calculate speed. It is used to calculate PV for SP_SPEED channel block.

7.2 ENBTUNE

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to enable online tuning of coefficients without changing the block status to offline.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	TEMPIN[1..4][0..12], IN[1..4][0..12], TEMPOUT[1..4][0..12], OUT[1..4][0..12], RESTORE, COMMIT
Remarks	<p>This parameter allows editing the values of IN[1..4][0..12] and OUT[1..4][0..12] and TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] parameter of linearization segment tables.</p> <p>The values of TEMPIN[1..4][0..12], IN[1..4][0..12], TEMPOUT[1..4][0..12] and OUT[1..4][0..12] parameter can be edited in as follows:</p> <ol style="list-style-type: none"> 1. The values of IN[1..4][0..12] and OUT[1..4][0..12] parameters can be directly edited when ENBTUNE is "OFF." 2. When ENBTUNE is "ON," the values of IN[1..4][0..12] and OUT[1..4][0..12] parameters are disabled and a temporary linearization segment table is enabled for editing. The temporary segment table contains the TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] parameters. After the TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] values are changed, you can COMMIT or RESTORE the changes to display the effect in the corresponding IN[1..4][0..12] and OUT[1..4][0..12] parameter values. <div>  Attention <ul style="list-style-type: none"> When CEE is RUN and CM is ACTIVE, this is the only method (point 2) by which you can modify IN[1..4][0..12] and OUT[1..4][0..12] values of all tables. </div>

7.3 EQNEUNITSOPT

Specific to Block	SVP_REGCTL Channel		
Description	Proportional-Only (Equation E) Units Option		
Data Type	Enumeration		
Range	0	EUs	Use Engineering Units
	1	Percent	Use percent
Default	EUs (0)		
Config. Load	Yes		
Active Loadable	No		
Access Lock	Engineer/Application Developer		
Residence	SVP IOM		
Related Parameters	CTLEQN		
Remarks	This parameter is enabled only if the CTLEQN parameter is set to "EquationE."		

7.4 EUDESC

Specific to Block	SP_SPEED channel
Description	This parameter allows you to describe the Engineering units for flow rate.
Data Type	String
Range	Length: 24 characters
Default	Null String
Config Load	Yes
Active Loadable	Yes
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	MEASUREMENTTYPE
Remarks	Recommended length of the characters is 16 characters.

7.5 EXCITNAMPFL

Specific to Block	SVP_AI Channel Block
Description	Excitation Amplitude Failure
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SVP IOM
Related Parameters	EXCITNFREQDRIFTFL, EXCITNFBAFL, EXCITNFBBFL
Remarks	This flag is set to "TRUE" when the configured excitation amplitude does not match with the actual excitation amplitude.

7.6 EXCITNFBAFL

Specific to Block	SVP_AI
Description	Excitation Feedback A Failure Flag
Data Type	Boolean
	OFF (0)
Range	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

7.7 EXCITNFBBFL

Specific to Block	SVP_AI
Description	Excitation Feedback B Failure Flag
Data Type	Boolean
	OFF (0)
Range	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

7.8 EXCITNFREQ

Specific to Block	SVP IOM
Description	Excitation Frequency - This parameter is used to configure excitation frequency for both SVP_AI channels configured to accept input from LVDT/RVDT or Resolver transducers.
Data Type	64-Bit Real Number
Range	1000 Hz to 3200 Hz
Default	2500Hz
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SVP IOM
Related Parameters	XMTRWIRESLCT, EXCITNVLTG
Remarks	This parameter accepts values from 1000 Hz to 3200 Hz. In Project view, any integer value in the range of 1000 to 3200 Hz can be entered. After loading, the value is rounded off to the least integer value, which is a multiple of 100. For example, the value 2578 Hz is rounded off to 2500 Hz and 3196 Hz is rounded off to 3100 Hz.

7.9 EXCITNFREQDRIFTFL

Specific to Block	SVP_AI
Description	Excitation Frequency Drift Failure Flag
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	EXCITNFREQ
Remarks	This parameter is set if the actual excitation frequency fed to the LVDT deviates from the configured excitation frequency in the parameter EXCITNFREQ.

7.10 EXCITNVLTG

Specific to Block	SVP_AI Channel
Description	This parameter is used to configure the RMS value of the excitation voltage fed to the LVDT/RVDT or Resolver.
Data Type	64-Bit Real Number
Range	For Resolver: 1.1V to 8V For LVDT/RVDT: 3V to 8V
Default	For Resolver: 3V For LVDT/RVDT: 3V
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SVP IOM
Related Parameters	SENSRTYP
Remarks	

8 Fxxx Parameters

Related topics

“FAULTOPT” on page 68

“FAULTVALUE” on page 70

“FILTERTIME” on page 71

8.1 FAULTOPT

Specific to Block	SVP_AO Channel		
Description	Fault Option		
Data Type	Enumeration		
Range	0	Hold	Hold output at last good value.
	1	Unpower	Output goes to un-powered value.
	2	UseFaultValue	Output goes to the value specified by the FAULTVALUE parameter.
	3	UseBiasCurrent	Output goes to the value specified by the OPBIASCURRENT parameter.
Default	Unpower		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer/AppDev		
Residence	SVP IOM		
Related Parameters	FAULTVALUE		
Remarks	<p>For Incremental valve types: When the OPACTION is set to "Incremental," this parameter (FALUTOPT) does not support "Hold" option. It only supports "Unpower," "UseFaultValue," and "UseBiasCurrent" options.</p> <p>For FullValue valve types: When the OPACTION is set to "FullValue," this parameter (FAULTOPT) supports "Hold," "Unpower," and "UseFaultValue" options.</p>		

Specific to Block	SP_AO Channel		
Description	Fault Option		
Data Type	Enumeration		
Range	0	Hold	Hold output at last good value.
	1	Unpower	Output goes to un-powered value.
	2	UseFaultValue	Output goes to the value specified by the FAULTVALUE parameter.
Default	Unpower		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer/AppDev		
Residence	SP IOM		
Related Parameters	FAULTVALUE		

Remarks	<p>This parameter defines the state which an AO channel goes into when the IOM stops communicating with the device that is responsible for sending updates to it.</p> <p>If the IOM failure is due to power loss, outputs go to un-powered regardless of the FAULTOPT value.</p>
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8.2 FAULTVALUE

Specific to Block	SP_AO Channel
Description	Fault value
Data Type	32-Bit Real Number
Range	-6.9% to 106.9%
Default	-6.9
Config Load	Yes
Active Loadable	No
Access Lock	Engineer/AppDev
Residence	SP IOM
Related Parameters	FAULTOPT
Remarks	<p>This parameter defines the value which a channel is set to when</p> <ul style="list-style-type: none"> the UseFaultValue is selected for the FAULTOPT, and the IOM stops communicating with the device that is responsible for sending updates to it. <p>The default setting for FAULTVALUE results in the channel behaving exactly as if Unpower was selected for FAULTOPT.</p>

Specific to Block	SVP_AO Channel
Description	Fault value
Data Type	32-Bit Real number
Range	<p>For 4-20ma output types: -6.9% to 106.9%</p> <p>For other output types: 0% to 100%</p>
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer/AppDev
Residence	SVP IOM
Related Parameters	FAULTOPT
Remarks	<p>This parameter is enabled only when FAULTOPT parameter is set as "UseFaultValue."</p>

8.3 FILTERTIME

Specific to Block	SP_SPEED Block
Description	Filter time (in mill seconds) - Defines the time window for which the speed PV values are considered to calculate the Rate Of Change Process Value (ROCPV).
Data Type	Enumeration
Range	2.5ms (0)
	5ms (1)
	7.5ms (2)
	10ms (3)
	20ms (4)
Default	5ms (1)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	ROCPV
Remarks	

9 Gxxx Parameters

Related topics

“GAINHILM” on page 74

“GAINLOLM” on page 75

“GAINOPT” on page 76

“GEARRATIO” on page 77

“GRP1IGNORD” on page 78

“GRP1IGNORDFL[1..4]” on page 79

“GRP2IGNORD” on page 80

“GRP2IGNORDFL[1..4]” on page 81

“GRP1NMIN” on page 82

“GRP2NMIN” on page 83

“GRP1VOTCHENB[1..4]” on page 84

“GRP2VOTCHENB[1..4]” on page 85

9.1 GAINHILM

Specific to Block	SVP_REGCTL Channel
Description	Gain High Limit - Specifies upper limit for gain value. If K value exceeds this limit, the value will be clamped to this limit, as applicable.
Data Type	64-Bit Real Number
Range	Any value greater than GAINLOLM.
Default	240.00
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	GAINLOLM, K
Remarks	

9.2 GAINLOLM

Specific to Block	SVP_REGCTL Channel
Description	Gain Low Limit - Specifies the lower limit for the gain value. If K value goes beneath this limit, the value is clamped to this limit.
Data Type	64-Bit Real Number
Range	Any value lesser than GAINHILM.
Default	0.00
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	GAINHILM, K
Remarks	

9.3 GAINOPT

Specific to Block	SVP_REGCTL Channel
Description	Gain Option - Specifies how the PID gain should be calculated.
Data Type	Enumeration
Range	Lin (0): Linear Gain
Default	Lin (0): Linear Gain
Config. Load	Yes
Active Loadable	No
Access Lock	ViewOnly
Residence	SVP IOM
Related Parameters	
Remarks	

9.4 GEARRATIO

Specific to Block	SP_SPEED Channel Block
Description	Gear Ratio
Data Type	64-Bit Real Number
Range	Any real number
Default	1
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM, IOLINK
Related Parameters	SENSRTYP, TOOTHCNT
Remarks	None.

9.5 GRP1IGNORD

Specific to Block	SP_SPDVOTE block
Description	Group Ignored Flag for Voting logic Group 1
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	GRP1IGNORDFL[1..4], GRP1VOTCHENB[1..4]
Remarks	<p>This parameter is set to "ON" in the following scenarios.</p> <ol style="list-style-type: none"> 1. When the channels selected for Voting Logic algorithm in Voting Group1 are bad. 2. When the Voting Group 1 is not selected for the voting logic algorithm.

9.6 GRP1IGNORDFL[1..4]

Specific to Block	SP_SPDVOTE block
Description	Individual Channel Ignored Flag for Voting logic Group 1
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	GRP1IGNORD, GRP1VOTCHENB[1..4]
Remarks	This parameter is set to "ON" only when the corresponding Speed channel is not considered for voting logic algorithm.

9.7 GRP2IGNORD

Specific to Block	SP_SPDVOTE block
Description	Group Ignored Flag for Voting logic Group 2
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	GRP2IGNORDFL[1..4], GRP2VOTCHENB[1..4]
Remarks	<p>This parameter is set to "ON" in the following scenarios.</p> <ol style="list-style-type: none"> 1. When the channels selected for Voting Logic algorithm in Voting Group2 are bad. 2. When the Voting Group 2 is not selected for the voting logic algorithm.

9.8 GRP2IGNORDFL[1..4]

Specific to Block	SP_SPDVOTE block
Description	Individual Channel Ignored Flag for Voting logic Group 2
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	GRP2IGNORD, GRP2VOTCHENB[1..4]
Remarks	This parameter is set to "ON" only when the corresponding Speed channel is not considered for voting logic algorithm.

9.9 GRP1NMIN

Specific to Block	SP_SPDVOTE block
Description	This parameter displays the minimum number of valid voting inputs required for Voting logic Group 1.
Data Type	Enumeration
Range	1 to 3
Default	1
Config Load	No
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	VOTALG1, GRP1VOTCHENB [1..4], and MEDOPT1
Remarks	This parameter represents the minimum number of group 1 valid voting inputs required for voting logic algorithm for group 1. The 2 out of 3 voting logic supports a maximum of 3 voting inputs. If maximum number of voting inputs configured for any group exceeds 3, the block data is treated as invalid (i.e. VOTPV is set to "NaN"). If the no. of valid voting inputs GRP1VOTCHENB [1..4] is lesser than GRP1NMIN parameter value, the configuration is treated as invalid and load of block fails.

9.10 GRP2NMIN

Specific to Block	SP_SPDVOTE block
Description	This parameter displays the minimum number of valid voting inputs required for Voting logic Group 2.
Data Type	Enumeration
Range	1 to 3
Default	1
Config Load	No
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	VOTALG2, GRP2VOTCHENB [1..4], and MEDOPT2
Remarks	This parameter represents the minimum number of group 1 valid voting inputs required for voting logic algorithm for group 1. The 2 out of 3 voting logic supports a maximum of 3 voting inputs. If maximum number of voting inputs configured for any group exceeds 3, the block data is treated as invalid (i.e. VOTPV is set to "NaN"). If the no. of valid voting inputs GRP2VOTCHENB [1..4] is lesser than GRP2NMIN parameter value, the configuration is treated as invalid and load of block fails.

9.11 GRP1VOTCHENB[1..4]

Specific to Block	SP_SPDVOTE block
Description	This parameter is used to select a particular speed channel to be part of Voting Logic algorithm for Group 1.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	GRP1NMIN, VOTALG1
Remarks	If the number of channels selected is lesser than that the number specified in GRP1NMIN parameter, the configuration of voting logic block is treated as invalid, and load of block fails.

9.12 GRP2VOTCHENB[1..4]


Specific to Block	SP_SPDVOTE block
Description	This parameter is used to select a particular speed channel to be part of Voting Logic algorithm for Group 2.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	GRP2NMIN, VOTALG2
Remarks	If the number of channels selected is lesser than that the number specified in GRP2NMIN parameter, the configuration of voting logic block is treated as invalid, and load of block fails.

10 Ixxx Parameters


Related topics

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10.1 I1

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter 1 - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I1INPTDIR, I1STS, INLCKINP_SRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX.FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX.FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY.FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY.FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.


10.2 I2

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [2] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	Yes
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I2INPTDIR, I2STS, INLCKINPTSRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX. FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX. FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the SPM IOM. YYYY. FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY. FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.


10.3 I3

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [3] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I3INPTDIR, I3STS, INLCKINPSTRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX.FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX.FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY.FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY.FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.


10.4 I4

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [4] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I4INPTDIR, I4STS, INLCKINPSTR[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX. FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX. FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY. FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY. FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from the interlock processing.

10.5 I5

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [5] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I5INPTDIR, I5STS, INLCKINPTSRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX. FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX. FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY. FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY. FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. <div>  Attention <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing. </div>


10.6 I6

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [6] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I6INPTDIR, I6STS, INLCKINPSTRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX.FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX.FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY.FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY.FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.

10.7 I7

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [7] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I7INPTDIR, I7STS, INLCKINPTSRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX. FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX. FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY. FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY. FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p>! Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.

10.8 I8

Specific to Block	SP_DO Channel Block
Description	Interlock check parameter [8] - This parameter is used to configure interlock for the DO channel.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	READY, I8INPTDIR, I8STS, INLCKINPTSRC[1...8]
Remarks	<p>This parameter can be configured as block pin connections with any one of the following parameters.</p> <ul style="list-style-type: none"> PV and PV.FLWRST of any DI Channel block of the same SPM IOM. XXXX.FL, where XXXX can be any one of VOTPVxHIALM, VOTROCxPOSHIALM, VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. XXXX.FLWRST, where XXXX can be any one of VOTPVxHHALM or VOTROCxPOSHHALM where x=1,2 of the SP_SPDVOTE channel of the same SPM IOM. YYYY.FL, where YYYY can be any one of PVHIALM, ROCPOSHIALM, PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM. YYYY.FLWRST, where YYYY can be any one of PVHHALM or ROCPOSHHALM of the SP_SPEED channel of the same SPM IOM.
	<p> Attention</p> <ul style="list-style-type: none"> If an interlock pin is not connected, this parameter is excluded from interlock processing.

