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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

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.

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"

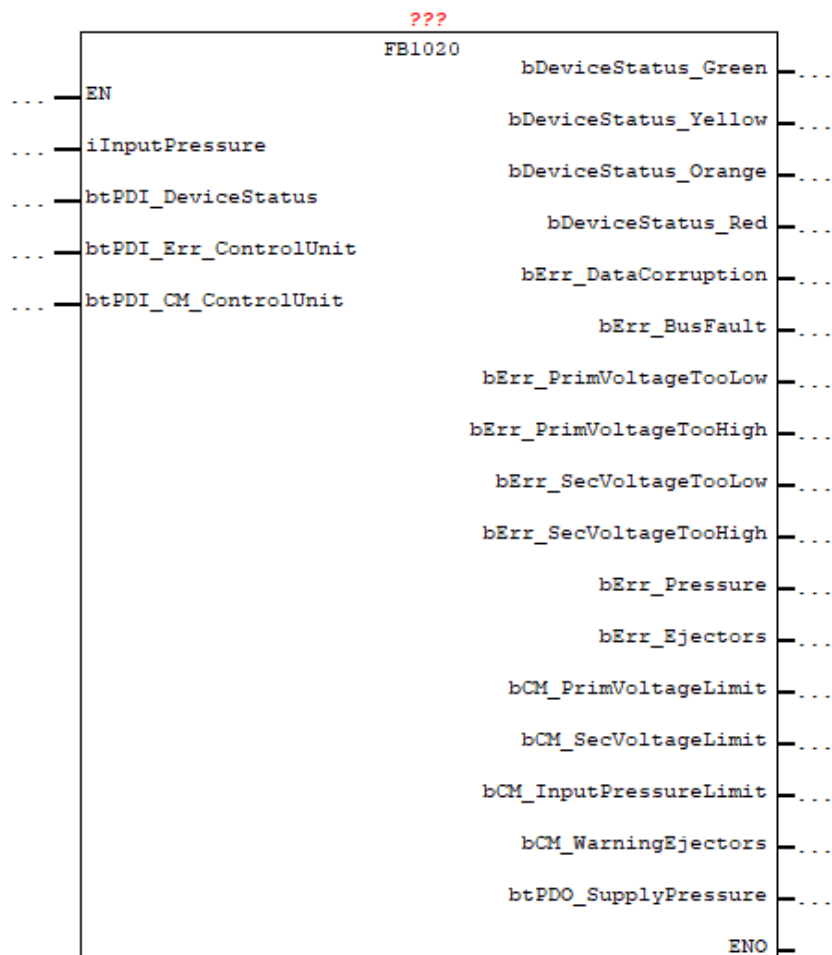
2.1 Brief description

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
ilnputPressure	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

2.5 Additional information

To successfully import the AWL source, the assignment between the symbol of the source and the desired block address in the symbol table must first be created.

3 Function block "FB_SCTSi_ETH_Ej"

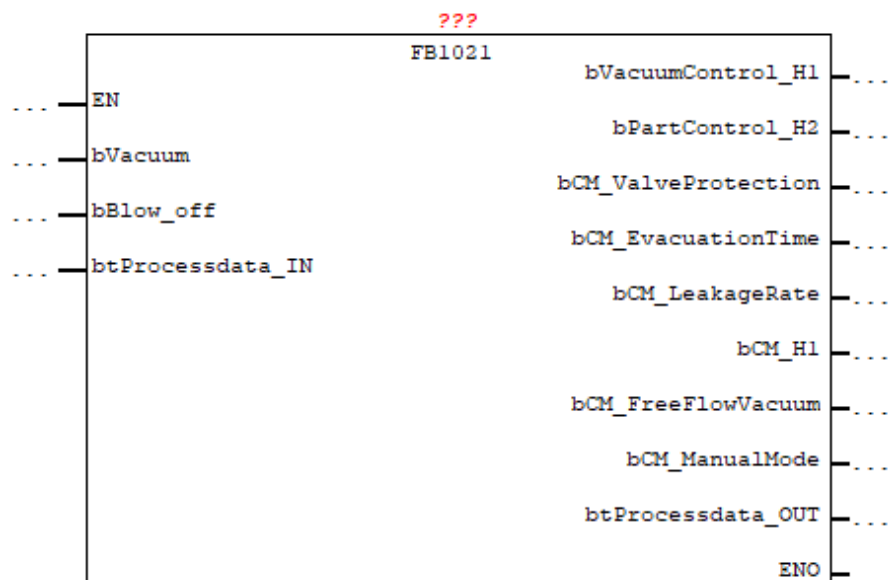
3.1 Brief description

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

3.5 Additional information

To successfully import the AWL source, the assignment between the symbol of the source and the desired block address in the symbol table must first be created.

4 Function block "FB_SCTSi_ETH_DI"

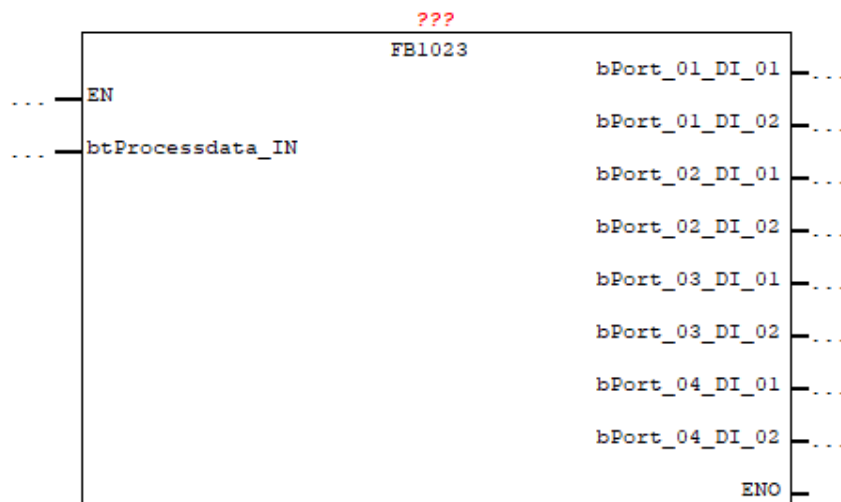
4.1 Brief description

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

4.5 Additional information

To successfully import the AWL source, the assignment between the symbol of the source and the desired block address in the symbol table must first be created.

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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