# Honeywell

Experion PKS
# PROFIBUS Gateway Module Parameter Reference

**Release 431**

| Document | Release | Issue | Date |
|---|---|---|---|
| EPDOC-XX87-en-431A | 431 | 0 | February 2015 |

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# 1 About this guide

This guide defines the user-visible parameters that exist in the PROFIBUS Gateway Module (PGM). It also provides a listing of the parameters, and their attributes that are applicable to the various PGM function blocks.

Use this publication as you configure the PGM blocks and during operation, when detailed information about function block parameters is required.

> **Attention**
> This document contains the parameters that are specific to PGM. For information on the existing parameters, you must refer to the *Control Builder Parameter Reference* guide.

**Revision history**

| Revision | Date | Description |
|---|---|---|
| A | February 2015 | Initial release of the document. |

# 1.1  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.

## AISENSORTYPE [0..15][0..31]

| Specific to Block(s) | Siemens ET200M DSB |
|---|---|
| Description | AI Sensor Type |
| Data Type | ENUM |
| Range | Unipolar |
| | Bipolar |
| | Temperature Unit |
| Default | Unipolar |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | CHLOWRANGE |
| | CHHIGHRANGE |
| Remarks | This parameter represents the sensor type supported for the AI module. |
| | This parameter is available for configuration only when the PDC type is selected as AI Module. |

## 1.2  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. |

# 1.3 Data Type

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

**Table 2: 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.

# 1.4  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 3: 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 | | | |

# 1.5 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.<br><br>It runs in the controller as a software layer built on top of the control software infrastructure. |
| SR | System Repository:<br><br>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.

# 2  Axxx Parameters

**Related topics**

# 2.1  ACCEPTDEV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Accept Device ID |
| **Data Type** | Boolean |
| **Range** | Not Applicable |
| **Default** | Off |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | PGM |
| **Related Parameters** | "HDEVIDFL" on page 196<br><br>"HDEVID" on page 193<br><br>"HDEVIDCD" on page 195 |
| **Remarks** | When ACCEPTDEV is pressed:<br><br>• HDEVID parameter is copied to the HDEVIDCD parameter.<br>• HDEVIDFL parameter is reset.<br>• Any pending notifications relating to HDEVIDFL are returned to normal. |

## 2.2  AISENSORTYPE [0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | Siemens ET200M DSB |
| **Description** | AI Sensor Type |
| **Data Type** | ENUM |
| **Range** | Unipolar |
| | Bipolar |
| | Temperature Unit |
| **Default** | Unipolar |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | CHLOWRANGE |
| | CHHIGHRANGE |
| **Remarks** | This parameter represents the sensor type supported for the AI module. |
| | This parameter is available for configuration only when the PDC type is selected as AI Module. |

## 2.3  ALMENBSTATE

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block, CEAGDSB, DRIVEDSB, GENDSB, GENIODSB, Siemens DP/AS-i Link DSB, Siemens ET 200M DSB, Turck Excom DSB, PBHCHANNEL block |
| **Description** | Alarming Enabled |
| **Data Type** | BOOLEAN |
| **Range** | Off (0) — Alarming disabled |
| | On (1) — Alarming enabled |
| **Default** | On (1) |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | When Off, alarms related to the field network or devices are not propagated. When On, all active alarms are regenerated. |

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# 2.4 AOSENSORTYPE [0..15][0..31]

| Specific to Block(s) | Siemens ET200M DSB |
|---|---|
| Description | AO Sensor Type |
| Data Type | ENUM |
| Range | Unipolar |
| | Bipolar |
| Default | Unipolar |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | CHLOWRANGE |
| | CHHIGHRANGE |
| Remarks | This parameter represents the sensor type supported for the AO module. |
| | This parameter is available for configuration only when the PDC type is selected as AO Module. |

## 2.5 ASISEGMENT[1..16]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | AS-I segment - Indicates in which segment the ASI slaves in the PDC are located. |
| **Data Type** | ENUM |
| **Range** | Segment 1 |
| | Segment 2 |
| **Default** | Segment 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | PDCTYPE |
| **Remarks** | You can only have one configured instance of each PDC Type for each segment. |
| | For example, you cannot configure the Slaves 0-7 twice for Segment 1. However, you can configure Slaves 0-7 once for Segment 1 and once for Segment 2. |

2 AXXX PARAMETERS

# 2.6 ASSIGNEDDSBNAME

| Specific to Block(s) | PBHIOMB block |
|---|---|
| Description | Slave Name |
| Data Type | BLOCKID |
| Range | |
| Default | |
| Config Load | No |
| Active Loadable | No |
| Access Lock | AppDevOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | |

## 2.7  AUDITTRAIL

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Field network configuration Audit Trail XML file |
| **Data Type** | BIGSTRING |
| **Range** | Length : 2 000 000 000 characters |
| **Default** | NA |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | ERDB Only |
| **Related Parameters** | |
| **Remarks** | This parameter contains the Audit Trail XML file of the field network configuration with QVCS details. It can be used for Audit Trail comparison in QVCS Diff Tool. |

# 2.8  AUTODISCOVERYENABLED

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Auto Discovery Enabled |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: Auto Discovery is Enabled |
| | FALSE: Auto Discovery is Disabled |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "FINDHDEVICES" on page 166 |
| | "AUTODISCOVERYSTATUS" on page 28 |
| **Remarks** | This parameter indicates whether the auto-discovery can be initiated. |
| | If all channels are configured, then AUTODISCOVERYENABLED is disabled. |

## 2.9  AUTODISCOVERYSTATUS

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Auto Discovery In Progress |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: Auto Discovery In Progress |
| | FALSE: Auto Discovery is not In Progress |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "FINDHDEVICES" on page 166 |
| | "AUTODISCOVERYENABLED" on page 27 |
| **Remarks** | This parameter indicates whether the auto-discovery of the HART devices is in progress. |

# 3  Bxxx Parameters

**Related topics**

# 3.1  BADPVFL

| | | |
|---|---|---|
| **Specific to Block(s)** | PBAICHANNEL | |
| **Description** | Bad Process Variable (PV) Flag | |
| **Data Type** | BOOLEAN | |
| **Range** | Off (0) | PV is OK. |
| | On (1) | PV is Bad. |
| **Default** | Off | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | CEE | |
| **Related Parameters** | PVSTS | |
| **Remarks** | This parameter indicates that a bad PV is detected for this data point. | |

# 3.2  BAUDRATE

| Specific to Block(s) | PBLINK | |
|---|---|---|
| Description | Baud Rate (kBit/s) | |
| Data Type | Enumeration | |
| | 0 | 9.6 |
| | 1 | 19.2 |
| | 2 | 31.25 |
| | 3 | 45.45 |
| | 4 | 93.75 |
| | 5 | 187.5 |
| | 6 | 500 |
| | 7 | 1500 |
| | 8 | 3000 |
| | 9 | 9000 |
| Range | 10 | 12000 |
| Default | 1500 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter allows you to select the Baud rate for the link configured in Sycon. This parameter is only used for calculating the DPV1 bandwidth based on the baud rate.<br><br>**Attention**<br>The Baud rate selected in the PBLINK must be same as the Baud rate configured in the SYCON. | |

## 3.3 **BCMCOMMAND**

| | |
|---|---|
| **Specific to Block(s)** | Primary/Secondary PGM |
| **Description** | Platform Command |
| **Data Type** | ENUM |
| **Range** | SHUTDOWN<br>NONE |
| **Default** | NONE |
| **Config Load** | NOLOAD |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | BCMSTATE<br>ENABLESHUTDOWN |
| **Remarks** | The shutdown is always allowed on a secondary PGM. The primary PGM may be shutdown if no DSBs are loaded to the PBLink blocks.<br><br>**Note:** The SHUTDOWN command results in a loss of control. All outputs transition to their configured safe state. |

## 3.4  BCMSTATE

| Specific to Block(s) | Primary/Secondary PGM |
|---|---|
| Description | Platform State |
| Data Type | ENUM |
| Range | OFFNET (0) |
| | TESTING (1) |
| | BOOTING (2) |
| | ALIVE (3) |
| | LOADING (4) |
| | OK (5) |
| | FAILED (6) |
| | PIREADY (7) |
| | BACKUP (8) |
| | NOTLOADED (9) |
| | TIMESOURCE (14) |
| Default | NOTLOADED |
| Config Load | NOLOAD |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | BCMCOMMAND |
| Remarks | The SOFTFAIL and BCMSTATE parameters are independent of each other. A change in the state of SOFTFAIL does not cause a change in the BCMSTATE parameter. |

## 3.5  BOOTVERSION

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | netX Boot Version |
| **Data Type** | STRING |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | Format: xxxx.xxxx.xxxx.xxxx (Major.Minor.Build.Revision) |

# 3.6  BUSSTATE

| Specific to Block(s) | Protocol Block | |
|---|---|---|
| Description | Field Network State - Current network status of the communication channel | |
| Data Type | ENUM | |
| Range | 0 | IDLE |
| | 1 | LOADED |
| | 2 | RUNNING |
| | 3 | STOPPED |
| Default | 0 (IDLE) | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Active Loadable | No | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | • RUNNING - The master is able to communicate at least with one slave.<br>• STOPPED - The master is not able to communicate with any of the slave.<br>• IDLE - The network configuration is not created and loaded. | |

# 4  Cxxx Parameters

**Related topics**

# 4.1  CHANBLKTYPE[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Channel Block Type - Channel block type for assignment |
| **Data Type** | Block ID |
| **Range** | PbAiChannel |
| | PbAoChannel |
| | PbDiChannel |
| | PbDoChannel |
| **Default** | Null |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | - |
| **Related Parameters** | CHANNELTYPE (from PDC) |
| **Remarks** | This parameter obtains its value through the PDC-PIOMB association. |

# 4.2  CHANDATA[0..31]

| Specific to Block(s) | PIOMB |
|---|---|
| Description | Channel Process Data |
| Data Type | FLOAT64 |
| Range | Depends on CHANDATATYPE |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | CEE |
| Related Parameters | CHANDATATYPE |
| Remarks | - |

## 4.3  CHANDATAANA[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Analog Channel Process Data |
| **Data Type** | FLOAT64 |
| **Range** | Depends on CHANDATATYPE |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | CHANDATATYPE |
| **Remarks** | This parameter displays the analog channel raw data. |

# 4.4 CHANDATADIG[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Digital Channel Process Data |
| **Data Type** | BOOLEAN |
| **Range** | Depends on CHANDATATYPE |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | CHANDATATYPE |
| **Remarks** | This parameter displays the digital channel raw data. |

# 4.5  CHANDATANUM[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Numeric Channel Process Data |
| **Data Type** | FLOAT64 |
| **Range** | Depends on CHANDATATYPE |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | CHANDATATYPE |
| **Remarks** | This parameter displays the numeric channel raw data. |

# 4.6 CHANDATATYPE[0..31]

| Specific to Block(s) | PIOMB | |
|---|---|---|
| Description | Channel Data Type | |
| Data Type | ENUM | |
| Range | 0 | Not configured |
| | 1 | Boolean (DI) |
| | 2 | UINT8 (NI/NO) |
| | 3 | UINT16 (NI/NO, AI/AO) |
| | 4 | UINT32 (NI/NO) |
| | 5 | INT8 (NI/NO) |
| | 6 | INT16 (NI/NO, AI/AO) |
| | 7 | INT32 (NI/NO) |
| | 8 | FLOAT32 (NI/NO, AI/AO) |
| Default | (0) Not configured | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | CEE | |
| Related Parameters | CHANNELDATATYPE (from PDC) | |
| Remarks | This parameter obtains its value through the PDC-PIOMB association. | |

# 4.7  CHANDESC[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Channel Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | Null String |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | CHANDESCRIPTION (from PDC) |
| **Remarks** | This parameter displays the user-defined description of the channel. This parameter obtains its value through the PDC-PIOMB association. |

# 4.8 CHANEERRCHANNUM[0..19]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Channel number for channel error |
| **Data Type** | UINT8 |
| **Range** | Na |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | CHANERRSLOTNUM<br><br>CHANERRTYPE |
| **Remarks** | This parameter indicates the channel number which is bad on the slot number indicated by CHANERRSLOTNUM. |

# 4.9 CHANEERRSLOTNUM[0..19]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Slot number for channel error |
| **Data Type** | UINT8 |
| **Range** | Na |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | CHANERRCHANNUM<br><br>CHANERRTYPE |
| **Remarks** | This parameter indicates the slot number on which the channel is bad. |

# 4.10  CHANEERRTYPE[0..19]

| Specific to Block(s) | GENDSB, GENIODSB | |
|---|---|---|
| Description | Error type for channel error | |
| Data Type | ENUM | |
| Range | 1 | Short Circuit |
| | 2 | Under Voltage |
| | 3 | Over Voltage |
| | 4 | Overload |
| | 5 | Over Temperature |
| | 6 | Wire Break |
| | 7 | Upper Limit Exceeded |
| | 8 | Lower Limit Under-Run |
| | 9 | Error |
| | 16 | Vendor Specific |
| | 255 | ... |
| Default | ... | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NOLOAD | |
| Related Parameters | CHANERRSLOTNUM | |
| | CHANERRCHANNUM | |
| Remarks | This parameter indicates the error type on the channel. The error type conforms to RIO standards. | |

# 4.11 CHANHIRANGE[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | High Range |
| **Data Type** | FLOAT64 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | CHHIGHRANGE (from PDC)<br>CHANNELDATATYPE |
| **Remarks** | This parameter represents the highest raw value this channel supports. |

# 4.12  CHANLORANGE[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Low Range |
| **Data Type** | FLOAT64 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | CHLOWRANGE (from PDC)<br>CHANNELDATATYPE |
| **Remarks** | This parameter represents the lowest raw value this channel supports. |

# 4.13  CHANNELDATATYPE[0..33][0..11]

| Specific to Block(s) | Turck Excom DSB | |
|---|---|---|
| Description | Channel Data Type | |
| Data Type | ENUM | |
| Range | 0 | Not configured |
| | 1 | Boolean (DI/DO) |
| | 2 | UINT16 (NI/NO, AI/AO) |
| | 3 | INT32 (NI/NO) |
| Default | 0 | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | SR | |
| Related Parameters | - | |
| Remarks | This parameter contains the channel data type for a particular channel of an I/O module in the Turck Excom DSB. | |

# 4.14  CHANNELDATATYPE[0..23][0..7]

| | | |
|---|---|---|
| **Specific to Block(s)** | CEAGDSB | |
| **Description** | Channel Data Type | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not Configured |
| | 1 | Boolean (DI/DO) |
| | 2 | Uint8 (NI/NO) |
| | 3 | Uint16 (NI/NO, AI/AO) |
| | 4 | Uint32 (NI/NO) |
| | 5 | Int8 (NI/NO) |
| | 6 | Int16 (NI/NO, AI/AO) |
| | 7 | Int32 (NI/NO) |
| | 8 | Float32 (NI/NO, AI/AO) |
| **Default** | 0 | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | | |

## 4.15  CHANNELDATATYPE[0..31]

| Specific to Block(s) | PIOMB | |
|---|---|---|
| Description | Channel Data Type | |
| Data Type | ENUM | |
| Range | 0 | Not configured |
| | 1 | Boolean (DI/DO) |
| | 2 | UINT8 (NI/NO) |
| | 3 | UINT16 (NI/NO, AI/AO) |
| | 4 | UINT32 (NI/NO) |
| | 5 | INT8 (NI/NO) |
| | 6 | INT16 (NI/NO, AI/AO) |
| | 7 | INT32 (NI/NO) |
| | 8 | FLOAT32 (NI/NO, AI/AO) |
| Default | 0 (Not configured) | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | CEE | |
| Related Parameters | CHANNELDATATYPE (from PDC) | |
| Remarks | This parameter obtains its value through the PDC-PIOMB association. | |

# 4.16  CHANNELDATATYPE[0..15][0..31]

| Specific to Block(s) | DRIVEDSB | |
|---|---|---|
| Description | Channel Data Type | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | Boolean (DI/DO) |
| | 2 | Uint8 (NI/NO) |
| | 3 | Uint16 (NI/NO, AI/AO) |
| | 4 | Uint32 (NI/NO) |
| | 5 | Int8 (NI/NO) |
| | 6 | Int16 (NI/NO, AI/AO) |
| | 7 | Int32 (NI/NO) |
| | 8 | Float32 (NI/NO, AI/AO) |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | For fixed PDC types, this parameter is displayed automatically. | |
| | For configurable PDC types, you must define this parameter. | |
| | You can modify the value of the CHANNELDATATYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. | |

| Specific to Block(s) | Siemens DP/AS-i Link DSB |
|---|---|
| Description | Channel Data Type |
| Data Type | ENUM |
| Range | Boolean (DI/DO) |
| Default | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter is non-editable and is always "BOOLEAN" for any configured channel in the Siemens DP/AS-i Link DSB because this DSB does not support analog channels. |

# 4.17  CHANNELDATATYPE[0..MAXPDCNUMBER] [0..MAXNUMOFCHANELS]

| Specific to Block(s) | GENDSB, GENIODSB | |
|---|---|---|
| Description | Channel Data Type | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | Boolean (DI/DO) |
| | 2 | Uint8 (NI/NO) |
| | 3 | Uint16 (NI/NO, AI/AO) |
| | 4 | Uint32 (NI/NO) |
| | 5 | Int8 (NI/NO) |
| | 6 | Int16 (NI/NO, AI/AO) |
| | 7 | Int32 (NI/NO) |
| | 8 | Float32 (NI/NO, AI/AO) |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | For fixed PDC types, this parameter is displayed automatically. | |
| | For configurable PDC types, you must define this parameter. | |
| | You can modify the value of the CHANNELDATATYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. | |
| | Note: | |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. | |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. | |

# 4.18 CHANNELTYPE[0..15][0..31]

| Specific to Block(s) | DRIVEDSB | |
|---|---|---|
| Description | Channel Type - This parameter defines the type of the channel | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | Digital input (DI) |
| | 2 | Analog input (AI) |
| | 3 | Numeric input (NI) |
| | 4 | Digital output (DO) |
| | 5 | Analog output (AO) |
| | 6 | Numeric output (NO) |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | For fixed PDC types, this parameter is displayed automatically. | |
| | For configurable PDC types, you must define this parameter. | |
| | You can modify the value of the CHANNELTYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. | |

| Specific to Block(s) | Siemens DP/AS-i Link DSB |
|---|---|
| Description | Channel Type - This parameter defines the type of the channel |
| Data Type | ENUM |
| Range | Digital input (DI) |
| | Digital output (DO) |
| Default | 0 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter is not configurable. The channel type is automatically selected when a PDC is configured. |

## 4.19 CHANNELTYPE[0..33][0..11]

| Specific to Block(s) | Turck Excom DSB | |
|---|---|---|
| **Description** | Channel Type | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not configured |
| | 1 | Digital input (DI) |
| | 2 | Digital output (DO) |
| | 3 | Analog input (AI) |
| | 4 | Analog output (AO) |
| **Default** | (0) Not configured | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | SR | |
| **Related Parameters** | - | |
| **Remarks** | This parameter contains channel type for a particular channel of an I/O module in the DSB. This is an internal parameter that is used for representing channel type for xml creation for PDC-PIOMB association. | |

# 4.20  CHANNELTYPE[0..23][0..7]

| Specific to Block(s) | CEAGDSB | |
|---|---|---|
| Description | Channel Type - This parameter defines the type of the channel | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | Digital input (DI) |
| | 2 | Analog input (AI) |
| | 3 | Numeric input (NI) |
| | 4 | Digital output (DO) |
| | 5 | Analog output (AO) |
| | 6 | Numeric output (NO) |
| Default | 0 (Not Configured) | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | The value of this parameter is automatically set according to the PDC type. | |

# 4.21  CHANNELTYPE[0..31]

| Specific to Block(s) | PIOMB | |
|---|---|---|
| Description | Channel Type | |
| Data Type | ENUM | |
| Range | 0 | Not configured |
| | 1 | Digital input (DI) |
| | 2 | Analog input (AI) |
| | 3 | Numeric Input (NI) |
| | 4 | Digital output (DO) |
| | 5 | Analog output (AO) |
| | 6 | Numeric output (NO) |
| Default | (0) Not configured | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | CEE | |
| Related Parameters | CHANNELTYPE (from PDC) | |
| Remarks | This parameter obtains its value through the PDC-PIOMB association. | |

# 4.22  CHANNELTYPE[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| Specific to Block(s) | GENDSB, GENIODSB | |
|---|---|---|
| Description | Channel Type - This parameter defines the type of the channel | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | Digital input (DI) |
| | 2 | Analog input (AI) |
| | 3 | Numeric input (NI) |
| | 4 | Digital output (DO) |
| | 5 | Analog output (AO) |
| | 6 | Numeric output (NO) |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | For fixed PDC types, this parameter is displayed automatically. | |
| | For configurable PDC types, you must define this parameter. | |
| | You can modify the value of the CHANNELTYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. | |
| | Note: | |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>• MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. | |

# 4.23  CHANNUM

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Channel Number |
| **Data Type** | 16-Bit Unsigned Integer |
| **Range** | 0 to number of channels on associated PBHIOMB |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter defines the channel number of the associated I/O Module. |

# 4.24  CHANNUM[0..31]

| Specific to Block(s) | PIOMB |
|---|---|
| Description | Channel Number - Array of channels |
| Data Type | INT32 |
| Range | 0-31 |
| Default | -1 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | - |
| Related Parameters | CHANNELNBR (from PDC) |
| Remarks | - |

# 4.25  CHANNUMOFFSET

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Channel Number Offset |
| **Data Type** | UINT8 |
| **Range** | 0 to 16 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | |
| **Remarks** | This parameter is used for displaying the offset value based on the associated PDC configuration. |

# 4.26  CHANSTATUS[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Channel Status - Provides status for each channel of the module. |
| **Data Type** | ENUM |
| **Range** | NORMAL |
| | BAD |
| | INITREQ |
| **Default** | BAD |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | The status byte is defined according to the Fieldbus Foundation variable status byte. The PIOMB converts and displays the status to the above enumerations. |

## 4.27  CHBITOFFSET[0..15][0..31]

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Bit Offset |
| Data Type | UINT8 |
| Range | 0-7 |
| Default | 0 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | PGM |
| Related Parameters | - |
| Remarks | This parameter defines the offset of the digital input/output channel in bits.<br><br>You must define this parameter for configurable digital input/outputs channels. |

# 4.28  CHBITOFFSET[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Bit Offset |
| **Data Type** | UINT8 |
| **Range** | 0-7 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the offset of the digital input/output channel in bits.<br><br>You must define this parameter for configurable digital input/outputs channels.<br><br>Note:<br>•   MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>•   MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.29  CHDATABOOL[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Channel Data Boolean |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the data for each channel of the digital I/O modules. This parameter is applicable only when the configured I/O module is a DI or a DO module. |
| | If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.30  CHDATABOOL[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Channel Data Boolean |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the data for each channel of the digital I/O modules. This parameter is applicable only when the configured I/O module is a DI or a DO module. |
| | If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.31  CHDATABOOL[0..23][0..7]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Channel Data Boolean |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the data for each channel of the digital I/O modules. This parameter is applicable only when the configured I/O module is a DI or a DO module.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

## 4.32  CHDATABOOL[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Channel Data Boolean |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the data for each channel of the digital I/O modules. This parameter is applicable only when the configured I/O module is a DI or a DO module. |
| | If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |
| | Note: |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.33  CHDATAOFFSET[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Data Offset |
| **Data Type** | UINT8 |
| **Range** | 0-244 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the data offset of the channel in bytes. For fixed PDC types, this parameter is displayed automatically. For configurable PDC types, you must define this parameter. |

# 4.34  CHDATAOFFSET[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Data Offset |
| **Data Type** | UINT8 |
| **Range** | 0-244 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the data offset of the channel in bytes. |
| | For fixed PDC types, this parameter is displayed automatically. |
| | For configurable PDC types, you must define this parameter. |
| | Note: |
| | •    MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | •    MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.35  CHDATARAW[0..15][0..31]

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Numeric Raw Data |
| Data Type | INT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the A/D counts for AI and AO modules.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

| Specific to Block(s) | Siemens ET200M DSB |
|---|---|
| Description | Numeric Data |
| Data Type | INT16 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the A/D counts for AI and AO modules.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.36  CHDATARAW[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Numeric Raw Data |
| **Data Type** | INT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the A/D count value of the analog input/output modules.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.37  CHDATARAW[0..23][0..7]

| Specific to Block(s) | CEAGDSB |
|---|---|
| Description | Numeric Raw Data |
| Data Type | INT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the channel raw data value of the analog input and output channels.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.38  CHDATARAW[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Numeric Raw Data |
| **Data Type** | INT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the A/D counts for AI and AO modules. |
| | If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |
| | Note: |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

## 4.39  CHDATAREAL[0..15][0..31]

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Floating point value |
| Data Type | FLOAT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the channel data of AI/AO modules after converting the A/D counts to a value representing percentage of full range.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

| Specific to Block(s) | Siemens ET200M DSB |
|---|---|
| Description | Floating point value |
| Data Type | Float32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the channel data of AI/AO modules after converting the A/D counts to a value representing percentage of full range.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

# 4.40  CHDATAREAL[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Floating point value |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the channel data of AI/AO modules after converting the A/D counts to a value representing percentage of full range. |
| | If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

## 4.41  CHDATAREAL[0..23][0..7]

| Specific to Block(s) | CEAGDSB |
|---|---|
| Description | Floating point value |
| Data Type | FLOAT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Active Loadable | No |
| Access Lock | Operator |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the channel data of AI/AO modules after converting the A/D counts to a value representing percentage of full range.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value. |

## 4.42  CHDATAREAL[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Floating point value |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the channel data of AI/AO modules after converting the A/D counts to a value representing percentage of full range.<br><br>If a PDC is not associated with a PIOMB, you can set this parameter value in the Monitoring view. However, when a PDC is associated with a PIOMB, you cannot change this value.<br><br>Note:<br>• MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>• MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

4 CXXX PARAMETERS

# 4.43 CHDESCRIPTION[0..15] [0..31]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB |
| **Description** | Channel Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the user-defined description of the channel. You can modify the value of the CHDESCRIPTION parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.44  CHDESCRIPTION[0..33][0..11]

| Specific to Block(s) | Turck Excom |
|---|---|
| **Description** | Channel Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the user-defined description of the channel. You can modify the value of the CHDESCRIPTION parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

## 4.45  CHDESCRIPTION[0.. MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Channel Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the user-defined description of the channel. |
| | You can modify the value of the CHDESCRIPTION parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |
| | Note: |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