10.9 IN[1..4][0..12]

Specific to Block	ENHGENLIN Function Block
Description	Input Coordinate - IN array defines the input value for all the linearization segment tables.
Data Type	64-Bit Real Number
Range	Each coordinate within a linearization segment table must be greater than the previous coordinate, and lesser than the next coordinate.
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	ENBTUNE, VIEWLINSEG, NUMSEGS[1..4]
Remarks	<p>This parameter defines the input value for the linearization segment table. [1..4] indicates the linearization segment table to which the IN parameter belongs. [0..12] indicates the co-ordinate number of IN parameter. This parameter can be modified only when EBTUNE is "ON."</p> <p>The P1 value determines which two consecutive IN[1..4][0..12] and OUT[1..4][0..12] value pairs are used for linearization.</p>

10.10 I1INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 1 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I1, I1STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.11 I2INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 2 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I2, I2STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.12 I3INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 3 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I3, I3STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.13 I4INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 4 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I4, I4STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.14 I5INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 5 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I5, I5STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.15 I6INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 6 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I6, I6STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.16 I7INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 7 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I7, I7STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.17 I8INPTDIR

Specific to Block	SP_DO Channel Block
Description	Interlock 8 input direction
Data Type	Enumeration
Range	Direct (0)
	Reverse (1)
Default	Reverse (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	I8, I8STS
Remarks	This parameter is used to configure the input direction for interlocks.

10.18 I1STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I1.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I1, I1INPTDIR, READY
Remarks	This parameter value is computed by using the values of I1 parameter and I1INPTDIR parameter.

10.19 I2STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I2.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I2, I2INPTDIR, READY
Remarks	This parameter value is computed by using the values of I2 parameter and I2INPTDIR parameter.

10.20 I3STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I3.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I3, I3INPTDIR, READY
Remarks	This parameter value is computed by using the values of I3 parameter and I3INPTDIR parameter.

10.21 I4STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I4.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I4, I4INPTDIR, READY
Remarks	This parameter value is computed by using the values of I4 parameter and I4INPTDIR parameter.

10.22 I5STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I5.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I5, I5INPTDIR, READY
Remarks	This parameter value is computed by using the values of I5 parameter and I5INPTDIR parameter.

10.23 I6STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I6.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I6, I6INPTDIR, READY
Remarks	This parameter value is computed by using the values of I6 parameter and I6INPTDIR parameter.


10.24 I7STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I7.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I7, I7INPTDIR, READY
Remarks	This parameter value is computed by using the values of I7 parameter and I7INPTDIR parameter.

10.25 I8STS

Specific to Block	SP_DO Channel Block
Description	This parameter indicates the status for the interlock I8.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	I8, I8INPTDIR, READY
Remarks	This parameter value is computed by using the values of I8 parameter and I8INPTDIR parameter.

10.26 INITMAN

Specific to Block	SVP_REGCTL Channel
Description	Initialization Manual Flag - Indicates the status of the function block initialization.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	<p>This parameter is set to "On," when one of the following conditions is true.</p> <ul style="list-style-type: none"> • SVP_REGCTL block's CV range (CVEUHI / CVEULO) is Bad. • SVP_AO block's MODE is set to "MAN." <p>The SVP_REGCTL block's output is initialized to the SVP_AO's initialization value when this parameter value is changed to "ON."</p> <hr/> <p> Attention</p> <p>When INITMAN is set to "On," "Init" appears on the SVP_REGCTL block's Detail or group display, and the operator, supervisor or engineer are prevented from changing the block's output (regardless of MODE).</p>

10.27 INITREQ

Specific to Block	SP_AO, SP_DO, SVP_AO		
Description	Initialization Request - Displays the state of the back initialization request for the associated output channel block.		
Data Type	Boolean		
Range	0	OFF	Full output path is normal.
	1	ON	Output path has been broken and needs to be back initialized.
Default	OFF (0)		
Config Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SP IOM, SVP IOM		
Related Parameters	Not Applicable		
Remarks	When the channel is set to "Inactive," this parameter is set to "ON."		

Specific to Block	SVP_REGCTL Channel		
Description	Initialization Request - Used by SVP_REGCTL block to request a primary initialization.		
Data Type	Boolean		
Range	OFF (0)		
	ON (1)		
Default	OFF (0)		
Config Load	No		
Active Loadable	No		
Access Lock	Control		
Residence	SVP IOM		
Related Parameters	INITVAL		
Remarks	When the channel is set to "Inactive," this parameter is set to "ON." Or, when the SVP module is set to "Idle," this parameter is set to "ON."		

10.28 INITREQLATCH

Specific to Block	SP_DO
Description	Initialize Request Latched
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	INITREQ
Remarks	

10.29 INITVAL

Specific to Block	SP_AO, SVP_AO
Description	Initialization Value - The value to which a primary must initialize.
Data Type	64-Bit Real Number
Range	For 4-20ma output types: -6.9 % to 106.9 % For other output types: 0% to 100%
Default	0.0 %
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	OP
Remarks	This is the back initialization value read from the AO.

10.30 INLCKINPTSRC[1..8]

Specific to Block	SP_DO Channel block
Description	Interlock Input Source
Data Type	BlockId
Range	Not Applicable
Default	Not Applicable
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	LASTTRIPREASON
Remarks	This parameter is used to display the name of source parameter for the corresponding configured interlock.

10.31 INPTDIR

Specific to Block	SP_AI, SVP_AI		
Description	Input Direction - Specifies response to analog PV input as direct or reverse. If the input direction is "Direct action," PVCALC increases as PVRAW input increases. If the input direction is "Reverse action," PVCALC decreases as PVRAW input increases.		
Data Type	Enumeration		
Range	0	Direct	PVCALC increases as PVRAW input increases
	1	Reverse	PVCALC decreases as PVRAW input increase
Default	Direct (0)		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer or Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters			
Remarks	SVP_AI and SP_AI - Input Direction applies to Linear and Square Root PV characterizations. This parameter is not applicable for LVDT/RVDTResolver.		

Specific to Block	SP_DI, SVP_DI		
Description	<p>Input Direction - Specifies response to digital PV input as direct or reverse.</p> <p>Direct action means that the PV condition tracks the PVRAW condition. If the PVRAW is OFF then the PV is OFF, and the PVRAW is ON then PV is ON.</p> <p>Reverse action means that the PV condition is the opposite of the PVRAW condition. If the PVRAW is OFF then the PV is ON, and the PVRAW is ON then PV is OFF.</p>		
Data Type	Enumeration		
Range	0	Direct	If PVRAW = OFF, PV = OFF If PVRAW = ON, PV = ON
	1	Reverse	If PVRAW = OFF, PV = ON If PVRAW = ON, PV = OFF
Default	Direct (0)		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer or Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters			
Remarks			

10.32 INTRLOCKFAILOPT1

Specific to Block	SVP_AO Channel Block
Description	This parameter is used to select to determine the OP value when interlock failure occurs.
Data Type	Enumeration
Range	PRCSAFEOP (1)
	HOLD (2)
Default	PRCSAFEOP (1)
Config Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	IOLINK , SVP IOM
Related Parameters	PRCSINTRLOCK1, PRCSAFEOP1
Remarks	This configuration parameter is used for the OP value to be driven to the AO Valve output when there is an interlock failure.

10.33 INTRLOCKFAILOPT2

Specific to Block	SVP_AO Channel Block
Description	This parameter is used to select to determine the OP value when interlock failure occurs.
Data Type	Enumeration
Range	PRCSAFEOP (1)
	HOLD (2)
Default	PRCSAFEOP (1)
Config Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	IOLINK , SVP IOM
Related Parameters	PRCSINTRLOCK2, PRCSAFEOP2
Remarks	This configuration parameter is used for the OP value to be driven to the AO Valve output when there is an interlock failure.


10.34 INTRLCK1STS

Specific to Block	SVP_AO
Description	Process Interlock 1 Status.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PRCSINTRLOCK1
Remarks	This parameter is used to indicate when the INITREQ parameter has been set to "ON" for SVP AO channel due to the corresponding configured Interlock.

10.35 INTRLCK2STS

Specific to Block	SVP_AO
Description	Process Interlock 2 Status.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PRCSINTRLOCK2
Remarks	This parameter is used to indicate when the INITREQ parameter has been set to "ON" for SVP AO channel due to the corresponding configured Interlock.

10.36 IOLINKTYPE

Specific to Block	C300 - 20 IOLINK	
Description	IOLINKTYPE allows you to select the I/O Family Type for the associated IOLINK FB's.	
Data Type	Enumeration	
Range	0	NONE
	2	SERIES_C_IO_TYPE
Default	NONE	
Config Load	Yes	
Active Loadable	No	
Access Lock	Engineer	
Residence	IOLINK	
Related Parameters	N/A	
Remarks	By default, this parameter is set to "NONE" for IOLINK block.	
	 Attention This parameter must be selected before assigning any IO modules to the associated IOLINK.	

11 Kxxx Parameters

Related topics

“K” on page 126

“KFACTOR” on page 127

11.1 K

Specific to Block	SVP_REGCTL Channel
Description	Total Gain for Calculated Variable (CV).
Data Type	64-Bit Real Number
Range	GAINLOLM to GAINHILM
Default	1.0
Config. Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	SVP IOM
Related Parameters	GAINHILM, GAINLOLM.
Remarks	This parameter is used only if GAINOPT parameter is configured as "Lin."

11.2 KFACTOR

Specific to Block	SP_SPEED channel
Description	This parameter displays the ratio between the pulse count and the flow rate.
Data Type	32-Bit Real Number
Range	Any value greater than zero
Default	1
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	ORDEROFKFACTOR
Remarks	This parameter is configurable only when you configure the measurement type as "Flow Measurement."

12 Lxxx Parameters

Related topics

“LASTGOODPV” on page 130

“LASTPV” on page 131

“LASTTRIPREASON” on page 132

“LASTTRIPTIME” on page 133

“LASTROCPOSHHDRNMSPD” on page 134

“LASTVOTPV1” on page 135

“LASTVOTPV2” on page 136

“LASTVOTROC1” on page 137

“LASTVOTROC2” on page 138

“LOCUTOFF” on page 139

“LVDTCOREFALLOUTFL” on page 140

12.1 LASTGOODPV

Specific to Block	SVP_REGCTL Channel
Description	Last good Process Variable (PV) value.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV, PVSTS
Remarks	

12.2 LASTPV

Specific to Block	SP_AI, SP_SPEED, SVP_AI
Description	Last Process Variable (PV) - Displays the value of the PV before the PV value became BAD.
Data Type	32-Bit Real Number
Range	Not applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	ViewOnly
Residence	SP IOM, SVP IOM
Related Parameters	PV, PVSTS
Remarks	This parameter is used as a reference when the PV value becomes "BAD."

12.3 LASTTRIPREASON

Specific to Block	SP_ DO block
Description	This parameter displays the source from which the interlock failure was caused.
Data Type	String
Range	
Default	
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SPM IOM
Related Parameters	LASTTRIPTIME, INLCKINPTSRC[1..8]
Remarks	

12.4 LASTTRIPTIME

Specific to Block	SP_DO block
Description	This parameter displays the time and date of the last trip occurred due to Voted PV or Voted Rate Of Change (ROC).
Data Type	String
Range	
Default	
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SPM IOM
Related Parameters	LASTTRIPREASON, INLCKINPTSRC[1..8]
Remarks	None.

12.5 LASTROCPOSHHDRNMSPD

Specific to Block	SP_SPEED block
Description	This parameter is used to display the highest acceleration during the last nominal speed.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0 (≥ 0.0)
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	LASTROCNEGLLDRCRSPD
Remarks	The nominal speed must be configured for determining highest acceleration.

12.6 LASTVOTPV1

Specific to Block	SP_SPDVOTE block
Description	Last Voted Process Variable (PV) for Voting logic Group 1 displays the value of the Voted PV1 before the value becomes as "BAD."
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0 (≥ 0.0)
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1, VOTPV1STS
Remarks	This parameter can be used as reference when Voted PV1 has gone as "BAD."

12.7 LASTVOTPV2

Specific to Block	SP_SPDVOTE block
Description	Last Voted Process Variable (PV) for Voting logic Group 2 displays the value of the Voted PV2 before the value becomes as "BAD."
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0 (≥ 0.0)
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV2, VOTPV2STS
Remarks	This parameter can be used as reference when Voted PV2 has gone as "BAD."

12.8 LASTVOTROC1

Specific to Block	SP_SPDVOTE block
Description	Last Voted Rate Of Change (ROC) of PV for Voting logic Group 1 displays the value of the Voted ROC1 before the value becomes as "BAD."
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0 (≥ 0.0)
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1, VOTROC1STS
Remarks	This parameter can be used as reference when Voted ROC1 has gone as "BAD."

12.9 LASTVOTROC2

Specific to Block	SP_SPDVOTE block
Description	Last Voted Rate Of Change (ROC) of PV for Voting logic Group 2 displays the value of the Voted ROC2 before the value becomes as "BAD."
Data Type	64-Bit Real Number
Range	Greater than or equal to 0.0 (≥ 0.0)
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2, VOTROC2STS
Remarks	This parameter can be used as reference when Voted ROC2 has gone as "BAD."

12.10 LOCUTOFF

Specific to Block	SP_AI, SVP_AI
Description	Low Cut-off Signal - Specifies the low signal cutoff point for flow inputs.
Data Type	32- Real Number
Range	PVEULO to PVEUHI
	Greater Than 0
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer or Application Developer
Residence	SP IOM, SVP IOM
Related Parameters	PV, PVCHAR
Remarks	For SVP_AI: This parameter is supported for LVDT/RVDT. This parameter is disabled for Resolver.

12.11 LVDTCOREFALLOUTFL

Specific to Block	SVP_AI
Description	LVDT Core Fallout Flag: This flag is set if the LVDT core is out of LVDT.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	<p>This softfail is not applicable for Resolver sensor type.</p> <p>This parameter functions only when the XMTRWIRESLCT parameter is configured as "6_WIRE."</p>

13 Mxxx Parameters

Related topics

- “MEASUREMENTTYPE” on page 142
- “MEDOPT1” on page 143
- “MEDOPT2” on page 144
- “MISGPULFL” on page 145
- “MODE” on page 146
- “MODEATTR” on page 148
- “MODEATTRFL.NORM” on page 150
- “MODEATTRFL.OPER” on page 151
- “MODEATTRFL.PROG” on page 152
- “MODEFL.CAS” on page 153
- “MODEFL.MAN” on page 154
- “MODEFL.NORM” on page 155
- “MODEPERM” on page 156

13.1 MEASUREMENTTYPE

Specific to Block	SP_SPEED channel
Description	This parameter is used to select the measurement type of the SPEED channel.
Data Type	Enumeration
Range	SPEED_Measurement (0)
	FLOW_Measurement (1)
Default	SPEED_Measurement (0)
Config Load	Yes
Active Loadable	No
Access Lock	AppDeveloper
Residence	SP IOM
Related Parameters	
Remarks	To measure the speed, you must configure the measurement type as "SPEED_MEASUREMENT."
	To measure the flow in the turbine flow meter, you must configure the measurement type as "FLOW_MEASUREMENT."

13.2 MEDOPT1

Specific to Block	SP_SPDVOTE block
Description	This parameter is used to select whether minimum or maximum value of valid voting inputs is used for Voting Logic Group 1, when Median is the Voting Logic algorithm.
Data Type	Enumeration
Range	MIN (0)
	MAX (1)
Default	MIN (0)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	VOTALG1
Remarks	This parameter is enabled only if VOTALG1 parameter value is set to "MED." When the parameter is configured as "MIN or MAX," the voting channel must have two valid inputs.


13.3 MEDOPT2

Specific to Block	SP_SPDVOTE block
Description	This parameter is used to select whether minimum or maximum value of valid voting inputs is used for Voting Logic Group 2, when Median is the Voting Logic algorithm.
Data Type	Enumeration
Range	MIN (0)
	MAX (1)
Default	MIN (0)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SP IOM
Related Parameters	VOTALG2
Remarks	This parameter is enabled only if VOTALG2 parameter value is set to "MED." When the parameter is configured as "MIN or MAX," the voting channel must have two valid inputs.


13.4 MISGPULFL

Specific to Block	SP_SPEED Channel Block
Description	Missing Pulse Detection Flag: This parameter is used to display the status of missing pulse.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	DEFMPULFL
Remarks	This parameter is set to "ON" if the missing pulse is detected, else it is set to "OFF."

