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IO-Link	
SIO-Mode	Yes
Frame-Typ	2.5
Baudrate	38,4 kBd
Minimum cycle time	3,0 ms
Processdata input	1 byte
Processdata output	1 byte

Process Data					
	Parameter	Bit		Access	Remark
Input Data Byte	Part present (H2)	0		ro	Vacuum is over H2 & not yet under H2-h2
	Air saving function (H1)	1		ro	Vacuum is over H1 & not yet under H1-h1
	-	2		ro	Not used
	Status LED - green	3		ro	Status LED green on
	Status LED - red	4		ro	Status LED red on
	Status LED - flashing	5		ro	Status LED is flashing
	Condition Monitoring Event	6		ro	Details see Index 0x0092
	Error Event	7		ro	Error code see Index 0x0082
Output Data Byte	Vacuum	0		wo	Vacuum on/off
	Blow-off	1		wo	Blow-off on/off
	Setting mode	2		wo	Vacuum on/off without valve-protection
	-	3		wo	Not used
	-	4		wo	Not used
	-	5		wo	Not used
	-	6		wo	Not used
	-	7		wo	Not used

Parameter								
SPDU Index		Parameter	Data width	Value range	Access	Default value	Remark	
dec	hex							
Identification								
7	0x07	Vendor ID	2 bytes		ro	0x00	0x00EA = 234 = J. Schmalz GmbH	
8	0x08					0xEA		
9	0x09	Device ID	3 bytes		ro	0x01	Internal code number	
10	0x0A					0x87		
11	0x0B					0x72		
16	0x010	Vendor name	15 bytes		ro	J. Schmalz GmbH	Manufacturer designation	
17	0x011	Vendor text	15 bytes		ro	www.schmalz.com	Internet address	
18	0x012	Product name	32 bytes		ro	SXPi	General product name	
19	0x013	Product ID	17 bytes		ro	10.02.02.00000/00	Order-Nr.	
20	0x014	Product text	30 bytes		ro	SXMPi 00 IMP Q 2xM12	Order-Code	
21	0x015	Serial number	9 bytes		ro	000000002	Serial number	
22	0x016	Hardware revision	3 bytes		ro		Hardware revision	
23	0x017	Firmware revision	3 bytes		ro		Firmware revision	
Online								
64	0x040	System vacuum	2 bytes	0 - 999	ro	0	Unit: mbar	
Initial Setup								
68	0x044	ctr	Air saving function	1 byte	0 - 2	rw	1	0 = not active (off) 1 = active (on) 2 = active with supervision (onS)
69	0x045	bLo	Blow-off mode	1 byte	0 - 2	rw	0	0 = Externally controlled blow-off (-E-) 1 = Internally controlled blow-off – time-dependent (I-t) 2 = Externally controlled blow-off – time-dependent (E-t)
70	0x046	o-1	Output 1 function	1 byte	0 - 1	rw	0	0 = NO 1 = NC
71	0x047	o-2	Output 2 function	1 byte	0 - 1	rw	0	0 = NO 1 = NC
72	0x048	o-3	Output 3 function	1 byte	0 - 1	rw	0	0 = NO 1 = NC
73	0x049	tyP	Signal type	1 byte	0 - 1	rw	0 / 1	0 = PNP 1 = NPN
74	0x04A	uni	Vacuum display unit	1 byte	0 - 2	rw	0	0 = mbar 1 = kPa 2 = inHg
75	0x04B	dLY	Output filter	1 byte	0 - 3	rw	1	0 = Off 1 = 10ms 2 = 50ms 3 =200ms
76	0x04C	Eco	Eco-Mode	1 byte	0 - 1	rw	0	0 = Eco OFF 1 = Eco ON
77	0x04D	Pin	PIN code	2 bytes	0 - 999	rw	0	0 = unlocked >0 = locked
78	0x04E	dCS	disable continuous sucking	1 byte	0 - 1	rw	0	0 = NO 1 = YES