## 4.46  CHHIGHRANGE[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | High Range |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the highest raw value this channel supports. |
| | This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules. |
| | You can modify the value of the CHHIGHRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

| | |
|---|---|
| **Specific to Block(s)** | Siemens ET200M DSB |
| **Description** | High Range |
| **Data Type** | INT16 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | AISENSORTYPE |
| | AOSENSORTYPE |
| **Remarks** | This parameter represents the highest raw value this channel supports. |
| | This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules. |
| | For AI and AO modules, this parameter value depends on the AISENSORTYPE and AOSENSORTYPE parameters. |
| | You can modify the value of the CHHIGHRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

## 4.47  CHHIGHRANGE[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | High Range |
| **Data Type** | INT32 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | INPUTSIGNALTYPE<br><br>OUTPUTSIGNALTYPE |
| **Remarks** | This parameter represents the highest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>For AI and AO modules, this value depends on the INPUTSIGNALTYPE and the OUTPUTSIGNALTYPE parameters.<br><br>With R410, you can modify the value of the CHHIGHRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

4 CXXX PARAMETERS

# 4.48 CHHIGHRANGE[0..23][0..7]

| Specific to Block(s) | CEAGDSB |
|---|---|
| Description | High Range |
| Data Type | FLOAT32 |
| Range | - |
| Default | 50000 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter represents the highest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>You must define this parameter for analog AI/AO modules.<br><br>You can modify the value of the CHHIGHRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.49  CHHIGHRANGE[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | High Range |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the highest raw value this channel supports. |
| | This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules. |
| | You can modify the value of the CHHIGHRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |
| | Note: |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.50  CHINITVALUE[0..MAXPDCNUMBER][0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB, DRIVEDSB, GENDSB, GENIODSB, Siemens ET 200M DSB, Turck Excom DSB |
| **Description** | Initialization value for the output channels |
| **Data Type** | FLOAT32 |
| **Range** | AO channels: 0 - 100 |
| | DO channels: 0/1 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | You can define the initialization values for the AO/DO channels from which the channel values must be re-initialized after recovering from a communication break condition. |

# 4.51  CHLOWRANGE[0..15][0..31]

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Low Range |
| Data Type | FLOAT32 |
| Range | - |
| Default | 0 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter represents the lowest raw value this channel supports. |
| | This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules. |
| | You must define this parameter for AI/AO modules. |
| | You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

| Specific to Block(s) | Siemens ET200M DSB |
|---|---|
| Description | Low Range |
| Data Type | INT16 |
| Range | - |
| Default | 0 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | AISENSORTYPE |
| | AOSENSORTYPE |
| Remarks | This parameter represents the lowest raw value a this channel supports. |
| | This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules. |
| | For AI/AO modules, this parameter value depends on the AISENSORTYPE and AOSENSORTYPE parameters. |
| | You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Low Range |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | 10000 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | |
| **Remarks** | This parameter represents the lowest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>You must define this parameter for AI/AO modules.<br><br>You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.52  CHLOWRANGE[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Low Range |
| **Data Type** | INT32 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | INPUTSIGNALTYPE<br><br>OUTPUTSIGNALTYPE |
| **Remarks** | This parameter represents the lowest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>For AI and AO modules, this parameter value depends on the input and output signal types selected.<br><br>You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.53  CHLOWRANGE[0..23][0..7]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Low Range |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | 10000 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the lowest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>You must define this parameter for AI/AO modules.<br><br>You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.54 CHLOWRANGE[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Low Range |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the lowest raw value this channel supports.<br><br>This parameter is not applicable for DI/DO modules and remains 0 in case of DI/DO modules.<br><br>You must define this parameter for AI/AO modules.<br><br>You can modify the value of the CHLOWRANGE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB.<br><br>Note:<br>• MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>• MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.55 CHNFWDATE

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | netX Channel Firmware Date |
| **Data Type** | STRING |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | - |

# 4.56 CHNFWVERSION

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | netX Channel Firmware Version |
| **Data Type** | STRING |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | Format: xxxx.xxxx.xxxx.xxxx (Major.Minor.Build.Revision) |

# 4.57  CHNLNAME[0..31]

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Currently Assigned Channels |
| **Data Type** | BlockID |
| **Range** | - |
| **Default** | Null |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | After the PROFIBUS I/O channel blocks are assigned to the Control Module containing this PIOMB, the CHNLNAME parameter displays the channels that are associated to this PIOMB. |

# 4.58  CHNLNAME[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Channel Block Name |
| **Data Type** | BlockID |
| **Range** | Length: 16 characters |
| **Default** | Not Applicable |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | When you configure the HENABLE [1..15] parameter, this parameter automatically displays the default channel name. |

# 4.59 CHNUMBER[0..15][0..31]

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Channel Number |
| Data Type | UINT8 |
| Range | 0-32 |
| Default | 0,1,2,...31 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | The channel number is automatically updated based on the number of channels configured for the selected module. For example, if the number of channels configured for a module is 4, then this column lists the channel numbers as 0, 1, 2, and 3. However, you can modify the channel numbers, if required. |

| Specific to Block(s) | Siemens AS-i Link DSB |
|---|---|
| Description | Channel Number |
| Data Type | UINT8 |
| Range | 0-32 |
| Default | 0,1,2,...31 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | - |
| Remarks | You cannot modify the number of channels for this DSB. The number of channels is determined by the PDC type selected.<br><br>For example, for the "Slave 1-7 inputs" and "Slave 1-7 outputs" PDC types, there are 28 channels. For other PDC types there are 32 channels. Each slave has four channels assigned. |

# 4.60 CHNUMBER[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Channel Number |
| **Data Type** | UINT8 |
| **Range** | 0-11 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | The channel number is automatically updated based on the number of channels configured for the specific module. However, you must enter the channel number when you select the DM80Ex digital module. You must enter the channel number from 0 through 7.<br><br>You can modify the value of the CHNUMBER parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 4.61 CHNUMBER[0..23][0..7]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Channel Number |
| **Data Type** | UINT8 |
| **Range** | 0 - 255 |
| **Default** | 0, 1, 2, 3, 4, 5, 6, 7 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The channel number is automatically updated based on the number of channels configured for the selected module. For example, if the number of channels configured for a module is 4, then this column lists the channel numbers as 0, 1, 2, and 3. However, you can modify the channel numbers, if required. |

# 4.62 CHNUMBER[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Channel Number |
| **Data Type** | UINT8 |
| **Range** | 0-32 |
| **Default** | 0,1,2,...31 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | You must enter the channel numbers in increasing order. If not, this may result in an unknown channel status behavior.<br><br>Examples for correct configuration: 0, 1, 2, 3, 4 ..... or 1, 2, 3, 4, 5.....<br><br>Examples for incorrect configuration: 0,0,1,1,2,2,3,4,5..... or 0,1,2,3,0,1,2,3,4,5.....<br><br>Note:<br>• MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>• MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

## 4.63  CHBITFIELD[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Bit Field |
| **Data Type** | UINT8 |
| **Range** | 1 to 8 |
| **Default** | 8 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the number of bit, starting from bit configured in Bit Offset, to be parsed so that multi bit value could be extracted from data.<br><br>This parameter is applicable only for "Extended Diagnostic" PDC and is configurable only if the PDCTYPE is selected as "Extended Diagnostic" and Channel Data Type is selected as "UINT8" within the Extended diagnostic PDC.<br><br>For all other configurations it remains unavailable for configuration.<br><br>Note:<br>•	MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB.<br>•	MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

# 4.64  CHSTATUS[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB, Siemens DP/AS-i Link DSB, Siemens ET200M DSB, |
| **Description** | Status |
| **Data Type** | ENUM |
| **Range** | Bad_NonSpecific |
| | Bad_ConfigError |
| | Bad_ConnError |
| | Bad_HARTError |
| | Bad_SensorError |
| | Bad_SensorErrHighLim |
| | Bad_SensorErrLowLim |
| | Bad_CommErrUsableVal |
| | Bad_CommErrNoUsableVal |
| | Bad_OutOfServError |
| | Unc_NonSpecific |
| | Unc_SenserInaccurate |
| | Unc_RangeViolation |
| | Good_NonCascade |
| | GoodCasc_NonSpecific |
| | GoodCasc_InitAck |
| | GoodCasc_InitReq |
| | GoodCasc_LocalOverride |
| | GoodCasc_FSA |
| **Default** | Bad_NonSpecific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The status byte is displayed according to the Fieldbus Foundation variable status byte. |

The following table provides a brief description of the various channel statuses.

| Channel Status | Description |
|---|---|
| Bad_NonSpecific | The extended diagnostics report any status other than the good status. |
| | For example, there is a short circuit for channel 0, then the channel status is set to "Bad_NonSpecific". |
| | For HART data, this channel status indicates that the physical channel status is bad. |

| Channel Status | Description |
| --- | --- |
| Bad_ConfigError | The slave reports a configuration error in the diagnostic data. All channels in all PDCs have this state when active. |
| Bad_ConnError | There is a connection loss with the physical slave device. |
| Bad_DevError | The channel values are out of the extended range limits. |
| Bad_HARTError | For HART data, this channel status indicates a HART communication error.<br><br>The physical channel status would still be good when there is Bad_HARTError in the corresponding HART channel. However, when the physical channel status is bad, HART channel status will always be bad. HART status error is not treated as bad and the respective channel status of the HART channel is set to Good_NonCascade. |
| Good_NonCascade | This state indicates a healthy state of an input channel.<br><br>For output PDCs, if any channel is not in a "Good_NonCascade" state, the output value does not change irrespective of the value provided by the PIOMB. For example, if the channel 0 is in bad state and channel 1 is in good state, then the value of channel 1 is updated with the value supplied by PIOMB. However, the value of channel 0 is not updated irrespective of the value sent by the PIOMB. |
| GoodCascade_NonSpecific | This state indicates a healthy state of an output channel. |
| GoodCascade_InitializationAck | Back initialization acknowledged from PIOMB to PDC channel. |
| GoodCascade_InitializationRequest | Back initialization request sent from PDC to PIOMB. This state is an intermittent state.<br><br>**Attention**<br>This state changes to "Good_NonCascade" after it receives the data from the PIOMB. |
| GoodCascade_FaultStateActive | The DSB sets the channel to fail safe state and clears output. |

| Channel Status | Description |
|---|---|

**Attention**

- The Siemens ET200M DSB, Turck Excom DSB, and DriveDSB support the following channel statuses.
  - Bad_NonSpecific
  - Bad_ConfigError
  - Bad_ConnError
  - Bad_DevError
  - Good_NonCascade
  - GoodCasc_NonSpecific
  - GoodCasc_InitReq
- The Siemens ASI supports the following additional statuses based on the extended diagnosis.

| Extended Diagnostic | Affected channels | Channel status |
|---|---|---|
| Internal error | All channels in all PDCs | Bad_DevError |
| External error | Does not impact the channel status | Left as-is |
| Unexpected slave configuration | Does not impact the channel status | Left as-is |
| AS-Interface voltage low | Does not impact the channel status | Left as-is |
| Hardware error | All channels in all PDCs | Bad_DevError |
| DP/AS-I Link module is offline | All channels in all PDCs | Bad_OutOfServError |
| EEPROM is defective | All channels in all PDCs | Bad_DevError |
| Slave error (for slave X) | All channels associated with AS-i slave X | Bad_NonSpecific |
| Combination of any of the above, with the same scope | Largest scope of common diagnostics<br><br>**Attention**<br>Only the Siemens DP/AS-i-Link DSB has the diagnostic tab. | Bad_NonSpecific |

# 4.65  CHSTATUS[0..23][0..7]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Status |
| **Data Type** | ENUM |
| **Range** | Bad_NonSpecific |
| | Bad_ConfigError |
| | Bad_ConnError |
| | Bad_DevError |
| | Bad_SensorError |
| | Good_NonCascade |
| | GoodCasc_NonSpecific |
| | GoodCasc_InitReq |
| **Default** | Bad_NonSpecific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The status byte is displayed according to the Fieldbus Foundation variable status byte. |

The following table provides a brief description of the various channel statuses.

| Channel Status | Description |
|---|---|
| Bad_NonSpecific | The extended diagnostics report any status other than the good status. |
| | For example, there is a short circuit for channel 0, then the channel status is set to "Bad_NonSpecific". |
| Bad_ConfigError | The slave reports a configuration error in the diagnostic data. All channels in all PDCs have this state when active. |
| Bad_ConnError | There is a connection loss with the physical slave device. |
| Bad_DevError | The channel values are out of the extended range limits. |
| Good_NonCascade | This state indicates a healthy state of an input channel. |
| | For output PDCs, if any channel is not in a "Good_NonCascade" state, the output value does not change irrespective of the value provided by the PIOMB. For example, if the channel 0 is in bad state and channel 1 is in good state, then the value of channel 1 is updated with the value supplied by PIOMB. However, the value of channel 0 is not updated irrespective of the value sent by the PIOMB. |
| GoodCascade_NonSpecific | This state indicates a healthy state of an output channel. |

| Channel Status | Description |
| --- | --- |
| GoodCascade_InitializationRequest | Back initialization request sent from PDC to PIOMB. This state is an intermittent state. |
| | **! Attention**<br>This state changes to "Good_NonCascade" after it receives the data from the PIOMB. |

## 4.66 CHSTATUS[0..33][0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Status |
| **Data Type** | ENUM |
| **Range** | Bad_NonSpecific |
| | Bad_ConfigError |
| | Bad_ConnError |
| | Bad_HARTError |
| | Bad_SensorError |
| | Bad_SensorErrHighLim |
| | Bad_SensorErrLowLim |
| | Bad_CommErrUsableVal |
| | Bad_CommErrNoUsableVal |
| | Bad_OutOfServError |
| | Unc_NonSpecific |
| | Unc_SenserInaccurate |
| | Unc_RangeViolation |
| | Good_NonCascade |
| | GoodCasc_NonSpecific |
| | GoodCasc_InitAck |
| | GoodCasc_InitReq |
| | GoodCasc_LocalOverride |
| | GoodCasc_FSA |
| **Default** | Bad_NonSpecific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The status byte is displayed according to the Fieldbus Foundation variable status byte. |

The following table provides a brief description of the various channel statuses.

| Channel Status | Description |
|---|---|
| Bad_NonSpecific | The extended diagnostics report any status other than the good status. |
| | For example, there is a short circuit for channel 0, then the channel status is set to "Bad_NonSpecific". |
| | For HART data, this channel status indicates that the physical channel status is bad. |
| Bad_ConfigError | The slave reports a configuration error in the diagnostic data. All channels in all PDCs have this state when active. |

| Channel Status | Description |
|---|---|
| Bad_ConnError | There is a connection loss with the physical slave device. |
| Bad_DevError | The channel values are out of the extended range limits. |
| Bad_HARTError | For HART data, this channel status indicates a HART communication error.<br><br>The physical channel status would still be good when there is Bad_HARTError in the corresponding HART channel. However, when the physical channel status is bad, HART channel status will always be bad. HART status error is not treated as bad and the respective channel status of the HART channel is set to Good_NonCascade. |
| Good_NonCascade | This state indicates a healthy state of an input channel.<br><br>For output PDCs, if any channel is not in a "Good_NonCascade" state, the output value does not change irrespective of the value provided by the PIOMB. For example, if the channel 0 is in bad state and channel 1 is in good state, then the value of channel 1 is updated with the value supplied by PIOMB. However, the value of channel 0 is not updated irrespective of the value sent by the PIOMB. |
| GoodCascade_NonSpecific | This state indicates a healthy state of an output channel. |
| GoodCascade_InitializationAck | Back initialization acknowledged from PIOMB to PDC channel. |
| GoodCascade_InitializationRequest | Back initialization request sent from PDC to PIOMB. This state is an intermittent state.<br><br>**Attention**<br>This state changes to "Good_NonCascade" after it receives the data from the PIOMB. |
| GoodCascade_FaultStateActive | The DSB sets the channel to fail safe state and clears output. |

## 4.67 CHSTATUS[0..MAXPDCNUMBER][0..MAXNUMOFCHANELS]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Status |
| **Data Type** | ENUM |
| **Range** | Bad_NonSpecific |
| | Bad_ConfigError |
| | Bad_ConnError |
| | Bad_DevError |
| | Bad_SensorError |
| | Bad_SensorErrHighLim |
| | Bad_SensorErrLowLim |
| | Bad_CommErrUsableVal |
| | Bad_CommErrNoUsableVal |
| | Bad_OutOfServError |
| | Unc_NonSpecific |
| | Unc_SenserInaccurate |
| | Unc_RangeViolation |
| | Good_NonCascade |
| | GoodCasc_NonSpecific |
| | GoodCasc_InitAck |
| | GoodCasc_InitReq |
| | GoodCasc_LocalOverride |
| | GoodCasc_FSA |
| **Default** | Bad_NonSpecific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The status byte is displayed according to the Fieldbus Foundation variable status byte. |
| | Note: |
| | • MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |
| | • MAXNUMOFCHANELS = 32 for GENDSB and 16 for GENIODSB. |

The following table provides a brief description of the various channel statuses.

| Channel Status | Description |
|---|---|
| Bad_NonSpecific | The extended diagnostics report any status other than the good status. |
| | For example, there is a short circuit for channel 0, then the channel status is set to "Bad_NonSpecific". |

| Channel Status | Description |
| --- | --- |
| Bad_ConfigError | The slave reports a configuration error in the diagnostic data. All channels in all PDCs have this state when active. |
| Bad_ConnError | There is a connection loss with the physical slave device. |
| Bad_DevError | The channel values are out of the extended range limits. |
| Good_NonCascade | This state indicates a healthy state of an input channel.<br><br>For output PDCs, if any channel is not in a "Good_NonCascade" state, the output value does not change irrespective of the value provided by the PIOMB. For example, if the channel 0 is in bad state and channel 1 is in good state, then the value of channel 1 is updated with the value supplied by PIOMB. However, the value of channel 0 is not updated irrespective of the value sent by the PIOMB. |
| GoodCascade_NonSpecific | This state indicates a healthy state of an output channel. |
| GoodCascade_InitializationAck | Back initialization acknowledged from PIOMB to PDC channel. |
| GoodCascade_InitializationRequest | Back initialization request sent from PDC to PIOMB. This state is an intermittent state.<br><br>**Attention**<br>This state changes to "Good_NonCascade" after it receives the data from the PIOMB. |
| GoodCascade_FaultStateActive | The DSB sets the channel to fail safe state and clears output. |

## 4.68  COMPNVSCMD

| Specific to Block(s) | Protocol Block | |
|---|---|---|
| Description | Compact Non-Volatile Storage | |
| Data Type | BOOLEAN | |
| Range | Off (0) | The command is not active |
| | On (1) | The command is active |
| Default | Off | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | Engineer | |
| Residence | PGM | |
| Related Parameters | ENCMDS | |
| Remarks | When this parameter is on, it is possible to compact the non-volatile memory. | |

# 4.69  CONBRSUPTIME

| Specific to Block(s) | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB |
|---|---|
| Description | DPV0 Connection Break TimeOut (sec) |
| Data Type | FLOAT32 |
| Range | Minimum value - 0.0 |
| | Minimum value - 5.0 (in Experion R410.1 or earlier) and 30.0 (in Experion R410.2 and later) |
| Default | 0.0 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | CEE |
| Related Parameters | SLAVESTATE |
| Remarks | This parameter filters off network communication break for configurable amount of time in seconds (0 to 30 seconds). If the communication break condition persists after the configured amount of time, then the SLAVESTATE transitions to "Communication Error" state. <br><br> **❗ Attention** <br> This timeout is applicable only for DPV0 communication. |

# 4.70 CONBRKSUPTMNWDOWN

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB, DRIVEDSB, GENDSB, GENIODSB, Siemens ET 200M DSB, Turck Excom DSB |
| **Description** | Communication break time out applicable for network down condition |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | False |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | – |
| **Remarks** | When this check box is selected, the output channels initialize back from the user-defined values after the connection break timeout timer is exceeded. However, if you do not select this check box, the output channels initialize back from the user-defined values immediately during a network down condition. |

# 4.71 CONFIGFAULT

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Configuration Fault |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 2 of the Station Status byte 1, of the PROFIBUS diagnostic response message. |
| | The PROFIBUS DP slave sets this bit as soon as it identifies that the last received configuration data from the PROFIBUS DP master is different from what the PROFIBUS DP slave has determined. |

## 4.72 CONTROLMODE

| Specific to Block(s) | DRIVEDSB | |
|---|---|---|
| Description | Control Mode - Control mode of the PROFIdrive device | |
| Data Type | ENUM | |
| Range | 0 | SpeedControlMode |
| | 1 | PositioningMode |
| Default | SpeedControlMode | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | SR | |
| Related Parameters | - | |
| Remarks | You can change the drive control mode of the DSB after it is configured. However, changing the drive's control mode does not impact the drive's run-time. It only modifies meaning/description of the Control Word and Status Word bits. Each bit of the Control Word or the Status Word has its own meaning/description. When you change the control mode, the bit meaning/description changes accordingly. | |

**Control Word Bit Description**

The following table summarizes the description/meaning of the Control Word bits for the SpeedControlMode and PositioningMode.

| Bit | SpeedControlMode | PositioningMode |
|---|---|---|
| 0 | ON/OFF 1 | |
| 1 | Operating condition/OFF 2 | |
| 2 | Operating condition/OFF 3 | |
| 3 | Enable operation/inhibit operation | |
| 4 | Operating condition/inhibit ramp-function generator | Operating condition/cancel drive task |
| 5 | Enable ramp-function generator/stop ramp-function generator | Operating condition/ intermediate stop |
| 6 | Enable setpoint/inhibit setpoint | Activate drive task (edge) |
| 7 | Acknowledge/no meaning | |
| 8 | Inching 1 ON/inching 1 OFF | |
| 9 | Inching 2 ON/inching 2 OFF | |
| 10 | Control by automation unit/no control | |
| 11 | Device-related | Start referencing/terminate referencing |
| 12 – 15 | Device-related | |

**Status Word Bit Description**

The following table summarizes the description/meaning of the Status Word bits for the SpeedControlMode and PositioningMode.

| Bit | SpeedControlMode | PositioningMode |
|---|---|---|

| | |
|---|---|
| 0 | Ready for switch-on/not ready for switch-on |
| 1 | Ready for operation/not ready for operation |
| 2 | Operation enabled/operation inhibited |
| 3 | Fault/no fault |
| 4 | No OFF 2/OFF 2 |
| 5 | No OFF 3/OFF 3 |
| 6 | Switch-on inhibit/no switch-on inhibit |
| 7 | Alarm/no alarm |
| 8 | Setpoint/actual value within tolerance range | No contouring error/contouring error |
| | Setpoint/actual value not within tolerance range | |
| 9 | Control requested/operation on site | |
| 10 | f or n reached/f or n underranged | Setpoint position reached/ outside setpoint position |
| 11 | Device-related | Reference point set/no reference point set |
| 12 | Device-related | Setpoint acknowledgment (edge) |
| 13 | Device-related | Drive stationary/drive moving |
| 14 – 15 | Device-related | |

# 4.73  CPULOAD

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | CPU Load (in percent) |
| **Data Type** | FLOAT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | Displays the CPU load in 0.01% units (10000 = 100%) |

# 5 Dxxx Parameters

# 5.1 DATAMODULENBR[0..15]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Data Module Number |
| **Data Type** | UINT16 |
| **Range** | 0-255 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the module number of the I/O module in the I/O rack. This must match the slot number of the PDC in the Field Network Configuration tab. This number is visible in the Monitoring view after the DSB block is loaded. |

# 5.2  DATAMODULENBR[0..23]

| Specific to Block(s) | CEAGDSB |
|---|---|
| Description | Data Module Number |
| Data Type | UINT16 |
| Range | 0-255 |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | SR |
| Related Parameters | - |
| Remarks | This parameter represents the module number of the I/O module in the I/O rack. This information is used when processing the module status delivered in extended diagnostic data from the CEAG slave device. |

# 5.3 DATAMODULENBR[0..33]

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| **Description** | Data Module Number |
| **Data Type** | UINT16 |
| **Range** | 0-16 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the module number of the I/O module in the I/O rack. This must match the slot number of the PDC in the Field Network Configuration tab.<br><br>This number is visible in the Monitoring view after the DSB block is loaded. |

# 5.4  DATAMODULENBR[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Data Module Number |
| **Data Type** | UINT16 |
| **Range** | 0-255 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the module number of the I/O module in the I/O rack. This must match the slot number of the PDC in the Field Network Configuration tab.<br><br>This number is visible in the Monitoring view after the DSB block is loaded. |

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Data Module Number |
| **Data Type** | UINT16 |
| **Range** | 0-16 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents the module number of the I/O module in the I/O rack. This must match the slot number of the PDC in the Field Network Configuration tab.<br><br>This number is visible in the Monitoring view after the DSB block is loaded. |

# 5.5  DESC

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB, PBHIOMB, PBHCHANNEL |
| **Description** | Description - User-defined description of the DSB block instance |
| **Data Type** | STRING |
| **Range** | 132 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | - |

# 5.6 DEVICETYPE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Device Type - User-defined device type such as I/O or motor controller |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | - |

# 5.7 DIRPROCDATAINDEX

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Directory Process Data Index |
| **Data Type** | UINT8 |
| **Range** | 0 – 255 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Residence** | PGM |
| **Access Lock** | AppDevOnly |
| **Related Parameters** | |
| **Remarks** | See the GSD file for the below string<br>SubSys_Module_Dir_Index(1) = xxx |

## 5.8  DPV1BANDWIDTH

| Specific to Block(s) | PBLINK | |
|---|---|---|
| Description | DPV1 Bandwidth (%) | |
| Data Type | Enumeration | |
| | 5 | 5% |
| | 10 | 10% |
| | 15 | 15% |
| | 20 | 20% |
| Range | 25 | 25% |
| Default | 10% | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter is used for configuring the percentage of Profibus DP bandwidth that you want to allocate for DPV1 request and response handling. This parameter allows you to configure the percentage of Profibus DPV1 bandwidth per link level. | |

# 5.9 DPV1BITOFFSET[0..15][0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Bit Offset |
| **Data Type** | UINT8 |
| **Range** | 0 – 7 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | "DPV1BYTEOFFSET[0..15][0..15]" on page 129 |
| **Remarks** | This parameter is enabled only if the DPV1DATATYPE parameter is selected as "Boolean." This parameter also indicates the bit location in the DPV1 response byte, which gives the actual value of the data record.<br><br>For GENIODSB, the first dimension array size is from 0 to 63. |

# 5.10  DPV1BYTEOFFSET[0..15][0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Byte Offset |
| **Data Type** | UINT8 |
| **Range** | 0 – 240 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | "DPV1BITOFFSET[0..15][0..15]" on page 128 |
| **Remarks** | This parameter indicates that the byte location in the DPV1 response, which provides the actual value of the data record. The number of bytes to be used for parsing depends on the data type selected. For GENIODSB, the first dimension array size is from 0 to 63. |