13.5 MODE

Specific to Block	SP_AO, SVP_AO, SP_DO		
Description	Operating mode for channel block		
Data Type	Enumeration		
Range	1	Man	Manual mode, a user or a program provides this channel's output value.
	2	Cascade	Cascade mode, a control (example : SVP_REGCTL) block provides the output value.
	5	Normal	Parameter NMODE determines this point's mode and parameter NMODATTR determines this point's MODEATTR.
Default	SP_AO: Cas		
	SP_DO: Man		
	SVP_AO: Cas		
Config Load	Yes		
Active Loadable	No		
Access Lock	For SP_AO and SP_DO: Operator		
	For SVP_AO: Supervisor		
	 Attention To change the MODE of the SVP_AO channel from CAS to MAN, the OPACTION parameter must be in incremental configuration.		
Residence	SP IOM, SVP IOM		
Related Parameters	MODEATTR, MODEPERM, NMODE, NMODATTR, REDTAG		
Remarks	This parameter defines the current mode for this channel. <ul style="list-style-type: none"> For a user to change MODE, MODEATTR must equal Operator, MODEPERM must equal Permit, and REDTAG must be OFF. For a program to change MODE, MODEATTR must equal Program and REDTAG must be OFF. 		

Specific to Block	SVP_REGCTL Channel	
Description	Mode - Defines the mode of a SVP - Regulatory Control block.	
Data Type	Enumeration REGMODE	
Range	Manual (0)	OP is stored by either the operator or a user program. The function block does not derive OP, so the input (SP, X1, and so on.) is ignored.
	Cascade (2)	The channel derives OP. The input is pulled from another function block (the primary).
	Normal (5)	

Default	Man
Config Load	No
Active Loadable	No
Access Lock	<p>Operator</p> <hr/> <p> Attention • To change the MODE from CAS to MAN of the SVP_REGCTL channel, you must have Supervisor credentials.</p> <hr/>
Residence	SVP IOM
Related Parameters	MODEATTR
Remarks	<p>MODE change by a program requires MODEATTR = Program.</p> <p>MODE change by an operator requires MODEATTR = Operator and MODEPERM = Permit.</p>

13.6 MODEATTR

Specific to Block	SP_AO, SP_DO, SVP_AO		
Description	Mode Attribute - This parameter determines whether the operator or the sequence program has authority to change certain parameters of the associated channel block.		
Data Type	Enumeration		
Range	1	Operator	Operator provides the channel's output value.
	2	Program	Program can change the channel's output value.
	3	Normal	Parameter NMODATTR determines this point's MODEATTR.
Default	SP_AO: Program		
	SP_DO: Operator		
	SVP_AO: Operator		
Config Load	Yes		
Active Loadable	No		
Access Lock	Operator		
Residence	SP IOM, SVP IOM		
Related Parameters	MODE, MODEPERM, REDTAG		
Remarks	<p>For an operator to change MODEATTR, MODEPERM must equal Permit and REDTAG must be OFF.</p> <p>The setting for MODEATTR only affects the channel's output if MODE is set to Man (Manual).</p>		

Specific to Block	SVP_REGCTL Channel		
Description	Mode Attribute - Defines whether the operator or a user program has the authority to change certain variables within this function block.		
Data Type	Enumeration MODEATTR		
Range	Operator (1): The operator can set MODE, OP, SP, RATIO and BIAS.		
	Program (2): The program (SCM) can set MODE, OP, SP, RATIO and BIAS.		
	Normal (3)		
Default	Operator (1)		
Config Load	No		
Active Loadable	No		
Access Lock	Operator		
Residence	SVP IOM		
Related Parameters	MODE, OP, SP, X1		

Remarks	MODEATTR is displayed near MODE on detail and group displays. If MODEATTR is Program, a "-P" appears to the left of MODE; if it is Operator, blanks are displayed next to MODE.
----------------	---

13.7 MODEATTRFL.NORM

Specific to Block	SVP_REGCTL Channel	
Description	Normal Mode Attribute Flag - Indicates if mode attribute is normal; i.e., MODEATTR = NORMMODEATTR	
Data Type	Boolean	
Range	OFF (0)	Mode attribute is not normal
	ON (1)	Mode attribute is normal
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	MODEATTR, NORMMODEATTR	
Remarks		

13.8 MODEATTRFL.OPER

Specific to Block	SVP_REGCTL Channel	
Description	Operator Mode Attribute Flag - Indicates if the mode attribute is Operator	
Data Type	Boolean	
Range	OFF (0)	Mode attribute is not Operator
	ON (1)	Mode attribute is Operator
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	MODEATTR	
Remarks		

13.9 MODEATTRFL.PROG

Specific to Block	SVP_REGCTL Channel	
Description	Program Mode Attribute Flag - Indicates if the mode attribute is Program.	
Data Type	Boolean	
Range	OFF (0)	MODEATTR is not currently Program.
	ON (1)	MODEATTR is currently Program.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	MODEATTR	
Remarks		

13.10 MODEFL.CAS

Specific to Block	SVP_REGCTL Channel	
Description	Cascade Mode Flag - Indicates if the mode is Cascade.	
Data Type	Boolean	
Range	OFF (0)	Mode is not Cascade.
	ON (1)	Mode is Cascade.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	MODE	
Remarks		

13.11 MODEFL.MAN

Specific to Block	SVP_REGCTL Channel	
Description	Manual Mode Flag - Indicates if the mode is Manual.	
Data Type	Boolean	
Range	OFF (0)	Mode is not Manual.
	ON (1)	Mode is Manual.
Default	OFF (0)	
Config. Load	No	
Access Lock	View Only	
Active Loadable	No	
Residence	SVP IOM	
Related Parameters	MODE	
Remarks		

13.12 MODEFL.NORM

Specific to Block	SVP_REGCTL Channel
Description	Mode Flag Normal - Indicates if mode is normal; that is, MODE = NORMMODE.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	MODE, NORMMODE.
Remarks	Although MODE and NORMMODE share the same enumeration, MODE cannot be set to "NONE" and NORMMODE cannot be set to "NORMAL." Control Builder checks status at load time and triggers an error flag, if it detects any problems.

13.13 MODEPERM

Specific to Block	SP_AO, SP_DO, SVP_AO		
Description	Mode Permissive - Indicates if the operator can change the mode of a block.		
Data Type	Enumeration		
Range	0	NOTPERM	Users cannot change this channel's mode.
	1	PERMIT	Users can change this channel's mode.
Default	PERMIT		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer/Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters	MODE, MODEATTR		
Remarks	This parameter determines if the operator is permitted to change the mode of this channel.		

Specific to Block	SVP_REGCTL Channel		
Description	Mode Permissive - Indicates if the operator can change the mode of a SVP_REGCTL block.		
Data Type	Enumeration MODEPERM		
Range	NOTPERM (0) - Operator is not permitted to change the mode.		
	PERMIT (1) - Operator is permitted to change the mode.		
Default	PERMIT (1)		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SVP IOM		
Related Parameters	MODE		
Remarks			

14 Nxxx Parameters

Related topics

“NMODE” on page 158

“NMODATTR” on page 160

“NMSPEED” on page 161


“NUMLINSEG” on page 162

“NUMSEGS[1..4]” on page 163

14.1 NMODE

Specific to Block	SP_AO, SP_DO, SVP_AO		
Description	Normal Mode		
Data Type	Enumeration		
Range	0	None	No configured "normal" operating mode.
	1	Man	Manual is the configured "normal" mode.
	2	Cas	Cascade is the configured "normal" mode.
Default	None		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SP IOM, SVP IOM		
Related Parameters	NMODATTR		
Remarks	<p>This parameter defines the normal operating mode for the channel block.</p> <ul style="list-style-type: none"> NMODE (Normal Mode) is the MODE that is activated by pressing the Normal button on the operator panel. If NMODE is None and the user presses the Normal button, the user is informed that MODE was not set because MODE is None. 		

Specific to Block	SVP_REGCTL Channel		
Description	Normal Mode - Defines the normal mode of a Regulatory Control function block.		
Data Type	Enumeration REGMODE		
Range	Manual (Man)		
	Cascade (Cas)		
	Normal		
Default	Normal		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SVP IOM		
Related Parameters	MODE		

Remarks	<p>The mode of this channel is derived at runtime based on current conditions. However, the user may configure a normal mode (NORMMODE) and normal attribute NORMMODEATTR, and go to that mode by pressing the NORM button on the operator pane. When the button is pressed, the contents of NORMMODE is copied to MODE, and NORMMODEATTR is copied to MODEATTR.</p> <p>Possible values for NORMMODE are:</p> <ul style="list-style-type: none"> • Normal • Man • Cas <p>Possible values for NORMMODEATTR are:</p> <ul style="list-style-type: none"> • Operator • Program • None <p>Although MODE and NORMMODE share the same enumeration, MODE cannot be set to NONE and NORMMODE cannot be set to NORMAL. Control Builder checks status at load time and triggers an error flag, if it detects any problems.</p> <hr/> <p> Attention</p> <ul style="list-style-type: none"> • Storing to MODE will not cause NORMMODE to change. Likewise, storing to MODEATTR will not cause NORMMODEATTR to change.
----------------	---

14.2 NMODATTR

Specific to Block	SP_AO, SP_DO, SVP_AO		
Description	Normal Mode Attribute		
Data Type	Enumeration		
Range	0	None	MODEATTR is not affected by this parameter.
	1	Operator	Users have the ability to change certain parameters.
	2	Program	The program has ability to change certain parameters.
Default	None		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SP IOM, SVP IOM		
Related Parameters	NMODE		
Remarks	<ul style="list-style-type: none"> NMODATTR (Normal Mode Attribute) is the MODEATTR (Mode Attribute) that is activated by pressing the Normal button on the operator panel. If NMODATTR is None and the user presses the Normal button, the user is informed that MODEATTR was not set because NMODATTR is None. 		

Specific to Block	SVP_REGCTL Channel		
Description	Normal Mode Attribute - Defines the Normal Mode Attribute of a SVP_REGCTL channel.		
Data Type	Enumeration MODEATTR		
Range	None (0)		
	Oper (1)		
	Program (2)		
Default	None (0)		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SVP IOM		
Related Parameters	MODEATTR		
Remarks			

14.3 NMSPEED

Specific to Block	SP_SPEED Channel block
Description	Nominal Speed
Data Type	64-Bit Real Number
Range	Not Applicable
Default	0
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	LASTROCPOSHHDRNMSPD
Remarks	<p>This parameter has to be configured with the normal operating speed of the turbine. This parameter is used for the following purposes.</p> <ul style="list-style-type: none"> When the SP_SPEED channel's PV is connected to the SP_AO channel's OP of the same SPM IOM, the nominal speed corresponds to the maximum (100%) of the OP for the SP_AO channel. <p>For example, if Nominal Speed is 3000 RPM and SP_SPEED channel's PV is 1500 RPM, the SP_AO channel's OP is 50%.</p> <ul style="list-style-type: none"> LASTROCPOSHHDRNMSPD uses the Nominal Speed for determining the highest acceleration during the last nominal speed.

14.4 NUMLINSEG

Specific to Block	ENHGENLIN Function Block
Description	Number of linearization segment tables - This parameter determines the maximum number of linearization segment tables that are available to you.
Data Type	INT32
Range	1 to 4
Default	1
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	CEE
Related Parameters	ACTLINSEG, VIEWLINSEG, NUMSEGS[1..4]
Remarks	This is a configuration-only parameter. A maximum of 4 linearization segment tables can be configured. This parameter represents the total number of linearization segment tables that would be available to the user.

14.5 NUMSEGS[1..4]

Specific to Block	ENHGENLIN Function Block
Description	Number of Segments - This parameter determines the total number of segments available in the selected linearization segment table to define linear function.
Data Type	INT32
Range	1 to 12
Default	1
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	NUMLINSEG, OUT, IN[1..4][0..12], TEMPIN[1..4][0..12], TEMPOUT[1..4][0..12]
Remarks	This parameter defines a total number of segments in the linearization segment table. This parameter is used to define the total number of IN[1..4][0..12] and OUT[1..4][0..12] parameter values used by the same table for PV calculation.

15 Oxxx Parameters

Related topics

“ONPULSE” on page 167
“OP” on page 168
“OPACTION” on page 169
“OPBIAS” on page 170
“OPBIAS.FIX” on page 171
“OPBIAS.FLOAT” on page 172
“OPBIAS.RATE” on page 173
“OPBIASCUR” on page 174
“OPCHAR” on page 175
“OPEU” on page 176
“OPEXHIFL” on page 177
“OPEXHILM” on page 178
“OPEXLOFL” on page 179
“OPEXLOLM” on page 180
“OPFINAL” on page 181
“OPHICURRENT” on page 182
“OPHIFL” on page 183
“OPIN0” on page 184
“OPIN1” on page 185
“OPIN2” on page 186
“OPIN3” on page 187
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“OPLOCURRENT” on page 190
“OPLOFL” on page 191
“OPLOLM” on page 192
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“OPOUT1” on page 195
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15.1 ONPULSE

Specific to Block	SP_DO Channel
Description	On Pulse Command
Data Type	64-Bit Real Number
Range	0.0 to 60.0 seconds
Default	Not Applicable
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM
Related Parameters	None.
Remarks	<ul style="list-style-type: none"> • This command sets the output to "ON" for the specified number of seconds. At the end of the pulse time, the output is set to "OFF." If 0.0 is entered for ONPULSE, the output is immediately set to "OFF." • DOWTYPE must be set to "ONPULSE" to use ONPULSE functionality. • When the ONPULSE pin is connected to a Device Control's PO pin, the operator must change the OP of the Device Control to start an ONPULSE. The operator cannot set a value to the ONPULSE parameter of the DO Channel directly. Writes to SO is also be rejected. • When the SO and the ONPULSE pins are not connected to a Function Block, the operator can store a value to the ONPULSE parameter and start an ON Pulse with the entered pulse width. • The value read indicates the last commanded pulse width.

15.2 OP

Specific to Block	SP_AO, SVP_AO
Description	Output - Defines the output value from this point in percent.
Data Type	64-Bit Real Number
Range	-6.9 to 106.9 percent
Default	-6.9 percent of Full Scale
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM, SVP IOM
Related Parameters	OPTDIR
Remarks	The control mode must be Manual before an operator can adjust the OP manually.

Specific to Block	SVP_REGCTL Channel
Description	Output Value (in Percent)
Data Type	64-Bit Real Number
Range	OPEXLOLM to OPEXHILM
Default	0.0
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	OPEU
Remarks	Output Value (OP) is represented in percentage of the Calculated Value (CV) range (CVEULO and CVEUHI).

15.3 OPACTION

Specific to Block	SVP_AO block
Description	This parameter is used to select the behavior of valve based on current drive. The output of SVP_AO channel is connected to the valve.
Data Type	Enumeration
Range	Full Value (0)
	Incremental (1)
Default	Incremental (1)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, IOM
Related Parameters	OPTYPE
Remarks	<p>In SVP_AO block, this parameter is configured depending on the valve behavior on the current drive. This parameter is configured as "Full Value" if the valve position is proportional to the current drive. This parameter is configured as "Incremental" if the valve velocity is proportional to the current drive. The OPACTION and OPTYPE parameters decide the behavior of output from AO channel of SVP-IOM. When OPACTION parameter value is "Incremental", the OPHICURRENT and OPLOCURRENT parameter values are mapped to the output values (in %) as follows:</p> <ul style="list-style-type: none"> • 100% of output is mapped to OPHICURRENT value. • 0% of output is mapped to OPLOCURRENT value. <p>When OPACTION parameter value is "Full Value," the SVP_AO channel output characteristics change as follows:</p> <ul style="list-style-type: none"> • OPLOCURRENT is editable when OPTYPE is unipolar. It is disabled only when OPTYPE is 4-20mA. • The output current limits defined by OPHICURRENT and OPLOCURRENT values is mapped to OP percentage values as follows: <ul style="list-style-type: none"> – 100% of output is mapped to OPHICURRENT value. – 0% of output is mapped to OPLOCURRENT value.

