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Published by

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1 Function block "FB_SCPMi"

1.1 Brief description

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

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
siProcessdata_IN1	SINT	Input byte 1 of process data
siProcessdata_IN2	SINT	Input byte 2 of process data
siProcessdata_IN3	SINT	Input byte 3 of process data
siProcessdata_IN4	SINT	Input byte 4 of process data

1.4 Parameter - Output

name	data type	description
bVacuumControl_SP1	BOOL	Control value vacuum
bPartControl_SP2	BOOL	Switch-on value signal output „Part control“
bPartDeposited_SP3	BOOL	Part deposited
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_Orange	BOOL	Device is working but there are severe warnings
bDeviceStatus_Red	BOOL	Device is not working properly
siInputPressure	SINT	Input pressure (0,1 bar)
iSystemVacuum	INT	System vacuum (mBar)
siCM_Warnings	SINT	CM Warnings
iEvacuationTime_t1	INT	Evacuation time t1 (ms)
siLeakageLastCycle	SINT	Leakage of last handling cycle (mbar/s)
iLastFreeFlowVacuum	INT	Last free flow vacuum (mbar)
siPrimarySupplyVoltage	SINT	Input voltage (V)
iAirConsumptionLastCycle	INT	Air consumption of last handling cycle (0,1 NL)
siProcessdata_OUT1	SINT	Output byte 1 of process data
siProcessdata_OUT2	SINT	Output byte 2 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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Version 01 | 01.2020