



8023536 1218
9292540 1218
WL4SLC-3_A72
8389154
2117181036
9292542 1218 (1.1.0)

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Please note the validity of the additional operating instructions for automation functions

1. Physical layer

Note: The IO-Link Device's max. current consumption (inclusive load current) shall not exceed the master port's max. output power current.

SIO Modus	yes
Min Cycle Time	2.3 ms
Baudrate ²	COM2
Process Data Length (IN)	2 Byte
IODD version	V1.18630
Valid for IO-Link version	1.1.0

2. Process data

Record³: 2 Byte

Bitoffset	15	14	13	12	11	10	9	8
Byte 0	Measurement value length [mm] resp. Measurement value speed [mm/s]							
Type/Subindex	Integer 14							
Bitoffset	7	6	5	4	3	2	1	0
Byte 1	Measurement value length [mm] resp. Measurement value speed [mm/s]					Qint.1	QL1	
Type/Subindex	Integer 14					3 Boolean	2 Boolean	1

3. Service data

The following ISDUs will not be saved via Data-Storage: Profile characteristic, Teach-in channel, Teach-in state, Device / function name, Sender configuration, Quality of teach, Quality of run, Current receiver level (live), Find me, Speed and Length Monitoring Version and Impulse buffer state

IO-Link specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Value / Range	Remark [Unit]
12 (0x0C)	Device Access Locks	Record ³	2 Byte	rw			
2 (0x02)	Data Storage Lock	Bit (1)	1 Bit	rw			
4 (0x04)	Local User Interface Lock	Bit (3)	1 Bit	rw			
16 (0x10)	Vendor Name	String	7 Byte	ro	SICK AG		
18 (0x12)	Product Name	String	18 Byte	ro			
19 (0x13)	Product ID	String	13 Byte	ro			
20 (0x14)	Product Text	String	45 Byte	ro			
21 (0x15)	Serial Number	String	8 Byte	ro			
22 (0x16)	Hardware Version	String	4 Byte	ro			
23 (0x17)	Firmware Version	String	19 Byte	ro			
24 (0x18)	Application Specific Tag	String	32 Byte	rw	*****		
36 (0x24)	Device Status	Uint	8 Bit	ro		0 = Device is OK 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure 5...255 = Reserved	
40 (0x28)	Process Data Input	PD In	2 Byte	ro			

SICK device specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Value / Range	Remark [Unit]
13 (0x0D)	Profile characteristic	Array ³	10 Byte	ro		Unsigned Integer16 [5]	
14 (0x0E)	PDInput descriptor	Array ³	6 Byte	ro		Octet String [2]	
15 (0x0F)	PDOutput descriptor	Array ³	3 Byte	ro		Octet String [1]	
58 (0x3A)	Teach-in channel	Uint	8 Bit	rw	0	0...2 = Default BDC	
59 (0x3B)	Teach-in state	Record ³	1 Byte	ro			
1 (0x01)	Teach flags	Bit (4)	1 Bit	ro		false = Teachpoint 1 not taught true = Teachpoint 1 successfully taught	
2 (0x02)	Teach state	Bit (0)	4 Bit	ro		0 = IDLE 1 = SP1 SUCCESS 5 = BUSY	
60 (0x3C)	Qint.1 SP1 / SP2	Record ³	2 Byte	rw			
1 (0x01)	SP1 upper threshold (switch-on)	Bit (8)	8 Bit	rw	50	50	[%]
2 (0x02)	SP2 lower threshold (switch-off)	Bit (0)	8 Bit	rw	45	45	[%]
61 (0x3D)	Qint.1 configuration	Record ³	4 Byte	rw			

¹ ro = read only, wo = write only, rw = read/write

² COM values specify the bitrate (see IO-Link specification): COM1 (4,8 kbit/s), COM2 (38,4 kbit/s), COM3 (230,4 kbit/s)