15.4 OPBIAS

Specific to Block	SVP_REGCTL Channel
Description	Total Output Bias (in Engineering Units) - OPBIAS is the sum of two components: a user-specified fixed bias (OPBIAS.FIX) and a calculated floating bias (OPBIAS.FLOAT).
Data Type	64-Bit Real Number
Range	Not Applicable
Default	Not Applicable
Config. Load	No
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	OPBIAS.FIX, OPBIAS.RATE
Remarks	<p>The following occurs on a store to OPBIAS:</p> <ul style="list-style-type: none"> • OPBIAS and OPBIAS.FIX are both set to a new value. • OPBIAS.FLOAT is set to zero.

15.5 OPBIAS.FIX

Specific to Block	SVP_REGCTL Channel
Description	Fixed Output Bias (in Engineering Units) - A user-specified bias that is applied to the function blocks' Calculated Variable (CV).
Data Type	64-Bit Real Number
Range	Not Applicable
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	OPBIAS, OPBIAS.RATE
Remarks	$CV = OP + OPBIAS.FIX + OPBIAS.FLOAT$

15.6 OPBIAS.FLOAT

Specific to Block	SVP_REGCTL Channel
Description	Floating Output Bias (in Engineering Units) - Used in conjunction with OPBIAS.RATE.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	Not Applicable
Config. Load	No
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	OPBIAS.RATE
Remarks	<p>Floating bias is calculated as follows:</p> $\text{OPBIAS.FLOAT} = \text{CV}(\text{init}) - (\text{CV}(\text{unbiased}) + \text{OPBIAS.FIX})$ <p>CV (init) = initialization value received from secondary</p> <p>CV(unbiased) = unbiased calculated value</p> <p>OPBIAS.FIX = fixed bias (user specified)</p>


15.7 OPBIAS.RATE

Specific to Block	SVP_REGCTL Channel
Description	Output Bias Ramp Rate (in Engineering Units per Minute) - Used in conjunction with OPBIAS.FLOAT to eliminate output bumps when initialization path is done by the user.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OPBIAS, OPBIAS.FIX, OPBIAS.FLOAT.
Remarks	The Output Bias is the sum of two parts (OPBIAS.FIXED - a fixed output bias, and OPBIAS.FLOAT - a calculated bias) and is generally used to ensure a bumpless transfer when the block initializes or changes mode.

15.8 OPBIASCUR

Specific to Block	SVP_AO Channel
Description	This parameter is used to configure the value of output current, which maintains the valve motionless in its current position when driving the valve.
Data Type	32-Bit Real Number
Range	OPLOCURRENT to OPHICURRENT
Default	0 mA
Config Load	Yes
Active Loadable	No
Access Lock	Engineer/AppDeveloper
Residence	SVP IOM
Related Parameters	OPTYPE, OPHICURRENT, OPLOCURRENT, OP, OPACTION
Remarks	This parameter is enabled when OPACTION parameter value is "Incremental" type (for valves whose velocity is proportional to current drive). The valve moves in the opening direction when the flowing current is greater than the OPBIASCUR value. The valve moves in the closing direction when the flowing current is lesser than OPBIASCUR value.

15.9 OPCHAR

Specific to Block	SP_AO, SVP_AO
Description	Output Characterization - Specifies whether the output characterization function is to be used for this data point or not.
Data Type	Boolean
Range	OFF - Output characterization is not to be used.
	ON - Output characterization is to be used.
Default	OFF
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	<p>For SP_AO Channel: If OPCHAR is ON, you must configure the values for the input coordinates (OPIN1 to 4) and the output coordinates (OPOUT1 to 4).</p> <hr/> <p> Attention Refer to the <i>Control Builder Component Theory Guide</i> for more information on output characterization.</p> <hr/> <p>OPCHAR allows the user to ensure that between any two points the OP value is determined by plotting OP to a straight line which connects the two points. Each point is described as OPIN/OPOUT (X/Y) coordinate and the plotting of OP can be seen in the OPFINAL parameter.</p> <p>For SVP_AO Channel: The OPCHAR parameter is enabled only when OPACTION is set to "FullValue."</p>

15.10 OPEU

Specific to Block	SVP_REGCTL Channel
Description	Output Value (in Engineering Units)
Data Type	64-Bit Real Number
Range	Not Applicable
Default	Not Applicable
Config. Load	No
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	OP
Remarks	

15.11 OPEXHIFL

Specific to Block	SVP_REGCTL Channel	
Description	Output (OP) Extended High Limit Flag - Indicates if OP is at its extended high limit.	
Data Type	Boolean	
Range	OFF (0)	OP is below its extended high limit.
	ON (1)	OP is at its extended high limit.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	OPEXHILM	
Remarks		

15.12 OPEXHILM

Specific to Block	SVP_REGCTL Channel
Description	Output (OP) Extended High Limit (in percentage)
Data Type	64-Bit Real Number
Range	Greater than OPHILM
Default	106.9%
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OPEXHIFL
Remarks	<p>Only the Operator is permitted to specify an Output (OP) value that exceeds the OPHILM value. However, the operator is prohibited from specifying values greater than the OPEXHILM.</p> <p>This value is expressed as a percent of the CV range (CVEUHI and CVEULO).</p>

15.13 OPEXLOFL

Specific Block	SVP_REGCTL Channel	
Description	Output (OP) Extended Low Limit Flag - Indicates if OP is at its extended low limit.	
Data Type	Boolean	
Range	OFF (0)	OP is above its extended low limit.
	ON (1)	OP is at its extended low limit.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	OPEXL0LM	
Remarks		


15.14 OPEXLOLM

Specific to Block	SVP_REGCTL Channel
Description	Output (OP) Extended Low Limit (in percentage)
Data Type	64-Bit Real Number
Range	Lesser than OPLOLM
Default	-6.9%
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OPEXLOFL
Remarks	<p>Only the Operator is permitted to specify an Output (OP) value that is lesser than the OPLOLM value. However, the operator is not allowed from specifying values lesser than the OPEXLOLM.</p> <p>This value is expressed as a percent of the CV range (CVEUHI and CVEULO).</p>

15.15 OPFINAL

Specific to Block	SP_AO, SVP_AO
Description	Final Percent Output (Sent to Control Element)
Data Type	32-Bit Real Number
Range	
Default	-6.9%
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	<p>This parameter is the output value after direct or reverse control action and output characterization have all been applied.</p> <p>If output has been configured for direct action (OPTDIR), 0.0% represents 4 mA to the control element and 100% represents 20 mA.</p>

15.16 OPHICURRENT

Specific to Block	SVP_AO Channel	
Description	This parameter defines the maximum current output in milli amperes that is used for driving the valve.	
Data Type	32-Bit Real Number	
Range	High current limit defined by OPTYPE parameter value.	
Default	The default value depends on the OPTYPE value as listed.	
	OPTYPE value	Default
	4-20 mA	20 mA
	Unipolar current range	50 mA
	Bipolar current range	10 mA
Config Load	Yes	
Active Loadable	No	
Access Lock	Application Developer	
Residence	IOLINK, SVP IOM	
Related Parameters	OPBIASCURRENT, OPLOCURRENT, OPTYPE	
Remarks	This parameter determines the high limit of output current in mA. It accepts positive integer values whose upper limit depends on the selection of OPTYPE parameter value.	
	The range checking of this parameter is performed based on the value of OPTYPE parameter value.	
	Example: If the OPTYPE parameter value is -80 to 80 mA, the OPHICURRENT value cannot be more than 80mA.	
	The range checking of this parameter is listed in the following table.	
	OPTYPE	OPHICURRENT
	4-20 mA	Disabled (Default value: 20mA)
	0-50 mA	Enabled (Default value: 50mA)
	0-300 mA	Enabled (Default value: 300mA)
	-10 to 10 mA	Enabled (Default value: 10mA)
	-20 to 20 mA	Enabled (Default value: 20mA)
	-40 to 40 mA	Enabled (Default value: 40mA)
	-80 to 80 mA	Enabled (Default value: 80mA)
	-160 to 160 mA	Enabled (Default value: 160mA)
	-320 to 320 mA	Enabled (Default value: 320mA)
	 Attention The OPHICURRENT parameter value cannot be lesser than the OPLOCURRENT parameter value.	

15.17 OPHIFL

Specific Block	SVP_REGCTL Channel	
Description	Output (OP) High Limit Flag - Indicates if OP has reached the high limit, as specified by OPHILM.	
Data Type	Boolean	
Range	OFF (0)	Output has not reached the high limit.
	ON (1)	Output has reached the high limit.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	OPHILM	
Remarks		

15.18 OPIN0

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 0. Defines the number 0 Input coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Not Applicable
Default	Fixed at -6.9 percent
Active Loadable	No
Config Load	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	OPCHAR
Remarks	

15.19 OPIN1

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 1. Specifies the number 1 Input coordinate in percent for the output when the OPCHAR parameter is "ON."
Data Type	32-Bit Real Number
Range	Lesser than next coordinate.
	Greater than previous coordinate.
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue." This parameter is disabled when OPACTION is set to "Incremental."</p>

15.20 OPIN2

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 2. Specifies the number 2 Input coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue." This parameter is disabled when OPACTION is set to "Incremental."</p>

15.21 OPIN3

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 3. Specifies the number 3 Input coordinate in percent for the output when the OPCHAR parameter is On.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE".</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue." This parameter is disabled when OPACTION is set to "Incremental."</p>


15.22 OPIN4

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 4. Specifies the number 4 Input coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue." This parameter is disabled when OPACTION is set to "Incremental."</p>

15.23 OPIN5

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 5. Defines the number 5 Input coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Not Applicable
Default	Fixed at 106.9 percent
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	OPCHAR
Remarks	

15.24 OPLOCURRENT

Specific to Block	SVP_AO	
Description	This parameter defines the minimum current output that is used for driving the valve.	
Data Type	32-Bit Real Number	
Range	Current low limit defined by OPTYPE parameter value	
Default	The default value depends on the OPTYPE value as listed.	
	OPTYPE value	Default
	4-20mA	4mA
	Unipolar current range	0mA
	Bipolar current range	-10mA
Config Load	No	
Active Loadable	No	
Access Lock	Application Developer	
Residence	IOLINK, SVP IOM	
Related Parameters	OPBIASCURRENT, OPHICURRENT, OPTYPE	
Remarks	This parameter determines the low limit of output current in mA. It accepts integer values.	
	The range checking of this parameter is performed based on the value of OPTYPE parameter value.	
	Example: If the OPTYPE parameter value is -80 to 80 mA, the OPLOCURRENT value cannot be lesser than -80mA.	
	The range checking of this parameter is listed in the following table.	
	OPTYPE	OPLOCURRENT
	4-20 mA	Disabled (Default value: 4mA)
	0-50 mA	Enabled (Default value: 0mA)
	0-300 mA	Enabled (Default value: 0mA)
	-10 to 10 mA	Disabled (Default value: -10mA)
	-20 to 20 mA	Disabled (Default value: -20mA)
	-40 to 40 mA	Disabled (Default value: -40mA)
	-80 to 80 mA	Disabled (Default value: -80mA)
	-160 to 160 mA	Disabled (Default value: -160mA)
	-320 to 320 mA	Disabled (Default value: -320mA)
	 Attention The OPLOCURRENT parameter value cannot be more than the OPHICURRENT parameter value.	

15.25 OPLOFL

Specific Block	SVP_REGCTL Channel	
Description	Output (OP) Low Limit Flag - Indicates if OP has reached its low limit, as specified by OPLOLM.	
Data Type	Boolean	
Range	OFF (0)	Output has not reached the low limit.
	ON (1)	Output has reached the low limit.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	OPLOLM	
Remarks		

15.26 OPLOLM

Specific Block	SVP_REGCTL Channel
Description	Output (OP) Low Limit (in percentage)
Data Type	64-Bit Real Number
Range	NaN, or OPEXL0LM to OPHILM
Default	-5.0%
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OPLOFL
Remarks	<p>Entering NaN disables limit checking.</p> <p>Only the operator is permitted to specify an OP value that falls behind the OPLOLM value. If values larger than this value are requested then they are clamped at the OPLOLM value.</p> <p>This value is expressed as a percent of the CV range (CVEUHI and CVEULO).</p>


15.27 OPMINCHG

Specific Block	SVP_REGCTL Channel
Description	Output (OP) Minimum Change Limit (in Percent)
Data Type	64-Bit Real Number
Range	NaN, or a real number greater than or lesser than zero.
Default	0%
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OP
Remarks	<p>Defines the minimum amount that the output must change before the function blocks actually change the OP. If this value is NaN, then there is no minimum limit set.</p> <p>Entering NaN disables limit checking.</p>


15.28 OPOUT0

Specific to Block	SP_AO, SVP_AO
Description	Output Coordinate Number 0. Defines the number 0 Output coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Not Applicable
Default	Fixed at -6.9 percent
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	


15.29 OPOUT1

Specific to Block	SP_AO, SVP_AO
Description	Output Coordinate Number 1. Specifies the number 1 output coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue" and OPCHAR is set to "ON."</p> <hr/> <p> Attention Refer to <i>Control Builder Component Theory Guide</i> for more information.</p>


15.30 OPOUT2

Specific to Block	SP_AO, SVP_AO
Description	Output Coordinate Number 2. Specifies the number 2 Output coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue" and OPCHAR is set to "ON."</p> <hr/> <p> Attention Refer to <i>Control Builder Component Theory Guide</i> for more information.</p>

15.31 OPOUT3

Specific to Block	SP_AO, SVP_AO
Description	Output Coordinate Number 3. Specifies the number 3 Output coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue" and OPCHAR is set to "ON."</p> <hr/> <p> Attention Refer to <i>Control Builder Component Theory Guide</i> for more information.</p>

15.32 OPOUT4

Specific to Block	SP_AO, SVP_AO
Description	Output Coordinate Number 4. Specifies the number 4 Output coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Lesser than next coordinate
	Greater than previous coordinate
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	OP, OPCHAR
Remarks	<p>This parameter can only be set when PTEXECST is set to "INACTIVE."</p> <p>For SVP_AO Channel: This parameter is enabled only when OPACTION is set to "FullValue" and OPCHAR is set to "ON."</p>
	<p> Attention</p> <p>• Refer to <i>Control Builder Component Theory Guide</i> for more information.</p>

15.33 OPOUT5

Specific to Block	SP_AO, SVP_AO
Description	Input Coordinate Number 5. Defines the number 5 Input coordinate in percent for the output when the OPCHAR parameter is ON.
Data Type	32-Bit Real Number
Range	Not Applicable
Default	Fixed at 106.9 percent
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	

15.34 OPTDIR

Specific to Block	SP_AO, SVP_AO		
Description	Output Direction		
Data Type	Enumeration		
Range	0	DIRECT	OP 0% maps to OPLOCURRENT OP 100% maps to OPHICURRENT
	1	REVERSE	OP 0% maps to OPHICURRENT OP 100% maps to OPLOCURRENT
Default	DIRECT		
Config Load	Yes		
Active Loadable	No		
Access Lock	Engineer/Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters	OP, OPFINAL		
Remarks	This parameter is supported only when the OPACTION parameter is configured as "FULLVALUE."		

15.35 OPTOL

Specific to Block	SVP_REGCTL Channel
Description	Output (OP) Tolerance - Defines tolerance value for output in percent.
Data Type	64-Bit Real Number
Range	0 to OPEXHILM
Default	0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	OP
Remarks	

15.36 OPTYPE

Specific to Block	SVP_AO Channel	
Description	The OPTYPE parameter is used to select the firmware restricted current range for driving valves.	
Data Type	Enumeration	
Range	-10 to 10 mA (0)	
	-20 to 20 mA (1)	
	-40 to 40 mA (2)	
	-80 to 80 mA (3)	
	-160 to 160 mA (4)	
	-320 to 320 mA (5)	
	0 to 50 mA (6)	
	0 to 300 mA (7)	
	4 to 20 mA (8)	
Default	OPACTION	Default
	Full Value	4 to 20 mA
	Incremental	-10 to 10 mA
Config Load	Yes	
Active Loadable	No	
Access Lock	Application Developer	
Residence	IOLINK, SVP IOM	
Related Parameters	OPACTION, OPHICURRENT, OPLOCURRENT	
Remarks	<p>If OPACTION parameter value is set to "FullValue," only unipolar current ranges (including 4-20mA) are allowed by OPTYPE parameter.</p> <p>If OPACTION parameter is set to "Incremental," both unipolar and bipolar current ranges (excluding 4-20mA) are allowed by OPTYPE parameter.</p>	

15.37 ORDEROFKFACTOR

Specific to Block	SP_SPEED channel
Description	This parameter displays the order of the K factor.
Data Type	Enumeration
Range	1st Order (0)
Default	1st Order (0)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	KFACTOR
Remarks	This parameter is configurable only when you configure the measurement type as "Flow Measurement."