## 5.11 DPV1BYTESPERSEC

| | |
|---|---|
| **Specific to Block(s)** | PBLINK |
| **Description** | DPV1 Bytes per second |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter provides the DPV1 traffic in bytes per second per link level. The value displayed in this parameter is a moving average statistic of DPV1 traffic. |

# 5.12  DPV1CONNREF[2..125]

| | |
|---|---|
| **Specific to Block(s)** | PBLINK |
| **Description** | DPV1 connection reference ID |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is used for displaying the DPV1 connection ID for a slave. A valid connection ID is displayed only when the DPV1 connection status to a slave is set as "Connected." This is an arrayed parameter and the array is the slave address. |

## 5.13  DPV1CONNSTS[2..125]

| Specific to Block(s) | PBLINK | |
|---|---|---|
| Description | DPV1 connection status to a slave | |
| Data Type | Enumeration | |
| | 1 | InitSent |
| | 2 | Connected |
| | 3 | AbortSent |
| Range | 4 | NotConnected |
| Default | NotConnected | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter provides the DPV1 connection status of the PROFIBUS slave devices.<br><br>The DPV1CONNSTS[2..125] is an indexed parameter and the index value must be the slave address.<br><br>The status for each state follows:<br><br>• InitSent – Connection attempt in progress<br>• Connected – Successful DPV1 Class 2 connection to the slave<br>• AbortSent – Connection disconnect in progress<br>• NotConnected – No DPV1 Class 2 connection to the slave | |

# 5.14  DPV1DATATYPE[0..15][0..15]

| Specific to Block(s) | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
|---|---|---|
| Description | Datatype | |
| Data Type | Enumeration | |
| | 0 | Not configured |
| | 1 | Boolean |
| | 2 | UINT8 |
| | 3 | UINT16 |
| | 4 | UINT32 |
| | 5 | INT8 |
| | 6 | INT16 |
| | 7 | INT32 |
| Range | 8 | FLOAT32 |
| Default | Not configured | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter indicates the data type of the configured data record. Based on this data type, the DPV1 response is parsed and converted to a proper value. For GENIODSB, the first dimension array size is from 0 to 63. | |

# 5.15  DPV1INDEX[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Index |
| **Data Type** | UINT8 |
| **Range** | 0 – 255 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter must be configured to frame a DPV1 request packet. However, this parameter value varies from device to device. The value is available in the data sheet or object mapping sheet of the devices provided by vendors.<br><br>For GENIODSB, the array size is from 0 to 63. |

# 5.16  DPV1LASTUPDATETIME[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Last Updated Time |
| **Data Type** | TIME |
| **Range** | 00:00:00 to 23:59:59 |
| **Default** | 00:00:00 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| | This parameter is used for displaying the time at which the DPV1 requests were last updated.<br><br>**Attention**<br>**!** Time is not updated for both cases of invalid response or no response. |
| **Remarks** | For GENIODSB, the array size is from 0 to 63. |

# 5.17  DPV1LENGTH[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Length |
| **Data Type** | UINT8 |
| **Range** | 0 – 240 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter indicates the number of bytes that must be read or written in the DPV1 request.<br><br>For GENIODSB, the array size is from 0 to 63. |

# 5.18 DPV1NUMHIGHPRIREQ

| Specific to Block(s) | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
|---|---|---|
| Description | Number Of High Priority Request | |
| Data Type | Enumeration | |
| | 5 | 5 |
| | 10 | 10 |
| | 25 | 25 |
| | 50 | 50 |
| Range | 100 | 100 |
| Default | 5 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter indicates the number of times a high priority request is serviced before servicing a low priority request. | |

# 5.19 DPV1NUMOFDATARECORDS[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Number Of Data Records |
| **Data Type** | UINT8 |
| **Range** | 0 – 16 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| | This parameter indicates the number of valid data records that needs to be parsed from the DPV1 response.<br><br>**Note**<br>The number of rows in the **DPV1 Data Records** table depends on this parameter. If there is no data records that needs to be parsed from the DPV1 response, then this parameter needs to be set to zero. |
| **Remarks** | For GENIODSB, the array size is from 0 to 63. |

# 5.20 DPV1NUMPOLL

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Number of Requests |
| **Data Type** | UINT8 |
| **Range** | 0 – 15<br>For GENIODSB: 0 — 64 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter indicates the number of DPV1 data requests that needs to be configured for a DSB.<br><br>**Note**<br>The number of rows in the **DPV1 Requests** table depends on this parameter.<br><br>A maximum number of 64 requests can be configured for GENIODSB. |

## 5.21 DPV1ONDEMANDSCAN

| | | |
|---|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
| **Description** | DPV1 on-demand scan | |
| **Data Type** | Boolean | |
| **Range** | Disabled | DPV1 read requests scanning does not occur. |
| | Enabled | One complete scanning occurs for all the DPV1 requests and then scanning stops. |
| **Default** | Disabled | |
| **Config Load** | No | |
| **Active Loadable** | Yes | |
| **Access Lock** | Engineer | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | When this parameter is selected, all the DPV1 read requests having the scan priority as "Low," High," and "On Demand" are scanned one time. | |

# 5.22  DPV1PARAMNAME[0..15][0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Parameter Name |
| **Data Type** | String |
| **Range** | 32 Characters |
| **Default** | ParamValue1 to ParamValue16 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is used for indicating the name of the data records. <br><br> For GENIODSB, the first dimension array size is from 0 to 63. |

# 5.23  DPV1PARAMSTATUS[0..15]

| Specific to Block(s) | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
|---|---|---|
| **Description** | Parameter Status | |
| **Data Type** | Enumeration | |
| | 0 | Good |
| | 1 | Bad_Disconnected |
| | 2 | Bad_Reserved |
| | 3 | Bad_User_Specific |
| | 4 | Initial |
| | 160 | Bad_Read_Error |
| | 161 | Bad_Write_Error |
| | 162 | Bad_Module_Failure |
| | 176 | Bad_Invalid_Index |
| | 177 | Bad_WriteLength_Error |
| | 178 | Bad_Invalid_Slot |
| | 179 | Bad_Type_Conflict |
| | 180 | Bad_Invalid_Area |
| | 181 | Bad_State_Conflict |
| | 182 | Bad_Access_Denied |
| | 183 | Bad_Invalid_Range |
| | 184 | Bad_Invalid_Parameter |
| | 185 | Bad_Invalid_Type |
| | 192 | Bad_Read_Conflict |
| | 193 | Bad_Write_Conflict |
| | 194 | Bad_Resource_Busy |
| **Range** | 195 | Bad_Resource_Unavailable |
| **Default** | Bad_Disconnected | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |

| | |
|---|---|
| | This parameter displays the status of each DPV1 request in PGM. |
| | **Note** |
| | All the requests status sets to "Bad_Disconnected" after 20 seconds from the time of disconnection. |
| | The DPV1 read records starts the polling if the DPV1SCANOPT parameter is configured as "Cyclic."If the polling fails, then this parameter updated the status as mentioned in the Range. |
| **Remarks** | For GENIODSB, the first dimension array size is from 0 to 63. |

## 5.24  DPV1PARAMVALUE[0..15][0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Value |
| **Data Type** | FLOAT64 |
| **Range** | Any Value |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter used for writing or monitoring the DPV1 parameter value. This parameter value is always displayed as "FLOAT64" irrespective of data type selected.<br><br>This parameter indicates the values parsed from the DPV1 response.<br><br>**Note**<br>This parameter is set as "Read-Only" for DPV1_Read type requests and "Editable" for DPV1_Write type requests.<br><br>For GENIODSB, the first dimension array size is from 0 to 63. |

# 5.25 DPV1PRIORITY[0..15]

| | | |
|---|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
| **Description** | Scan Priority | |
| **Data Type** | Enumeration | |
| | 0 | Low |
| | 1 | High |
| | 2 | On Demand |
| **Range** | 3 | No Poll |
| **Default** | No Poll | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | AppDevOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| | This parameter indicates the scan priority of the DPV1 records. <br><br> • When the DPV1PRIORITY parameter is set as "High," DPV1 requests are polled for every cycle. <br><br> • When the DPV1PRIORITY parameter is set as "Low," the DPV1 requests are polled based on the DPV1NUMHIGHPRIOREQ parameter. For example, if the DPV1NUMHIGHPRIOREQ parameter is set as 5, then the "Low" requests are polled once for every 5 cycles. <br><br> • When the DPV1PRIORITY parameter is set as "On Demand," the DPV1 requests are polled only when the DPV1ONDEMANDSCAN parameter is selected. <br><br> • When the DPV1PRIORITY parameter is set as "No Poll," the corresponding DPV1 request is not polled. <br><br> **Note** <br><br> This parameter is NOT applicable for DPV1_Write type of requests since the write requests are not periodic and always takes high priority when compared to Read requests. | |
| **Remarks** | For GENIODSB, the array size is from 0 to 63. | |

## 5.26 DPV1REQSPERSEC

| | |
|---|---|
| **Specific to Block(s)** | PBLINK |
| **Description** | DPV1 Requests per second |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter provides the DPV1 traffic in requests per second (HoP and DPV1) per link level. The value displayed in this parameter is a moving average statistic of DPV1 traffic. |

# 5.27 DPV1REQTYPE[0..15]

| Specific to Block(s) | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 | |
|---|---|---|
| Description | DPV1 Type | |
| Data Type | Enumeration | |
| | 1 | DPV1 Read |
| | 2 | DPV1 Write |
| Default | DPV1 Read | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| | DPV1 read type of records are polled periodically, whereas DPV1 write parameters are initiated only when the DPV1PARAMVALUE parameter of the corresponding requests are changed.<br><br>**Note**<br>Write requests has two stages. First, it sends a read request to the device and then update the required bytes with the written value and send the write request. | |
| Remarks | For GENIODSB, the array size is from 0 to 63. | |

## 5.28  DPV1SLOTNUM[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Slot Number |
| **Data Type** | UINT8 |
| **Range** | 0 - 63 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter must be configured to frame a DPV1 request packet. The value of this parameter varies from device to device. The value is available in the data sheet or object mapping sheet of the devices provided by vendors.<br><br>For GENIODSB, the array size is from 0 to 63. |

# 5.29  DSBBYTEORDER

| Specific to Block(s) | GENDSB, GENIODSB | |
|---|---|---|
| Description | Byte order - User-defined byte order of the raw data for analog data | |
| Data Type | ENUM | |
| Range | 32 characters | |
| | 0 | Not configured |
| | 1 | Little-endian format |
| | 2 | Big-endian format |
| Default | 0 - Not Configured | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | You must set this value to a value other than the default value, before loading. This parameter value cannot be changed after the DSB block is loaded to the system.<br><br>If the DSB is loaded with the default value, the load will not succeed. | |

# 5.30 DSBCONNLOSTCOUNT

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, CEAGDSB, DRIVEDSB |
| **Description** | Connection Lost Counter |
| **Data Type** | UINT32 |
| **Range** | N/A |
| **Default** | N/A |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter starts counting when the communication between the PROFIBUS and the slave is lost. |

# 5.31 DSBEVENTLIST[0..19]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, Siemens DP/AS-i Link DSB, CEAGDSB |
| **Description** | DSB Events |
| **Data Type** | ENUM |
| **Range** | 0 | No Event |
| | 1 | Bind Process Data References |
| | 2 | Process Data Binding Response |
| | 3 | Raw Input Data To DSB |
| | 4 | Open PDC Delivery |
| | 5 | Close PDC Delivery |
| | 6 | PDA Process Data Request |
| | 7 | PDC Channel Usage Status Request |
| | 8 | PDC Store Process Data |
| | 9 | DSB Cyclic Execute |
| | 10 | Not Defined |
| | 11 | Not Defined |
| | 12 | Not Defined |
| | 13 | Not Defined |
| | 14 | Not Defined |
| | 15 | Not Defined |
| | 16 | Not Defined |
| | 17 | Not Defined |
| | 18 | Not Defined |
| | 19 | Not Defined |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameters provides a list of events on the DSB block. |

# 5.32  DSBEXTDIAGNDATA

| Specific to Block(s) | GENDSBDP, GENIODSBSP, GENPADSB, GENPAGWDSB |
|---|---|
| Description | Extended diagnostic data |
| Data Type | Array of bytes |
| Range | N/A |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View only |
| Residence | NO LOAD |
| Related Parameters | - |
| Remarks | This parameter displays the extended diagnostic data of the slave. |

# 6 Exxx Parameters

**Related topics**

# 6.1  ENABLEPADIAG

| Specific to Block(s) | GENPADSB, GENPAGWDSB | |
|---|---|---|
| Description | • Enable PA Diagnostics - For GENPADSB<br>• Enable GW Diagnostics - For GENPAGWDSB | |
| Data Type | BOOLEAN | |
| Range | Disabled | PA Profile/IM-157 based alarming is disabled |
| | Enabled | PA Profile/IM-157 based alarming is enabled |
| Default | Disabled | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | CEE | |
| Related Parameters | NA | |
| Remarks | This parameter is used to enable or disable PA or IM-157 based alarming for GENPADSB and GENPAGWDSB respectively. | |

## 6.2 ENABLERIOPROF

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Enable RIO profile-based alarming |
| **Data Type** | BOOLEAN |
| **Range** | Disabled - RIO profile-based alarming disabled |
| | Enabled - RIO profile-based alarming enabled |
| **Default** | Disabled |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | NA |
| **Remarks** | This parameter is used to enable or disable RIO profile-based alarming for GENDSB and GENIODSB. |

## 6.3 ENABLESHUTDOWN

| | |
|---|---|
| **Specific to Block(s)** | Primary PGM |
| **Description** | Enable Shutdown command |
| **Data Type** | BOOLEAN |
| **Range** | ON (TRUE) |
| | OFF (FALSE) |
| **Default** | OFF (FALSE) |
| **Config Load** | NOLOAD |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | BCMCOMMAND |
| **Remarks** | When enabled, the PGM module may be shutdown with the configured slave devices that are on control. Once set to ON (TRUE), this parameter will time-out after 30 seconds and is automatically reset to OFF (FALSE) if Shutdown is not commanded. |

# 6.4 ENCMDS

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Enable NVS Commands |
| **Data Type** | BOOLEAN |
| **Range** | OFF |
| | ON |
| **Default** | OFF |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The NVS commands can only be executed if ENCMDS is ON. |

# 6.5  ERRORCOUNT

| Specific to Block(s) | Protocol Block |
| --- | --- |
| Description | Error count |
| Data Type | UINT32 |
| Range | N/A |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | N/A |
| Remarks | This field holds the total number of errors detected since power-up, respectively after reset. The protocol stack counts all errors irrespective of whether they are network related or caused internally.<br><br>After power cycling, reset, or channel initialization, this counter is reset. |

# 6.6 ERRREMADDR

| Specific to Block(s) | Protocol Block |
|---|---|
| **Description** | Field Network Number |
| **Data Type** | UINT8 |
| **Range** | 0-255 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | N/A |
| **Remarks** | This parameter represents the source of the error. The source where the error is detected either can be at the PROFIBUS master itself or reported by a network device.<br><br>When the error is at the PROFIBUS master, then the variable contains the value 255.<br><br>When the error is reported by a network device, then the parameter contains the station address directly. The range is 0 through 125. |

## 6.7  EXTENDDIAGOVERFLOW

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Extended Diagnostic Overflow |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 7 of the Station Status byte 3, of the PROFIBUS diagnostic response message. |
| | If this bit is set, there exists more diagnostic information than specified in Ext_Diag_Data. For example, the PROFIBUS DP slave sets this bit if there are more channel diagnostics than the PROFIBUS DP slave can enter in its send buffer. The PROFIBUS DP master also sets this bit if the PROFIBUS DP slave sends more diagnostic information than the master can enter in its diagnostic buffer. |

# 6.8  EXTENDEDDIAG

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Extended Diagnostics |
| **Data Type** | Boolean |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 3 of the Station Status byte 1, of the PROFIBUS diagnostic response message.<br><br>The PROFIBUS DP slave sets this bit.<br><br>If this bit is set to 1, it indicates that a diagnostic entry exists in the slave-specific diagnostic area (Ext_Diag_Data).<br><br>If this bit is set to 0, a status message can exist in the slave-specific diagnostic area (Ext_Diag_Data). |

# 6.9  EXTERNALERR

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | External error |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates that an error has occurred external to the DP/AS-i module (for example, slave failed or APF). |

# 7 Fxxx Parameters

**Related topics**

# 7.1  FIELDNETWORKNUMBER

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Field Network Number - Physical network number (PBLINK1 or PBLINK2). |
| **Data Type** | ENUM |

| **Range** | 0 | Not configured |
|---|---|---|
| | 1 | Field Network 1 |
| | 2 | Field Network 2 |

| | |
|---|---|
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the field network number to which the DSB is assigned. The PBLink1 represents field network 1 and the PBLink2 represents field network 2. |

## 7.2  FIELDNETWORKTYPE

| Specific to Block(s) | Protocol Block |
|---|---|
| Description | Field Network Type |
| Data Type | ENUM |
| Range | PROFIBUS DP |
| Default | PROFIBUS DP |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | - |
| Remarks | - |

# 7.3  FINDHDEVICES

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Find HART Devices |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: Finding HART devices enabled |
| | FALSE: Finding HART devices disabled |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | "AUTODISCOVERYENABLED" on page 27 |
| **Remarks** | This parameter is enabled only when the AUTODISCOVERYENABLED parameter is set to TRUE. |
| | This parameter enables you to initiate the auto-discovery of the HART devices. |

# 7.4 FREEMEM

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Currently Free Memory (b) |
| **Data Type** | UINT32 |
| **Range** | 0 to 10 MB |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the amount of currently free memory in PGM user memory.<br><br>This parameter publishes total amount of unused memory in the user memory pool. The free memory decreases as blocks are loaded and increases as blocks are unloaded. The difference between TOTALMEM and FREEMEM is equal to USEDMEM. |

# 7.5  FREEMEMINK

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Currently Free Memory (kb) |
| **Data Type** | UINT32 |
| **Range** | 0 to 10 MB |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the amount of currently free memory in PGM user memory.<br><br>This parameter publishes total amount of unused memory in the user memory pool. The free memory decreases as blocks are loaded and increases as blocks are unloaded. The difference between TOTALMEMINK and FREEMEMINK is equal to USEDMEMINK. |

# 7.6 FREEZEMODE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Freeze Mode |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 4 of the Station Status byte 2, of the PROFIBUS diagnostic response message.<br><br>The PROFIBUS DP slave sets this bit as soon as the respective slave receives the Freeze control command. |

# 7.7 FUNNOTSUPPORTED

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Function Not Supported |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 4 of the Station Status byte 1, of the PROFIBUS diagnostic response message. This bit is set by the PROFIBUS DP slave immediately after a function is requested, which is not supported from this PROFIBUS DP slave. |

# 8 Gxxx Parameters

**Related topics**

# 8.1  GLOBALSTATE

| Specific to Block(s) | Protocol Block |
|---|---|
| **Description** | Global State Field |
| **Data Type** | BITSTRING |
| **Range** | 0-255 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | N/A |

| Remarks | This bit field serves as a collective display of the global notifications. The notified errors can occur either at the PROFIBUS master itself or at the slaves. The following are the various error conditions and causes for the error conditions. | |
|---|---|---|
| | CONTROL-ERROR (b0) | Incorrect parameterization. |
| | AUTO-CLEAR-ERROR (b1) | The PROFIBUS master stops communication to all the slaves and reaches the auto-clear state. |
| | NON-EXCHANGE-ERROR (b2) | At least one slave has not reached the data exchange state and no process data are exchanged with it. |
| | FATAL-ERROR (b3) | No bus communication is possible any more because of a severe bus error. |
| | EVENT-ERROR (b4) | - |
| | HOST-NOT-READY-NOTIFICATION (b5) | The host program has set its state to operate or not. If the bit is set, the host program is not ready for communication. |
| | TIMEOUT-ERROR (b6) | The PROFIBUS master has detected an overstepped timeout supervision time because of the rejected PROFIBUS telegrams. This is an indication of bus short circuits while the master interrupts the communication. The number of detected timeouts is fixed in the Time_out_cnt variable. The bit will be set when the first timeout is detected and will not be deleted. |
| | RESERVED (b7) | - |

## 8.2  GWSWITCHCMD

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Gateway Switch Over Command |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Operator |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | This command is used to switchover redundant gateway modules of a Turck device. The first 3 bits of second byte in the command word is set based on the switchover command. |

# 8.3  GWSWITCHOVEREVENT

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Gateway switchover has occurred |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | When the gateway redundancy mode is set to Mode1, this diagnostic information is provided by the gateway. |

# 9  Hxxx Parameters

**Related topics**

# 9.1  HARDWAREERR

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | Hardware error |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates a hardware problem that has occurred on the DP/AS-i Link module (for example, internal watchdog error). |

## 9.2 HARTVERSION

| | | |
|---|---|---|
| **Specific to Block(s)** | PBHCHANNEL block | |
| **Description** | Supported HART Version | |
| **Data Type** | Enumeration | |
| **Range** | 0 | Unknown |
| | 5 | HART5 |
| | 6 | HART6 |
| | 7 | HART7 |
| | 8 | HART8 |
| **Default** | 0 | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | The attached HART device supports HART 5 to HART 8 or an unknown command set. | |

# 9.3 HASHPARLIST[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Hash Code Parameters List |
| **Data Type** | String |
| **Range** | 32 characters |
| **Default** | FIELDNETWORKNBR, SLAVEADDRESS, PDCTYPE[0..15], PDCDESCRIPTION[0..15], NETTAGNAME[0..15], NETTAGID[0..15], MAXCHANNELNBR[0..15], CHNUMBER[0..15] [0..31], CHDESCRIPTION[0..15] [0..31], CHANNELTYPE[0..15] [0..31], CHANNELDATATYPE[0..15] [0..31], CHDATAOFFSET[0..15] [0..31], CHBITOFFSET[0..15] [0..31], CHLOWRANGE[0..15] [0..31], CHHIGHRANGE[0..15] [0..31] |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | ERDB |
| **Related Parameters** | - |
| **Remarks** | This parameter provides the list of parameter names that are used in hash code calculation. |

# 9.4  HASHPARLIST[1..15]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB |
| **Description** | Hash Code Parameters List |
| **Data Type** | String |
| **Range** | 32 characters |
| **Default** | FIELDNETWORKNBR, SLAVEADDRESS, PDCTYPE[0..15], PDCDESCRIPTION[0..15], NETTAGNAME[0..15], NETTAGID[0..15], MAXCHANNELNBR[0..15], CHNUMBER[0..15] [0..31], CHDESCRIPTION[0..15] [0..31], CHANNELTYPE[0..15] [0..31], CHANNELDATATYPE[0..15] [0..31], CHDATAOFFSET[0..15] [0..31], CHBITOFFSET[0..15] [0..31], CHLOWRANGE[0..15] [0..31], CHHIGHRANGE[0..15] [0..31] |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | ERDB |
| **Related Parameters** | - |
| **Remarks** | This parameter provides the list of parameter names that are used in hash code calculation. |

## 9.5  HCFGDEVAI

| Specific to Block(s) | PBHCHANNEL block | | |
|---|---|---|---|
| Description | Configured HART Device. | | |
| Data Type | Enumeration | | |
| Range | 251 | Generic HART Device | HART communication and functions are enabled, but specific command 48 details are missing. |
| | 5888 | Honeywell STT25H R01 DD03 | AI only |
| | 5889 | Honeywell ST3000 R01 DD03 | AI only |
| | 5890 | Honeywell ST3000 R02 DD02 | AI only |
| | | Others as added with HART DD DD Manager | |
| Default | Generic HART Device | | |
| Config Load | Yes | | |
| Active Loadable | Yes | | |
| Access Lock | Application Developer | | |
| Residence | SR | | |
| Related Parameters | "HDEVMISM" on page 199, "HDVMFGCD" on page 208, "HDVTYPCD" on page 210, "HDVREVCD" on page 209 | | |
| Remarks | • HCFGDEVAI is used to interpret the device's command 48 data.<br>• HCFGDEV provides an enumeration that links to a list of HART devices whose DD files have been added or included with Experion. Each unique device in the list is represented by a unique combination of manufacturer, Device Type and Device Revision.<br>• Only input devices are listed. | | |

## 9.6  HCFGDEVAO

| Specific to Block(s) | PBHCHANNEL block | | |
|---|---|---|---|
| **Description** | Configured HART Device. | | |
| **Data Type** | Enumeration | | |
| **Range** | 251 | Generic HART Device | HART communication and functions are enabled, but specific command 48 details are missing. |
| | 12288 | Flowserve Logix 12xx R01 DD04 | AO only |
| | | Others as added with HART DD DD Manager | |
| **Default** | Generic HART Device | | |
| **Config Load** | Yes | | |
| **Active Loadable** | Yes | | |
| **Access Lock** | Application Developer | | |
| **Residence** | SR | | |
| **Related Parameters** | "HDEVMISM" on page 199, "HDVMFGCD" on page 208, "HDVTYPCD" on page 210, "HDVREVCD" on page 209 | | |
| **Remarks** | • HCFGDEV provides an enumeration that links to a list of HART devices whose DD files have been added or included with Experion. Each unique device in the list is represented by a unique combination of manufacturer, Device Type and Device Revision.<br>• Only output devices are listed. | | |

# 9.7  HCMD48BT[1..200]

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | HART Additional Device Status as retrieved by HART command 48. |
| Data Type | Boolean, An array of 200 independent bit flags. |
| Range | OFF<br>ON |
| Default | OFF (If no bits are set, then NONE is displayed.) |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | When bit value is 1, the indicated condition exists and is displayed with an icon and associated text description for that particular bit.<br>When bit value is 0, the indicated condition does not exist.<br>Notifications are raised on transitions from 0 to 1, when configured by user. |

## 9.8  HCMD48NOTIFY

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| **Description** | Notification Option | |
| **Data Type** | Enumeration | |
| **Range** | Alarm (03) | Record in the alarm log. |
| | Event (01) | Record in the event summary. |
| | ViewOnly (00) | Do not record, but provide status indications in Control Builder. |
| **Default** | Event (01) | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | The "command 48" notification options are provided by the configured HART device (HCFGDEV). This parameter indicates the notification option that you have configured. | |

