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# 1 SCTSi Ethernet

## 1.1 Description

The following function blocks are provided to support the control and processing of the process data of the SCTSi Ethernet:

- FB\_SCTSi\_ETH\_CU
- FB\_SCTSi\_ETH\_Ej
- FB\_SCTSi\_ETH\_DI
- stEjectorExtendedValues

For the central monitoring of the SCTSi Ethernet, the function block "FB\_SCTSi\_ETH\_CU" can be used once per terminal.

Depending on the expansion stage, the number of ejectors can vary. For this reason, the function block "FB\_SCTSi\_ETH\_Ej" can be integrated per ejector. In order to obtain the extended data, the structure "stEjectorExtendedValues" can be integrated.

If the expansion stage contains digital input modules, the function block "FB\_SCTSi\_ETH\_DI" can be used per module.

## 2 Function block "FB\_SCTSi\_ETH\_CU"

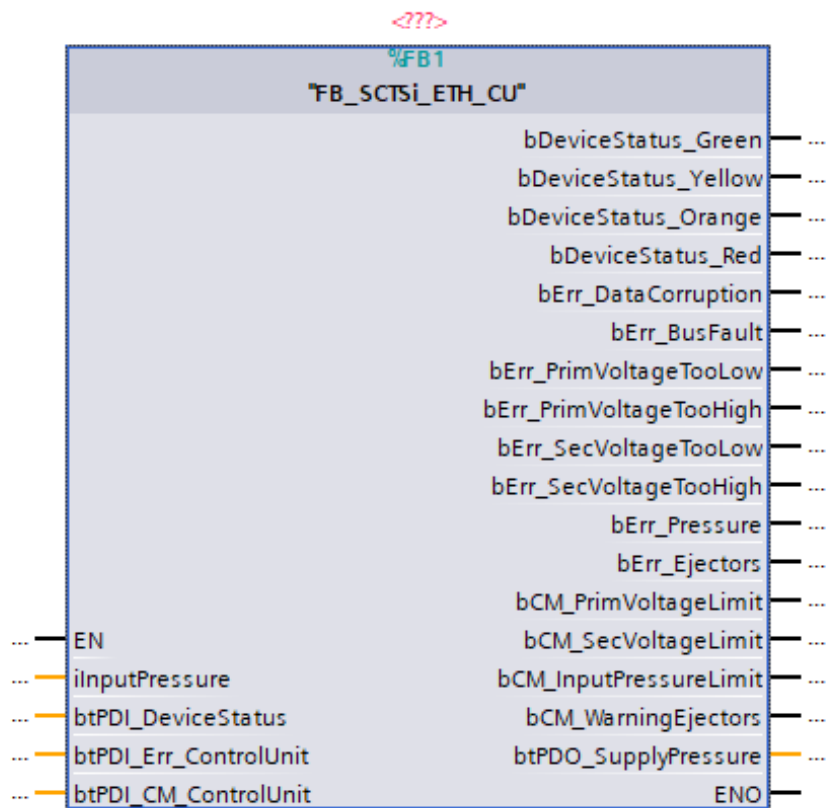
### 2.1 Brief description

The following tasks are performed by the module:

- Transmission of the current supply pressure to the device
- Output of the device status
- Error message of the control unit
- Status monitoring of the control unit

### 2.2 Image of function block

Example of function block:



## 2.3 Parameter - Input

name	data type	description
iInputPressure	INT	Enter current supply pressure in mbar
btPDI_DeviceStatus	BYTE	Input byte for device status is read
btPDI_Error_ControlUnit	BYTE	Input byte for error of the control unit is read
btPDI_CM_ControlUnit	BYTE	Input byte for condition monitoring of the control unit is read

## 2.4 Parameter - Output

name	data type	description
bDeviceStatus_Green	BOOL	Device is green
bDeviceStatus_Yellow	BOOL	Device is yellow
bDeviceStatus_Orange	BOOL	Device is orange
bDeviceStatus_Red	BOOL	Device is red
bErr_DataCorruption	BOOL	Error control unit: Data corruption
bErr_BusFault	BOOL	Error control unit: Bus fault
bErr_PrimVoltageTooLow	BOOL	Error control unit: Primary voltage too low
bErr_PrimVoltageTooHigh	BOOL	Error control unit: Primary voltage too high
bErr_SecVoltageTooLow	BOOL	Error control unit: Secondary voltage too low
bErr_SecVoltageTooHigh	BOOL	Error control unit: Secondary voltage too high
bErr_Pressure	BOOL	Error control unit: Supply pressure too low or too high
bErr_Ejectors	BOOL	Error control unit: Error in one ore more ejectors
bCM_PrimVoltageLimit	BOOL	Condition monitoring of control unit: Primary voltage limit
bCM_SecVoltageLimit	BOOL	Condition monitoring of control unit: Secondary voltage limit
bCM_InputPressureLimit	BOOL	Condition monitoring of control unit: Input pressure limit (3,5...6bar)
bCM_WarningsEjectors	BOOL	Condition monitoring of control unit: Warning in one or more ejectors
btPDO_SupplyPressure	BYTE	Output byte on the process data for transmission of the supply pressure entered on the block