15.38 OUT[1..4][0..12]

Specific to Block	ENHGENLIN Function Block
Description	Output Coordinate - OUT array defines the output value for the linearization segment tables.
Data Type	64-Bit Real Number
Range	Any Real Number, not NaN
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	VIEWLINSEG, NUMSEGS[1..4], ENBTUNE, PV
Remarks	<p>This parameter defines the output value for the linearization segment table. [1..4] indicates the linearization segment table to which the OUT parameter belongs. [0..12] indicates the co-ordinate number of OUT[1..4][0..12] parameter. This parameter can be modified only when EBTUNE is "ON."</p> <p>Based on the linearization segment selected by P1 value, the PV value is calculated using the two selected IN[1..4][0..12] and OUT[1..4][0..12] value pairs.</p>

15.39 OWDENBL

Specific to Block	SP_DI, SVP_DI, SVP_AI
Description	This parameter defines when open wire detection must be enabled.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM, SVP IOM
Related Parameters	OWDFL
Remarks	When this parameter is set to "ON" and if the bleed resistor is not installed, a false open wire alarm is generated whenever the input device is not closed (i.e. PVRAW = OFF)

16 Pxxx Parameters

Related topics

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16.1 PERIOD

Specific to Block	C300-20 Controller's CM
Description	<p>Execution Period: Specify an execution/processing period (or scan rate) of a block in milliseconds (ms). The Execution Period is the amount of time between two consecutive executions of the block.</p> <p>The execution period of the C300-20msCEE controller block is 20ms.</p> <p>The Period for the Series C IO blocks is 800ms by default.</p>
Data Type	Enumeration
Range	800ms (31)
	400ms (29)
	200ms (6)
	80ms (30)
	40ms (28)
	20ms (3)
Default	800ms (31)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	BASEPERIOD, ORDERINCM, PHASE
Remarks	<p>If an attempt is made to load a CM with an unsupported BASEPERIOD to the C300-20msCEE, an "Invalid Execution Period" error is returned and the assignment fails.</p> <p>The C300-20msCEE supports the same set of parameters on C300FB, CEEFB and all other function blocks that are configured under the CEE FB in Control Builder Assignment view.</p>

16.2 PFOVERRUNSCUR

Specific to Block	C300 - 20msCEE IOLINK block
Description	This parameter defines the number of pre-fetch overruns that occurs in the current hour.
Data Type	UINT 32
Range	Not applicable
Default	Not applicable
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	PFOVERRUNSPREV
Remarks	<p>The parameter value can be reset to zero at anytime using "Reset Statistics" button available on the Statistics tab of the IOLINK function block form.</p> <p>If the PFOVERRUNSCUR parameter count continuously increases, it indicates the input scan delay is larger than expected. This can cause an increase in end-to-end response times. Prefetch overruns can occur due to the following reasons.</p> <ul style="list-style-type: none"> Seven or more priority input modules are configured on a single IOLINK, or C300 control strategies generate a burst of output writes to priority output modules in a single 20ms phase. <p>If pre-fetch overruns count continues to increase, the following steps must be performed.</p> <ul style="list-style-type: none"> Reconfigure the CMs to balance the output writes across different phases, or Redistribute the IOMs among the two IOLINKs. <div>  Attention <ul style="list-style-type: none"> A few prefetch overruns can occur during IOM failover or immediately following power up of secondary IOM. This can be safely ignored. </div>

16.3 PFOVERRUNSPREV

Specific to Block	C300 - 20msCEE IOLINK block
Description	This parameter defines the number of pre-fetch overruns that occurred in the previous hour.
Data Type	UINT 32
Range	Not applicable
Default	Not applicable
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK
Related Parameters	PFOVERRUNSCUR
Remarks	The parameter value can be reset to zero at anytime using "Reset Statistics" button available on the Statistics tab of the IOLINK function block form.

16.4 PRCSAFEOP1

Specific to Block	SVP_AO
Description	Process Safe Output 1 value in percentage
Data Type	64-Bit Real Number
Range	0% to 100%
Default	0%
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	INTRLOCKFAILOPT1
Remarks	This parameter is used to configure the OP value that is driven when there is an interlock failure.

16.5 PRCSAFEOP2

Specific to Block	SVP_AO
Description	Process Safe Output 2 value in percentage
Data Type	64-Bit Real Number
Range	0% to 100%
Default	0%
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	INTRLOCKFAILOPT2
Remarks	This parameter is used to configure the OP value that is driven when there is an interlock failure.

16.6 PRCSINTRLOCK1

Specific to Block	SVP_AO Channel
Description	Process Interlock1 - This parameter is used to configure interlock source for the SVP_AO Channel.
Data Type	Enumeration
Range	NONE (0)
	DI1PVFL (1)
	DI2PVFL (2)
Default	NONE (0)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, IOM
Related Parameters	INTRLOCKFAILOPT1
Remarks	The parameter source that is selected for the interlock decides the value to be driven to the analog output based on the configured value of INTRLOCKFAILOPT1 parameter.

16.7 PRCSINTRLOCK2

Specific to Block	SVP_AO Channel
Description	Process Interlock2 - This parameter is used to configure interlock source for the SVP_AO Channel.
Data Type	Enumeration
Range	NONE (0)
	DI1PVFL (1)
	DI2PVFL (2)
Default	NONE (0)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, IOM
Related Parameters	INTRLOCKFAILOPT2
Remarks	The parameter source that is selected for the interlock decides the value to be driven to the analog output based on the configured value of INTRLOCKFAILOPT2 parameter.

16.8 PREFPVSRC

Specific to Block	SVP_REGCTL Channel
Description	Preferred PV Source - This parameter is used to configure the preferred PV between PV1 and PV2 input source in the SVP_REGCTL block.
Data Type	Enumeration
Range	PV1 (1)
	PV2 (2)
Default	PV1 (1)
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SVP IOM
Related Parameters	
Remarks	

16.9 PRIMDATA.ARWSTS

Specific to Block	SVP_REGCTL Channel	
Description	Primary Data Anti-Reset Windup Status - Indicates the windup status for the primary.	
Data Type	Enumeration	
Range	0	Normal
	1	Hi
	2	Lo
	3	HiLo
Default	Normal	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters		
Remarks		

16.10 PRIMDATA.INITSTS

Specific to Block	SVP_REGCTL Channel	
Description	Primary Data Initialization Status - Indicates the initialization status propagated to the primary.	
Data Type	Boolean	
Range	0	False
	1	True
Default	0	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters		
Remarks		

16.11 PRIMDATA.INITVAL

Specific to Block	SVP_REGCTL Channel
Description	Primary Data Initialization Value - Indicates the initialization value propagated to the primary.
Data Type	64-Bit Real Number
Range	
Default	0
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

16.12 PNTTYPE

Specific to Block	SP_AI, SP_DI, SP_AO, SP_DO, SVP_AI, SVP_DI, SVP_AO, SP_SPEED, SP_SPDVOTE, SVP_REGCTL		
Description	Point Type		
Data Type	Enumeration		
Range	0	NULL	Point is not configured.
	32	SVP	SVPM channels.
	33	SP	SPM channels.
Default	Based on channel type.		
Config. Load	Yes		
Active Loadable	No		
Access Lock	Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters	Not Applicable		
Remarks	This parameter is always loaded first.		

16.13 PV

Specific to Block	SP_AI, SVP_AI
Description	Process Variable (PV) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	The Analog Input Channel's PVEXEULO to PVEXEUHI.
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM, SVP IOM
Related Parameters	PVSTS, PVRAW, PVCALC
Remarks	The PV exists in the IOM (SP IOM and SVP IOM) as a 32-bit floating point value. It is converted to a 64-bit floating point value for convenience when wiring to other block parameters in Control Builder (CB).

Specific to Block	SP_DI, SVP_DI
Description	Process Variable - Displays the current state of this data point. It is derived from the open or closed state of field contacts and from the Input Direction parameter (INPTDIR) configuration.
Data Type	Boolean
Range	OFF ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM, SVP IOM
Related Parameters	BADPVFL, PVRAW
Remarks	Operators can only change PV when the PVSOURCE configuration is MAN.

Specific to Block	SP_SPEED Channel
Description	Process Variable
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM
Related Parameters	PVSTS, PVRAW, PVCALC

Remarks	<p>This parameter calculates the PVCALC value according to the following equation. PVCALC is provided in Revolutions per Minute (RPM).</p> $\text{PVCALC} = ((\text{PVRAW} * 60)/\text{C1}) * \text{C2}$ <p>C1 is number of teeth in wheel C2 is gear reduction factor</p> <hr/> <p>! Attention</p> <p>The speed channel input can fail due to sensor failure, openwire or wheel movement away from sensors and so on. The changes to the PV parameter due to these scenarios is listed.</p> <ul style="list-style-type: none"> • PV is set to "NaN," • PV status is set to "BAD," and • No Pulse Detected soft fail is reported. <p>If PV is equal to 0 RPM, ZERO SPEED is detected and ZERO SPEED flag is set.</p> <hr/> <p>! Attention</p> <p>No range checking is available with this parameter.</p>
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Specific to Block	SVP_REGCTL Channel
Description	Process Variable
Data Type	64-Bit Real Number
Range	
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV1STS, PV2STS, PREFPV, PV1, and PV2
Remarks	<p>The PV is calculated from PV1 and PV2 based on PV1STS, PV2STS, PREFPV parameters.</p> <p>PV1 and PV2 are read from upstream block.</p>

16.14 PV1

Specific to Block	SVP_REGCTL
Description	Process Variable (PV1) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV1STS
Remarks	This parameter accepts inputs only from PV parameter of the SVP_AI channels of the same SVPM IOM.

Specific to Block	SP_SPDVOTE
Description	Process Variable (PV1) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	
Remarks	This parameter accepts inputs only from PV parameter of the SP_SPEED channels of the same SPM IOM.

16.15 PV1STS

Specific to Block	SVP_REGCTL		
Description	Process Variable (PV1) Status - Displays the current status of the PV1 value.		
Data Type	Enumeration		
Range	0	BAD	The input value is bad and replaced with NaN.
	1	UNCERTAIN	The status of the input is uncertain.
	2	NORMAL	The input value is good.
	3	MANUAL	The input value is manually set.
Default	BAD (0)		
Config. Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SVP IOM		
Related Parameters	PV1, PVSTSFL.BAD, PVSTSFL.NORM		
Remarks			

16.16 PV2

Specific to Block	SVP_REGCTL
Description	Process Variable (PV2) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV2STS
Remarks	This parameter accepts inputs only from PV parameter of the SVP_AI channels of the same SVPM IOM.

Specific to Block	SP_SPDVOTE
Description	Process Variable (PV2) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	
Remarks	This parameter accepts inputs only from PV parameter of the SP_SPEED channels of the same SPM IOM.

16.17 PV2STS

Specific to Block	SVP_REGCTL		
Description	Process Variable (PV2) Status - Displays the current status of the PV2 value.		
Data Type	Enumeration		
Range	0	BAD	The input value is bad and replaced with NaN.
	1	UNCERTAIN	The status of the input is uncertain.
	2	NORMAL	The input value is good.
	3	MANUAL	The input value is manually set.
Default	BAD (0)		
Config. Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SVP IOM		
Related Parameters	PV2, PVSTSFL.BAD, PVSTSFL.NORM		
Remarks			

16.18 PV3

Specific to Block	SP_SPDVOTE
Description	Process Variable (PV3) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	
Remarks	This parameter accepts inputs only from PV parameter of the SP_SPEED channels of the same SPM IOM.

16.19 PV4

Specific to Block	SP_SPDVOTE
Description	Process Variable (PV4) - Displays the current value of the converted input signal in Engineering Units.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	
Remarks	This parameter accepts inputs only from PV parameter of the SP_SPEED channels of the same SPM IOM.

16.20 PV.FLWRST

Specific to Block	SP_DI Channel
Description	Process Value Flag with Reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	RESETTRIP
Remarks	<p>This parameter is used for SP DO channel interlock configuration.</p> <p>This parameter is set "ON" only if PV of the particular DI Channel becomes "ON." This parameter can be reset when DI becomes "OFF" by setting the RESETTRIP parameter in same IOM.</p>

16.21 PVAUTO

Specific to Block	SP_AI, SVP_AI, SP_SPEED
Description	Filtered and clamped value of the Process Value.
Data Type	64-Bit Real Number
Range	Not Applicable
Default	NaN
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	PVAUTOST
Remarks	

Specific to Block	SP_DI, SVP_DI
Description	State of actual inputs.
Data Type	Boolean
Range	OFF ON
Default	OFF
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	PV
Remarks	


16.22 PVAUTOST

Specific to Block	SP_AI, SVP_AI, SP_SPEED	
Description	Status of the filtered and clamped value of the Process Value.	
Data Type	Enumeration	
Range	Bad (0)	The PVAUTO value was bad, it was replaced with NaN.
	Uncertain (1)	The status of the PVAUTO value is uncertain.
	Normal (2)	The value is good.
	Manual (3)	The value was manually stored.
Default	Bad (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM, SVP IOM	
Related Parameters	PVAUTO	
Remarks		

16.23 PVCALC

Specific to Block	SP_AI, SVP_AI, SP_SPEED
Description	Calculated Process Variable (PV) - Displays the value of the PV after the PV algorithm has calculated it.
Data Type	32-Bit Real Number
Range	
Default	NaN
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM, SVP IOM
Related Parameters	PV, PVAUTO
Remarks	

16.24 PVCHAR

Specific to Block	SP_AI, SVP_AI
Description	PV Characterization Option
Data Type	Enumeration
Range	Linear (12) Sqrroot (13)
Default	Linear (12)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM, SVP IOM
Related Parameters	PVEXEULO, PVEXEUHI
Remarks	<p>This parameter defines the characterization to be used for characterizing the input PV value. Characterization is based on the field sensor type.</p> <hr/> <p> Attention</p> <ul style="list-style-type: none"> For SVP_AI channel, PVCHAR parameter is disabled, when the SENSRTYP parameter is configured as "LVDT/RVDTRResolver."


16.25 PVCLAMP

Specific to Block	SP_AI, SVP_AI		
Description	Process Variable Clamping Option - Specifies whether or not PV clamping action is to be used with this data point.		
Data Type	Enumeration		
	0	NOCLAMP	No clamping of the PV value.
Range	1	CLAMP	Clamp PV value at the extended range limit.
Default	NOCLAMP (0)		
Config. Load	Yes		
Active Loadable	No		
Access Lock	Engineer/Application Developer		
Residence	SP IOM, SVP IOM		
Related Parameters			
Remarks	If PVCLAMP is set to "CLAMP" and PV extended range limit is exceeded, PV status (PVSTS) is marked as "Uncertain" and the PV is set equal to the extended limit that was violated.		

16.26 PVCONN


Specific to Block	SVP_REGCTL block
Description	Connected Process Variable.
Data Type	Enumeration
Range	None (0) PV1 (1) PV2 (2) PV1 and PV2 (3)
Default	None
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV1, PV2
Remarks	This parameter is used to display which PV pins of SVP_REGCTL block are connected.

16.27 PVEUHI

Specific to Block	SP_AI, SVP_AI
Description	Process Variable Engineering Units High - Specifies the high range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	PVEULO to PVEXEUHI, NaN
Default	100.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	 Attention Note that PVEUHI cannot be written with Not a Number (NaN). NaN is the default power up value only.