# 9.9  HCMD48STRNGS

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Command 48 String |
| **Data Type** | String |
| **Range** | 136 characters |
| **Default** | N/A, Device dependent |
| **Config Load** | YES |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | SR |
| **Related Parameters** | |
| Remarks | The "command 48 strings" are options are provided by the configured HART device (HCFGDEV) and cannot be changed from Control Builder. The "command 48 strings" are embedded within the DD file and while these strings are added to the database with DD Manager, the user is not permitted to change them so that the strings remain as they were defined by the manufacturer in the corresponding DD file. |

# 9.10  HCMDFAIL

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | Failed Command. | |
| Data Type | Enumeration | |
| Range | **User Visible Text** | **Values** |
| | None | 122 through 126 |
| | Extended Command | 31 |
| | Command xxx | Where xxx is always 3 digits and is any value between 0 and 255, except 31, and 122 through 126. |
| Default | None | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | "HCMDRESP" on page 187 | |
| Remarks | • HCMDFAIL provides the HART command number that generates an error response code from the HART device.<br>• The error response code is available in the HCMDRESP parameter. | |

## 9.11  HCMDRESP

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Failed Response Code |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | Not Applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HCMDFAIL" on page 186<br>"RESETHCOMERR" on page 389 |
| **Remarks** | This parameter provides the response code from the failed command listed in the HCMDFAIL parameter.<br><br>The RESETHCOMERR parameter resets the HCMDRESP to its default value. |

# 9.12  HCOMFAIL

| Specific to Block | PBHCHANNEL block | | |
|---|---|---|---|
| Description | Last Communication Failure. | | |
| Data Type | Enumeration | | |
| Range | 0 | None | No communication failures detected. |
| | 1 | No Response | No response received from the device (Possible causes: Faulty wiring, non-HART device on the wire, noise on the wires). |
| | 2 | IOM Detected Errors | The IOM detects communication errors. (Possible causes: Faulty wiring wire, noise on the wires, problems with the device). |
| | 3 | Device Detected Errors | The connected HART device detects communication errors. (Possible causes: Faulty wiring or wire, noise on the wires, problems with the IOM). |
| | 4 | Device and IOM Detected Errors | Both devices detect errors. (Possible causes: Faulty wiring or wire, noise on the wires, problems with the device). |
| Default | None (0) | | |
| Config Load | No | | |
| Active Loadable | No | | |
| Access Lock | ViewOnly | | |
| Residence | PGM | | |
| Related Parameters | "HCOMSTS" on page 189 | | |
| Remarks | This parameter indicates the last communication failure based on the status of the HCOMSTS parameter.<br><br>Whenever HCOMSTS returns to its default state, the previous value for HCOMSTS is written to HCOMFAIL. | | |

# 9.13  HCOMSTS

| Specific to Block | PBHCHANNEL block | | |
|---|---|---|---|
| Description | HART Communication Status. Displays the current communication status with the HART device. The value of HCOMSTS changes when a change in status occurs. | | |
| Data Type | Enumeration | | |
| Range | 0 | OK | Status good. |
| | 1 | No Response | No response received from the device. (Possible causes: Faulty wiring, non-HART device on the wire, noise on the wires). |
| | 2 | IOM Detected Errors | The IOM detects communication errors. (Possible causes: Faulty wiring or wire, noise on the wires, problems with the device). |
| | 3 | Device Detected Errors | The connected HART device detects communication errors. (Possible causes: faulty wiring or wire, noise on the wires, problems with the IOM). |
| | 4 | Device and IOM Detected Errors | Both devices detect errors. (Possible causes: Faulty wiring or wire, noise on the wires, problems with the device). |
| Default | OK (0) | | |
| Config Load | No | | |
| Active Loadable | No | | |
| Access Lock | ViewOnly | | |
| Residence | PGM | | |
| Related Parameters | "HCOMFAIL" on page 188 | | |
| Remarks | Whenever HCOMSTS returns to its default state, the previous value of HCOMSTS is written to HCOMFAIL. | | |

# 9.14  HDAY

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Day |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 1-31 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HMONTH" on page 226<br>"HYEAR" on page 261 |
| **Remarks** | None. |

# 9.15  HDDREVCD

Placeholder

## 9.16  HDESC

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | Descriptor |
| **Data Type** | String |
| **Range** | 16-character string |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is used for displaying the device description. |

# 9.17 HDEVID

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | ID (Serial Number) |
| **Data Type** | 32-Bit Unsigned Integer |
| **Range** | 0 to 16,777,215 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly. |
| **Residence** | PGM |
| **Related Parameters** | "ACCEPTDEV" on page 20<br><br>"HDEVIDCD" on page 195 |
| **Remarks** | HART Device ID (Identification) as defined in Command 0 of HCF_Spec-183 Section 6.1. It is unique for every device manufactured with a given "HDEVMFG" on page 197 and "HDEVTYPE" on page 204. |

# 9.18  HDEVID[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | ID (Serial Number) |
| **Data Type** | 32-Bit Unsigned Integer |
| **Range** | 0 to 16,777,215 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "ACCEPTDEV" on page 20 |
| **Remarks** | HART Device ID (Identification) as defined in Command 0 of HCF_Spec-183 Section 6.1. It is unique for every device manufactured with a given "HDEVMFG[0..15]" on page 198 and "HDEVTYPE[0..15]" on page 205. |

# 9.19  HDEVIDCD

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | Id (Serial Number) - as defined in Command 0 of HCF_Spec-183 Section 6.1 |
| Data Type | 32-Bit Unsigned Integer |
| Range | 0 to 16,777,215 |
| Default | 0 |
| Config Load | YES |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | PGM |
| Related Parameters | "ACCEPTDEV" on page 20 |
| | "HDEVID[0..15]" on page 194 |
| Remarks | HDEVIDCD is compared with HDEVID to determine if HDEVIDFL should be set. |

## 9.20  HDEVIDFL

| | | |
|---|---|---|
| **Specific to Block** | PBHCHANNEL block | |
| **Description** | Device Changed flag. | |
| **Data Type** | Boolean | |
| **Range** | OFF | The HART device previously connected to a HART channel remains the same. |
| | ON | The HART device previously connected to a HART channel has been replaced with different HART device. |
| **Default** | OFF | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | PGM | |
| **Related Parameters** | "HDEVST"<br>"ACCEPTDEV" on page 20<br>"HDEVIDCD" on page 195<br>"HDEVID" on page 193 | |
| **Remarks** | None. | |

# 9.21  HDEVMFG

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Manufacturer ID-HART Manufacturer as retrieved in HART command 0 and as defined in HCF_Spec-183 Section 5.8 Table 8 (Revision 13) |
| **Data Type** | Enumeration |
| **Range** | 1 to 65535: Values 249 through 24576 are reserved for HART. |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | Reference HCF_Spec-183 Section 5.8 Table 8 (Revision 20) for more details. Values between 0 and 255 that are not defined in the table are displayed as "UNKNOWN XXX" where XXX is the undefined number. |

# 9.22  HDEVMFG[0..15]

| Specific to Block(s) | PBHIOMB block |
|---|---|
| Description | Manufacturer ID-HART Manufacturer as retrieved in HART command 0 and as defined in HCF_Spec-183 Section 5.8 Table 8 (Revision 13) |
| Data Type | Enumeration |
| Range | 1 to 65535: Values 249 through 24576 are reserved for HART. |
| Default | Not applicable |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Engineer |
| Residence | PGM |
| Related Parameters | |
| Remarks | Reference HCF_Spec-183 Section 5.8 Table 8 (Revision 20) for more details. Values between 0 and 255 that are not defined in the table are displayed as "UNKNOWN XXX" where XXX is the undefined number. |

# 9.23 HDEVMISM

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Device Type Mismatch |
| **Data Type** | Boolean |

| | | |
|---|---|---|
| **Range** | ON | The HART device that is currently connected to the channel does not match the configured HART device type in the control strategy. |
| | | A device type mismatch occurs when: |
| | | • HDVMFGCD does not equal HDEVMFG or, |
| | | • HDVTYPCD does not equal HDEVTYP |
| | OFF | There is a match between the user-configured HART device and the connected device. |

| | |
|---|---|
| **Default** | OFF |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDEVST" |
| | "HDEVMFG" on page 197 |
| | "HDVMFGCD" on page 208 |
| | "HDEVTYPE" on page 204 |
| | "HDVTYPCD" on page 210 |
| | "HDEVREV" on page 202 |
| | "HDVREVCD" on page 209 |
| **Remarks** | Using a Generic HART Device type matches every HART device and dose not cause a mismatch. |
| | **Note**<br>HDEVMISM and HREVMISM are mutually exclusive in that only one can be set at any given time. |

## 9.24  HDEVMSG

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Message |
| **Data Type** | String |
| **Range** | 32 characters |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

# 9.25  HDEVPROFILE

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | Device Profile Code | |
| Data Type | ENUM | |
| Range | 1 | None |
| | 2 | HART Process Automation Device |
| | 3 | HART Discrete Device |
| | 4 | Hybrid : Process Automation + Discrete |
| | 5 | I/O System |
| Default | None | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | HART device profile as defined in HCF_Spec-183 section 5.57 table 57 (Revision 20) | |

## 9.26  HDEVREV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Revision |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 0 to 255 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | For more information, see HART Command 0 and as defined in HCF_Spec-127 Section 6.1 (Revision 7) |

# 9.27  HDEVREV[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Revision |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 0 to 255 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | For more information, see HART Command 0 and as defined in HCF_Spec-127 Section 6.1 (Revision 7) |

# 9.28 HDEVTYPE

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Type -HART Device Type |
| **Data Type** | UINT16 |
| **Range** | 1 to 65535 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDVTYPCD" on page 210 |
| **Remarks** | HART device type as defined in HCF_Spec-183 Section 5.1 Table 1 (Revision 20) Note that each OEM has their own sub-table within section 5.1. |

# 9.29  HDEVTYPE[0..15]

| Specific to Block(s) | PBHIOMB block |
|---|---|
| Description | Type -HART Device Type as defined in HCF_Spec-183 Section 5.1 Table 1 (Revision 13).Note that each OEM has their own sub-table within section 5.1. |
| Data Type | 16-Bit Unsigned Integer |
| Range | 1 to 32768 |
| Default | Not applicable |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | |

# 9.30 HDEVTYPENAME

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | HART Device Type Name - It is the enumeration that corresponds to the combination of HDEVMFG and "HDEVTYPE" on page 204. |
| **Data Type** | Enumeration |
| **Range** | 251 | Any Device |
| | 12289 | Logix 12xx |
| | 5889 | ST3000 |
| | 5892 | STT25H |
| **Default** | Any Device (251) |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | SR |
| **Related Parameters** | "HDVTYPCD" on page 210 |
| **Remarks** | The ranges mentioned above are as Experion is shipped. With every device added to the particular server's database, an additional device may also be added to the above range. DD Manager is used to add HART Devices to a server. |

# 9.31  HDEVTYPENAME[0..15]

| Specific to Block(s) | PBHIOMB block | |
|---|---|---|
| Description | HART Device Type Name - Is the enumeration that corresponds to the combination of "HDEVMFG[0..15]" on page 198 and "HDEVTYPE[0..15]" on page 205. | |
| Data Type | Enumeration | |
| Range | 251 | Any Device |
| | 12289 | Logix 12xx |
| | 5889 | ST3000 |
| | 5892 | STT25H |
| Default | Any Device (251) | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | SR | |
| Related Parameters | | |
| Remarks | The ranges mentioned above are as Experion is shipped. With every device added to the particular server's database, an additional device may also be added to the above range. DD Manager is used to add HART Devices to a server. | |

# 9.32 HDVMFGCD

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Manufacturer - Reference HCF_Spec-183 Section 5.8 Table 8 (Revision 13) for more details. |
| **Data Type** | Enumeration |
| **Range** | 1 to 255: Values 251 through 255 are reserved for HART. Values between 1 ND 255 that are not defined in the table are displayed as "UNKNOWNxxx,"where xxx is the undefined number. |
| **Default** | 250 (Generic HART device) |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDEVMFG[0..15]" on page 198<br><br>"HDEVMISM" on page 199<br><br>"HDEVIDFL" on page 196 |
| **Remarks** | You cannot directly set this parameter. However, since this parameter is embedded in the enumeration for HCFGDEV, when you change HCFGDEV, this parameter may also change.<br><br>This parameter returns the configured manufacturing ID for device types up to 255 as the enumeration size in PGM is limited to 1 byte.<br><br>HDVMFGCD displays the MSB of the HDVTYPCD7 for HART7 devices. |

# 9.33  HDVREVCD

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | Revision - HART Device Revision as defined in *HCF_Spec-127 Section 6.1 (Revision 6)* |
| **Data Type** | 16-Bit Unsigned Integer |
| **Range** | 1 to 32768 |
| **Default** | Not applicable |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDEVMISM" on page 199<br>"HDEVREV" on page 202 |
| **Remarks** | This parameter is compared with HDEVREV to determine if HDEVIDFL should be set.<br><br>HDVREVCD is compared with HDEVREV to determine if HDEVMISM should be set.<br><br>Users cannot directly set this parameter. This parameter is embedded in the enumeration for HCFGDEV so that when a user changes HCFGDEV, this parameter may also change. |

## 9.34  HDVTYPCD

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | HART Device Type - Reference *HCF_Spec-183 Section 5.1 Table 1 (Revision 13)* for more details. Note that each OEM has their own sub-table within section 5.1. |
| Data Type | UINT16 |
| Range | 1 to 65535 |
| Default | 251 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | "HDEVMISM" on page 199<br>"HDEVTYPE" on page 204 |
| Remarks | HDEVMISM is set when HDVTYPCD is not equal to HDEVTYP.<br><br>You cannot directly set this parameter. However, since this parameter is embedded in the enumeration for HCFGDEV, when you change HCFGDEV, this parameter may also change.<br><br>HDVTYPCD displays the LSB of HDVTYPCD7. |

## 9.35  HDVTYPCDNAME

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | HART Device Type (name) | |
| Data Type | Enumeration | |
| Range | 251 | Any device |
| | 12289 | Logix 12xx |
| | 5889 | ST3000 |
| | 5893 | STT25H |
| Default | 251 - Any device | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | SR | |
| Related Parameters | "HDVTYPCD" on page 210 | |
| Remarks | HDVTYPCDNAME is the enumeration that corresponds to both HDVMFGCD with HDEVTYPCD. | |
| | Users cannot set this parameter directly. This parameter is embedded in the enumeration for HCFGDEV so that when a user changes HCFGDEV, this parameter may also change. | |
| | The ranges displayed above are as shipped with Experion system. Device types can be added to this parameter by using DD Manager utility. | |

# 9.36 HDYNCC[1..4]

| Specific to Block(s) | PBHCHANNEL block |
|---|---|
| **Description** | Classification |
| **Data Type** | Enumeration |
| **Range** | See *HCF_Spec-183 Section 5.21 Table 21 (Revision 13.0)* for more details. |
| **Default** | Not Classified |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDYNEU[1..4]" on page 215<br><br>"HDYNST" on page 217<br><br>"HMAXDEVVARS" on page 225<br><br>"HNSMMINPRE" on page 229<br><br>"HNCFGCHG" on page 227<br><br>"HSLOT0TS" on page 244<br><br>"HSLOTCC[1..8]" on page 245 |
| **Remarks** | Only valid for HART 6 and later version devices.<br><br>HART Classification code for PV, SV, TV and QV.<br><br>HDYNCC array indices are 1 for PV, 2 for SV, 3 for TV and 4 for QV.<br><br>This parameter is only exposed when HENABLE = TRUE. |

# 9.37 HDYNDSC[1..4]

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | Descriptor - HART Digital PV, SV, TV and QV Description | |
| Data Type | String | |
| Range | Maximum of 48 Characters | |
| Default | **Array Index** | **Default Value** |
| | 1 | Primary Variable |
| | 2 | Secondary Variable |
| | 3 | Tertiary Variable |
| | 4 | Quaternary Variable |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | SR | |
| Related Parameters | "HDYNNAME[1..4]" on page 216 | |
| | "HDYNDVC[1..4]" on page 214 | |
| | "HDYNST" on page 217 | |
| | "HDYNEU[1..4]" on page 215 | |
| Remarks | HART Digital PV, SV, TV and QV Description. | |

## 9.38  HDYNDVC[1..4]

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | HART Digital PV, SV, TV and QV Dynamic Variable Codes | |
| Data Type | Enumeration | |
| Range | None (250) | No Dynamic variable assigned. |
| | Variable 000 (0) | Device specific variable 0 is mapped to PV, SV, TV, or QV |
| | Variable 001 (1) | Device specific variable 0 is mapped to PV, SV, TV, or QV |
| | Through | excluding 250 |
| | Variable 255 (255) | Device specific variable 255 is mapped to PV, SV, TV, or QV |
| Default | None | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | "HDYNNAME[1..4]" on page 216 | |
| | "HDYNST" on page 217 | |
| | "HDYNEU[1..4]" on page 215 | |
| Remarks | None. | |

# 9.39  HDYNEU[1..4]

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | Units - HART Engineering Units for PV, SV, TV and QV. |
| Data Type | Enumeration |
| Range | See *HCF_Spec-183 Section 5.2 Table 2 (Revision 13)* for more details. |
| Default | Not applicable |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | "HDYNNAME[1..4]" on page 216<br><br>"HDYNDVC[1..4]" on page 214<br><br>"HDYNST" on page 217 |
| Remarks | HDYNEU array indices are 1 for PV, 2 for SV, 3 for TV and 4 for QV.<br><br>This parameter is only exposed when HENABLE = TRUE. |

# 9.40 HDYNNAME[1..4]

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| **Description** | Name - HART Digital PV, SV, TV and QV Names. | |
| **Data Type** | String | |
| **Range** | Maximum of 24 Characters | |
| **Default** | **Array Index** | **Default Value** |
| | 1 | PV |
| | 2 | SV |
| | 3 | TV |
| | 4 | QV |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | SR | |
| **Related Parameters** | "HDYNDVC[1..4]" on page 214 | |
| | "HDYNST" on page 217 | |
| | "HDYNEU[1..4]" on page 215 | |
| **Remarks** | These names are for user identification and are not loaded to the device. | |

# 9.41  HDYNST

| Specific to Block(s) | PBHCHANNEL block | |
|---|---|---|
| **Description** | Status | |
| **Data Type** | BITS, mapped as per *HCF_Spec-99 section 8.4 Device Variable Status* | |
| **Range** | See *HCF_Spec-99 Section 8.4 (Revision 8)* for more details. | |
| | 0 | Unknown |
| | 1-7 | Bad, Not Limited |
| | 8-15 | Bad, Not Limited, More |
| | 16-23 | Bad, Low Limited |
| | 24-31 | Bad, Low Limited, More |
| | 32-39 | Bad, High Limited |
| | 40-47 | Bad, High Limited, More |
| | 48-55 | Bad, Constant |
| | 56-63 | Bad, Constant, More |
| | 64-71 | Poor, Not Limited |
| | 72-79 | Poor, Not Limited, More |
| | 80-87 | Poor, Low Limited |
| | 88-95 | Poor, Low Limited, More |
| | 96-103 | Poor, High Limited |
| | 104-111 | Poor, High Limited, More |
| | 112-119 | Poor, Constant |
| | 120-127 | Poor, Constant, More |
| | 128-135 | Manual, Not Limited |
| | 136-143 | Manual, Not Limited, More |
| | 144-149 | Manual, Low Limited |
| | 152-159 | Manual, Low Limited, More |
| | 160-167 | Manual, High Limited |
| | 168-175 | Manual, High Limited, More |
| | 176-183 | Manual, Constant |
| | 184-191 | Manual, Constant, More |
| | 192-199 | Good, Not Limited |
| | 200-207 | Good, Not Limited, More |
| | 208-215 | Good, Low Limited |
| | 216-223 | Good, Low Limited, More |
| | 224-231 | Good, High Limited |
| | 232-239 | Good, High Limited, More |
| | 240-247 | Good, Constant |
| | 248-255 | Good, Constant, More |
| **Default** | N/A | |

| Config Load | No |
|---|---|
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDYNEU[1..4]" on page 215 |
| | "HDYNNAME[1..4]" on page 216 |
| | "HMAXDEVVARS" on page 225 |
| | "HNSMMINPRE" on page 229 |
| | "HNCFGCHG" on page 227 |
| | "HSLOT0TS" on page 244 |
| | "HSLOTCC[1..8]" on page 245 |
| | "HDYNCC[1..4]" on page 212 |
| **Remarks** | Only valid for HART 6 and later version devices. |
| | HART variable status for PV, SV, TV and QV. |
| | Always undefined for HART 5 devices. For some HART 6 and later version devices HDYNST[1..4] may also be undefined. |
| | HDYNST array indices are 1 for PV, 2 for SV, 3 for TV and 4 for QV. |
| | Only the 5 highest order bits are mapped to the range. Thus, 8 different values from the device will provide the same enumeration value to the user. |
| | This parameter is only exposed when HENABLE = TRUE. |

# 9.42  HDYNVAL

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Value -HART digital PV, SV, TV and QV values |
| **Data Type** | FLOAT32 |
| **Range** | Device Specific |
| **Default** | N/A |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDYNNAME[1..4]" on page 216<br><br>"HDYNDVC[1..4]" on page 214<br><br>"HDYNEU[1..4]" on page 215 |
| **Remarks** | HDYNVAL array indices are 1 for PV, 2 for SV, 3 for TV and 4 for QV. |

# 9.43  HENABLE[0..15]

| Specific to Block(s) | PBHIOMB block | |
|---|---|---|
| Description | Enable HART channel. | |
| Data Type | BOOLEAN | |
| **Range** | 0 | False |
| | 1 | True |
| Default | FALSE | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | When HENABLE is configured as TRUE, the PBHCHANNEL block is created under the PBHIOMB block. When HENABLE is configured as FALSE, the PBHCHANNEL block is deleted from the PBHIOMB block | |

# 9.44  HEU

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Engineering Units |
| **Data Type** | Enumeration |
| **Range** | Reference *HCF_Spec-183 Section 5.2, Table 2 (Revision 13)*. Values between 0 and 255 that are not defined in the table are displayed as "UNKNOWNxxx," where xxx is the undefined number. |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART PV Upper and Lower Range Value Engineering Units as defined in *HCF_Spec-127 Section 6.13 (Revision 6.0)*. |

## 9.45 HFASSYNO

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | Final Assembly Number |
| **Data Type** | 32-Bit Unsigned Integer |
| **Range** | 0 to 16,777,215 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HFASSYNO is used for identifying the materials and electronics used in the field device. In some plants, this number references a drawing number indicating the installation and application of the device. |

# 9.46  HHWREV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Hardware Revision |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 0 to 30, 31 is reserved. |
| **Default** | N/A |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | For more information, see HART Command 0 and as defined in *HCF_Spec-127 Section 6.1 (Revision 6)*. |

# 9.47  HLONGTAG

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Long Tag |
| **Data Type** | String |
| **Range** | 0 to 64 |
| **Default** | Not Applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | |

# 9.48 HMAXDEVVARS

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Maximum Number of Variables |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 0 t0 255 |
| **Default** | |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Revision 6.0 and later only.<br><br>For more information, see byte 13 of HART Command 0 as defined in *HCF_Spec-127 Section 6.1 (Revision 6)*. |

## 9.49  HMONTH

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Month |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 1-12 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDAY" on page 190<br>"HYEAR" on page 261 |
| **Remarks** | None. |

# 9.50  HNCFGCHG

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Configuration Change Counter |
| **Data Type** | 16-Bit Unsigned Integer |
| **Range** | 0 to 65535 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is only exposed when HENABLE [1..15] is set as TRUE. |

# 9.51 HNCOMERR

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Communication Errors. |
| **Data Type** | 16-Bit Unsigned Integer |
| **Range** | 0 to 65535 |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "RESETHCOMERR" on page 389 |
| **Remarks** | The value of HNCOMERR is increased when a communication retry is necessary; HNCOMERR is decreased when a retry is not necessary. |
| | Excessively high values for HNCOMERR indicate that the communication link has significant electrical noise. |
| | HNCOMERR is always less than HCOMTHRS. |
| | The RESETHCOMERR resets HNCOMERR to zero. |

## 9.52 HNSMMINPRE

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Minimum slave to master Preambles |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 2 to 255 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Revision 6.0 and later only. Minimum number of preambles required for the request message from the Slave to the Master. For more information, see byte 12 of HART Command 0 as defined in *HCF_Spec-127 Section 6.1 (Revision 6)*. This parameter is only exposed when HENABLE = TRUE. |

# 9.53 HOLDONFAIL[0..15]

| Specific to Block(s) | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET 200M DSB | |
|---|---|---|
| Description | Hold on Failure | |
| Data Type | BOOLEAN | |
| Range | Off(0) | Zeroing outputs |
| | On(1) | Keeping last values |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | This parameter is applicable only for output modules. When a PDC is configured as an output module (AO or DO), this parameter is available for configuration. Otherwise, it remains disabled. When Off (cleared), it causes all output channels to set to 0 in the event of a communication loss with the controller. When On (selected), the last value of output channel is preserved in the event of a communication loss with the controller. | |

## 9.54  HOLDONFAIL[0..23]

| | | |
|---|---|---|
| **Specific to Block(s)** | CEAGDSB | |
| **Description** | Hold on Failure | |
| **Data Type** | BOOLEAN | |
| **Range** | Off(0) | Zeroing outputs |
| | On(1) | Keeping last values |
| **Default** | 0 | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | CEE | |
| **Related Parameters** | - | |
| **Remarks** | This parameter is applicable only for output modules. When a PDC is configured as an output module (AO or DO), this parameter is available for configuration. Otherwise, it remains disabled. | |
| | When Off (cleared), it causes all output channels to set to 0 in the event of a communication loss with the controller. | |
| | When On (selected), the last value of output channel is preserved in the event of a communication loss with the controller. | |

# 9.55  HOLDONFAIL[0..33]

| Specific to Block(s) | Turck Excom DSB | |
|---|---|---|
| Description | Hold on Failure | |
| Data Type | BOOLEAN | |
| Range | Off(0) | Zeroing outputs |
| | On(1) | Keeping last values |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | This parameter is applicable only for output modules. When a PDC is configured as an output module (AO or DO), this parameter is available for configuration. Otherwise, it remains disabled. | |
| | When Off (cleared), it causes all output channels to set to 0 in the event of a communication loss with the controller. | |
| | When On (selected), the last value of output channel is preserved in the event of a communication loss with the controller. | |

# 9.56  HOLDONFAIL[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Hold on Failure |
| **Data Type** | BOOLEAN |
| **Range** | Off(0)      Zeroing outputs |
| | On(1)      Keeping last values |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter is applicable only for output modules. When a PDC is configured as an output module (AO or DO), this parameter is available for configuration. Otherwise, it remains disabled.<br><br>When Off (cleared), it causes all output channels to set to 0 in the event of a communication loss with the controller.<br><br>When On (selected), the last value of output channel is preserved in the event of a communication loss with the controller.<br><br>Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |

## 9.57  HPVDAMP

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | HART PV damping in seconds |
| **Data Type** | FLOAT32 |
| **Range** | Device specific |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the HART PV damping range value. |

# 9.58 HPVLRV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | PV Lower Range Value |
| **Data Type** | FLOAT32 |
| **Range** | Device specific |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

# 9.59  HPVMISM

| Specific to Block | PBHCHANNEL block | | |
|---|---|---|---|
| Description | Device PV Range Mismatch | | |
| Data Type | BOOLEAN | | |
| Range | 1 | ON | The HART device that is currently connected to the channel does not match the configured HART device type in the control strategy. |
| | 0 | OFF | The device PV characterization values match: PVEXEUHI, PVEUHI, PVEXEULO, and PVEULO |
| Default | OFF | | |
| Config Load | No | | |
| Active Loadable | No | | |
| Access Lock | ViewOnly | | |
| Residence | PGM | | |
| Related Parameters | | | |
| Remarks | The channel cannot be activated when HPVMISM is set to ON. A configuration mismatch error is displayed in the Control Builder. | | |

# 9.60  HPVTLDST

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Private Label Distributor |
| **Data Type** | Enumeration |
| **Range** | 1 to 625535 → Values 250 through 24576 are reserved for HART. For more information, see HCF_Spec-183 Section 5.8 Table 8 (Revision 20). |
| **Default** | |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Private Label Distributor as received in HART command 0 and as defined in HCF_Spec-183 Section 5.8 Table 8 (Revision 20). |

## 9.61 HPVURV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | PV Upper Range Value |
| **Data Type** | FLOAT32 |
| **Range** | Device specific |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

# 9.62 HREVMISM

| Specific to Block(s) | PBHCHANNEL block | | |
|---|---|---|---|
| Description | Device Revision Mismatch | | |
| Data Type | Boolean | | |
| Range | 0 | OFF | There is a match between the user-configured HART device and the actually device. |
| | 1 | ON | The HART device that currently exists at the end of the wire is different from the device that the user thought would exist at the end of the wire. A device revision occurs whenever<br><br>• HDVMFGCD is the same as HDEVMFG,<br><br>• HDVTYPCD is the same as HDEVTYP, and<br><br>• HDVREVCD is different from HDEVREV<br><br>HDEVMISM and HREVMISM are mutually exclusive in that only one can be set at any given time. It should be noted that the Generic HART Device matches EVERY HART device. |
| Default | OFF | | |
| Config Load | No | | |
| Active Loadable | No | | |
| Access Lock | View Only | | |
| Residence | PGM | | |
| Related Parameters | "HDEVST"<br>"HDEVMFG" on page 197<br>"HDVMFGCD" on page 208<br>"HDEVTYPE" on page 204<br>"HDVTYPCD" on page 210<br>"HDEVREV" on page 202<br>"HDVREVCD" on page 209 | | |
| Remarks | This parameter is used for displaying the device match between the user-configured HART device the actually device. | | |

## 9.63  HSCANCFG

| Specific to Block(s) | PBHIOMB block | |
|---|---|---|
| Description | Scan Priority for HART Variables | |
| Data Type | Enumeration | |
| | 0 | Not Configured |
| | 1 | Low |
| Range | 2 | High |
| Default | Not Configured | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter is used for setting the frequency to scan the HART device and/or dynamic variable data of HART devices connected to PBHIOMB blocks. | |

| Specific to Block(s) | PBHCHANNEL block | |
|---|---|---|
| Description | Scan Priority for HART Variables | |
| Data Type | Enumeration | |
| | 0 | Not Configured |
| | 1 | Low |
| Range | 2 | High |
| Default | Low | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter is used for setting the frequency to scan the HART device and/or dynamic variable data of HART devices connected to PBHCHANNEL blocks. | |

## 9.64  HSCANCFGC48

| | | |
|---|---|---|
| **Specific to Block(s)** | PBHIOMB block | |
| **Description** | Scan Priority for Command 48 | |
| **Data Type** | Enumeration | |
| | 0 | Not Configured |
| | 1 | Low |
| **Range** | 2 | High |
| **Default** | Not Configured | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | ViewOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | This parameter indicates the CMD 48 scan priority. | |

| | | |
|---|---|---|
| **Specific to Block(s)** | PBHCHANNEL block | |
| **Description** | Scan Priority for Command 48 | |
| **Data Type** | Enumeration | |
| | 0 | Not Configured |
| | 1 | Low |
| **Range** | 2 | High |
| **Default** | Low | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | AppDevOnly | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | This parameter indicates the CMD 48 scan priority. | |

## 9.65  HSCANDEV

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Scan Device Variables |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: Device Variables scanning enabled |
| | FALSE: Device Variables scanning disabled |
| **Default** | FALSE: Device Variables scanning disabled |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter represents the status of device variable scanning, |

# 9.66  HSCANDYN

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Scan Dynamic Variables |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: Dynamic Variables scanning enabled |
| | FALSE: Dynamic Variables scanning disabled |
| **Default** | FALSE: Dynamic Variables scanning disabled |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter represents the status of the dynamic variable scanning. |

## 9.67 HSLOT0TS

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Slot0 Data Time Stamp |
| **Data Type** | TIME |
| **Range** | 00:00:00 to 23:59:59 |
| **Default** | 00:00:00 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | Time Stamp is monotonic and rollover. Time stamp of HART Device/Dynamic variable is read for every 24 hours. |

# 9.68 HSLOTCC[1..8]

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Classification |
| **Data Type** | Enumeration |
| **Range** | *See HCF_Spec-183 Section 5.21 Table 21 (Revision 13.0)* for more details. |
| **Default** | Not Classified |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Classification codes for slot 0 variable, slot 1variable, slot 2 variable and up to slot 7 variable.<br><br>Only valid for HART 6 and later version devices.<br><br>This parameter is only exposed when HENABLE = TRUE. |

# 9.69 HSLOTDSC[1..8]

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | Descriptor |
| **Data Type** | String |
| **Range** | Maximum of 32 Characters |
| **Default** | None (The 4 array values are blank.) |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | "HSLOTNAME[1..8]" on page 249<br><br>"HSLOTDVC[1..8]" on page 247<br><br>"HSLOTVAL[1..8]" on page 251<br><br>"HSLOTEU[1..8]" on page 248 |
| **Remarks** | Description for slot 0 variable, slot 1 variable, slot 2 variable, and up to slot 7 variable. |

# 9.70 HSLOTDVC[1..8]

| Specific to Block | PBHCHANNEL block | | |
|---|---|---|---|
| Description | Variable Code | | |
| Data Type | Enumeration | | |
| Range | 250 | None | There is no Slot n variable. |
| | 0 | Variable 000 | Read device specific variable 0. |
| | 1 | Variable 001 | Read device specific variable 1. |
| | | Through | Excluding 25. |
| | 255 | Variable 255 | Read device specific variable 255. |
| Default | None | | |
| Config Load | Yes | | |
| Active Loadable | No | | |
| Access Lock | Application Developer | | |
| Residence | PGM | | |
| Related Parameters | "HSLOTNAME[1..8]" on page 249 | | |
| | "HSLOTDSC[1..8]" on page 246 | | |
| | "HSLOTVAL[1..8]" on page 251 | | |
| | "HSLOTEU[1..8]" on page 248 | | |
| Remarks | Slot 0, Slot 1, Slot 2 and Slot 3 Device Variable Codes. | | |

# 9.71  HSLOTEU[1..8]

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Units -HART Engineering Units for slot0 variable, slot1variable, slot2 variable and slot3 variable. |
| **Data Type** | Enumeration |
| **Range** | *See HCF_Spec-183 Section 5.2 Table 2 (Revision 20)* for more details. |
| **Default** | UNKNOWN |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HSLOTNAME[1..8]" on page 249<br><br>"HSLOTDVC[1..8]" on page 247<br><br>"HSLOTDSC[1..8]" on page 246<br><br>"HSLOTVAL[1..8]" on page 251 |
| **Remarks** | HART Engineering Units for slot 0 variable, slot 1variable, slot 2 variable and up to slot 7 variable. |

# 9.72  HSLOTNAME[1..8]

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | Name - Slot1, Slot2, Slot3, Slot4, Slot5, Slot6, Slot7, and Slot8 Name. | |
| Data Type | String | |
| Range | Maximum 24 Characters | |
| Default | **Array Index** | **Default Value** |
| | 1 | Slot 0 Variable |
| | 2 | Slot 1 Variable |
| | 3 | Slot 2 Variable |
| | 4 | Slot 3 Variable |
| | 5 | Slot 4 Variable |
| | 6 | Slot 5 Variable |
| | 7 | Slot 6 Variable |
| | 8 | Slot 7 Variable |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | SR | |
| Related Parameters | "HSLOTDVC[1..8]" on page 247 | |
| | "HSLOTDSC[1..8]" on page 246 | |
| | "HSLOTVAL[1..8]" on page 251 | |
| | "HSLOTEU[1..8]" on page 248 | |
| Remarks | None. | |

# 9.73 HSLOTST[1..8]

| | |
|---|---|
| **Specific to Block**(s) | PBHCHANNEL block |
| **Description** | Status |
| **Data Type** | BITS, mapped as per *HCF_Spec-99 Section 8.4 Device Variable Status* |
| **Range** | *See HCF_Spec-99 Section 8.4 (Revision 8)* and "HDYNST" on page 217 for more details. |
| **Default** | |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | "HDYNST" on page 217<br><br>"HARTVERSION" on page 178<br><br>"HDYNCC[1..4]" on page 212<br><br>"HDYNEU[1..4]" on page 215<br><br>"HMAXDEVVARS" on page 225<br><br>"HNCFGCHG" on page 227<br><br>"HNSMMINPRE" on page 229<br><br>"HSLOTCC[1..8]" on page 245 |
| **Remarks** | HART Variable status for slot 0 variable, slot 1 variable, slot 2 variable and up to slot 7 variable.<br><br>Only valid for HART 6 and later version devices.<br><br>Only the 5 highest order bits are mapped into the range. Thus, 8 different values from the device will provide the same enumeration value to the user.<br><br>This parameter is only exposed when HENABLE = TRUE. |

# 9.74  HSLOTVAL[1..8]

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | Value |
| Data Type | FLOAT32 |
| Range | Device Specific |
| Default | N/A |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | "HSLOTNAME[1..8]" on page 249 |
| | "HSLOTDVC[1..8]" on page 247 |
| | "HSLOTDSC[1..8]" on page 246 |
| | "HSLOTEU[1..8]" on page 248 |
| Remarks | HART slot 0 value, slot 1 value, slot 2 value and up to slot 7 value. |

## 9.75  HSWREV

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Software Revision - See HART Command 0 and as defined in *HCF_Spec-127 Section 6.1 (Revision 6)* for more details. |
| **Data Type** | 8-Bit Unsigned Integer |
| **Range** | 0 to 253 only, 254 and 255 are reserved. |
| **Default** | Not Applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | For more information, see HART Command 0 and as defined in HCF_Spec-127 Section 6.1 (Revision 6). |

# 9.76  HTAG

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Tag |
| **Data Type** | String |
| **Range** | 8-character string |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter represents the tag name of the PBHCHANNEL block. |

## 9.77  HTAG[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Tag |
| **Data Type** | String |
| **Range** | 8-character string |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter represents the tag name of the PBHIOMB block. |

# 9.78  HTDEU

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Engineering Units |
| **Data Type** | Enumeration |
| **Range** | Reference *HCF_Spec-183 Section 5.2, Table 2 (Revision 13)*. Values between 0 and 255 that are not defined in the table are displayed as "UNKNOWNxxx," where xxx is the undefined number. |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Transducer Limits and Minimum Span Engineering Units as defined in *HCF_Spec-127 Section 6.13 (Revision 6.0)*. |

# 9.79 HTDLRL

| Specific to Block | PBHCHANNEL block |
|---|---|
| **Description** | Lower Transducer Limit |
| **Data Type** | FLOAT32 |
| **Range** | Not applicable, Device specific |
| **Default** | Not applicable, Device specific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

# 9.80  HTDMINSPAN

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Minimum Span |
| **Data Type** | FLOAT32 |
| **Range** | Not applicable, Device specific |
| **Default** | Not applicable, Device specific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | HART Transducer Minimum Span as defined in *HCF_Spec-127 Section 6.13 (Revision 6.0)* |

# 9.81 HTDSN

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Transducer Serial Number |
| **Data Type** | 32-Bit Unsigned Integer |
| **Range** | 0 to 16,777,215 |
| **Default** | Not applicable |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

# 9.82 HTDURL

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Upper Transducer Limit |
| **Data Type** | FLOAT32 |
| **Range** | Not applicable, Device specific |
| **Default** | Not applicable, Device specific |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | None. |

## 9.83  HUCMDREV

| Specific to Block | PBHCHANNEL block | |
|---|---|---|
| Description | Universal Command Revision - See HART Command 0 and as defined in *HCF_Spec-127 Section 6.1 (Revision 6)* for more details. | |
| Data Type | Enumeration | |
| Range | 0-3, 7-255 | UNKNOWN ###, where ### is 0 through 3 or 7 through 255 |
| | 4 | HART Revision 4 |
| | 5 | HART Revision 5 |
| | 6 | HART Revision 6 |
| | 7 | HART Revision 7 |
| | 8 | HART Revision 8 |
| Default | UNKNOWN 000 | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | PGM and PBHIOMB have been designed and tested to work only with HART revision 5, 6, and 7 devices.<br><br>For more information, see HART Command 0 and as defined in HCF_Spec-127 Section 6.1 (Revision 7). | |

# 9.84  HYEAR

| Specific to Block | PBHCHANNEL block |
|---|---|
| Description | Year |
| Data Type | 16-Bit Unsigned Integer |
| Range | 1900 to 2155 |
| Default | Not applicable |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | "HDAY" on page 190<br>"HMONTH" on page 226 |
| Remarks | None. |

# 10 Ixxx Parameters

**Related topics**

# 10.1 IDENTNUMBER

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Identification number |
| **Data Type** | UINT16 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the slave identification number (hex format). You can find the same identification number from the GSD file of the slave device. |

# 10.2 IDENTSTRING

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Ident String |
| **Data Type** | STRING |
| **Range** | Length: 16 |
| **Default** | N/A |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the ident number of a device in a hexadecimal format. |

# 10.3  IGNOREXTDIAGOVRFLO

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Ignore extended diagnostic overflow |
| **Data Type** | BOOLEAN |
| **Range** | Disabled - Extended diagnostic overflow is not ignored |
| | Enabled - Extended diagnostic overflow is ignored |
| **Default** | Disabled |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | CEE |
| **Related Parameters** | NA |
| **Remarks** | When enabled, ignores extended diagnostic overflow while performing RIO based diagnostic parsing. |
| | When disabled, all channels of all PDC is set to "Bad_Nonspecific" when extended diagnostic overflow occurs. |

# 10.4  INPUTSIGNALTYPE[0..33][0..11]

| Specific to Block(s) | Truck Excom DSB | |
|---|---|---|
| Description | Input Signal Type | |
| Data Type | ENUM | |
| Range | 0 | Not Configured |
| | 1 | 0 to 20 mA |
| | 2 | 4 to 20 mA |
| | 3 | 0 to 10 Volts |
| | 4 | 2 to 10 Volts |
| | 5 | Pt100 |
| | 6 | Pt200 |
| | 7 | Pt400 |
| | 8 | Pt1000 |
| | 9 | Ni100 |
| | 10 | Cu100 |
| | 11 | Thermocouple-B |
| | 12 | Thermocouple-C |
| | 13 | Thermocouple-D |
| | 14 | Thermocouple-E |
| | 15 | Thermocouple-J |
| | 16 | Thermocouple-K |
| | 17 | Thermocouple-L |
| | 18 | Thermocouple-N |
| | 19 | Thermocouple-R |
| | 20 | Thermocouple-S |
| | 21 | Thermocouple-T |
| | 22 | Thermocouple-U |
| | 23 | Frequency Input |
| | 24 | Pulse Input |
| | 25 | HARTInput |
| Default | 0 (Not Configured) | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | SR | |
| Related Parameters | CHLOWRANGE | |
| | CHHIGHRANGE | |

| Remarks | This parameter represents the input signal types supported by the Turck Excom analog input modules. This parameter is available for configuration only when the PDC type is an AI module. It is disabled for other PDC types. |
| --- | --- |
| | You can modify the value of the INPUTSIGNALTYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 10.5 INTERNALERR

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | Internal error |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates that the DP/AS-i module has an internal error (for example, EEPROM defective). |

## 10.6  INVALIDSLAVERESPONSE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB,Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Invalid Slave Response |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 5 of the Station Status byte 1, of the PROFIBUS diagnostic response message.<br><br>The PROFIBUS DP master sets this bit as soon as it receives a non-plausible response from an addressed PROFIBUS DP slave. The PROFIBUS DP slave sets this bit to zero. |

# 10.7  IOMSTS

| Specific to Block(s) | PBHIOMB block | |
|---|---|---|
| Description | IOM Status | |
| Data Type | Enumeration | |
| | - | Not Loaded |
| | 1 | OK |
| | 3 | CommError |
| Range | 5 | Init (Hart Profile is not read) |
| Default | — Not Loaded | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | ViewOnly | |
| Residence | PGM | |
| Related Parameters | | |
| Remarks | This parameter indicates the operational status of the PBHIOMB. | |

# 10.8  IOMTYPE

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | IOM type |
| **Data Type** | String |
| **Range** | Length: 64 characters |
| **Default** | Profibus HART I/O Module Block |
| **Config Load** | Not configurable, but loaded to SR |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | SR |
| **Related Parameters** | |
| **Remarks** | This non-configurable parameter is the description of the IO module type. |

# 10.9  ITEMNAME

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB |
| **Description** | - |
| **Data Type** | STRING |
| **Range** | 12 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | Server |
| **Related Parameters** | - |
| **Remarks** | - |

# 11 Jxxx Parameters

**Related topics**

"JOURNALONLY" on page 276

# 11.1 JOURNALONLY

| | | | |
|---|---|---|---|
| **Specific to Block(s)** | PBHCHANNEL block | | |
| **Description** | Journal Only option | | |
| **Data Type** | Boolean | | |
| **Range** | 0 | OFF | HART alarms are reported to Alarm Summary and Event Summary Journal in Station |
| | 1 | ON | HART alarms and events are reported to Event Summary Journal only in Station |
| **Default** | OFF | | |
| **Config Load** | Yes | | |
| **Active Loadable** | No | | |
| **Access Lock** | Supervisor | | |
| **Residence** | CEE | | |
| **Related Parameters** | "ALMENBSTATE" on page 22<br>"HENABLE[0..15]" on page 220 | | |
| **Remarks** | The ALMENBSTATE parameter must be set to ON for HART alarm journaling. | | |

# 12 Lxxx Parameters

**Related topics**

# 12.1  LASTERRCODE[2..125]

| Specific to Block(s) | PBLINK |
|---|---|
| Description | DPV1 request last error code |
| Data Type | UINT32 |
| Range | Not applicable |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | This parameter is used for displaying the last error code received for DPV1 connection to a slave. The error code can be the error code returned from any of the DPV1 calls (Init, Read, Write). |

## 12.2  LEFTGATEWAYACTIVE

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| **Description** | Gateway on the left slot is Active. |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | Input Status data obtained from the gateway. The first 2 bits of the second byte in the input word provides this information. |

# 12.3 LINKNUM

| Specific to Block(s) | Protocol Block |
|---|---|
| Description | Field Network Number |
| Data Type | UINT16 |
| Range | 1 |
| | 2 |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | - |
| Remarks | - |

## 12.4  LRL

| Specific to Block(s) | PBHCHANNEL block |
|---|---|
| Description | PV Extended Low Range. Indicates the lower range limit of the PV at the HART device. |
| Data Type | 32-Bit Real Number |
| Range | Not applicable |
| Default | NaN |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HTDLRL parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

## 12.5  LRL[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Specifies the lower range limit of the Process Variable (PV) measurement. |
| **Data Type** | 32-Bit Real Number |
| **Range** | Not applicable |
| **Default** | NaN |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HTDLRL parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

# 12.6  LRV

| Specific to Block(s) | PBHCHANNEL block |
|---|---|
| Description | PV Low Range (4mA). Indicates the lower range limit of the operating range for PVRAW. |
| Data Type | 32-Bit Real Number |
| Range | Not applicable |
| Default | NaN |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Engineer |
| Residence | PGM |
| Related Parameters | |
| Remarks | This parameter is exposed only if HENABLE[1..15] is set to TRUE and displays the same value as the HPVLRV parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

# 12.7  LRV[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Defines the lower end of the operating range for the PVRAW input value. |
| **Data Type** | 32-Bit Real Number |
| **Range** | Not applicable |
| **Default** | NaN |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is exposed only if HENABLE[1..15] is set to TRUE and displays the same value as the HPVLRV parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

# 13 Mxxx Parameters

**Related topics**

# 13.1  MASTERADDRESS

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Master Address |
| **Data Type** | UINT8 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the Master Address byte of the PROFIBUS diagnostic response message. In this byte, the address of the PROFIBUS DP master, which has parameterized this slave appears. Normally this is 1. If none of the PROFIBUS DP masters has parameterized the slave, then the slave inserts the address 255 to this byte. |

# 13.2  MASTERLOCK

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Master Lock |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter provides information on whether the PROFIBUS DP slave is parameterized from another master. |
| | This parameter represents bit 7 of the Station Status byte 1, of the PROFIBUS diagnostic response message. |
| | The PROFIBUS DP master sets this bit, if the master address is different from 255 and different from its own address. The PROFIBUS DP slave sets this bit to zero. |

# 13.3  MASTERSTATE

| Specific to Block(s) | Protocol Block | |
|---|---|---|
| Description | Field Network Master State | |
| Data Type | ENUM | |
| Range | (0) OFFLINE | This is the state after the initialization. In this state, no communication (data transfer) is permitted. This state means that the PROFIBUS master is waiting for a signal to start and does not participate in the token ring of the PROFIBUS access control mechanism. |
| | (1) STOP | In this state, no data transfer is permitted between the master and the slaves. However, the data transfer to other masters in multi-master system is allowed. This state indicates that the bus parameter set has been loaded successfully. |
| | (2) CLEAR | In this state, the master is able to read the input data from the DP slaves. The master forces the outputs to the slaves to be in a safe state. For instance, incorrect data transfer of a slave can cause the PROFIBUS DP master to fall back from OPERATE state to CLEAR state. The parameterization and configuration checks are possible in this state. |
| | (3) OPERATE | In this state, the unrestricted data transfer is possible. This data transfer is cyclic which means the input values are read from the slaves and the output data are written to the slaves. |
| Default | OFFLINE | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | - | |

# 13.4  MAXCHANNELNBR[0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Maximum Channel Number |
| **Data Type** | UINT8 |
| **Default** | 0 |
| **Range** | 0 - 11 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | - |

## 13.5  MAXCHANNELNBR[0..15]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, DRIVEDSB |
| **Description** | Maximum Channel Number |
| **Data Type** | UINT8 |
| **Default** | 1 |
| **Range** | 1 - 32 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | - |

# 13.6 MAXCHANNELNBR[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Maximum Channel Number |
| **Data Type** | UINT8 |
| **Default** | 1 |
| **Range** | 1 - 32 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |

# 13.7  MAXFREEBLKSZ

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Largest Free Memory Block Size (b) |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the size of largest contiguous memory block in PGM user memory. The largest memory block is always lesser than or equal to the current free memory. Note that only some of the blocks loaded in PGM may require the largest blocks of contiguous memory. |

# 13.8 MAXFREEINK

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Largest Free Memory Block Size (b) |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the size of largest contiguous memory block in PGM user memory. The largest memory block is always lesser than or equal to the current free memory. Note that only some of the blocks loaded in PGM may require the largest blocks of contiguous memory. |

# 13.9 MODOFFLINE

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | DP/AS-INTERFACE LINK Advanced is offline |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates that the module is in offline mode, and hence cannot perform the cyclic communication with the slave devices on the AS-i bus.<br><br>A module can be placed in the Offline mode through the control panel interface on the DP/AS-i device. |

## 13.10 MODULEERRSLOTNUM[0..19]

| Specific to Block(s) | GENDSB, GENIODSB |
|---|---|
| Description | Slot number for module error |
| Data Type | UINT8 |
| Default | NA |
| Range | 0 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | MODULEERRTYPE |
| Remarks | This parameter indicates which slot on the physical IO rack is faulty. |

# 13.11 MODULEERRTYPE[0..19]

| Specific to Block(s) | GENDSB, GENIODSB | |
|---|---|---|
| Description | Error type for module error | |
| Data Type | ENUM | |
| Range | 0 | - |
| | 1 | Module Failure |
| | 2 | Wrong Module |
| | 3 | No Module |
| Default | - | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NOLOAD | |
| Related Parameters | MODULEERRSLOTNUM | |
| Remarks | This parameter indicates the error type on the slot. The error type conforms to RIO standards. | |

# 14  Nxxx Parameters

**Related topics**

# 14.1  NBROFACTSLAVES

| Specific to Block(s) | Protocol Block |
|---|---|
| **Description** | Number of Active Slaves |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter holds the number of active slaves. |
| | The firmware maintains a list of slaves to which the master has successfully opened a communication relationship. Ideally, the number of active slaves is equal to the number of configured slaves. |

## 14.2  NBROFCONFSLAVES

| Specific to Block(s) | Protocol Block |
|---|---|
| Description | Number of Configured Slaves |
| Data Type | UINT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | - |
| Remarks | This parameter holds the number of configured slaves. |
| | The firmware maintains a list of slaves to which the master has to open a connection. This list is derived from the configuration database created by the Field network configuration tool. |

# 14.3  NBROFFAULTSLAVES

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Number of Diagnostic Issues |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter holds the number of field devices that indicate diagnostic information which has not yet been accessed by the Protocol Block. |

# 14.4  NETCONF

| Specific to Block(s) | Protocol Block |
|---|---|
| **Description** | Field Network Configuration |
| **Data Type** | BIGSTRING |
| **Range** | Length: 500000 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Program |
| **Residence** | Server |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the field network configuration of the associated bus. The data in this parameter is binary data that is encoded as a string using base64 encoding. |

# 14.5  NETCONFBIN

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Field Network Configuration |
| **Data Type** | Array of BLOBs |
| **Range** | 200 Kb |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Program |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the field network configuration of the associated bus. The data in this parameter is binary data.<br><br>The data to this parameter is converted from the NETCONF parameter by the PBLink.dll. |

