



VACUUM-AUTOMATION

## Function Block-Documentation

„FB\_SCPSi\_IOLv1\_1“ – Beckhoff – TwinCAT 2

Version 01 | 01.2020

**Note**

This document were originally written in German and have been translated into English.  
Store in a safe place for future reference.

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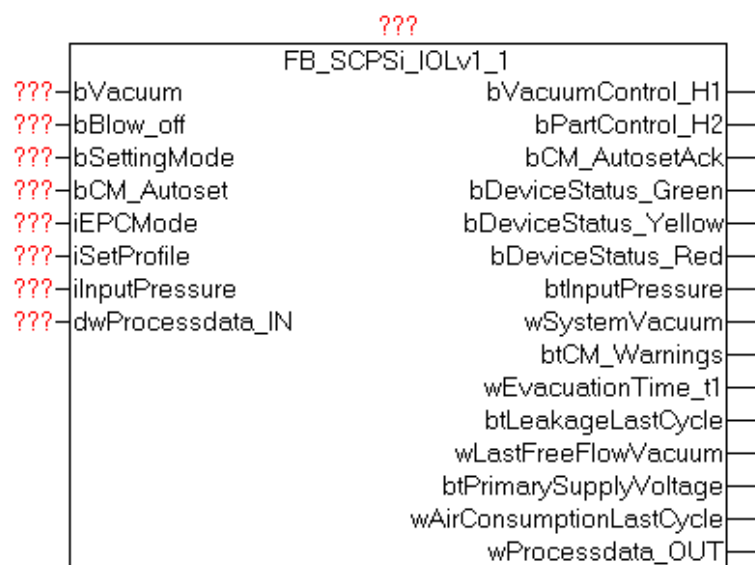
# 1 Function block "FB\_SCPSi\_IOLv1\_1"

## 1.1 Brief description

This function block controls the Processdata of Schmalz SCPSi with IO-Link Version 1.1.

## 1.2 Image of function block

Example of function block:



### 1.3 Parameter - Input

name	data type	description
bVacuum	BOOL	Request for suction
bBlow_off	BOOL	Request to blow-off
bSettingMode	BOOL	Vacuum on/off with continuous suction disabled
bCM_Autoset	BOOL	Automatic determination and storage in the active profile of max. leakage rate (-L-) and evacuation time (t-1) of last cycle
iEPCMode	INT	Request for EPC data can be controlled as following: 0 = no request 1 = request for values of EPC-Select 0 2 = request for values of EPC-Select 1 3 = request for values of EPC-Select 2 4 = request for values of EPC-Select 3 5 = values are automatically picked up
iSetProfile	INT	Choice of desired vacuum profile (0 – 3)
iInputPressure	INT	Ejectors without a pressure sensor get the input pressure via process data to be able to create EPC analysis. Input size in mbar
dwProcessdata_IN	DWORD	Input doubling word of process data

### 1.4 Parameter - Output

name	data type	description
bVacuumControl_H1	BOOL	Control value vacuum
bPartControl_H2	BOOL	Switch-on value signal output „Part control“
bCM_AutosetAck	BOOL	Active when CM Autostart completes successfully
bDeviceStatus_Green	BOOL	Device is working optimally
bDeviceStatus_Yellow	BOOL	Device is working but there are warnings
bDeviceStatus_Red	BOOL	Device is not working properly
btInputPressure	BYTE	Input pressure (0,1 bar)
wSystemVacuum	WORD	System vacuum (mBar)
btCM_Warnings	BYTE	CM Warnings
wEvacuationTime_t1	WORD	Evacuation time t1 (ms)
btLeakageLastCycle	BYTE	Leakage of last handling cycle (mbar/s)
wLastFreeFlowVacuum	WORD	Last free flow vacuum (mbar)
btPrimarySupplyVoltage	BYTE	Input voltage (V)
wAirConsumptionLastCycle	WORD	Air consumption of last handling cycle (0,1 NL)
btProcessdata_OUT	BYTE	Output byte of process data

## 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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