Specific to Block	SVP_REGCTL Channel
Description	Process Variable (PV) High Range (in Engineering Units) - This value corresponds to 100% of full scale.
Data Type	64-Bit Real Number
Range	Greater than PVEULO, SPLOLM and greater than or equal to SPHILM.
Default	100.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	
Remarks	

16.28 PVEULO

Specific to Block	SP_AI, SVP_AI
Description	Process Variable Engineering Units Low - Specifies the low range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	PVEXEULO to PVEUHI, NaN
Default	0.0
Config. Load	yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	 Attention Note that PVEULO cannot be written with Not a Number (NaN). NaN is the default power up value only.

Specific to Block	SVP_REGCTL Channel
Description	Process Variable (PV) Low Range (in Engineering Units) - This value corresponds to 0% of full scale.
Data Type	64-Bit Real Number
Range	Lesser than PVEUHI, SPHILM and lesser than or equal to SPLOLM.
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP_IOM
Related Parameters	
Remarks	

16.29 PVEXEUHI

Specific to Block	SP_AI, SVP_AI
Description	Process Variable Extended High Range - Specifies the extended high range PV value in Engineering Units.
Data Type	32-Bit Real Number
Range	Greater than or equal to PVEUHI, NaN.
Default	102.9
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	PVEXEULO
Remarks	Both PVEXEUHI and PVEXEULO are used to clamp or detect a bad PV value. These parameters cannot be set to NaN.

16.30 PVEXEULO

Specific to Block	SP_AI, SVP_AI
Description	Process Variable Extended Low Range - Specifies the extended low PV range in Engineering Units.
Data Type	32-Bit Real Number
Range	Lesser than or equal to PVEULO, NaN.
Default	-2.9
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM, SVP IOM
Related Parameters	PVEXEUHI, SENSRTYP
Remarks	Both PVEXEUHI and PVEXEULO are used to clamp or detect a bad PV value. These parameters cannot be set to NaN.

16.31 PVEXHIFL

Specific to Block	SP_AI, SVP_AI	
Description	Process Variable (PV) Extended High Range Flag - Displays if the PV has exceeded the extended high range trip point.	
Data Type	Boolean	
Range	OFF	Extended high range limit not exceeded.
	ON	Extended high range limit exceeded.
Default	OFF	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM, SVP IOM	
Related Parameters		
Remarks		

16.32 PVEXLOFL

Specific to Block	SP_AI, SVP_AI	
Description	Process Variable (PV) Extended Low Range Flag - Displays if the PV has exceeded the extended low range trip point.	
Data Type	Boolean	
Range	OFF	Extended low range limit not exceeded.
	ON	Extended low range limit exceeded.
Default	OFF	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM, SVP IOM	
Related Parameters		
Remarks		

16.33 PVHHALM.FL

Specific to Block	SP_SPEED blocks	
Description	Process Variable (PV) High High Alarm Flag.	
Data Type	Boolean	
Range	OFF (0)	PV High High alarm is not active; PV is lesser than PVHHALM.TP
	ON (1)	PV High High alarm is active; PV is greater than PVHHALM.TP
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	ViewOnly	
Residence	SP IOM	
Related Parameters	PV, PVHHALM.FLWRST, PVHHALM.TP	
Remarks		

16.34 PVHHALM.FLWRST

Specific to Block	SP_SPEED blocks	
Description	Process Variable (PV) High High Alarm Flag with Reset.	
Data Type	Boolean	
Range	OFF (0)	PV High High alarm is not active; PV is lesser than PVHHALM.TP
	ON (1)	PV High High alarm is active; PV is greater than PVHHALM.TP
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	ViewOnly	
Residence	SP IOM	
Related Parameters	PV, PVHHALM.FL, PVHHALM.TP, RESETTRIP	
Remarks	This parameter is set to "ON" when PVHHALM.FL becomes "ON." It can be reset to "OFF" using RESETTRIP command only when PVHHALM.FL is "OFF."	

16.35 PVHHALM.TP

Specific to Block	SP_SPEED blocks
Description	Process Variable (PV) High High Alarm Trip Point - Defines the trip point for a PV High High alarm.
Data Type	64-Bit Real Number
Range	NaN or greater-than or equal to PVHIALM.TP
Default	NaN
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	PV, PVHHALM.FLWRST, PVHHALM.FL
Remarks	

16.36 PVHIALM.FL

Specific to Block	SP_SPEED blocks	
Description	Process Variable (PV) High Alarm Flag - Indicates if a PV High alarm has been issued.	
Data Type	Boolean	
Range	OFF (0)	PV High alarm is not active; PV is lesser than PVHIALM.TP.
	ON (1)	PV High alarm present; PV is greater than PVHIALM.TP.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	ViewOnly	
Residence	SP IOM	
Related Parameters	PV, PVHIALM.TP	
Remarks		

16.37 PVHIALM.TP

Specific to Block	SP_SPEED blocks
Description	Process Variable (PV) High Alarm Trip Point - Defines the trip point for a PV High alarm.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to PVHIALM.TP
Default	NaN
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	PV, PVHIALM.FL
Remarks	

16.38 PVRAW

Specific to Block	SP_AI, SVP_AI, SP_SPEED	
Description	Process Variable (PV) Raw Value - Displays the raw input value of the PV before or after initial processing has been applied, depending on the type of I/O Module that is involved.	
Data Type	32-Bit Real Number	
Range	Not Applicable	
Default	NaN	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM, SVP IOM	
Related Parameters		
Remarks	<p>For analog IOMs, this parameter indicates the raw input value of the PV from the terminal block before PV characterization is applied. The field sensor type determines the units of value as follows:</p> <p>For SP_AI Channel:</p> <ul style="list-style-type: none"> 0 - 5V, 0.4 - 2V, 1 - 5V: percent (%) <p>For SP_SPEED Channel:</p> <ul style="list-style-type: none"> If Measurement_Type is Speed_Measurement, the unit is RPM. If Measurement_Type is Flow_Measurement, the unit is based on EUDESC and TimeBase parameter. <p>For SVP_AI Channel:</p> <ul style="list-style-type: none"> 0 - 5V, 0.4 - 2V, 1 - 5V, LVDT, RVDT: percent (%) Resolver - angle in degrees 	

Specific to Block	SP_DI, SVP_DI	
Description	Raw Process Variable (PV) - Displays the current raw state of the field contacts.	
Data Type	Boolean	
Range	OFF (0)	Open Contacts
	ON (1)	Closed Contacts
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM, SVP IOM	
Related Parameters		
Remarks		

16.39 PVSEL

Specific to Block	SVP_REGCTL
Description	Process Variable selected for PID algorithm.
Data Type	Enumeration
Range	PV1 (0)
	PV2 (1)
Default	PV1 (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	PV1, PV1STS, PV2, PV2STS, PREFPVSRC
Remarks	This parameter decides which PV is considered as an input to the PID algorithm based on values of PV1STS, PV2STS, and PREFPVSRC parameters.

16.40 PVSOURCE

Specific to Block	SP_AI, SVP_AI, SP_SPEED, SP_DI, SVP_DI		
Description	Process Variable (PV) Source - Defines the source of the PV input to this data point.		
Data Type	Enumeration		
Range	0	SUB	PV is supplied by a program.
	1	MAN	PV is supplied by the operator.
	2	AUTO	PV is supplied by field wiring.
Default	AUTO (2)		
Config. Load	Yes		
Active Loadable	No		
Access Lock	Operator		
Residence	SP IOM, SVP IOM		
Related Parameters	PVSRCOPT		
Remarks			

16.41 PVSRCOPT

Specific to Block	SP_AI, SVP_AI, SP_DI, SVP_DI, SP_SPEED		
Description	Process Variable (PV) Source Option - Defines the source of the PV to be used for a particular channel.		
Data Type	Enumeration		
	0	OnlyAuto	PV source selection is not available and field wiring supplies PV. When set to OnlyAuto, users may not change PVSOURCE.
Range	1	All	PV can be provided by an operator or by a sequence program or by field wiring. When set to All, users may change PVSOURCE.
Default	OnlyAuto		
Config. Load	Yes		
Active Loadable	No		
Access Lock	Engineer		
Residence	SP IOM, SVP IOM		
Related Parameters	PVSOURCE		
Remarks			

16.42 PVSTS

Specific to Block	SP_AI, SVP_AI, SP_SPEED, SVP_REGCTL		
Description	Process Variable (PV) Status - Displays the current status of the PV value.		
Data Type	Enumeration		
Range	0	BAD	The input value is bad and replaced with NaN.
	1	UNCERTAIN	The status of the input is uncertain.
	2	NORMAL	The input value is good.
	3	MANUAL	The input value is manually set.
Default	BAD (0)		
Config. Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SP IOM, SVP IOM		
Related Parameters	PVSTSFL.BAD, PVSTSFL.NORM		
Remarks			

16.43 PVSTSFL.BAD

Specific to Block	SVP_REGCTL Channel	
Description	Bad Process Variable (PV) Status Flag - Indicates if the PV status is Bad.	
Data Type	Boolean	
Range	OFF (0)	PVSTS is not Bad.
	ON (1)	PVSTS is Bad.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	PV, PVSTS, PVSTSFL.MAN, PVSTSFL.NORM	
Remarks	This parameter is set to "ON" when the PVSTS parameter is set to "BAD."	

16.44 PVSTSFL.NORM

Specific to Block	SVP_REGCTL Channel	
Description	Normal Process Variable (PV) Status Flag - Indicates that the PVSTS is Normal.	
Data Type	Boolean	
Range	OFF (0)	PVSTS is not Normal.
	ON (1)	PVSTS is Normal.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	PV, PVSTS, PVSTSFL.BAD	
Remarks		

17 Rxxx Parameters

Related topics

- “RDNCNTCYCTP” on page 256
- “READY” on page 257
- “REDTAG” on page 258
- “RESETTRIP” on page 259
- “RESTORE” on page 260
- “REVROTCHNLA” on page 261
- “REVROTCHNLB” on page 262
- “REVROTFL” on page 263
- “ROCPOSHHALM.FL” on page 264
- “ROCPOSHHALM.FLWRST” on page 265
- “ROCPOSHHALM.TP” on page 266
- “ROCPOSHIALM.FL” on page 267
- “ROCPOSHIALM.TP” on page 268
- “ROCPV” on page 269

17.1 RDNCNTCYCTP

Specific to Block	C300-20msCEE block
Description	Redundancy transfer Count per Cycle Trip Point: Trip point for report of Redundancy Count Exceeded alarm.
Data Type	Integer
Range	≥ 0
Default	45000
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	RDNCNTCYCMAX, RDNXFERMAX, RDNXFERAVG
Remarks	CEE monitors the count of redundancy bytes transferred each cycle from primary to secondary within a C300-20ms redundant controller pair. If, during any 800ms interval, the maximum bytes transferred by any of the cycles reach the value of parameter RDNCNTCYCTP, CEE block reports a high-priority alarm. The alarm clears once the maximum across a subsequent 800ms interval falls below 90% of the configured trip point value.

17.2 READY

Specific to Block	SP_DO Channel
Description	This parameter indicates whether the interlock condition is satisfied or not.
Data Type	Boolean
Range	OFF (0) - Interlock checks are not satisfied
	ON (1) - Interlock checks are satisfied
Default	OFF (0)
Config Load	No
Access Lock	View Only
Active Loadable	No
Residence	IOLINK, SP IOM
Related Parameters	I1, I2, I3, I4, I5, I6, I7, and I8
Remarks	This parameter is set to "ON" if the interlock check satisfies for all the parameters I1 to I8.

17.3 REDTAG

Specific to Block	SP_AO, SP_DO, SVP_AO	
Description	Red Tag - Allows the user to set the FB as being "out-of-service". This indicates that the FB or the associated control strategy needs repair, or is being repaired.	
Data Type	Boolean	
Range	OFF (0)	Channel is in service and its output is not frozen.
	ON (1)	Channel is out of service and its output is frozen.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	Engineer	
Residence	SP IOM, SVP IOM	
Related Parameters	MODE, MODEATTR	
Remarks	<p>This parameter allows you to set the channel as being out of service indicating that this channel or its associated control loops need(s) repair(s) or are(is) being repaired.</p> <p>Once a channel is put in the red tag condition, its output is frozen at the last value, blocking manual or program changes, and its MODE and MODEATTR cannot be changed.</p> <p>This parameter can only be written when MODE is Man and MODEATTR is Operator.</p> <p>This parameter is disabled in the SVP_AO channel when OPACTION is configured as "Incremental." "</p>	


17.4 RESETTRIP

Specific to Block	SP IOM
Description	Reset Trip - This parameter is used to reset the SPM IOM from trip condition.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	IOLINK, SP IOM
Related Parameters	PV.FLWRST, PVHHALM.FLWRST, ROCPOSHHALM.FLWRST, VOTPV1HHALM.FLWRST, VOTPV2HHALM.FLWRST, VOTROC1POSHHALM.FLWRST, VOTROC2POSHHALM.FLWRST
Remarks	All FLWRST parameters in SP_DI, speed and voting logic channels are flip-flop with Set input from corresponding flags (XXXX.FL) and Reset input from the parameter RESETTRIP.


17.5 RESTORE

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to copy the IN[1..4][0..12] and OUT[1..4][0..12] parameter values of all linearization segment tables to the corresponding TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] parameter values.
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	None
Related Parameters	ENBTUNE, IN[1..4][0..12], OUT[1..4][0..12], TEMPIN[1..4][0..12], TEMPOUT[1..4][0..12]
Remarks	<p>This parameter is used to restore any changes in TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] parameter values. The RESTORE operation is effective only if the values of TEMPIN[1..4][0..12] and IN[1..4][0..12] parameter (or TEMPOUT[1..4][0..12] and OUT[1..4][0..12] parameter) are different.</p> <p>The RESTORE parameter is enabled only when ENBTUNE is "ON."</p> <p>TEMPIN[1..4][0..12] and TEMPOUT[1..4][0..12] values are restored as long as the RESTORE parameter is "ON."</p>

17.6 REVROTCHNLA

Specific to Block	SP IOM
Description	Reverse Rotation Channel A - This parameter is used to select the speed channel that is used for reverse rotation detection.
Data Type	Enumeration
Range	1 to 4
Default	1
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SP IOM
Related Parameters	REVROTCHNLB, REVROTFL
Remarks	<p>Two speed probes selected for reverse rotation detection must be positioned at least 45 degrees apart. In addition, both speed probes must be active sensors.</p> <hr/> <p> Attention</p> <ul style="list-style-type: none"> This parameter must not be configured as same as the REVROTCHNLB parameter.

17.7 REVROTCHNLB

Specific to Block	SP IOM
Description	Reverse Rotation Channel B - This parameter is used to select the speed channel that is used for reverse rotation detection.
Data Type	Enumeration
Range	1 to 4
Default	2
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SP IOM
Related Parameters	REVROTCHNLA, REVROTFL
Remarks	<p>Two speed probes selected for reverse rotation detection must be positioned at least 45 degrees apart. In addition, both speed probes must be active sensors.</p> <hr/> <p> Attention</p> <ul style="list-style-type: none"> • This parameter must not be configured as same as the REVROTCHNLA parameter.

17.8 REVROTFL

Specific to Block	SP IOM
Description	Reverse Rotation Flag - This parameter indicates that the turbine is rotating in reverse direction.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	REVROTCHNLA, REVROTCHNLB
Remarks	Reverse rotation detection is done only when the speed of the turbine is lesser than 50RPM.

17.9 ROCPOSHHALM.FL

Specific to Block	SP_SPEED Channel
Description	Rate Of Change Positive High High Alarm Flag - This parameter is set to "ON" when ROCPV exceeds the ROCPOSHHALM.TP trip limit.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	Yes
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	ROCPOSHHALM.TP, ROCPV, ROCPOSHHALM.FLWRST
Remarks	

17.10 ROCPOSHHALM.FLWRST

Specific to Block	SP_SPEED Channel
Description	Rate Of Change Positive High High Alarm Flag With Reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	ROCPV, ROCPOSHHALM.FL, RESETTRIP
Remarks	This parameter is set to "ON" when ROCPOSHHALM.FL becomes "ON." It can be reset to "OFF" using RESETTRIP command only when ROCPOSHHALM.FL becomes "OFF."