# 14.6  NETTAGID[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, DRIVEDSB, Siemens DP/AS-i Link DSB, Siemens ET200M DSB |
| **Description** | Net Tag Identification Number |
| **Data Type** | BLOB |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | These numbers represent the identification numbers for the net tag names. The values contain Microsoft GUID values generated by the field network configuration tool. |

## 14.7 NETTAGID[0..23]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Net Tag Identification Number |
| **Data Type** | BLOB (array of 16 bytes) |
| **Range** | - |
| **Default** | Empty (all zeroes) |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | These numbers represent the identification numbers for the net tag names. The values contain Microsoft GUID values generated by the field network configuration tool. |

# 14.8  NETTAGID[0..MAXPDCNUMBER]

| Specific to Block(s) | GENDSB, GENIODSB |
|---|---|
| Description | Net Tag Identification Number |
| Data Type | BLOB |
| Range | - |
| Default | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | CEE |
| Related Parameters | - |
| Remarks | These numbers represent the identification numbers for the net tag names. The values contain Microsoft GUID values generated by the field network configuration tool. |

# 14.9  NETTAGNAME[0..15]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Net Tag Name |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | The values that appear in this field are the tag names that you have defined while configuring the field network in the PBLink block using the field network configuration tool.<br><br>The net tag name is unique for each I/O module. You cannot select the same net tag name for two I/O modules inside a slave. However, you can use the same net tag name for a different slave. |

## 14.10  NETTAGNAME[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Net Tag Name |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | The values that appear in this field are the tag names that you have defined while configuring the field network in the PBLink block using the field network configuration tool. |
| | The net tag name is unique for each I/O module. You cannot select the same net tag name for two I/O modules inside a slave. However, you can use the same net tag name for a different slave. |
| | Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |

## 14.11 NETTAGPDCNAME[0..(MAXPDCNUMBER+1)]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB, DRIVEDSB, GENDSB, GENIODSB, Siemens DP/AS-i Link DSB, Siemens ET 200M DSB, Turck Excom DSB |
| **Description** | DSB Tag Name |
| **Data Type** | STRING |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | SR |
| **Related Parameters** | NETTAGNAME |
| **Remarks** | In Protocol Block, the NETTAGLIST contains the information about all the Net Tag Names, their respective GUID s and the DSB Slave Address associated with the Net Tag Names. The NETTAGPDCNAME contains the list of the Net Tags that is read from the NETTAGLIST of the Protocol Block.<br><br>You cannot configure NETTAGPDCNAME[0] since element at index 0 is always empty and is used for deselecting the configured NETTAGNAMEs in the PDC tab of the DSB. |

# 14.12  NETTAGTABLE

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Net Tag Table |
| **Data Type** | BIGSTRING |
| **Range** | Length: 500000 characters |
| **Default** | Empty |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Program |
| **Residence** | Server |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the run-time net tag table that is loaded in the PGM. The data in this parameter is binary data that is encoded as a string using base64 encoding. |

## 14.13  NETTAGTABLEBIN

| Specific to Block(s) | Protocol Block |
|---|---|
| **Description** | Net Tag Table |
| **Data Type** | Array of BLOBs |
| **Range** | 200 Kb |
| **Default** | Empty |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Program |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the run-time net tag table that is loaded to the PGM. The data in this parameter is binary data. |

# 14.14  NETTYPE

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Field Network Type |
| **Data Type** | ENUM |
| **Range** | PROFIBUS DP |
| **Default** | PROFIBUS DP |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Program |
| **Residence** | SERVER |
| **Related Parameters** | FIELDNETWORKTYPE |
| **Remarks** | This parameter is used by the field network configuration tool. |

# 14.15  NETWORKSLAVELED[0..127]

| Specific to Block(s) | Protocol Block | |
|---|---|---|
| Description | Field Network Slave Diagnostic LED | |
| Data Type | ENUM | |
| Range | 0 | LEDINACTIVE |
| | 1 | LEDRED |
| | 2 | LEDGREEN |
| | 3 | LEDYELLOW |
| Default | LEDINACTIVE | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | - | |

## 14.16 NTOTMEMDESC

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Total Memory Descriptors |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of total memory descriptors. This is a static number and the units are number of descriptors. |

# 14.17 NUMCHANNEL[0..11]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Number of Channels |
| **Data Type** | UINT16 |
| **Range** | 1 - 12 |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The number of channels are automatically updated based on the module selected except for the DM80Ex digital module. You must manually enter the number of channels for this module.<br><br>You can modify the value of the NUMCHANNEL parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

# 14.18  NUMCHANNEL[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Siemens ET 200M DSB, DRIVEDSB |
| **Description** | Number of Channels |
| **Data Type** | UINT16 |
| **Range** | 1 - 32 |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the number of data channels supported by the configured I/O module. You must enter the appropriate value while configuring the I/O module. |
| | The possible values are 2, 4, 8, 16, and 32. If a value other than these is entered, an error message appears. |
| | **Note:** Because the selection for the number of channels supported is internally used by the block to calculate the size of its expected input/output data, it is important that the number of channels be configured in agreement with the end device. |
| | With R410, you can modify the value of the NUMCHANNEL parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. |

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | Number of Channels |
| **Data Type** | UINT16 |
| **Range** | 1 - 32 |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines the number of data channels supported by the configured I/O module. |
| | The "Slave 1-7 inputs" and "Slave 1-7 outputs" PDCs support 28 channels. The other PDCs support 32 channels. The channels are assigned to the slave devices in groups of 4. For example, a PDC type of "Slave 1-7 inputs" will have the first 4 input channels mapped to slave 1, the next 4 mapped to slave 2, and so on. |
| | **Note**: When a slave device has less than 4 inputs or outputs, some of the channels may be unused. |

# 14.19 NUMCHANNEL[0..23]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Number of Channels |
| **Data Type** | UINT16 |
| **Range** | 1 - 8 |
| **Default** | 8 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The number of channels depends on the PDC type selected. The value of this parameter is automatically set according to the PDC type. |

# 14.20 NUMCHANS

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Maximum number of channels |
| **Data Type** | INT32 |
| **Range** | 0 - 31 |
| **Default** | -1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | NUMCHANNEL (from PDC) |
| **Remarks** | This parameter displays the user-defined maximum number of channels of the PDC. This parameter obtains its value through the PDC-PIOMB association. |

| | |
|---|---|
| **Specific to Block(s)** | PBHIOIMB block |
| **Description** | Number Of Channels |
| **Data Type** | UINT8 |
| **Range** | 0 – 15 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the user-defined maximum number of channels of the PDC. This parameter obtains its value through the PDC-PBHIOMB association. |

# 14.21  NUMEXTBLKS

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | External Memory Blocks |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of external memory blocks. The number of external blocks refers to the blocks located within different CPM, ACE, SIM C200 or CEEC300. For example, the number of blocks used in a peer-to-peer communication. |

# 14.22 NUMFREEBLKS

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Free Memory Blocks |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of free memory blocks. Memory is not partitioned into blocks until it is used. It is common to have only one free memory block. |

## 14.23 NUMFREEDESC

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Free Memory Descriptors |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of free memory descriptors. |

# 14.24  NUMREGDESC

| Specific to Block(s) | PGM |
|---|---|
| **Description** | Registered Memory Descriptors |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of registered memory descriptors, which is equal to zero generally, since the descriptors are registered when connections are lost. |

## 14.25 NUMUSEDBLKS

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Used Memory Blocks |
| **Data Type** | UINT32 |
| **Range** | Not applicable |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the number of used memory blocks. Units are number of blocks and blocks vary in size. |

# 14.26  NUMUSEDDESC

| Specific to Block(s) | PGM |
|---|---|
| Description | Used Memory Descriptors |
| Data Type | UINT32 |
| Range | Not applicable |
| Default | 0 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | The parameter displays the number of used memory descriptors, which is equal to the difference between the total memory descriptors and the free memory descriptors. |

## 14.27  NUMUSERALARMS

| | |
|---|---|
| **Specific to Block(s)** | GENDSB |
| **Description** | Number of user alarms |
| **Data Type** | INT32 |
| **Range** | 16<br>34 |
| **Default** | 34 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | The NUMUSERALARMS parameter defines the number of user configurable alarms for GENDSB. By default value of this parameter is 34. The value 16 is supported only for interoperability with R400 as GenDSB supports 16 user configurable alarms in R400.<br><br>When GENDSB is migrated from R400 to R410, NUMUSERALARMS parameter will have the value 16 and 16 user configurable alarms available for strategies migrated from R400 to R410. If you want to increase the number of user configurable alarms, then you need to change value of NUMUSERALARMS from 16 to 34. |

# 14.28 NVSCOMPINPROG

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | NVS Compaction In Progress |
| **Data Type** | - |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the status of the non-volatile memory compaction or store. When a compaction is in progress, the module cannot perform retention startup. |

## 14.29 NVSFAILFL

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Non-Volatile Storage Soft Failure |
| **Data Type** | - |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the success of storing data to the non-volatile memory. |
| | In case of a failure, the functioning of the PBLink block and the DSB block is not affected. However, after RAM Retention, their functionality is not guaranteed. In such a scenario, you must reload the PGM. |

# 14.30 NVSSAVEINPROG

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | NVS Save In Progress |
| **Data Type** | - |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | Creation and configuration of the function blocks results in the asynchronous saving of the block configuration to non-volatile memory.<br><br>This parameter indicates the status of the asynchronous save to non-volatile memory. When the save is in progress, the module cannot perform retention startup. |

# 14.31  NVSUSED

| | |
|---|---|
| **Specific to Block(s)** | Protocol Block |
| **Description** | Non-Volatile Storage Usage |
| **Data Type** | 32-bit real number |
| **Range** | 0.0 to 100.0 |
| **Default** | 0.0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the percentage of non-volatile storage memory used in the associated module. |

# 15 Oxxx Parameters

**Related topics**

"OUTPUTSIGNALTYPE[0..33][0..11]" on page 330

# 15.1 OUTPUTSIGNALTYPE[0..33][0..11]

| | | |
|---|---|---|
| **Specific to Block(s)** | Turck Excom DSB | |
| **Description** | Output Signal Type | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not Configured |
| | 1 | 0 to 20 mA |
| | 2 | 4 to 20 mA |
| **Default** | 0 (Not Configured) | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | SR | |
| **Related Parameters** | CHLOWRANGE<br>CHHIGHRANGE | |
| **Remarks** | This parameter represents the output signal types supported by the Turck Excom analog output modules. This parameter is available for configuration, only when the PDC type is an AO module. It is disabled for other PDC types.<br><br>You can modify the value of the OUTPUTSIGNALTYPE parameter even after a PDC is associated with a PIOMB. However, you must ensure that you reload both the DSB and the PIOMB after modifying the parameter value. If you do not reload both the DSB and the PIOMB, there may be a break in the connection between the DSB and the PIOMB. | |

# 16  Pxxx Parameters

**Related topics**

# 16.1  PADATASTATUS[0.. MAXPDCNUMBER ][0..MAXNUMOFCHANELS]

| Specific to Block(s) | GENPADSB, GENPAGWDSB |
|---|---|
| Description | Data status of the Profibus PA data |
| Data Type | ENUM |
| Range | Refer to the PA profile specifications |
| Default | 0 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | No Load |
| Related Parameters | - |
| Remarks | - |

## 16.2  PADIAGMESSAGE

| Specific to Block(s) | GENPADSB, GENPAGWDSB | |
|---|---|---|
| Description | Error type for channel error | |
| Data Type | Enum | |
| Range | 0 | Not in use |
| | 1 | Hardware failure of the electronics |
| | 2 | Hardware failure mechanics |
| | 3 | Motor- temperature too high |
| | 4 | Electronic temperature too high |
| | 5 | Memory error |
| | 6 | Failure in measurement |
| | 7 | Device not initialized (No self-calibration) |
| | 8 | Self-calibration failed |
| | 9 | Zero point error (limit position) |
| | 10 | Power supply failed (electrical, pneumatic) |
| | 11 | Configuration not valid |
| | 12 | Warm Start |
| | 13 | Cold Start |
| | 14 | Maintenance required |
| | 15 | Characterization invalid |
| | 16 | Identifier number violation |
| | 17 | Maintenance Alarm |
| | 18 | Maintenance Demanded |
| | 19 | Function Check |
| | 20 | Invalid Process Condition |
| | 21 | Reserved Octet 3 bit 4 |
| | 22 | Reserved Octet 3 bit 5 |
| | 23 | Reserved Octet 3 bit 6 |
| | 24 | Reserved Octet 3 bit 7 |
| | 25 | Reserved Octet 4 bit 0 |
| | 26 | Reserved Octet 4 bit 1 |
| | 27 | Reserved Octet 4 bit 2 |
| | 28 | Reserved Octet 4 bit 3 |
| | 29 | Reserved Octet 4 bit 4 |
| | 30 | Reserved Octet 4 bit 5 |
| | 31 | Reserved Octet 4 bit 6 |
| | 32 | More diagnosis information is available |
| | 50 | IM-157 configuration failure |
| | 51 | IM-157 Invalid bus parameter |

|  | 52 | All PA slaves are not up and running |
|---|---|---|
|  | 80 | GW State Off |
|  | 81 | GW State Stop |
|  | 82 | GW State Clear |
|  | 83 | GW State Operate |
|  | 103 - 224 | PA slave X has diagnostics data (X is slave address) |
|  | 303 - 424 | PA slave X has channel diagnostics data (X is slave address) |
|  | 500 – 735 | PA module failure in slot X ( X is slot number) |
|  | 800 - 1036 | PA module status error in slot X (X is slot number) |
|  | 1998 | PA Diagnostics not enabled |
|  | 1999 | Diagnostics overflow diag data corrupted |
| **Default** | - | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | No Load | |
| **Related Parameters** | CHANERRSLOTNUM<br><br>CHANERRCHANNUM | |
| **Remarks** | This parameter indicates the error type on the channel. The error types conform to RIO standards. | |

## 16.3  PARAMETERFAULT

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Parameter Fault |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 6 of the Station Status byte 1, of the PROFIBUS diagnostic response message. |
| | The PROFIBUS DP slave sets this bit, if the last parameter frame was faulty. For example, wrong length, wrong identification number, and invalid parameters. |

# 16.4  PBLINK1ID

| | |
|---|---|
| **Specific to Block(s)** | Primary/Secondary PGM |
| **Description** | PBLINK1 Block IOID |
| **Data Type** | BLOCKID |
| **Exposure** | NONE |
| **Range** | >=0 |
| **Default** | 0 |
| **Config Load** | NOLOAD |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | PBLINK2ID |
| **Remarks** | This parameter provides the corresponding PBLINK1ID name, which is used in the detail displays. |

# 16.5  PBLINK2ID

| | |
|---|---|
| **Specific to Block(s)** | Primary/Secondary PGM |
| **Description** | PBLINK2 Block IOID |
| **Data Type** | BLOCKID |
| **Exposure** | NONE |
| **Range** | >=0 |
| **Default** | - |
| **Config Load** | NOLOAD |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | PBLINK1ID |
| **Remarks** | This parameter provides the corresponding PBLINK2ID name which is used in the detail displays. |

# 16.6  PDCCHANNUM[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | PDC Channel Number |
| **Data Type** | 16-Bit Unsigned Integer |
| **Range** | 1 to number of channels on associated PBHIOMB |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter defines the channel number of the associated I/O Module. |

## 16.7 PDCCONFIGURED

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Number of configurable PDCs |
| **Data Type** | INT32 |
| **Range** | 16<br>32 |
| **Default** | 32 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | ERDB Only |
| **Related Parameters** | - |
| **Remarks** | This parameter can be used to change the number of PDCs that can be configured. The primary goal of this parameter is to alter the number of configurable PDCs to support interoperability. |

# 16.8  PDCCONNSTATUS

| Specific to Block(s) | PIOMB | |
|---|---|---|
| Description | Connection Status | |
| Data Type | ENUM | |
| Range | 0 | NotConnected |
| | 1 | Connected |
| | 2 | ConfigError |
| Default | (0) NotConnected | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | • NotConnected - PIOMB is unable to connect to the PDC with which it is associated.<br>• Connected - PIOMB is able to connect to the PDC with which it is associated.<br>• ConfigError - The PIOMB association with the PDC has runtime errors. | |

## 16.9  PDCDATASIZE[0..15]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Data Size |
| **Data Type** | UINT8 |
| **Range** | 0-244 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the data size of the data module, which is used for this PDC. This is provided by the field network configuration tool. This is visible in the Monitoring view after the DSB is loaded. |

# 16.10 PDCDATASIZE[0..23]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Data Size |
| **Data Type** | UINT16 |
| **Range** | 0-244 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the data size of the data module, which is used for this PDC. This is provided by the field network configuration tool. This is visible in the Monitoring view after the DSB is loaded. |

## 16.11  PDCDATASIZE[0..33]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Data Size |
| **Data Type** | UINT16 |
| **Range** | 0-244 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the data size of the data module, which is used for this PDC. This is provided by the field network configuration tool. This is visible in the Monitoring view after the DSB is loaded. |

# 16.12  PDCDATASIZE[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Data Size |
| **Data Type** | UINT8 |
| **Range** | 0-244 |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the data size of the data module, which is used for this PDC. This is provided by the field network configuration tool. This is visible in the Monitoring view after the DSB is loaded. |

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Data Size |
| **Data Type** | UINT16 |
| **Range** | 0-244 |
| **Default** | - |
| **Config Load** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the data size of the data module, which is used for this PDC. This is provided by the field network configuration tool. This is visible in the Monitoring view after the DSB is loaded. |

## 16.13  PDCDESCRIPTION

| Specific to Block(s) | PIOMB |
|---|---|
| **Description** | PDC description |
| **Data Type** | NULL STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | PDCDESCRIPTION (from PDC) |
| **Remarks** | This parameter contains the PDC description as defined in the DSB. This parameter obtains its value through the PDC-PIOMB association. |

| Specific to Block(s) | PBHIOMB block |
|---|---|
| **Description** | PDC description |
| **Data Type** | String |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | "PDCNAMEREF" on page 356<br>"PDCNUMBER" on page 357 |
| **Remarks** | This parameter contains the PDC description as defined in the DSB. This parameter obtains its value through the PDC-PBHIOMB association. |

# 16.14  PDCDESCRIPTION[0..15]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | PDC description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the user-defined description of the PDC. |

# 16.15 PDCDESCRIPTION[0..33]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | PDC description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the user-defined description of the PDC. |

# 16.16 PDCDESCRIPTION[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | PDC description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter contains the user-defined description of the PDC.<br><br>Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |

## 16.17  PDCHASHCODE

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Hash code for PDA communication |
| **Data Type** | UINT32 |
| **Range** | None |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the calculated hash code of the PDC configuration. This parameter obtains its value through the PDC-PIOMB association. |

# 16.18  PDCHASHCODE[0..15]

| Specific to Block(s) | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET200M DSB |
|---|---|
| **Description** | Hash Code |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the calculated hash code of the PDC configuration. This is recalculated if the PDC configuration is changed. |

# 16.19  PDCHASHCODE[0..23]

| | |
|---|---|
| **Specific to Block(s)** | CEAGDSB |
| **Description** | Hash Code |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the calculated hash code of the PDC configuration. This is recalculated if the PDC configuration is changed. |

# 16.20  PDCHASHCODE[0..33]

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| **Description** | Hash Code |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the calculated hash code of the PDC configuration. This is recalculated if the PDC configuration is changed. |

## 16.21  PDCHASHCODE[0..MAXPDCNUMBER]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Hash Code |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the calculated hash code of the PDC configuration. This is recalculated if the PDC configuration is changed.<br><br>Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. |

# 16.22  PDCGROUPED

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | PDC Grouped |
| **Data Type** | BOOLEAN |
| **Range** | TRUE: PDC is grouped |
| | FALSE: PDC is not grouped |
| **Default** | FALSE |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | "NUMCHANS" on page 317 |
| **Remarks** | This parameter is set to "ON" when you configure the grouped PDC as "PDC reference." In addition, the number of channels can be configured only when this parameter is set "ON." |

## 16.23  PDCNAMEREF

| Specific to Block(s) | PIOMB |
|---|---|
| Description | PDC Name Reference |
| Data Type | INOUTCONN |
| Range | Length: 64 characters |
| Default | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | PIOMB |
| Related Parameters | - |
| Remarks | This parameter obtains its value through the PDC-PIOMB association.<br><br>After the PIOMB is successfully loaded, the PDCNAMEREF parameter must display the name of the PDC that is associated with this PIOMB. |

| Specific to Block(s) | PBHIOMB |
|---|---|
| Description | PDC Name Reference |
| Data Type | String |
| Range | Length: 64 characters |
| Default | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | AppDevOnly |
| Residence | SR |
| Related Parameters | "PDCDESCRIPTION" on page 346<br><br>"PDCNUMBER" on page 357 |
| Remarks | This parameter obtains its value through the PDC-PBHIOMB association.<br><br>After the PBHIOMB is successfully loaded, the PDCNAMEREF parameter must display the name of the PDC that is associated with this PBHIOMB. |

# 16.24 PDCNUMBER

| Specific to Block(s) | PIOMB |
|---|---|
| Description | PDC index number in DSB |
| Data Type | INT32 |
| Range | 0–63 |
| Default | -1 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter obtains its value through the PDC-PIOMB association. |

| Specific to Block(s) | PBHIOMB |
|---|---|
| Description | PDC index number |
| Data Type | INT8 |
| Range | 0 – 63 |
| Default | -1 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | |
| Remarks | This parameter obtains its value through the PDC-PBHIOMB association. |

## 16.25 PDCPBHIOMBNAME[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, TURCKDSB, CEAGDSB, SIEMENSET200 |
| **Description** | Associated PBHIOMB |
| **Data Type** | BLOCKID |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | - |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the PBHIOMB name to which the PDC is configured. This remains blank, if the PDC is not associated with a PBHIOMB.<br><br>**Note**: This parameter is visible only on the faceplates. |

# 16.26 PDCPIOMBNAME[0..15]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB |
| **Description** | Associated PIOMB |
| **Data Type** | BLOCKID |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | - |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the PIOMB name to which the PDC is configured. This remains blank, if the PDC is not associated with a PIOMB.<br><br>**Note**: This parameter is visible only on the faceplates. |

## 16.27 PDCPIOMBNAME[0..33]

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Associated PIOMB |
| **Data Type** | BLOCKID |
| **Range** | Length: 32 characters |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | - |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the PIOMB name to which the PDC is configured. This remains blank, if the PDC is not associated with a PIOMB.<br><br>**Note**: This parameter is visible only on the faceplates. |

# 16.28  PDCSTATE[0..15]

| Specific to Block(s) | Siemens DP/AS-i Link DSB, DRIVEDSB, Siemens ET200M DSB | |
|---|---|---|
| Description | PDC State | |
| Data Type | ENUM | |
| Range | 00 | PDC Not Configured |
| | 01 | PDC Configured |
| | 02 | PDC Configuration Failed |
| | 03 | PDC Opening PDC Delivery |
| | 04 | PDC Connected |
| Default | (00) PDC Not Configured | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NO LOAD | |
| Related Parameters | - | |
| Remarks | • PDC Not Configured - PDC is not configured.<br>• PDC Configured - PDC that is configured but not connected to PIOMB<br>• PDC Configuration Failed -PDC is not successfully registered with the PB.<br>• Opening PDC Delivery - Transient state when PDC is opening a connection with PIOMB.<br>• PDC Connected - PDC is connected to PIOMB. | |

# 16.29  PDCSTATE[0..23]

| Specific to Block(s) | CEAGDSB | |
|---|---|---|
| Description | PDC State | |
| Data Type | ENUM | |
| Range | 00 | PDC Not configured |
| | 01 | PDC Configured |
| | 02 | PDC Configuration Failed |
| | 03 | Opening PDC Delivery |
| | 04 | PDC Connected |
| Default | (00) PDC Not Configured | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NO LOAD | |
| Related Parameters | - | |
| Remarks | • PDC Not Configured - PDC is not configured.<br>• PDC Configured - PDC that is configured but not connected to PIOMB<br>• PDC Configuration Failed -PDC is not successfully registered with the PB.<br>• Opening PDC Delivery - Transient state when PDC is opening a connection with PIOMB.<br>• PDC Connected - PDC is connected to PIOMB. | |

# 16.30  PDCSTATE[0..33]

| Specific to Block(s) | Turck Excom DSB | |
|---|---|---|
| **Description** | PDC State | |
| **Data Type** | ENUM | |
| **Range** | 00 | PDC Not Configured |
| | 01 | PDC Configured |
| | 02 | PDC Configuration Failed |
| | 03 | PDC Opening PDC Delivery |
| | 04 | PDC Connected |
| **Default** | (00) PDC Not Configured | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | NO LOAD | |
| **Related Parameters** | - | |
| **Remarks** | • PDC Not Configured - PDC is not configured.<br>• PDC Configured - PDC that is configured but not connected to PIOMB<br>• PDC Configuration Failed -PDC is not successfully registered with the PB.<br>• Opening PDC Delivery - Transient state when PDC is opening a connection with PIOMB.<br>• PDC Connected - PDC is connected to PIOMB. | |

## 16.31 PDCSTATE[0..MAXPDCNUMBER]

| | | |
|---|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB | |
| **Description** | PDC State | |
| **Data Type** | ENUM | |
| **Range** | 00 | PDC Not Configured |
| | 01 | PDC Configured |
| | 02 | PDC Configuration Failed |
| | 03 | PDC Opening PDC Delivery |
| | 04 | PDC Connected |
| **Default** | (00) PDC Not Configured | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | NO LOAD | |
| **Related Parameters** | - | |
| **Remarks** | • PDC Not Configured - PDC is not configured.<br>• PDC Configured - PDC that is configured but not connected to PIOMB<br>• PDC Configuration Failed -PDC is not successfully registered with the PB.<br>• Opening PDC Delivery - Transient state when PDC is opening a connection with PIOMB.<br>• PDC Connected - PDC is connected to PIOMB.<br><br>Note: MAXPDCNUMBER = 16 for GENDSB and 64 for GENIODSB. | |

# 16.32  PDCSTATUS

| Specific to Block(s) | PIOMB | |
|---|---|---|
| Description | PDC Status | |
| Data Type | UINT16 | |
| Range | - | |
| Default | - | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | CEE | |
| Related Parameters | - | |
| Remarks | 0 | OK |
| | 1 | Priming |
| | 2 | Bad |
| | 3 | Connection Loss |
| | 4 | Hash Mismatch |
| | 5 | Not Configured |
| | 6 | Is Already Connected |
| | 7 | Not Existent |

