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# 1 Function block "FB\_SCTSi\_IOL"

## 1.1 Brief description

This function block controls the Processdata of Schmalz SCTSi with IO-Link.

## 1.2 Image of function block

Example of function block:



### 1.3 Parameter - Input

name	data type	description
bVacuum_Ejector01	BOOL	Request for suction of the corresponding ejector
...		
bVacuum_Ejector16	BOOL	Request for blow-off of the corresponding ejector
bBlow_off_Ejector01		
...		
bBlow_off_Ejector16		
iNumberOfEjectors	INT	The number of how many ejectors are operated with the terminal. (2-16)
iInputPressure	INT	With this parameter, the terminal gets the input pressure in mbar to be able to create EPC analysis.
btProcessdata_IN_0	BYTE	Process data byte 0 from SCTSi IO-Link
btProcessdata_IN_1	BYTE	Process data byte 1 from SCTSi IO-Link
btProcessdata_IN_2	BYTE	Process data byte 2 from SCTSi IO-Link
btProcessdata_IN_3	BYTE	Process data byte 3 from SCTSi IO-Link
btProcessdata_IN_4	BYTE	Process data byte 4 from SCTSi IO-Link
btProcessdata_IN_5	BYTE	Process data byte 5 from SCTSi IO-Link
btProcessdata_IN_6	BYTE	Process data byte 6 from SCTSi IO-Link
btProcessdata_IN_7	BYTE	Process data byte 7 from SCTSi IO-Link

## 1.4 Parameter - Output

name	data type	description
bDeviceStatus_Green	BOOL	Status of the terminal is green
bDevice Status_Yellow	BOOL	Status of the terminal is yellow
bDevice Status_Orange	BOOL	Status of the terminal is orange
bDevice Status_Red	BOOL	Status of the terminal is red
bErr_DataCorruption_CU	BOOL	Error control unit: Data corruption
bErr_BusFault_CU	BOOL	Error control unit: Bus fault
bErr_PrimVoltTooLow_CU	BOOL	Error control unit: Primary voltage too low
bErr_PrimVoltTooHigh_CU	BOOL	Error control unit: Primary voltage too high
bErr_SecVoltTooLow_CU	BOOL	Error control unit: Secondary voltage too low
bErr_SecVoltTooHigh_CU	BOOL	Error control unit: Secondary voltage too high
bErr_Pressure_CU	BOOL	Error control unit: Supply pressure too low or too high
bCM_PrimVoltLimit_CU	BOOL	Condition monitoring of control unit: Primary voltage limit
bCM_SecVoltLimit_CU	BOOL	Condition monitoring of control unit: Secondary voltage limit
bCM_InputPressLimit_CU	BOOL	Condition monitoring of control unit: Input pressure limit
wPrimarySupplyVoltage_CU	WORD	Current primary voltage (V)
wAuxSupplyVoltage_CU	WORD	Current auxillary voltage (V)
wTotalAirConsumption_CU	WORD	Total air consumption of the last handling cycle (0.1NL)
stEPCData_Ejector01 ... stEPCData_Ejector16	stSCTSi_Ejector	These outputs returns a structure for each ejector. In this structure, all relevant data of each ejector are stored.
btProcessdata_OUT_0	BYTE	Processdata byte 0 to SCTSi IO-Link
btProcessdata_OUT_1	BYTE	Processdata byte 1 to SCTSi IO-Link
btProcessdata_OUT_2	BYTE	Processdata byte 2 to SCTSi IO-Link
btProcessdata_OUT_3	BYTE	Processdata byte 3 to SCTSi IO-Link
btProcessdata_OUT_4	BYTE	Processdata byte 4 to SCTSi IO-Link
btProcessdata_OUT_5	BYTE	Processdata byte 5 to SCTSi IO-Link

## 1.5 Additional information

In addition to the function block, the structure "stSCTSi\_IO\_Link\_Ejector" must also be imported into the respective plc system. Here you can proceed exactly in the same way as when importing a function block. As already mentioned, the block returns a structure for each ejector which contains all relevant data. Without importing / creating the structure, errors will occur when the plc program is compiled.

### 1.5.1 Structure „stSCTSi\_IO\_Link\_Ejector“

Name	Datentyp	Beschreibung
bVacuumControl_H1	BOOL	Status of H1
bPartControl_H2	BOOL	Status H2
btError	BYTE	Error Code oft the ejector
btCM_Warnings	BYTE	Code for pending warnings of the ejector
btLeakageLastCycle	BYTE	Measured leakage of the last handling cycle (mbar/s)
wSystemVacuum	WORD	Current vacuum value of the ejector (mbar)
wEvacuationTime_t1	WORD	Measured evacuation time T1 (ms)
wLastFreeFlowVacuum	WORD	Measured free flow vacuum (mbar)
wAirConsumptionLastCycle	WORD	Air consumption of the last handling cycle (0.1NL)

## 2 Appendix

### 2.1 List of abbreviations

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

### 2.2 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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