⊞ Production Setup							
100	0x0064	H-1	Setpoint H1	2 bytes	$H1 \leq 998 \ \& \ H1 > (H2+h1)$	rw	750 Unit: mbar
101	0x0065	h-1	Hysteresis h1	2 bytes	$h1 < (H1-H2) \ \& \ h1 \geq 10$	rw	150 Unit: mbar
102	0x0066	H-2	Setpoint H2	2 bytes	$H2 < (H1-h1) \ \& \ H2 > h2+2$	rw	550 Unit: mbar
103	0x0067	h-2	Hysteresis h2	2 bytes	$h2 < H2-2 \ \& \ h2 \geq 10$	rw	10 Unit: mbar
106	0x006A	tbL	Duration automatic blow	2 bytes	10 - 999	rw	20 Unit: 1 ms x 10
107	0x006B	t-1	Permissible evacuation time	2 bytes	0 - 999	rw	200 Unit: 1 ms x 10
108	0x006C	-L-	Permissible leakage value	1 byte	0 - 6	rw	6 0 = 4mbar/s 1 = 11mbar/s 2 = 25mbar/s 3 = 50mbar/s 4 = 100mbar/s 5 = 150mbar/s 6 = 250mbar/s
⊞ Calibration							
120	0x0078	UAC	Vacuum sensor offset Cal	1 byte	0 - 1	wo	0 0 = Nothing 1 = Zero offset; After calibrating 0
122	0x007A	rct	Reset erasable counters	1 byte	0 - 1	wo	0 1 = Reset erasable counters
123	0x007B	rES	Factory defaults	1 byte	0 - 1	wo	0 1 = Restore; After restoring 0
⊞ Diagnose							
⊞ Error							
130	0x0082	Exx	Error-Code	1 byte	0-255	ro	0 1-99 = Error-code 100 - 199 = Internal error code
⊞ Counter							
140	0x008C	cc1	Vacuum-on counter	4 bytes	0 - 999 mio	ro	0 Not erasable
141	0x008D	cc2	Valve operating counter	4 bytes	0 - 999 mio	ro	0 Not erasable
142	0x008E	cc3	Condition monitoring counter	4 bytes	0 - 999 mio	ro	0 Not erasable
143	0x008F	ct1	Erasable vacuum-on counter	4 bytes	0 - 999 mio	ro	0 To reset this counter must "1" be sent to Index 0x007A
144	0x0090	ct2	Erasable valve operating counter	4 bytes	0 - 999 mio	ro	0 To reset this counter must "1" be sent to Index 0x007A
145	0x0091	ct3	Erasable Condition monitoring counter	4 bytes	0 - 999 mio	ro	0 To reset this counter must "1" be sent to Index 0x007A
⊞ Condition Monitoring [CM]							
146	0x0092		Condition monitoring	1 byte	0 - 255	ro	0 0 = no warning 1 = Valve protection aktiv 2 = Evacuation time longer than t-1 4 = Leakage rate higher than -L- 8 = H1 in gripping cycle
147	0x0093		Leakage area	1 byte	0 - 255	ro	0 0 = no actual value 1 = Leakage of last sucking cycle is >200mbar/s 2 = Leakage of last sucking cycle is between 133 ... 200mbar/s 4 = Leakage of last sucking cycle is between 67 ... 133mbar/s 8 = Leakage of last sucking cycle is <67mbar/s
148	0x0094		Evacuation time t_b	2 bytes	0 - 65.535	ro	0 Time from start of sucking to H2 [ms]
149	0x0095		Evacuation time t_l	2 bytes	0 - 65.535	ro	0 Time from H2 to H1 [ms]
⊞ Energy Monitoring [EM]							
155	0x009B		Air consumption per cycle in percent	1 byte	0 - 100	ro	0 Air consumption of last sucking cycle [%]