## 16.33  PDCSUBRATE

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | PDC Subscription Rate |
| **Data Type** | ENUM |
| **Range** | 25_ms |
| | 50_ms |
| | 100_ms |
| | 200_ms |
| | 250_ms |
| | 500_ms |
| | 1000_ms |
| | 2000_ms |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | CEE |
| **Related Parameters** | IOSCHEDOPT |
| **Remarks** | The PDC subscription rate is the period at which the DSB publishes input data values to the C300 for a PIOMB. |
| | For configurations that do not need to receive the process data every 50 ms, you can reduce the PDC subscription rate. Also, you can reduce the PDC subscription rate to observe possible CPU usage and FTE traffic improvements. |
| | You can configure the PDC subscription rate for the entire PDC but not for the individual channels. |
| | You cannot modify the PDC subscription rate after loading the PIOMB. |
| | This parameter is not applicable to output type PIOMBs. |

# 16.34  PDCTYPE[0..15]

| Specific to Block(s) | Siemens ET200M DSB | |
|---|---|---|
| **Description** | PDC type of the Siemens ET200M DSB | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not configured |
| | 1 | Digital Input |
| | 2 | Analog Input |
| | 3 | Digital Output |
| | 4 | Analog Output |
| **Default** | 0 | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | CEE | |
| **Related Parameters** | CHLOWRANGE | |
| | CHHIGHRANGE | |
| | AISENSORTYPE | |
| | AOSENSORTYPE | |
| **Remarks** | This parameter represents the module types supported by the Siemens ET200M DSB. You must select the appropriate I/O module for configuring the required I/O module. | |

| Specific to Block(s) | DRIVEDSB | |
|---|---|---|
| **Description** | PDC type of the Generic Drive DSB. | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not configured |
| | 1 | PPO1 inputs ch 0-16 (0-15 DI 16 AI) |
| | 2 | PPO1 outputs ch 0-16 (0-15 DO 16 AO) |
| | 3 | PPO2 inputs ch 0-31 (0-15 DI 16 AI) |
| | 4 | PPO2 outputs ch 0-31 (0-15 DO 16 AO) |
| | 5 | PPO3 inputs ch 0-16 (0-15 DI 16 AI) |
| | 6 | PPO3 outputs ch 0-16 (0-15 DO 16 AO) |
| | 7 | PPO4 inputs ch 0-31 (0-15 DI 16 AI) |
| | 8 | PPO4 outputs ch 0-31 (0-15 DO 16 AO) |
| | 9 | PPO5 inputs ch 0-31 (0-15 DI 16 AI) |
| | 10 | PPO5 outputs ch 0-31 (0-15 DO 16 AO) |
| | 11 | PKW inputs |
| | 12 | PKW outputs |
| | 13 | Configurable inputs ch 0-31 |
| | 14 | Configurable outputs ch 0-31 |

| Default | 0 |
| --- | --- |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | PGM |
| Related Parameters | - |
| Remarks | This parameter represents the user-defined PDCTYPE for the PDC.<br><br>Only one input PPO type PDC and one output PPO type PDC can be configured for a drive device. If you want to configure additional PDCs, the PDC type must be either "User Configurable" or "PKW".<br><br>For PPO input types, the 16 DI channels map to the individual bits of the status word of PPO. The standard AI channel maps to the real time actual value of the drive (speed or torque).<br><br>For PPO output types, the 16 DO channels map to the individual bits of the control word of PPO. The standard AO channel maps to the set point of the drive (speed or torque).<br><br>The PKW Inputs and PKW Outputs PDC types are user-configurable channels and types that make use of the acyclic PKW data area to read parameter information from the drive. These channels can be used to read information such as statistics, configuration information, and other miscellaneous data from the drive. |

| Specific to Block(s) | Siemens DP/AS-i Link DSB | |
| --- | --- | --- |
| Description | PDC type of the Siemens DP/AS-i Link DSB | |
| Data Type | ENUM | |
| Range | 0 | NotConfigured |
| | 1 | Slave 1-7 inputs |
| | 2 | Slave 8-15 inputs |
| | 3 | Slave 16-23 inputs |
| | 4 | Slave 24-31 inputs |
| | 5 | Slave 1-7 outputs |
| | 6 | Slave 8-15 outputs |
| | 7 | Slave 16-23 outputs |
| | 8 | Slave 24-31 outputs |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | - | |

| Remarks | This parameter represents the user-defined PDCTYPE for the PDC. |
| --- | --- |
| | The "Slave 1-7 inputs" and "Slave 1-7 outputs" PDCs support 28 channels. The other PDCs support 32 channels. The channels are assigned to the slave devices in groups of 4. For example, a PDC type of "Slave 1-7 inputs" will have the first 4 input channels mapped to slave 1, the next 4 input channels mapped to slave 2, and so on. |
| | **Note**: When a slave device has less than 4 inputs or outputs, some of the channels may be unused. |

## 16.35 PDCTYPE[0..23]

| Specific to Block(s) | CEAGDSB | |
| --- | --- | --- |
| Description | PDC type of the CEAGDSB | |
| Data Type | ENUM | |
| Range | 0 | Not configured |
| | 1 | 2 channel DI with LFD |
| | 2 | 3 channel DI with LFD |
| | 3 | 8 channel DI with LFD |
| | 4 | 4 channel DI no Status |
| | 5 | 8 channel DI no Status |
| | 6 | 4 channel DI just LFD |
| | 7 | 1 channel AI with LFD and LZD |
| | 8 | 4 channel AI with LFD and LZD |
| | 9 | 1 channel AI with LFD |
| | 10 | 4 channel AI with LFD |
| | 11 | 2 channel AI no Status |
| | 12 | 2 channel NI Communication Module |
| | 13 | 2 channel NO Communication Module |
| | 14 | 2 channel DO |
| | 15 | 4 channel DO with data invalid |
| | 16 | 8 channel DO with data invalid |
| | 17 | 1 channel AO |
| | 18 | 4 channel AO |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | This parameter represents the module types supported by the CEAGDSB. You must select the appropriate I/O module for configuring the required I/O module. | |

# 16.36  PDCTYPE[0...33]

| | | |
|---|---|---|
| **Specific to Block(s)** | Turck Excom DSB | |
| **Description** | PDC type of Turck Excom DSB | |
| **Data Type** | ENUM | |
| **Range** | 0 | Not configured |
| | 1 | Analog Input (AI40Ex) |
| | 2 | Analog Input (AI41Ex) |
| | 3 | Analog Input (AIH40Ex) |
| | 4 | Analog Input (AIH41Ex) |
| | 5 | Analog Output (AO40Ex) |
| | 6 | Analog Output (AOH40Ex) |
| | 7 | Temperature Input (TI40ExR) |
| | 8 | Temperature Input (TI40ExT) |
| | 9 | FreqCounter_Input (DF20ExF) |
| | 12 | PulseCounter_Output (DF20ExP) |
| | 13 | Digital Input (DI40Ex) |
| | 14 | Digital Output (DO40Ex) |
| | 15 | Digital_Input (DM80Ex) |
| | 16 | Digital_Output (DM80Ex) |
| | 17 | TemperatureInput-TI41ExR |
| | 18 | DigitaInput-DI40N |
| | 19 | Digital_Output-DO60N |
| | 20 | HARTInputData |
| | 21 | Gateway Status |
| | 22 | Gateway Command |
| **Default** | 0 | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | PGM | |
| **Related Parameters** | CHLOWRANGE<br><br>CHHIGHRANGE<br><br>INPUTSIGNALTYPE<br><br>OUTPUTSIGNALTYPE | |
| **Remarks** | This parameter represents the module types supported by the Turck Excom DSB. You must select the appropriate I/O module for configuring the required I/O module. | |

## 16.37 PDCTYPE[0..MAXPDCNUMBER]

| Specific to Block(s) | GENDSB | |
|---|---|---|
| Description | PDC type of the generic DSB | |
| Data Type | ENUM | |
| | 0 | Digital inputs ch 0-31 |
| | 1 | Analog inputs (uint8) ch 0-31 |
| | 2 | Analog inputs (int8) ch 0-31 |
| | 3 | Analog inputs (uint16) ch 0-31 |
| | 4 | Analog inputs (int16) ch 0-31 |
| | 5 | Analog inputs (int32) ch 0-31 |
| | 6 | Analog inputs (float32) ch 0-31 |
| | 7 | Digital output ch 0-31 |
| | 8 | Analog outputs (uint8) ch 0-31 |
| | 9 | Analog outputs (int8) ch 0-31 |
| | 10 | Analog outputs (uint16) ch 0-31 |
| | 11 | Analog outputs (int16) ch 0-31 |
| | 12 | Analog outputs (int32) ch 0-31 |
| | 13 | Analog outputs (float32) ch 0-31 |
| | 14 | Configurable inputs ch 0-31 |
| | 15 | Configurable outputs ch 0-31 |
| | 16 | Extended Diagnostic |
| Default | 0 | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | This parameter represents the module types supported by the GENDSB. You must select the appropriate I/O module for configuring the required I/O module. | |

| Specific to Block(s) | GENIODSB | |
|---|---|---|
| Description | PDC type of the generic DSB | |
| Data Type | ENUM | |
| | 0 | Digital inputs ch 0-16 |
| | 1 | Analog inputs (uint8) ch 0-16 |
| | 2 | Analog inputs (int8) ch 0-16 |
| | 3 | Analog inputs (uint16) ch 0-16 |
| | 4 | Analog inputs (int16) ch 0-16 |
| | 5 | Analog inputs (int32) ch 0-16 |
| | 6 | Analog inputs (float32) ch 0-16 |

| | 7 | Digital output ch 0-16 |
|---|---|---|
| | 8 | Analog outputs (uint8) ch 0-16 |
| | 9 | Analog outputs (int8) ch 0-16 |
| | 10 | Analog outputs (uint16) ch 0-16 |
| | 11 | Analog outputs (int16) ch 0-16 |
| | 12 | Analog outputs (int32) ch 0-16 |
| | 13 | Analog outputs (float32) ch 0-16 |
| | 14 | Configurable inputs ch 0-16 |
| | 15 | Configurable outputs ch 0-16 |
| | 16 | Extended Diagnostic |
| **Default** | 0 | |
| **Config Load** | Yes | |
| **Active Loadable** | No | |
| **Access Lock** | Application Developer | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | This parameter represents the module types supported by the GENIODSB. You must select the appropriate I/O module for configuring the required I/O module. | |

## 16.38 PGMIPADDRESS

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Associated PGM IP address |
| **Data Type** | STRING |
| **Range** | 0.0.0.0 to 255.255.255.255 |
| **Default** | 0.0.0.0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter obtains its value through the PDC-PIOMB association and is updated prior to loading the PIOMB. |

# 16.39  PGMNAME

| | |
|---|---|
| **Specific to Block(s)** | PIOMB |
| **Description** | Associated PGM block name |
| **Data Type** | BLOCKID |
| **Range** | - |
| **Default** | Null |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the PGM name to which the PIOMB is associated.<br><br>This parameter obtains its value through the PDC-PIOMB association. |

## 16.40 PKWLASTERRORID

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Last PKW error ID |
| **Data Type** | UINT8 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter holds a list of the last ten error IDs (reasons for an error response) for PKW responses that were error cases. |

# 16.41  PKWLASTERRRESPID

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Last PKW error Response ID |
| Data Type | UINT8 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | - |
| Remarks | This parameter displays the list of the last ten response IDs for PKW responses that were error cases. |

# 16.42  PKWNUMRESPERRORS

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Number of PKW response errors |
| **Data Type** | UINT32 |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter counts and displays the number of responses from PKW requests that are error related. For example, parameter reads for invalid parameter IDs, storing the wrong data type, or attempting to store a value that is out of range for a parameter. |

# 16.43  PKWNUMSLAVEINTS

| Specific to Block(s) | DRIVEDSB |
| --- | --- |
| Description | Number of slave interrupts |
| Data Type | UINT32 |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | - |
| Remarks | This parameter counts and displays the number of times that the drive has interrupted PKW processing to publish a parameter change. This can occur when a parameter value is manually changed from the drive control panel while the PGM is connected to the drive. Also, this can occur only if the drive supports it. |

# 16.44  PKWPARAMNUM[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | PROFIdrive device parameter number |
| **Data Type** | UINT16 |
| **Range** | 0-1999 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter is applicable only for the PKW PDCs types and is used by the PKW area configuration.<br><br>If you want to configure the PKW area for the acyclic data transfer, you must set a valid parameter number to the user configurable PDC channels.<br><br>You can set multiple parameter numbers for the same PKW area, as the DSB multiplexes the PKW area to process the multiple parameter IDs one by one from the drive. |

# 17  Rxxx Parameters

**Related topics**

## 17.1  RAWEXTDIAGDATA[0..24]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Raw extended diagnostic data |
| **Data Type** | STRING |
| **Range** | NA |
| **Default** | NA |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | The Raw Extended Diagnostic Data group displays diagnostic bytes received from the device. Each row displays 10 bytes of diagnostic in hexadecimal format, where each byte is separated by comma. The first row displays byte number 0 to 9, second row displays bytes number 10 to 19 and so on. |

# 17.2  RDNGWERROR

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| Description | Error in redundant gateway |
| Data Type | BOOLEAN |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | - |
| Remarks | When the gateway redundancy mode is set to Mode1, this diagnostic information is provided by the gateway. |

## 17.3  RDNGWMISSING

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Redundant gateway is missing |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NOLOAD |
| **Related Parameters** | - |
| **Remarks** | When the gateway redundancy mode is set to Mode1, this diagnostic information is provided by the gateway. |

## 17.4  RDNGWNOTCOMMUNICATING

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| Description | Redundant gateway is not communicating |
| Data Type | BOOLEAN |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | - |
| Remarks | When the gateway redundancy mode is set to Mode1, this diagnostic information is provided by the gateway. |

## 17.5  RDNGWNOTREADY

| Specific to Block(s) | Turck Excom DSB |
|---|---|
| Description | Redundancy gateway is not ready |
| Data Type | BOOLEAN |
| Range | - |
| Default | - |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | NOLOAD |
| Related Parameters | - |
| Remarks | When the gateway redundancy mode is set to Mode1, this diagnostic information is provided by the gateway. |

## 17.6 REPARAMETERIZATIONREQU

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Reparameterization Requested |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 0 of the Station Status byte 2, of the PROFIBUS diagnostic response message. The PROFIBUS DP slave sets this bit. If the PROFIBUS DP slave sets this bit, the respective slave is reparameterized and reconfigured. The bit remains set until parameterization is complete. If bit 1 and bit 0 are set, bit 0 has the higher priority. |

# 17.7  RESETCOUNTERS

| | | |
|---|---|---|
| **Specific to Block(s)** | GENDSB, CEAGDSB, DRIVEDSB | |
| **Description** | Reset Counters | |
| **Data Type** | BOOLEAN | |
| **Range** | Off (0) | Reset disabled |
| | On (1) | Reset enabled |
| **Default** | 0 | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | Engineer | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | When you enable this parameter, the DSBCONNLOSTCOUNT (Connection Lost Counter) parameter is reset. | |

# 17.8  RESETHCOMERR

| | |
|---|---|
| **Specific to Block** | PBHCHANNEL block |
| **Description** | Reset Errors and Failures - Clears and resets HART communication diagnostic parameters to their default values. |
| **Data Type** | Boolean Push button |
| **Range** | — |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | |
| **Related Parameters** | "HCMDFAIL" on page 186<br><br>"HCOMFAIL" on page 188<br><br>"HCMDRESP" on page 187<br><br>"HCOMSTS" on page 189<br><br>"HNCOMERR" on page 228 |
| **Remarks** | When RESETHCOMERR is pressed:<br><br>• HNCOMERR is set to zero.<br>• HCOMSTS is set to its default value.<br>• HCOMFAIL is set to its default value.<br>• HCMDFAIL is set to its default value.<br>• HCMDRESP is set to its default value.<br>• Any pending notifications related to HNCOMERR, HCOMSTS and HCMDFAIL are returned to normal. |

## 17.9  RIGHTGATEWAYACTIVE

| | |
|---|---|
| **Specific to Block(s)** | Turck Excom DSB |
| **Description** | Gateway on the right slot is Active. |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | Input Status data obtained from the gateway. The first 2 bits of the second byte in the input word provides this information. |

# 17.10  ROMDEFECT

| Specific to Block(s) | Siemens DP/AS-i Link DSB |
|---|---|
| Description | EEPROM is defective |
| Data Type | BOOLEAN |
| Range | TRUE |
| | FALSE |
| Default | FALSE |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter indicates a defective EEPROM. |

# 18 Sxxx Parameters

**Related topics**

# 18.1  SECTIONTYPE[0..15][0..31]

| Specific to Block(s) | DRIVEDSB | |
|---|---|---|
| Description | PKW area configuration parameter | |
| Data Type | ENUM | |
| Range | 0 | Normal |
| | 1 | PKW |
| | 2 | PKW Array |
| Default | Normal | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | Application Developer | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | This parameter is used for creating channels mapped to the PKW area for acyclic data exchange. | |
| | For PKW PDC types (PKW and PKW Array), the data and bit offset are disabled. Instead, the parameter number and sub-index is used to read or write a value based on whether the PDC is an input type or an output type PDC. | |
| | The only difference between "PKW" and "PKW Array" is that the "PKW Array" uses the sub-index parameter to specify an arrayed parameter on the drive. However, the "PKW" does not use the sub-index parameter to specify an arrayed parameter on the drive. | |
| | When you select a section type, the following data types are available for configuration. | |
| | • INT16<br>• UINT16<br>• INT32<br>• UINT32<br>• FLOAT32 | |

## 18.2  SLAVEADDRESS

| Specific to Block(s) | GENDSB, GENIODSB, GENPADSB, GENPAGWDSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
|---|---|
| Description | Slave Address |
| Data Type | UINT8 |
| Range | 2-125 |
| Default | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Application Developer |
| Residence | PGM |
| Related Parameters | - |
| Remarks | The slave address is defined while configuring the field network on the Field Network Configuration tab of the PBLink1/PBLink2 block. The slave address must be unique for a PBLink block. However, another PBLink block can have the same slave address .

You cannot change the slave address after the DSB block is loaded to the system.

**Attention**
• For GENPADSB, the transparent segment coupler displays all devices connected to the PROFIBUS PA network as if they were PROFIBUS DP field devices.
• For GENPAGWDSB, the PROFIBUS DP/PA link is a DP slave that acts as a proxy for the PA field devices. The DP/PA Link reserves one PROFIBUS DP slave address. |

| Specific to Block(s) | PBHIOIMB block |
|---|---|
| Description | Slave Address |
| Data Type | UINT8 |
| Range | 2 – 126 |
| Default | 2 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | The slave address is configured in the DSB block and it is auto-populated to the PBHIOMB block.

**Note**
You cannot change the slave address after the DSB block is loaded to the system. |

# 18.3  SLAVEDEACTIVATE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Slave Deactivate |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter provides information on the DP slave that is deactivated, which means the slave that has been removed from the current processing. |

# 18.4  SLAVEDEVICE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Slave Device |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 2 of the Station Status byte 2, of the PROFIBUS diagnostic response message. This bit is set to 1 by the PROFIBUS DP slave. |

## 18.5  SLAVEERR1[0..30]

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | Slave errors (Segment 1) - An error in the AS-i slave on Segment 1 |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates if there is an error for each of the 31 possible AS-i slave devices on the first AS-i master of the DP/AS-i Link. |
| | The mapping is from a 0-based parameter to a 1-based slave number. Therefore, SLAVEERR[0] = TRUE implies that slave number 1 has an error. |
| | **Attention**<br>Note that even though the status of the Slave errors of Segment 1 and Segment 2 are displayed as OK in the Diagnostics tab, it does not indicate that a slave exists at that position. This only implies that no errors have been received. |

# 18.6 SLAVEERR2[0..30]

| Specific to Block(s) | Siemens DP/AS-i Link DSB |
|---|---|
| Description | Slave errors (Segment 2) - An error in the AS-i slave on Segment 2 |
| Data Type | BOOLEAN |
| Range | TRUE |
| | FALSE |
| Default | FALSE |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | CEE |
| Related Parameters | - |
| Remarks | This parameter Indicates if there is an error for each of the 31 possible AS-i slave devices on the second AS-i master of the DP/AS-i Link. The mapping is from a 0-based parameter to a 1-based slave number. Therefore, SLAVEERR[0] = TRUE implies that slave number 1 has an error. This parameter is applicable only to the DP/AS-i Link Advanced dual-master version because the DP/AS-i Link 20E does not have the dual-master capability. **Attention** Note that even though the status of the Slave errors of Segment 1 and Segment 2 are displayed as OK in the Diagnostics tab, it does not indicate that a slave exists at that position. This only implies that no errors have been received. |

## 18.7  SLAVESTATE

| Specific to Block(s) | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB | |
|---|---|---|
| Description | Slave State | |
| Data Type | ENUM | |
| Range | Idle | |
| | Configured | |
| | Configuration Error | |
| | Communicating | |
| | Communication Error | |
| | Internal Error | |
| Default | - | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NO LOAD | |
| Related Parameters | CONBRKSUPTIME | |
| Remarks | Idle (blue) | The DSB is created but not loaded. |
| | Configured (blue) | All configuration parameters are loaded. |
| | Configuration error (yellow) | The DSB or at least one PDC has configuration error or slave indicates configuration error in diagnostics data and slave is communicating. The PDC configuration errors can be the because of the following: <br> • non-bound net tag. <br> • input bound to output data or vice versa. <br> • size of net tag bound to PDC is not big enough to store data for all channels defined in PDC. |
| | Communicating (green) | The device diagnostics data indicates that the slave is communicating and there are no configuration errors. |
| | Communication error (red) | The device diagnostics data indicates that the slave is not communicating. |
| | Internal error (red) | The DSB block has detected critical internal software error that prevents communication with the device. If a DSB enters this state, the state does not change until the DSB is reloaded. |
| | **Note:** In the Monitoring view, GENDSBPB block icon must be green only when this parameter value is "Communicating". | |

| Specific to Block(s) | Protocol Block |
|---|---|
| Description | Slave State |
| Data Type | ENUM |

| Range | 0 | UNDEFINED |
|---|---|---|
| | 1 | OK |
| | 2 | FAILED |
| | 3 | WARNING |
| | 4 | RESERVED |
| **Default** | - | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | This parameter indicates whether the master is in cyclic data exchange to all the configured slaves. If at least one slave is missing or if the slave has a diagnostic request pending, the status changes to "FAILED". <br><br> If the PROFIBUS master is not able to communicate with any slave. the status changes to "UNDEFINED". | |

## 18.8  SLAVESTATE

| | | |
|---|---|---|
| **Specific to Block(s)** | Protocol Block | |
| **Description** | Slave State | |
| **Data Type** | ENUM | |
| **Range** | 0 | UNDEFINED |
| | 1 | OK |
| | 2 | FAILED |
| | 3 | WARNING |
| | 4 | RESERVED |
| **Default** | - | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | This parameter indicates whether the master is in cyclic data exchange to all the configured slaves. If at least one slave is missing or if the slave has a diagnostic request pending, the status changes to "FAILED". If the PROFIBUS master is not able to communicate with any slave. the status changes to "UNDEFINED". | |

# 18.9  SLAVESTATE

| Specific to Block(s) | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET 200M DSB | |
|---|---|---|
| Description | Slave State | |
| Data Type | ENUM | |
| Range | Idle | |
| | Configured | |
| | Configuration Error | |
| | Communicating | |
| | Communication Error | |
| | Internal Error | |
| Default | - | |
| Config Load | No | |
| Active Loadable | No | |
| Access Lock | View Only | |
| Residence | NO LOAD | |
| Related Parameters | CONBRKSUPTIME | |
| Remarks | Idle (blue) | The DSB is created but not loaded. |
| | Configured (blue) | All configuration parameters are loaded. |
| | Configuration error (yellow) | The DSB or at least one PDC has configuration error or slave indicates configuration error in diagnostics data and slave is communicating. The PDC configuration errors can be the because of the following:<br>• non-bound net tag.<br>• input bound to output data or vice versa.<br>• size of net tag bound to PDC is not big enough to store data for all channels defined in PDC. |
| | Communicating (green) | The device diagnostics data indicates that the slave is communicating and there are no configuration errors. |
| | Communication error (red) | The device diagnostics data indicates that the slave is not communicating. |
| | Internal error (red) | The DSB block has detected critical internal software error that prevents communication with the device. If a DSB enters this state, the state does not change until the DSB is reloaded. |
| | **Note:** In the Monitoring view, GENDSBPB block icon must be green only when this parameter value is "Communicating". | |

# 18.10  SLOTNUM

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Slot Number |
| **Data Type** | UINT8 |
| **Range** | 0 – 63 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | "PDCNAMEREF" on page 356<br>"PDCDESCRIPTION" on page 346 |
| **Remarks** | This parameter represents the slot number to which this HART IOM belongs. |

## 18.11  SLOTOFFSETINSYCON

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | 1$^{st}$ Slot Offset in Sycon |
| **Data Type** | UINT8 |
| **Range** | 0-8 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter indicates the slot number offset for the 1$^{st}$ IO Module in Sycon.Net configuration. For example, in the TURCK EXCOM Slave, the slot offset is 1 because the gateway module is present in slot number 1 and the IO modules starts from the slot number 2. Similarly, in the SiemensET200M Slave, the first 3 slots are configured and the IO modules starts from slot number 4. Hence, the slot offset is 3. |

## 18.12  SLOTTYPE

| | | |
|---|---|---|
| **Specific to Block(s)** | PBHIOMB | |
| **Description** | Slot Type | |
| **Data Type** | Enumeration | |
| | 0 | Not Configured |
| | 1 | Digital Input |
| | 2 | Analog Input |
| | 3 | Numeric Input |
| | 4 | Digital Output |
| | 5 | Analog Output |
| **Range** | 6 | Numeric Output |
| **Default** | Not Configured | |
| **Config Load** | Yes | |
| **Access Lock** | ViewOnly | |
| **Active Loadable** | No | |
| **Residence** | PGM | |
| **Related Parameters** | | |
| **Remarks** | This parameter represents the IO type for which the slot is configured. | |

# 18.13  STATE

| Specific to Block(s) | Protocol Block |
|---|---|
| Description | PB Link State - State of the Protocol Block |
| Data Type | ENUM |
| Range | NOTLOADED |
| | LOADED |
| | ONLINE |
| Default | NOTLOADED |
| Config Load | No |
| Active Loadable | No |
| Access Lock | View Only |
| Residence | PGM |
| Related Parameters | - |
| Remarks | - |

# 18.14  STATICDIAGNOSTICS

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Static Diagnostics |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit number 1 of the second byte of the Station Status. If this parameter value is "On", it indicates that the slave is in the start-up phase. |