³ Subindex access not supported

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SICK device specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Value / Range	Remark [Unit]
1 (0x01)	Switchpoint logic	Bit (24)	8 Bit	rw	128	128 = Vendor specific	
2 (0x02)	Switchpoint mode	Bit (16)	8 Bit	rw	128	128 = Vendor specific	
3 (0x03)	Switchpoint hysteresis	Bit (0)	16 Bit	rw	0	0 = Autodefined hysteresis	
62 (0x3E)	Qint.2 SP1 / SP2	Record ³	2 Byte	rw			
1 (0x01)	SP1 upper threshold (switch-on)	Bit (8)	8 Bit	rw	50	50	
2 (0x02)	SP2 lower threshold (switch-off)	Bit (0)	8 Bit	rw	45	45	
63 (0x3F)	Qint.2 configuration	Record ³	4 Byte	rw			
1 (0x01)	Switchpoint logic	Bit (24)	8 Bit	rw	128	128 = Vendor specific	
2 (0x02)	Switchpoint mode	Bit (16)	8 Bit	rw	128	128 = Vendor specific	
3 (0x03)	Switchpoint hysteresis	Bit (0)	16 Bit	rw	0	0 = Autodefined hysteresis	
64 (0x40)	Device / function name	String	32 Byte	rw	*****		
97 (0x61)	Sender configuration	UInt	8 Bit	rw	0	0 = Sender active 1 = Sender not active	
114 (0x72)	Quality of teach	UInt	8 Bit	ro		0...100	[%]
121 (0x79)	Pin 2 configuration	UInt	8 Bit	rw	1	1 = External input	
175 (0xAf)	Quality of run	UInt	8 Bit	ro		0...255	[%]
176 (0xB0)	Quality of run alarm threshold	UInt	8 Bit	rw	50	0...90	[%]
177 (0xB1)	Quality of alignment	UInt	8 Bit	ro		0...100	[%]
180 (0xB4)	Current receiver level (live)	UInt	8 Bit	ro		0...255	[%]
204 (0xCC)	Find me	UInt	8 Bit	rw	0	0 = Find me deactivated 1 = Find me activated	
205 (0xCD)	SICK profile version	String	4 Byte	ro			
219 (0xDB)	Article No.	Record	7 Byte	ro			
1 (0x01)	Article No. IO-Link Device	Bit (0)	7 Byte	ro			
226 (0xE2)	System state	Record ³	1 Byte	ro			
1 (0x01)	Quality of run alarm output	Bit (1)	1 Bit	ro		false = Alarm not active true = Alarm active	
2 (0x02)	Detection output Q.int1	Bit (0)	1 Bit	ro		false = No object detected true = Object detected	
227 (0xE3)	Notification handling	UInt	8 Bit	rw	0	0 = All enabled 1 = All disabled 2 = Events enabled, PD invalid flag disabled 3 = Events disabled, PD invalid flag enabled	
1093 (0x445)	Inverter Ext. Input	UInt	8 Bit	rw	1	0 = not inverted 1 = inverted	
1096 (0x448)	Speed and Length Monitoring Version	String	8 Byte	ro			
1097 (0x449)	Measurement Mode	UInt	8 Bit	rw	0	0 = Length [mm] 1 = Length incremental [mm] 2 = Speed [mm/s]	
1098 (0x44A)	Distance between measuring points in 100 um	UInt	16 Bit	rw	1000	1...65535	[100 um] = [1/10 mm]
1099 (0x44B)	Pulses per 100 millimeter	UInt	16 Bit	rw	100	1...1000	[Pulses / 100 mm]
1100 (0x44C)	Measurement threshold 1	Int	16 Bit	rw	100	-8191...8191	Measurement threshold 1/2: The higher value is considered to be the upper threshold, the lower value is considered to be the lower threshold.
1101 (0x44D)	Measurement threshold 2	Int	16 Bit	rw	50	-8191...8191	Measurement threshold 1/2: The higher value is considered to be the upper threshold, the lower value is considered to be the lower threshold.
1102 (0x44E)	Switching mode	UInt	8 Bit	rw	0	0 = Within window 1 = Out of window	
1103 (0x44F)	Time setup impulse width	UInt	16 Bit	rw	500	1...30000	[ms]
1104 (0x450)	Time setup impulse shift	UInt	16 Bit	rw	0	0...30000	[ms]
1105 (0x451)	Object speed for reference run	UInt	16 Bit	rw	100	10...500	[mm/s]
1106 (0x452)	Length measurement value	Int	16 Bit	ro		-8191...8191	[mm]
1107 (0x453)	Speed measurement value	Int	16 Bit	ro		-8191...8191	[mm/s]
1109 (0x455)	Smart Task operating state	UInt	8 Bit	ro		0 = Operate 1 = Reference run	
1123 (0x463)	Impulse buffer state	UInt	8 Bit	ro		0 = Green: Buffer OK 1 = Yellow: Buffer almost full 2 = Red: Buffer overflow	

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Standard command					
Index dec (hex)		Access ¹	Value	Name	Remark [Unit]
2 (0x02)	Standard Command	wo	65 130 201 202	Single value teach Restore Factory Settings Start and Stop reference run Zero setting for incremental length measurement value	

Events			
Code dec (hex)	Name	Type	Remark [Unit]
36000 (0x8CA0)	Short Circuit on Qx	Notification	Short circuit on outputs
36001 (0x8CA1)	New parameters	Notification	Parameters have been changed
36004 (0x8CA4)	Quality of run alarm	Notification	Low device performance, clean sensor

Error			
Code dec (hex)	Additional Code	Name	Remark [Unit]
128 (0x80)	17 (0x11)	Index not available	Access occurs to a not existing index
128 (0x80)	18 (0x12)	Subindex not available	Access occurs to a not existing subindex
128 (0x80)	32 (0x20)	Service temporarily not available	Parameter is not accessible due to the current state of the device application
128 (0x80)	35 (0x23)	Access denied	Write access on a read-only parameter
128 (0x80)	48 (0x30)	Parameter value out of range	Written parameter value is outside its permitted value range
128 (0x80)	51 (0x33)	Parameter length overrun	Written parameter length is above its predefined length
128 (0x80)	52 (0x34)	Parameter length underrun	Written parameter length is below its predefined length
128 (0x80)	64 (0x40)	Invalid parameter set	Written single parameter collides with other actual parameter settings
128 (0x80)	65 (0x41)	Inconsistent parameter set	Parameter inconsistencies were found at the end of block parameter transfer, device plausibility check failed