17.11 ROCPOSHHALM.TP

Specific to Block	SP_SPEED Channel
Description	Rate Of Change Positive High High Alarm Trippoint for ROCPV.
Data Type	64-Bit Real Number
Range	NaN or any Real number
Default	NaN or greater-than or equal to ROCPOSHHALM.TP
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	ROCPOSHHALM.FL, ROCPV, ROCPOSHHALM.FLWRST
Remarks	

17.12 ROCPOSHIALM.FL

Specific to Block	SP_SPEED Channel
Description	Rate Of Change Positive High Alarm Flag - This parameter is set to "ON" when ROCPV exceeds ROCPOSHIALM.TP trip limit.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	ROCPOSHIALM.TP, ROCPV
Remarks	

17.13 ROCPOSHIALM.TP

Specific to Block	SP_SPEED Channel
Description	Rate Of Change Positive High Alarm Trippoint for ROCPV.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to ROCPOSHHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	ROCPOSHIALM.FL, ROCPV
Remarks	

17.14 ROCPV

Specific to Block	SP_SPEED channel
Description	Rate Of Change PV - This parameter is used to refer acceleration of gear wheel.
Data Type	32-Bit Real Number
Range	Any real value
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	PV
Remarks	This parameter is used to measure the acceleration of the gear wheels. This parameter value is calculated based on change in the PV value.

18 Sxxx Parameters

Related topics

“SECDATA.ARWSTS” on page 272

“SECDATA.INITSTS” on page 273

“SECDATA.INITVAL” on page 274

“SENSRTYP” on page 275

“SENSRTYPE” on page 276

“SERVODRIVEOPT” on page 277

“SO” on page 278

“SOINITVAL” on page 279

“SOREADFAIL” on page 280

“SP” on page 281

“SPHIFL” on page 282

“SPHILM” on page 283

“SPLOFL” on page 284

“SPLOLM” on page 285

“SPTOL” on page 286

“STATRESETAPPA” on page 287

“STATRESETIOLA” on page 288

18.1 SEC DATA.ARWSTS

Specific to Block	SVP_REGCTL Channel
Description	Secondary Data Input Anti-Reset Windup Status - Indicates the anti-reset windup status from secondary.
Data Type	Enumeration
Range	Normal (0)
	Hi (1)
	Lo (2)
	HiLo (3)
Default	Normal (0)
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

18.2 SECDATA.INITSTS

Specific to Block	SVP_REGCTL Channel
Description	Secondary Data Initialization Status - Indicates the initialization status for secondary.
Data Type	Boolean
Range	FALSE (0)
	TRUE (1)
Default	FALSE (0)
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

18.3 SECDATA.INITVAL

Specific Block	SVP_REGCTL Channel
Description	Secondary Data Initialization Value - Indicates initialization value from secondary.
Data Type	64-Bit Real Number
Range	
Default	0
Config. Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	
Remarks	

18.4 SENSRTYP

Specific to Block	SVP_AI Channel
Description	Sensor Type - Defines the type of field sensor or field device connected to the terminal block for the given I/O Module type.
Data Type	Enumeration
Range	1_5_V
	0_5_V
	P4_2_V
	LVDT
	RVDT
	Resolver
Default	LVDT
Config. Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SVP IOM
Related Parameters	
Remarks	If this parameter is configured as "Resolver," PVCLAMP parameter is disabled. In addition, Channel PV Range configuration is also disabled for Resolver sensor type. The PV range for the Resolver sensor is 0-359.999.

Specific to Block	SP_AI Channel
Description	Sensor Type - Defines the type of field sensor or field device connected to the terminal block for the given I/O Module type.
Data Type	Enumeration
Range	1_5_V
	0_5_V
	P4_2_V
Default	1_5_V
Config. Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	
Remarks	

18.5 SENSRTYPE

Specific to Block	SP_SPEED Channel
Description	Sensor Type - Defines the type of field sensor or field device connected to the terminal block for the given I/O Module type.
Data Type	Enumeration
Range	Active
	Passive
Default	Active
Config. Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	SP IOM
Related Parameters	
Remarks	

18.6 SERVODRIVEOPT

Specific to Block	SVP IOM
Description	Servo Drive Option - This parameter allows you to select the drive option for servo current outputs.
Data Type	Enumeration
Range	SingleCoil (0)
	DualCoil (1)
Default	SingleCoil (0)
Config. Load	Yes
Active Loadable	No
Access Lock	AppDev
Residence	IOLINK, SVP IOM
Related Parameters	
Remarks	This parameter is applicable for bipolar and unipolar outputs if you configure as "SingleCoil." However, this parameter is applicable only for bipolar servo outputs if you configure as "DualCoil." SVP_REGCTL output can be used to control one servo valve only when you configure this parameter as "DualCoil."

18.7 SO

Specific to Block	SP_DO Channel	
Description	Status Output - Specifies the state of the status output from a digital output point as On or Off.	
Data Type	Boolean	
Range	OFF (0)	Field contact is to be de-energized.
	ON (1)	Field contact is to be energized.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	Operator	
Residence	SP IOM	
Related Parameters	SOINITVAL, READY	
Remarks	<p>This parameter is the output from a digital output point.</p> <ul style="list-style-type: none"> When the channel is configured as "STATUS" and the SO pin is connected to a function block, the value indicates the fetched value from the upstream function block. The SO value can be modified by changing the value in the upstream function block. In addition, the SO is set to "OFF" when READY flag turns "OFF" due to an interlock failure. When the channel is configured as "STATUS" and the ONPULSE pin is connected to a function block, storing to SO is rejected. The value displays "OFF" for ONPULSE configuration. When the channel is configured as "STATUS" and SO and ONPULSE are not connected to a function block, you can store a value to this parameter and control the Status Output. The value indicates the current Status Output status. When the channel's REDTAG parameter is "ON," the Status Output is frozen to its last value. 	

18.8 SOINITVAL

Specific to Block	SP_DO Channel	
Description	SO Initialize Value - This is the field output value of the SP_DO channel.	
Data Type	Boolean	
Range	OFF (0)	Field contact is to be de-energized.
	ON (1)	Field contact is to be energized.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM	
Related Parameters	SO	
Remarks	This parameter is the field output value of this channel. The data reflects the actual IOM output for STATUS configuration.	

18.9 SOREADFAIL

Specific Block	SP_DO Channel	
Description	SO Initialize Value Invalid	
Data Type	Boolean	
Range	OFF (0)	The SO data for the channel was successfully read.
	ON (1)	Error occurred upon reading the SO data from the IOM.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SP IOM	
Related Parameters		
Remarks	This parameter is only valid for Status types.	

18.10 SP

Specific to Block	SVP_REGCTL Channel
Description	Setpoint Value (in Engineering Units)
Data Type	64-Bit Real Number
Range	SPLOLM to SPHILM
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Operator
Residence	SVP IOM
Related Parameters	
Remarks	SP is an initializable input for all function blocks.

18.11 SPHIFL

Specific to Block	SVP_REGCTL Channel	
Description	Set Point (SP) High Limit Flag - Indicates if SP has exceeded its upper limit, as specified by the Set Point High Limit (SPHILM).	
Data Type	Boolean	
Range	OFF (0)	SP high limit is not exceeded.
	ON (1)	SP high limit is exceeded.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	SPHILM	
Remarks		

18.12 SPHILM

Specific to Block	SVP_REGCTL Channel
Description	Set Point (SP) High Limit (in Engineering Units) - Defines the upper limit for the SP value.
Data Type	64-Bit Real Number
Range	Greater than SPLOLM and PVEULO, and lesser than or equal to PVEUHI
Default	100
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	SPHIFL
Remarks	Entering NaN disables SP limit checking, by forcing SPHILM to its extreme value (PVEUHI).

18.13 SPLOFL

Specific to Block	SVP_REGCTL Channel	
Description	Set Point (SP) Low Limit Flag - Indicates if SP has exceeded its lower limit, as specified by the Set Point Low Limit (SPLOLM).	
Data Type	Boolean	
Range	OFF (0)	SP low limit not exceeded.
	ON (1)	SP low limit exceeded.
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	SPLOLM	
Remarks		

18.14 SPLOLM

Specific to Block	SVP_REGCTL Channel
Description	Set Point (SP) Low Limit (in Engineering Units) - Defines the lower limit for the SP value.
Data Type	64-Bit Real Number
Range	Lesser than SPHILM and PVEUHI, and greater than or equal to PVEULO
Default	0.00
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	SPLOFL
Remarks	Entering NaN disables SP limit checking, by forcing SPLOLM to its extreme value (PVEULO).

18.15 SPTOL

Specific to Block	SVP_REGCTL Channel
Description	Set Point (SP) Tolerance - Define tolerance value for SP input.
Data Type	64-Bit Real Number
Range	Greater than or equal to zero
Default	0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	
Remarks	

18.16 STATRESETAPPA

Specific to Block	SP IOM, SVP IOM
Description	Reset Application processor CPU statistics
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM, SVP IOM
Related Parameters	CPUFREEAPPAVGA, CPUFREEAPPAVGB, CPUFREEAPPMAXA, CPUFREEAPPMAXB, CPUFREEAPPMINA, CPUFREEAPPMINB
Remarks	When this parameter is set to "ON," all CPU statistics (CPUFREEAPPAVG, CPUFREEAPPMAX, CPUFREEAPPMIN) of the application processor for both the IOMs (primary and secondary) are reset to zero.

18.17 STATRESETIOLA

Specific to Block	SP IOM, SVP IOM
Description	Reset IOLINK processor CPU statistics
Data Type	Boolean
Range	OFF
	ON
Default	OFF
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	SP IOM, SVP IOM
Related Parameters	CPUFREEIOLAVGA, CPUFREEIOLAVGB, CPUFREEIOLMAXA, CPUFREEIOLMAXB, CPUFREEIOLMINA, CPUFREEIOLMINB
Remarks	When this parameter is set to "ON," all CPU statistics (CPUFREEIOLAVG, CPUFREEIOLMAX, CPUFREEIOLMIN) of IOLINK processor for both the IOMs (primary and secondary) are reset to zero.

19 Txxx Parameters

Related topics

- “T1” on page 290
- “T1HILM” on page 291
- “T1LOLM” on page 292
- “T2” on page 293
- “T2HILM” on page 294
- “T2LOLM” on page 295
- “TEMPIN[1..4][0..12]” on page 296
- “TEMPOUT[1..4][0..12]” on page 297
- “TF” on page 298
- “TIMEBASE” on page 299
- “TMOUTFL” on page 300
- “TMOUTMODE” on page 301
- “TMOUTTIME” on page 302
- “TOOTHCNT” on page 303

19.1 T1

Specific to Block	SVP_REGCTL Channel
Description	Integral Time Constant (in Minutes)
Data Type	64-Bit Real Number
Range	T1LOLM to T1HILM
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	SVP IOM
Related Parameters	T1HILM, T1LOLM.
Remarks	

19.2 T1HILM

Specific to Block	SVP_REGCTL Channel
Description	T1 High Limit
Data Type	64-Bit Real Number
Range	Greater than or equal to T1LOLM
Default	1440.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	T1, T1LOLM
Remarks	

19.3 T1LOLM

Specific to Block	SVP_REGCTL Channel
Description	T1 Low Limit
Data Type	64-Bit Real Number
Range	Lesser than T1HILM
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	T1, T1HILM
Remarks	

19.4 T2

Specific to Block	SVP_REGCTL Channel
Description	Derivative Time Constant (in Minutes)
Data Type	64-Bit Real Number
Range	T2LOLM to T2HILM
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	SVP IOM
Related Parameters	T2HILM, T2LOLM
Remarks	

19.5 T2HILM

Specific to Block	SVP_REGCTL Channel
Description	T2 High Limit
Data Type	64-Bit Real Number
Range	Greater than or equal to T2LOLM
Default	1440.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	T2, T2LOLM
Remarks	

19.6 T2LOLM

Specific to Block	SVP_REGCTL Channel
Description	T2 Low Limit
Data Type	64-Bit Real Number
Range	Lesser than T2HILM
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	T2, T2HILM
Remarks	

19.7 TEMPIN[1..4][0..12]

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to temporarily store the modified value for IN[1..4][0..12] parameter.
Data Type	64-Bit Real Number
Range	Each coordinate within a linearization segment table must be greater than the previous coordinate, and lesser than the next coordinate.
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	ENBTUNE, VIEWLINSEG, NUMSEGS[1..4]
Remarks	This parameter is used to modify the corresponding IN[1..4][0..12] parameter of the linearization segment table. The parameter value can be modified only when ENBTUNE is "ON."

19.8 TEMPOUT[1..4][0..12]

Specific to Block	ENHGENLIN Function Block
Description	This parameter is used to temporarily store the modified value for OUT[1..4][0..12] parameter.
Data Type	64-Bit Real Number
Range	Any Real Number, not NaN
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	CEE
Related Parameters	ENBTUNE, VIEWLINSEG, NUMSEGS[1..4]
Remarks	This parameter is used to modify the corresponding OUT[1..4][0..12] parameter of the linearization segment table. The parameter value can be modified only when ENBTUNE is "ON." This parameter is disabled if ENBTUNE is "OFF."

19.9 TF

Specific to Block	SP_AI, SVP_AI
Description	PV Filter Lag Time, in minutes - Specifies the filtering time lag to be used after the Process Variable (PV) range has been checked.
Data Type	32-Bit Real Number
Range	0.0 to 60.0 minutes
Default	0.0
Config. Load	Yes
Active Loadable	No
Access Lock	Supervisor
Residence	SP IOM, SVP IOM
Related Parameters	
Remarks	A value of 0.0 specifies that PV will not be delayed.

19.10 TIMEBASE

Specific to Block	SP_SPEED channel
Description	This parameter allows you to configure the time unit when you measure the flow in the turbine flow meter.
Data Type	Enumeration
Range	/Second (0)
	/Minute (1)
	/Hour (2)
	/Day (3)
Default	/Second (0)
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SP IOM
Related Parameters	PV PVAUTO PVCALC LASTPV
Remarks	This parameter allows you to configure the time unit when you measure the flow in the turbine flow meter. If you want to modify this parameter from Monitoring view , you must inactivate the SP_SPEED channel.

19.11 TMOUTFL

Specific to Block	SVP_REGCTL Channel	
Description	Timeout Flag - Indicates if an initializable input has timed-out.	
Data Type	Boolean	
Range	OFF (0)	No time-out
	ON (1)	Input has timed-out
Default	OFF (0)	
Config. Load	No	
Active Loadable	No	
Access Lock	View Only	
Residence	SVP IOM	
Related Parameters	TMOUTMODE, TMOUTTIME	
Remarks		

19.12 TMOUTMODE

Specific to Block	SVP_REGCTL Channel	
Description	Timeout Shed Mode - The mode that a function block sheds to when an initializable input times out.	
Data Type	Enumeration REGMODE	
Range	None (0)	No mode shedding
	Man (2)	Shed to Manual mode
Default	Man (2)	
Config. Load	Yes	
Active Loadable	No	
Access Lock	Engineer	
Residence	SVP IOM	
Related Parameters	TMOUTFL, TMOUTTIME	
Remarks	None.	

19.13 TMOUTTIME

Specific to Block	SVP_REGCTL Channel
Description	Timeout Time - The maximum time between successive updates on an initializable input. If the updates are not received within the specified time, the input is assumed to have timed out.
Data Type	Integer
Range	0 to 1000 seconds
Default	1
Config. Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	TMOUTFL, TMOUTMODE
Remarks	Timeout time is the maximum allowable time period between two SP writes from the upstream block. For example, when the SVP_REGCTL channel's SP is received from ENHGENLIN block, SP timeout occurs if there are no SP writes from the ENHGENLIN block for the configured TMOUTTIME duration. As a result, the SVP_REGCTL channel's mode sheds based on the TMOUTMODE configuration.

