

The Library SysLibDPV1Hilscher.lib

Note: It depends on the target system, which system libraries can be used in the application program. Please see the document SysLibs_Overview.pdf.

This library supports the acyclic Profibus DPV1, Class 1, Read- and Write-Services for the data transfer between Master and Slaves. The data are addressed within the slaves by slot and index. (Concerning this see the PB-DP standard.)

If supported by the target system the following function blocks are available:

- DPV1_Read, DPV1_ReadEx: Reading data
- DPV1_Write, DPV1_WriteEx: Writing data

Each module uses the following parameters:

| Input variable | Data type | Description |
|----------------|-----------|--|
| ENABLE | BOOL | At a rising edge at this input the module starts processing. |
| Device | INT | Index of the Hilscher card, to which the request is given. |
| StationAddr | INT | Station address of the slave in the Profibus. |
| Slot | INT | Data slot, for identification of the data within the slave. |
| Index | INT | Data index, for identification of the data within the slave. |
| Len | INT | Length of the data to be read/written in Bytes. Fed in the maximum length of the data buffer "buffer". |
| buffer | DWORD | Local address of the data. (Evaluate via using ADR().) |

| Output variable | Data type | Description |
|-----------------|-----------|--|
| Ready | BOOL | The function block has finished processing. |
| State | V1State | Information on the state of the request (see below, Enumeration „V1State“) |
| Size | INT | Length of the actually read/written data in case of successful execution. |

| Variable | Data type | Description |
|-----------|-----------|--------------------|
| ENABLEOLD | BOOL | internal variable. |
| JobId | DWORD | internal variable. |

Additionally the modules **DPV1_ReadEx** and **DPV1_WriteEx** have an output parameter **Error**, which tells about possibly occurred errors:

| Output variable | Data type | Description |
|-----------------|-------------------------|--|
| Error | ARRAY[0..7] OF BYTE; | <p>Byte 1: Hilscher error code (see the documentation on the Hilscher PB-cards "Protocol Interface Manual Profibus DP".</p> <p>Byte 2: Error class code. These values can be looked up in the PB standard.</p> <p>Bytes 3+4 (index 2+3): Slave-specific error information. These values can be looked up in the slave-specific documentation..</p> |

Enumeration V1State

This structure is used by the function blocks of the SysLibDPV1Hilscher.lib always in the output variable "state". It describes the current sTYPE V1State :

```
(NotEnabled := 0, InvalidParam, Started, Done, DoneWithError );  
  
END_TYPE
```

Bedeutung der Komponenten:

| | |
|---------------|--|
| NotEnabled:=0 | Function block currently not active |
| InvalidParam | Invalid input variable |
| Started | Function block has started execution |
| Done | Function block has terminated execution |
| DoneWithError | Function block has aborted execution with an error |