### 3 Function block "FB\_SCTSi\_ETH\_Ej"

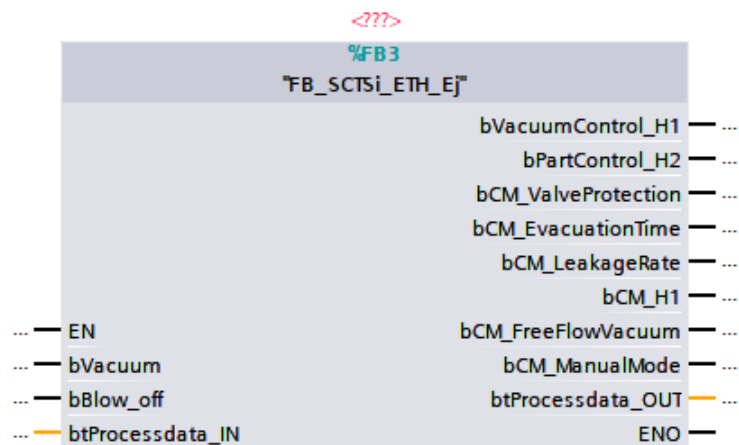
#### 3.1 Brief description

The following tasks are performed by the module:

- Control of the respective ejector
- Output of condition monitoring of the ejector

#### 3.2 Image of function block

Example of function block:



### 3.3 Parameter - Input

name	data type	description
bVacuum	BOOL	Request for suction
bBlow_off	BOOL	Request to blow-off
btProcessdata_IN	BYTE	Input byte of the process data for the corresponding ejector to be read in

### 3.4 Parameter - Output

name	data type	description
bVacuumControl_H1	BOOL	Control value vacuum
bPartControl_H2	BOOL	Switch-on value signal output „Part control“
bCM_ValveProtection	BOOL	Feedback about Ejectors: Valve protection active
bCM_EvacuationTime	BOOL	Feedback about Ejectors: Evacuation time greater than limit
bCM_LeakageRate	BOOL	Feedback about Ejectors: Leakage rate greater than limit
bCM_H1	BOOL	Feedback about Ejectors: H1 not reached in suction cycle
bCM_FreeFlowVacuum	BOOL	Feedback about Ejectors: Free flow vacuum too high
bCM_ManualMode	BOOL	Feedback about Ejectors: Manual mode active
btProcessdata_OUT	BYTE	Output byte of the process data for the corresponding ejector



## 4 Function block "FB\_SCTSi\_ETH\_DI"

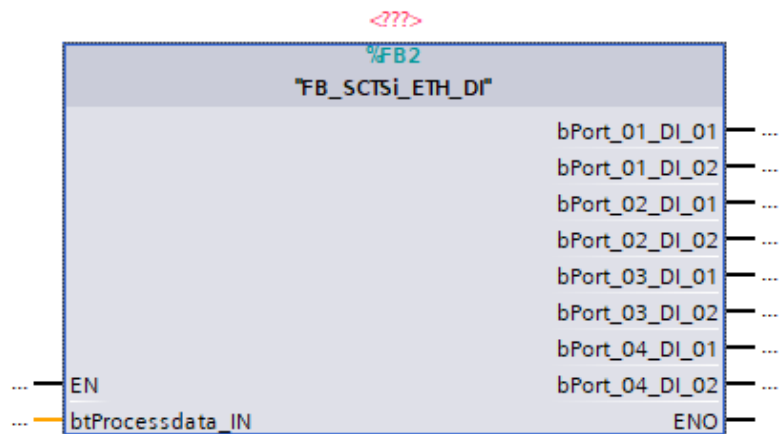
### 4.1 Brief description

The following tasks are performed by the module:

- Distribution of the signals of a digital input module

### 4.2 Image of function block

Example of function block:



### 4.3 Parameter - Input

name	data type	description
btProcessdata_IN	BYTE	Input byte of the process data for the corresponding digital input module to be read in

### 4.4 Parameter - Output

name	data type	description
bPort_01_DI_01	BOOL	Digital Input 1 of Port 1
bPort_01_DI_02	BOOL	Digital Input 2 of Port 1
bPort_02_DI_01	BOOL	Digital Input 1 of Port 2
bPort_02_DI_02	BOOL	Digital Input 2 of Port 2
bPort_03_DI_01	BOOL	Digital Input 1 of Port 3
bPort_03_DI_02	BOOL	Digital Input 2 of Port 3
bPort_04_DI_01	BOOL	Digital Input 1 of Port 4
bPort_04_DI_02	BOOL	Digital Input 2 of Port 4

## 5 Appendix

### 5.1 List of abbreviations

abbreviation	description
FB	Function block
EPC	Energy- and Processcontrol
CM	Condition Monitoring
EM	Energy Monitoring
PM	Predictive Maintenance

### 5.2 Note

- The byte order of the product is represented as big endian.
- The triggering of the vacuum must be carried out in accordance with the corresponding ejector variant (e.g., NO, NC, IMP).

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