19.14 TOOTHCNT

Specific to Block	SP_SPEED Channel
Description	Tooth Count - This parameter is used to configure the number of teeth present in turbine gear wheel.
Data Type	INT32
Range	Greater than or equal to 1
Default	60
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	SP IOM
Related Parameters	SENSRTYP, GEARRATIO
Remarks	This parameter is used for calculating PV of speed channel (to determine the speed of rotation of turbine gear wheel).

20 Vxxx Parameters

Related topics

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20.1 VALVECALIBENB

Specific to Block	SVP_AI
Description	Valve Position Calibration Enable.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	Engineer
Residence	SVP IOM
Related Parameters	CALIBVAL
Remarks	This parameter is used to enable the calibration for LVDT/RVDT transducers.

20.2 VALVECALIBSTS

Specific to Block	SVP_AI
Description	Valve Position Calibration Status
Data Type	Enumeration
Range	NOTDONE (0)
	STEP1 (1)
	STEP2 (2)
	INPROGRESS (3)
	COMPLETE (4)
	FAILED (5)
Default	NOTDONE
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SVP IOM
Related Parameters	VALVECALIBENB, CALIBVAL
Remarks	This parameter displays calibration status for LVDT/RVDT transducers.

20.3 VDTMODE

Specific to Block	SVP_AI Channel	
Description	This parameter is used to select the position mode for respective sensor types.	
Data Type	Enumeration	
Range	A (0) (A-B) (1) (A-B)/(A+B) (2) ARCTAN(A/B) (3)	
Default	For LVDT/RVDT: A (0) For Resolver: ARCTAN(A/B) (3)	
Config.Load	Yes	
Active Loadable	No	
Access Lock	Engineer	
Residence	IOLINK, SVP IOM	
Related Parameters	XMTRWIRESLCT	
Remarks	Wiring scheme (XMTRWIRESLCT)	Supported Modes (VDTMODE)
	3 wire	A
	4 wire	A
	5 wire	(A-B), (A-B)/(A+B)
	6 wire	(A-B), (A-B)/(A+B) ARCTAN(A/B)
	 Attention This parameter is set to ARCTAN(A/B) by default when the sensor type is configured as "Resolver."	

20.4 VIEWLINSEG

Specific to Block	ENHGENLIN Function Block
Description	View table of linearization segments - This parameter selects the linearization segment table that allows the user to view the IN[1..4][0..12], OUT[1..4][0..12], TEMPIN[1..4][0..12], and TEMPOUT[1..4][0..12] parameter values of the table.
Data Type	INT32
Range	1 to NUMLINSEG
Default	1
Config Load	No
Active Loadable	No
Access Lock	Operator
Residence	CEE
Related Parameters	IN[1..4][0..12], OUT[1..4][0..12], TEMPIN[1..4][0..12], TEMPOUT[1..4][0..12]
Remarks	<p>The linearization segment table is selected by VIEWLINSEG parameter. Each linearization segment table consists of its own IN[1..4][0..12], OUT[1..4][0..12], TEMPIN[1..4][0..12], and TEMPOUT[1..4][0..12] parameters.</p> <p>Only one linearization segment table is displayed at a time based on the value of this parameter.</p>

20.5 VOTALG1

Specific to Block	SP_SPDVOTE Channel
Description	Voting Algorithm for Group 1 - It is a configuration Parameter used to configure "NONE" or "MEDIAN" as voting logic algorithm.
Data Type	Enumeration
Range	NONE (0)
	MED (1)
Default	NONE (0)
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SP IOM
Related Parameters	GRP1VOTCHENB[1..4], MEDOPT1
Remarks	

20.6 VOTALG2

Specific to Block	SP_SPDVOTE Channel
Description	Voting Algorithm for Group 2 - It is a configuration Parameter used to configure "NONE" or "MEDIAN" as voting logic algorithm.
Data Type	Enumeration
Range	NONE (0)
	MED (1)
Default	NONE (0)
Config Load	Yes
Active Loadable	No
Access Lock	AppDevOnly
Residence	IOLINK, SP IOM
Related Parameters	GRP2VOTCHENB[1..4], MEDOPT2
Remarks	

20.7 VOTPV1

Specific to Block	SP_SPDVOTE Channel
Description	This parameter displays the voted PV (Process Value) for Voting Logic Group 1 for the Speed IOM.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	PV1, PV2, PV3, PV4, VOTPV1STS
Remarks	

20.8 VOTPV1HHALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This is parameter is used to display voted PV high high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1, VOTPV1HHALM.TP
Remarks	This parameter is set to "ON" when VOTPV1 value exceeds VOTPV1HHALM.TP value.

20.9 VOTPV1HHALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the voted PV high high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or Greater than or equal to VOTPV1HIALM.TP
Default	NaN.
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1HHALM.FL, VOTPV1HHALM.FLWRST
Remarks	None.

20.10 VOTPV1HIALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the status of voted PV high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1, VOTPV1HIALM.TP
Remarks	This parameter is set to "ON" when the VOTPV1 value exceeds VOTPV1HIALM.TP value.

20.11 VOTPV1HHALM.FLWRST

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display voted PV high high alarm flag with reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	VOTPV1, VOTPV1HHALM.TP, VOTPV1HHALM.FL
Remarks	<p>This parameter is set to "ON" when VOTPV1 value exceeds VOTPV1HHALM.TP value.</p> <p>This flag is set only if VOTPV1HHALM.FL becomes "ON." This flag can be reset using RESETTRIP command only when VOTPV1HHALM.FL is "OFF."</p>

20.12 VOTPV1HIALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the voted PV high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to VOTPV1HHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1, VOTPV1HIALM.FL
Remarks	None.

20.13 VOTPV1STS

Specific to Block	SP_SPDVOTE Channel		
Description	Voted Process Value Status for Group1 - This parameter displays the status of the Voted PV (Process Variable) for Voting Logic Group 1.		
Data Type	Enumeration		
Range	0	Bad	The input value is bad and replaced with NaN.
	1	Uncertain	The status of the input is uncertain.
	2	Normal	The input value is good.
	3	Manual	The input value is manually set.
Default	Bad		
Config Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	IOLINK, SP IOM		
Related Parameters	VOTPV1		
Remarks	None.		

20.14 VOTPV2

Specific to Block	SP_SPDVOTE Channel
Description	This parameter displays the voted PV (Process Value) for Voting Logic Group 2 for the Speed IOM.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	PV1, PV2, PV3, PV4, VOTPV2STS
Remarks	

20.15 VOTPV2HHALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the voted PV high high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV2, VOTPV2HHALM.TP
Remarks	This parameter is set to "ON" when VOTPV2 value exceeds VOTPV2HHALM.TP value.

20.16 VOTPV2HHALM.FLWRST

Specific to Block	SP_SPDVOTE Channel
Description	This is parameter is used to display voted PV high high alarm flag with reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	SP IOM
Related Parameters	VOTPV2, VOTPV2HHALM.TP, VOTPV2HHALM.FL
Remarks	This parameter is set to "ON" when VOTPV2HHALM.FL becomes "ON." It can be reset to "OFF" using RESETTRIP command only when VOTPV2HHALM.FL is "OFF."

20.17 VOTPV2HHALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the voted PV high high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or greater than or equal to VOTPV2HHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTPV2HHALM.FL, VOTPV2HHALM.FLWRST
Remarks	None.

20.18 VOTPV2HIALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the status of voted PV high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV2, VOTPV2HIALM.TP
Remarks	This parameter is set to "ON" when the VOTPV2 value exceeds VOTPV2HIALM.TP value.

20.19 VOTPV2HIALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the voted PV high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to VOTPV2HHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTPV2, VOTPV2HIALM.FL
Remarks	None.

20.20 VOTPV2STS

Specific to Block	SP_SPDVOTE Channel		
Description	Voted Process Value Status for Group 2 - This parameter displays the status of the Voted PV (Process Variable) for Voting Logic Group 2.		
Data Type	Enumeration		
Range	0	Bad	The input value is bad and replaced with NaN.
	1	Uncertain	The status of the input is uncertain.
	2	Normal	The input value is good.
	3	Manual	The input value is manually set.
Default	Bad		
Config Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SP IOM, IOLINK		
Related Parameters	VOTPV2		
Remarks	None.		

20.21 VOTPVMAX

Specific to Block	SP_SPDVOTE Channel
Description	Voted PV Maximum - This parameter is used to display the maximum speed of turbine gear wheel achieved after Power ON.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0
Default	0.00
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTPV1, VOTPV2
Remarks	This parameter is used to display the maximum of Voted PV1 and Voted PV2 values.

20.22 VOTPVONTRIP

Specific to Block	SP_SPDVOTE Channel
Description	Voted PV On Trip - This parameter is used to display the value of speed when a trip is activated (i.e. VOTPVxHHALM or VOTROCxPOSHHALM is set and the same flags used for interlock in DO channel).
Data Type	64-Bit Real Number
Range	Greater than or equal to 0
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	RESETTRIP, VOTPV1, VOTPV2, VOTPVMAX
Remarks	This parameter is reset only if RESETTRIP is set to "ON."

20.23 VOTROC1

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the voted ROC for Voting Logic Group1.
Data Type	32-Bit Real Number
Range	Any Real value
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1STS, VOTPV1
Remarks	None.

20.24 VOTROC1POSHHALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the rate of change (ROC) positive high high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1POSHHALM.TP, VOTROC1POSHHALM.FLWRST
Remarks	This parameter is set to "ON" when the VOTROC1 value exceeds VOTROC1POSHHALM.TP value.

20.25 VOTROC1POSHHALM.FLWRST

Specific to Block	SP IOM
Description	This parameter is used to display the rate of change (ROC) positive high high alarm flag with reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	ViewOnly
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1POSHHALM.FL, VOTROC1POSHHALM.TP, RESETTRIP
Remarks	This parameter is set to "ON" when VOTROC1POSHHALM.FL becomes "ON." It can be reset to OFF using RESETTRIP command only when VOTROC1POSHHALM.FL is "OFF."

20.26 VOTROC1POSHHALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the rate of change (ROC) positive high high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or greater than or equal to VOTROC1POSHIALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1POSHHALM.FL, VOTROC1POSHHALM.FLWRST, RESETTRIP
Remarks	

20.27 VOTROC1POSHIALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the rate of change (ROC) positive high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1POSHIALM.TP
Remarks	This parameter is set to "ON" when ROCPV1 exceeds VOTROC1POSHIALM.TP trip limit.

20.28 VOTROC1POSHIALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the rate of change (ROC) positive high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to VOTROC1POSHHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTROC1POSHIALM.FL
Remarks	

20.29 VOTROC1STS

Specific to Block	SP_SPDVOTE Channel		
Description	Voted ROC status for Group1- This parameter is used to display the status of voted ROC for Voting Logic Group1		
Data Type	Enumeration		
Range	0	Bad	The input value is bad and replaced with NaN.
	1	Uncertain	The status of the input is uncertain.
	2	Normal	The input value is good.
	3	Manual	The input value is manually set.
Default	Bad		
Config Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SP IOM, IOLINK		
Related Parameters	VOTROC1		
Remarks	None.		

20.30 VOTROC2

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the voted ROC for Voting Logic Group2.
Data Type	32-Bit Real Number
Range	Any Real value
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2STS, VOTPV2
Remarks	None.

20.31 VOTROC2POSHHALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the rate of change (ROC) positive high high alarm flag.
Data Type	Boolean
Range	OFF (0) ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, IOM
Related Parameters	VOTROC2POSHHALM.TP, VOTROC2POSHHALM.FLWRST
Remarks	This parameter is set to "ON" when the VOTROC2 value exceeds VOTROC2POSHHALM.TP value.

20.32 VOTROC2POSHHALM.FLWRST

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the rate of change (ROC) positive high high alarm flag with reset.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	ViewOnly
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2POSHHALM.FL, VOTROC2POSHHALM.TP, RESETTRIP
Remarks	<p>This parameter is set to "ON" when the VOTROC2 value exceeds VOTROC2POSHIALM.TP value.</p> <p>This parameter is set to "ON" when VOTROC2POSHHALM.FL becomes "ON." It can be reset to "OFF" using RESETTRIP command only when VOTROC2POSHHALM.FL is "OFF."</p>

20.33 VOTROC2POSHHALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the rate of change (ROC) positive high high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or greater than or equal to VOTROC2POSHIALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2POSHHALM.FL, VOTROC2POSHHALM.FLWRST, RESETTRIP
Remarks	

20.34 VOTROC2POSHIALM.FL

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the rate of change (ROC) positive high alarm flag.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2POSHIALM.TP
Remarks	This parameter is set to "ON" when the VOTROC2 value exceeds VOTROC2POSHIALM.TP value.

20.35 VOTROC2POSHIALM.TP

Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to configure the rate of change (ROC) positive high alarm trippoint.
Data Type	64-Bit Real Number
Range	NaN or lesser than or equal to VOTROC2POSHHALM.TP
Default	NaN
Config Load	Yes
Active Loadable	No
Access Lock	Engineer
Residence	IOLINK, SP IOM
Related Parameters	VOTROC2POSHIALM.FL
Remarks	

20.36 VOTROC2STS

Specific to Block	SP_SPDVOTE Channel		
Description	Voted ROC status for Group2 - This parameter is used to display the status of voted ROC for Voting Logic Group2.		
Data Type	Enumeration		
Range	0	Bad	The input value is bad and replaced with NaN.
	1	Uncertain	The status of the input is uncertain.
	2	Normal	The input value is good.
	3	Manual	The input value is manually set.
Default	Bad		
Config Load	No		
Active Loadable	No		
Access Lock	View Only		
Residence	SP IOM, IOLINK		
Related Parameters	VOTROC2		
Remarks	None.		

20.37 VOTROCPOSHHONTRIP


Specific to Block	SP_SPDVOTE Channel
Description	This parameter is used to display the voted ROC value during the last trip.
Data Type	64-Bit Real Number
Range	Greater than or equal to 0
Default	NaN
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	LASTTRIPREASON, LASTTRIPTIME
Remarks	None.

21 Xxxx Parameters

Related topics

“XMTRWIRESLCT” on page 346

21.1 XMTRWIRESLCT

Specific to Block	SVP_AI Channel
Description	Transducer Wire Select - This parameter is used to select the wiring connection of LVDT/RVDT or Resolver transducers.
Data Type	Enumeration
Range	3_WIRE (0)
	4_WIRE (1)
	5_WIRE (2)
	6_WIRE (3)
Default	For LVDT/RVDT: 3_WIRE (0) For Resolver: 6_WIRE (3)
Config Load	Yes
Active Loadable	No
Access Lock	Application Developer
Residence	IOLINK, SVP IOM
Related Parameters	VDTMODE
Remarks	<p>This parameter is enabled only if SENSRTYP parameter of SVP_AI channel is set to "LVDT" or "RVDT" or "Resolver."</p> <hr/> <p> Attention This parameter is set to 6_WIRE by default when you configure the sensor type as "Resolver."</p>

22 Zxxx Parameters

Related topics

“ZEROSPDFL” on page 348

22.1 ZEROSPDFL

Specific to Block	SP_SPEED Channel
Description	Zero Speed Flag: This parameter flag is used to indicate the zero speed status for SP_SPEED channel.
Data Type	Boolean
Range	OFF (0)
	ON (1)
Default	OFF (0)
Config Load	No
Active Loadable	No
Access Lock	View Only
Residence	IOLINK, SP IOM
Related Parameters	
Remarks	This parameter flag is set to "ON" when zero speed is detected. Soft Failure "No Pulse Detected" is also generated when this parameter flag is set to "ON."

23 Notices

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23.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions support website at:

<http://www.honeywellprocess.com/support>

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

hpsdocs@honeywell.com

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

23.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

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Submit the requested information to Honeywell using one of the following methods:

- Send an email to security@honeywell.com.
- or
- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

23.3 Support

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC). To find your local CCC visit the website, <https://www.honeywellprocess.com/en-US/contact-us/customer-support-contacts/Pages/default.aspx>.

23.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see <http://www.automationcollege.com>.