# 18.15  STATIONNOTEXIST

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Station Non Existent |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 0 of the Station Status byte 1, of the PROFIBUS diagnostic response message. The PROFIBUS DP master sets this bit, if the respective PROFIBUS DP slave cannot be reached over the line. If this bit is set, the diagnostic bits contain the state of the last diagnostic message or the initial value. The PROFIBUS DP slave sets this bit to zero. |

# 18.16  STATIONNOTREADY

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Station Not Ready |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 1 of the Station Status byte 1, of the PROFIBUS diagnostic response message. |
| | This PROFIBUS DP slave sets this bit, if it is not yet ready for the data transfer. |

# 18.17  STATUSALARMLIMIT

| | |
|---|---|
| **Specific to Block(s)** | GENPADSB, GENPAGWDSB |
| **Description** | First acceptable PA status value |
| **Data Type** | ENUM |
| **Range** | Refer to the table below for the range details. |
| **Default** | 128 - Good_NonCascade |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | If the PA status is below the defined first acceptable PA status, an alarm "**Data status below limit in PDC**" is reported.<br><br>For this alarm to be reported, you must define the first acceptable PA status value while configuring the DSB (GENPADSB/GENPWADSB). |

### STATUSALARMLIMIT ranges and their description

The following table lists the ranges of the STATUSALARMLIMIT parameter and a description of the ranges.

| Range | Description |
|---|---|
| 0 | Bad_NonSpecific |
| 1 | Bad_NonSpecificLowLim |
| 2 | Bad_NonSpecificHighLim |
| 3 | Bad_NonSpecificConstant |
| 4 | Bad_ConfigError |
| 5 | Bad_ConfigErrorLowLim |
| 6 | Bad_ConfigErrorHighLim |
| 7 | Bad_ConfigErrorConstant |
| 8 | Bad_ConnError |
| 9 | Bad_ConnErrorLowLim |
| 10 | Bad_ConnErrorHighLim |
| 11 | Bad_ConnErrorConstant |
| 12 | Bad_DevError |
| 13 | Bad_DevErrorLowLim |
| 14 | Bad_DevErrorHighLim |
| 15 | Bad_DevErrorConstant |
| 16 | Bad_SensorError |
| 17 | Bad_SensorErrLowLim |
| 18 | Bad_SensorErrHighLim |
| 19 | Bad_SensorErrorConstant |
| 20 | Bad_CommErrUsableVal |

| Range | Description |
|-------|-------------|
| 21 | Bad_CommErrUsableValLowLim |
| 22 | Bad_CommErrUsableValHighLim |
| 23 | Bad_CommErrUsableValConstant |
| 24 | Bad_CommErrNoUsableVal |
| 25 | Bad_CommErrNoUsableValLowLim |
| 26 | Bad_CommErrNoUsableValHighLim |
| 27 | Bad_CommErrNoUsableValConstant |
| 28 | Bad_OutOfServError |
| 29 | Bad_OutOfServErrorLowLim |
| 30 | Bad_OutOfServErrorHighLim |
| 31 | Bad_OutOfServErrorConstant |
| 32 | Bad_Passivated |
| 33 | Bad_PasivatedLowLim |
| 34 | Bad_PasivatedHighLim |
| 35 | Bad_PasivatedConstant |
| 36 | Bad_MaintenanceAlarm |
| 37 | Bad_MintenanceAlrLowLim |
| 38 | Bad_MintenanceAlrHighLim |
| 39 | Bad_MintenanceAlrConstant |
| 40 | Bad_ProcessRelated |
| 41 | Bad_ProcessRelatedLowLim |
| 42 | Bad_ProcessRelatedHighLim |
| 43 | Bad_ProcessRelatedConstant |
| 44 | Bad_NonDef_44 |
| 45 | Bad_NonDef_45_LowLim |
| 46 | Bad_NonDef_46_HighLim |
| 47 | Bad_NonDef_47_Constant |
| 48 | Bad_NonDef_48 |
| 49 | Bad_NonDef_49_LowLim |
| 50 | Bad_NonDef_50_HighLim |
| 51 | Bad_NonDef_51_Constant |
| 52 | Bad_FunctionalityCheck |
| 53 | Bad_FunctionalityCheckLowLim |
| 54 | Bad_FunctionalityCheckHighLim |
| 55 | Bad_FunctionalityCheckConstant |
| 56 | Bad_NonDef_56 |
| 57 | Bad_NonDef_57_LowLim |
| 58 | Bad_NonDef_58_HighLim |
| 59 | Bad_NonDef_59_Constant |
| 60 | Bad_NonDef_60 |
| 61 | Bad_NonDef_61_LowLim |

| Range | Description |
| --- | --- |
| 62 | Bad_NonDef_62_HighLim |
| 63 | Bad_NonDef_63_Constant |
| 64 | Unc_NonSpecific |
| 65 | Unc_NonSpecificLowLim |
| 66 | Unc_NonSpecificHighLim |
| 67 | Unc_NonSpecificConstant |
| 68 | Unc_LastUsableValue |
| 69 | Unc_LastUsableValue |
| 70 | Unc_LastUsableValueLowLim |
| 71 | Unc_LastUsableValueConstant |
| 72 | Unc_SubstituteValue |
| 73 | Unc_SubstituteValueLowLim |
| 74 | Unc_SubstituteValueHighLim |
| 75 | Unc_SubstituteValueConstant |
| 76 | Unc_InitialValueValue |
| 77 | Unc_InitialValueValueLowLim |
| 78 | Unc_InitialValueValueHighLim |
| 79 | Unc_InitialValueConstant |
| 80 | Unc_SenserInaccurate |
| 81 | Unc_SenserInaccurateLowLim |
| 82 | Unc_SenserInaccurateHighLim |
| 83 | Unc_SenserInaccurateConstant |
| 84 | Unc_RangeViolation |
| 85 | Unc_RangeViolationLowLim |
| 86 | Unc_RangeViolationHighLim |
| 87 | Unc_RangeViolationConstant |
| 88 | Unc_SubNormal |
| 89 | Unc_SubNormalLowLim |
| 90 | Unc_SubNormalHighLim |
| 91 | Unc_SubNormalConstant |
| 92 | Unc_ConfigurationError |
| 93 | Unc_ConfigurationErrorLowLim |
| 94 | Unc_ConfigurationErrorHighLim |
| 95 | Unc_ConfigurationErrorConstant |
| 96 | Unc_SimulatedValue |
| 97 | Unc_SimulatedValueLowLim |
| 98 | Unc_SimulatedValueHighLim |
| 99 | Unc_SimulatedValueConstant |
| 100 | Unc_SensorCalibration |
| 101 | Unc_SensorCalibration |
| 102 | Unc_SensorCalibrationLowLim |

| Range | Description |
|-------|-------------|
| 103 | Unc_SensorCalibrationHighLim |
| 104 | Unc_MaintenanceDemandConstant |
| 105 | Unc_MaintenanceDemandLowLim |
| 106 | Unc_MaintenanceDemandHighLim |
| 107 | Unc_MaintenanceDemandConstant |
| 108 | Unc_NonDef_108 |
| 109 | Unc_NonDef_108LowLim |
| 110 | Unc_NonDef_108HighLim |
| 111 | Unc_NonDef_108Constant |
| 112 | Unc_SimulatedValStart |
| 113 | Unc_SimulatedValStartLowLim |
| 114 | Unc_SimulatedValStartHighLim |
| 115 | Unc_SimulatedValStartConstant |
| 116 | Unc_SimulatedValEnd |
| 117 | Unc_SimulatedValEndLowLim |
| 118 | Unc_SimulatedValEndHighLim |
| 119 | Unc_SimulatedValEndConstant |
| 120 | Unc_ProcessRealated |
| 121 | Unc_ProcessRealatedLowLim |
| 122 | Unc_ProcessRealatedHighLim |
| 123 | Unc_ProcessRealatedConstant |
| 124 | Unc_NonDef_124 |
| 125 | Unc_NonDef_125_LowLim |
| 126 | Unc_NonDef_126_HighLim |
| 127 | Unc_NonDef_127_Constant |
| 128 | Good_NonCascade |
| 129 | Good_NonCascadeLowLim |
| 130 | Good_NonCascadeHighLim |
| 131 | Good_NonCascadeConstant |
| 132 | GoodNC_ActiveBlockAlr |
| 133 | GoodNC_ActiveBlockAlrLowLim |
| 134 | GoodNC_ActiveBlockAlrHighLim |
| 135 | GoodNC_ActiveBlockAlrConstant |
| 136 | GoodNC_ActiveAdvisorykAlr |
| 137 | GoodNC_ActiveAdvisorykAlrLowLim |
| 138 | GoodNC_ActiveAdvisorykAlrHighLim |
| 139 | GoodNC_ActiveAdvisorykAlrConstant |
| 140 | GoodNC_ActiveCriticalAlr |
| 141 | GoodNC_ActiveCriticalAlrLowLim |
| 142 | GoodNC_ActiveCriticalAlrHighLim |
| 143 | GoodNC_ActiveCriticalAlrConstant |

| Range | Description |
|---|---|
| 144 | GoodNC_UnackBlockAlr |
| 145 | GoodNC_UnackBlockAlrLowLim |
| 146 | GoodNC_UnackBlockAlrHighLim |
| 147 | GoodNC_UnackBlockAlConstant |
| 148 | GoodNC_UnackAdvisoryAlr |
| 149 | GoodNC_UnackAdvisoryAlrLowLim |
| 150 | GoodNC_UnackAdvisoryAlrHighLim |
| 151 | GoodNC_UnackAdvisoryAlrConstant |
| 152 | GoodNC_UnackCriticalAlr |
| 153 | GoodNC_UnackCriticalAlrLowLim |
| 154 | GoodNC_UnackCriticalAlrHighLim |
| 155 | GoodNC_UnackCriticalAlrConstant |
| 156 | GoodNC_LocalOverride |
| 157 | GoodNC_NonDefined_157_LowLim |
| 158 | GoodNC_NonDefined_158_HighLim |
| 159 | GoodNC_NonDefined_159_Constant |
| 160 | GoodNC_InitiateFailSafe |
| 161 | GoodNC_InitiateFailSafeLowLim |
| 162 | GoodNC_InitiateFailSafeHighLim |
| 163 | GoodNC_InitiateFailSafeConstant |
| 164 | GoodNC_MaintenanceRequired |
| 165 | GoodNC_MaintenanceRequiredLowLim |
| 166 | GoodNC_MaintenanceRequiredHighLim |
| 167 | GoodNC_MaintenanceRequiredConstant |
| 168 | GoodNC_MaintenanceDemanded |
| 169 | GoodNC_MaintenanceDemandedLowLim |
| 170 | GoodNC_MaintenanceDemandedHighLim |
| 171 | GoodNC_MaintenanceDemandedConstant |
| 172 | GoodNC_NonDef_172 |
| 173 | GoodNC_NonDef_173_LowLim |
| 174 | GoodNC_NonDef_174_HighLim |
| 175 | GoodNC_NonDef_175_Constant |
| 176 | GoodNC_NonDef_176 |
| 177 | GoodNC_NonDef_177_LowLim |
| 178 | GoodNC_NonDef_178_HighLim |
| 179 | GoodNC_NonDef_179_Constant |
| 180 | GoodNC_NonDef_180 |
| 181 | GoodNC_NonDef_181_LowLim |
| 182 | GoodNC_NonDef_182_HighLim |
| 183 | GoodNC_NonDef_183_Constant |
| 184 | GoodNC_NonDef_184 |

| Range | Description |
|---|---|
| 185 | GoodNC_NonDef_185_LowLim |
| 186 | GoodNC_NonDef_186_HighLim |
| 187 | GoodNC_NonDef_187_Constant |
| 188 | GoodNC_FunctionCheckLimit |
| 189 | GoodNC_FunctionCheckLimitLowLim |
| 190 | GoodNC_FunctionCheckLimitHighLim |
| 191 | GoodNC_FunctionCheckLimitConstant |
| 192 | GoodCasc_NonSpecific |
| 196 | GoodCasc_InitAck |
| 200 | GoodCasc_InitReq |
| 204 | GoodCasc_NotInvited |
| 208 | GoodCasc_NotSelected |
| 212 | GoodCasc_DoNotSelect |
| 216 | GoodCasc_LocalOverride |
| 220 | GoodCasc_FSA |
| 224 | GoodCasc_IFS |

# 18.18  STATUSUSAGE[0.. MAXPDCNUMBER ][0..MAXNUMOFCHANELS]

| Specific to Block(s) | GENPADSB, GENPAGWDSB | |
|---|---|---|
| Description | PA Status usage | |
| Data Type | ENUM | |
| Range | 0 | Ignore |
| | 1 | Update PA Status |
| | 2 | Update Ch status |
| | 3 | Update Ch Status and alarm |
| | 4 | Set Output Status |
| Default | 2 (Update Ch Status) for input PDCs | |
| | 4 (Set Output Status) for output PDCs | |
| | 0 (Ignore) for extended diagnostics PDCs | |
| Config Load | Yes | |
| Active Loadable | No | |
| Access Lock | AppDevOnly | |
| Residence | PGM | |
| Related Parameters | - | |
| Remarks | This parameter defines how the status of the PA data is used in the DSB. | |

# 18.19  SUBINDEX[0..15][0..31]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Sub-index - PROFIdrive device array parameter sub-index |
| **Data Type** | UINT8 |
| **Range** | 0-255 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | The sub-index parameter defines the offset of the array data. This parameter is available for configuration only when the Section Type for the channel is selected as "PKW Array".<br><br>This parameter is configured along with the parameter number if the drive parameter requests arrayed data. |

# 18.20  SYNCMODE

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Sync Mode |
| **Data Type** | BOOLEAN |
| **Range** | - |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 5 of the Station Status byte 2, of the PROFIBUS diagnostic response message. The PROFIBUS DP slave sets this bit as soon as the respective slave receives the Sync control command. |

# 19 Txxx Parameters

**Related topics**

# 19.1  TAGNAME

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Tag Name - A unique name that identifies the DSB block |
| **Data Type** | STRING |
| **Range** | 12 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | Server |
| **Related Parameters** | - |
| **Remarks** | - |

# 19.2 TOTALMEM

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Total User Memory (b) |
| **Data Type** | UINT32 |
| **Range** | 0 to 10 MB |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the total size of the PGM user memory in Bytes. |

# 19.3  TOTALMEMINK

| Specific to Block(s) | PGM |
|---|---|
| Description | Total User Memory (kb) |
| Data Type | UINT32 |
| Range | 0 to 10 MB |
| Default | 0 |
| Config Load | No |
| Active Loadable | No |
| Access Lock | ViewOnly |
| Residence | PGM |
| Related Parameters | |
| Remarks | The parameter displays the total size of PGM user memory in Kbytes. |

# 20 Uxxx Parameters

**Related topics**

## 20.1  UNEXPSLVCFG

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | Unexpected slave configuration |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the slaves (at least one) that have a different configuration than the expected configuration. |

## 20.2 URL

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | Specifies the PV Extended High Range. The upper range limit of the PV at the HART device. |
| **Data Type** | 32-Bit Real Number |
| **Range** | Not applicable |
| **Default** | NaN |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HTDURL parameter. Two parameters are used to display the device limits on two different tabs of the same configuration form. |

# 20.3  URL[0..15]

| Specific to Block(s) | PBHIOMB block |
|---|---|
| Description | Specifies the Upper Range Limit for Process Variable (PV) measurement. |
| Data Type | 32-Bit Real Number |
| Range | Not applicable |
| Default | NaN |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | Engineer |
| Residence | PGM |
| Related Parameters | |
| Remarks | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HTDURL parameter. Two parameters are used to display the device limits on two different tabs of the same configuration form. |

## 20.4  URV

| | |
|---|---|
| **Specific to Block(s)** | PBHCHANNEL block |
| **Description** | PV High Range (20mA). Indicates the upper range limit of the operating range for PVRAW. |
| **Data Type** | 32-Bit Real Number |
| **Range** | Not applicable |
| **Default** | NaN |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HPVURV parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

## 20.5  URV[0..15]

| | |
|---|---|
| **Specific to Block(s)** | PBHIOMB block |
| **Description** | Defines the upper end of the operating range for PVRAW input value. |
| **Data Type** | 32-Bit Real Number |
| **Range** | Not applicable |
| **Default** | NaN |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Engineer |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter is exposed only if HENABLE [1..15] is set to TRUE and displays the same value as the HPVURV parameter. Two parameters are used to display the limits on two different tabs of the same configuration form. |

## 20.6  USEDMEM

| Specific to Block(s) | PGM |
|---|---|
| **Description** | Currently Used Memory (b) |
| **Data Type** | UINT32 |
| **Range** | 0 to 10 MB |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | This parameter displays the total amount of used memory in PGM user memory in Bytes. The difference between the total user memory and the free memory is equal to the used memory. |

# 20.7  USEDMEMINK

| | |
|---|---|
| **Specific to Block(s)** | PGM |
| **Description** | Currently Used Memory (kb) |
| **Data Type** | UINT32 |
| **Range** | 0 to 10 MB |
| **Default** | 0 |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | ViewOnly |
| **Residence** | PGM |
| **Related Parameters** | |
| **Remarks** | The parameter displays the total amount of used memory in PGM user memory in Kbytes. The difference between the total user memory and the free memory is equal to the used memory. |

# 20.8 USERCONDITBIT[0..15]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Indication Bit |
| **Data Type** | UINT8 |
| **Range** | 0-7 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines bit number for indicating the user-defined alarm conditions such as 0 = bit0, 1 = bit1, 2 = bit2, 3 = bit3, 4 = bit4, 5 = bit5, 6 = bit6, and 7 = bit7. |

## 20.9  USERCONDITBIT[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Indication Bit |
| **Data Type** | UINT8 |
| **Range** | 0-7 |
| **Default** | 0 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines bit number for indicating the user-defined alarm conditions such as 0 = bit0, 1 = bit1, 2 = bit2, 3 = bit3, 4 = bit4, 5 = bit5, 6 = bit6, and 7 = bit7.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

## 20.10 USERCONDITBITFIELD[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Indication Bit Field |
| **Data Type** | INT32 |
| **Range** | 1-32 |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USECONDITBIT |
| **Remarks** | This parameter defines the number of bits to parse for value, starting indication bit specified in the USERCONDITBIT parameter. By the virtue of the value entered in this field, you can have single bit, multi bit, and multi byte parsing of extended diagnostic data for value. For example;<br><br>• Single bit processing: If you want to process single bit of extended diagnostic for alarming then value of Bit Field = 1.<br><br>For example, if you want to process 3rd bit of 5th byte in extended diagnostic data then DataOffset = 5, Indication bit = 3, Bit Filed =1.<br><br>• Multi bit processing: If you want to process multi bit of extended diagnostic data, then the value of Bit Field > 1.<br><br>For example, if you want to parse from bit number 3 to bit number 5 of 5th byte in extended diagnostic data then DataOffset = 5, Indication Bit = 3 and Bit Field = 3. Indication bit 3 and bit field 3 means starting bit 3, 3 bits (bit 3, bit 4 and bit 5) will be parsed for value.<br><br>• Multi Byte processing: For example, if you want to parse 32 bits starting bit number 4 of 5th byte of extended diagnostic, then you need to configure DataOffset = 5, Indication Bit = 4, and Bit Field = 32.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

## 20.11 USERCONDITCHAN[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | User Condition Channel |
| **Data Type** | INT32 |
| **Range** | N/A |
| **Default** | 255 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USERCONDITPDC |
| **Remarks** | This parameter is configured along with the USERCONDITPDC parameter. This parameter defines whether one or all channels of PDC configured in USERCONDITPDC parameter is affected when configured alarm is active.<br><br>The possible values of this parameter and their meaning is as follows:<br><br>• 255 -All channels of configured PDC will be affected when configured alarm is active<br><br>• 0...MAXCHANNEL where MAXCHANNEL is the number of channels supported by the DSB - Only the configured channel will be affected when configured alarm is active.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.12  USERCONDITCOMPOP[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Comparison Operator |
| **Data Type** | ENUM |
| **Range** | • Equals<br>• NotEquals<br>• LessThan<br>• GreaterThan<br>• LessThanEquals<br>• GreaterThanEquals |
| **Default** | Equals |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USERCONDITREF |
| **Remarks** | This parameter defines the kind of comparison that needs to be done between parsed value (multi bit or single bit) of extended diagnostic and reference value.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.13  USERCONDITDESC[0..15]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Condition Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the description of the user-defined alarm condition (maximum 32 characters). |

# 20.14 USERCONDITDESC[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Condition Description |
| **Data Type** | STRING |
| **Range** | 32 characters |
| **Default** | - |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | SR |
| **Related Parameters** | - |
| **Remarks** | This parameter displays the description of the user-defined alarm condition (maximum 32 characters). <br><br> Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.15  USERCONDITDOF[0..15]

| | |
|---|---|
| **Specific to Block(s)** | DRIVEDSB |
| **Description** | Data Offset |
| **Data Type** | UINT8 |
| **Range** | 0-255 |
| **Default** | 255 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines data offset for indicating the user-defined alarm condition in extended diagnostic data (values 0-255). |

# 20.16 USERCONDITDOF[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Data Offset |
| **Data Type** | UINT8 |
| **Range** | 0-255 |
| **Default** | 255 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | Application Developer |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter defines data offset for indicating the user-defined alarm condition in extended diagnostic data (values 0-255).<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.17  USERCONDITPDC[0..MAXALARM]

| Specific to Block(s) | GENDSB, GENIODSB |
|---|---|
| Description | User Condition PDC |
| Data Type | INT32 |
| Range | N/A |
| Default | 255 |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | AppDevOnly |
| Residence | CEE |
| Related Parameters | USERCONDITCHAN |
| Remarks | This parameter defines whether one/none/all PDC will be affected when configured user defined alarm is active.<br><br>The possible values and their meaning are as follows:<br><br>• 254 - This means all PDCs in the DSB will be affected when this user configurable alarm is active.<br>• 255 - This means none of the PDC in DSB will be affected when this user configurable alarm is active.<br>• 0. .. MAXPDC where MAXPDC = number of PDC supported for DSB - In this case USERCONDITPDC holds a valid PDC number. The PDC number mentioned will get affected when configured alarm is active.<br><br>For a GENDSB migrated from R400 to R410, value of this parameter is 255.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.18 USERCONDITPRIORITY[0..MAXALARM]

| Specific to Block(s) | GENDSB, GENIODSB |
|---|---|
| **Description** | Alarm Priority |
| **Data Type** | ENUM |
| **Range** | • None<br>• Journal<br>• Low<br>• High<br>• Urgent |
| **Default** | None |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USERCONDITSEVERITY |
| **Remarks** | You can define the priority of the user-defined alarm using this parameter.<br><br>• For GENDSB, the default value of priority is "HIGH" for the first 8 alarms and "LOW" for the remaining 24 alarms.<br>• For GENIODSB, the default value of priority is "NONE".<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.19 USERCONDITREF[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Reference Value |
| **Data Type** | UINT32 |
| **Range** | 1-32 |
| **Default** | 1 |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USERCONDITCOMPOP |
| **Remarks** | This parameter defines the reference value against which parsed value from extended diagnostic can be compared with the comparison operator defined by USERCONDITCOMPOP.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 20.20  USERCONDITSEVERITY[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Alarm Severity |
| **Data Type** | INT16 |
| **Range** | N/A |
| **Default** | N/A |
| **Config Load** | Yes |
| **Active Loadable** | No |
| **Access Lock** | AppDevOnly |
| **Residence** | CEE |
| **Related Parameters** | USERCONDITPRIORITY |
| **Remarks** | You can define the severity of the user-defined alarm using this parameter.<br><br>• For GENDSB, the default value of alarm severity is 0.<br>• For GENIODSB, the default value of alarm severity is 0.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

## 20.21  USERCONDITSTA[0..15]

| | | |
|---|---|---|
| **Specific to Block(s)** | DRIVEDSB | |
| **Description** | Condition Status | |
| **Data Type** | BOOLEAN | |
| **Range** | Off (0) | Condition not active |
| | On (1) | Condition active |
| **Default** | - | |
| **Config Load** | No | |
| **Active Loadable** | No | |
| **Access Lock** | View Only | |
| **Residence** | PGM | |
| **Related Parameters** | - | |
| **Remarks** | This parameter indicates the status of the user-defined alarm conditions in the Monitoring view. | |

# 20.22  USERCONDITSTA[0..MAXALARM]

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB |
| **Description** | Condition Status |
| **Data Type** | BOOLEAN |
| **Range** | Off (0) — Condition not active<br>On (1) — Condition active |
| **Default** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | PGM |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates the status of the user-defined alarm conditions in the Monitoring view.<br><br>Note: MAXALARM = 130 for GENIODSB and 34 for GENDSB. |

# 21 Vxxx Parameters

**Related topics**

# 21.1  VENDORNAME

| Specific to Block(s) | DRIVEDSB |
|---|---|
| Description | Vendor Name - Vendor names of the drive devices |
| Data Type | ENUM |
| Default | - |
| Range | - |
| Config Load | Yes |
| Active Loadable | No |
| Access Lock | - |
| Residence | - |
| Related Parameters | - |
| Remarks | - |

## 21.2  VOLTAGELOW

| | |
|---|---|
| **Specific to Block(s)** | Siemens DP/AS-i Link DSB |
| **Description** | AS-Interface voltage low |
| **Data Type** | BOOLEAN |
| **Range** | TRUE |
| | FALSE |
| **Default** | FALSE |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | CEE |
| **Related Parameters** | - |
| **Remarks** | This parameter indicates an AS-i power fail (APF) condition when the voltage supplied to the AS-i cable is too low. This may be due to the power on the AS-Interface missing (APF) or a ground short. |

# 22  Wxxx Parameters

**Related topics**

"WATCHDOGON" on page 454

# 22.1  WATCHDOGON

| | |
|---|---|
| **Specific to Block(s)** | GENDSB, GENIODSB, Turck Excom DSB, Siemens DP/AS-i Link DSB, CEAGDSB, DRIVEDSB, Siemens ET200M DSB |
| **Description** | Watchdog On |
| **Data Type** | BOOLEAN |
| **Default** | - |
| **Range** | - |
| **Config Load** | No |
| **Active Loadable** | No |
| **Access Lock** | View Only |
| **Residence** | NO LOAD |
| **Related Parameters** | - |
| **Remarks** | This parameter represents bit 3 of the Station Status byte 2, of the PROFIBUS diagnostic response message.<br><br>The PROFIBUS DP slave sets this bit as soon as the watchdog control is activated.<br><br>If the Watchdog timer expires, the slave devices set their output to fail safe values. |

# 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:

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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.