



8025571 0420  
9322867 0420  
**WTF16 A00**  
8389236  
2374165512  
9322862 0420 (1.1.0)

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Great Britain Phone +44 (0)1727 831121	Sverige Phone +46 10 110 10 00
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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 <sup>2</sup>	COM2
Process Data Length (IN)	2 Byte
IODD version	V1.24444
Valid for IO-Link version	1.1.0

## 2. Process data

Record<sup>3</sup>: 2 Byte

Bitoffset																							
Byte 0	15	14	13	12	11	10	9	8															
Type/Subindex																							
Bitoffset																							
Byte 1	7	6	5	4	3	2	1	0	CL2	1	CL1	0											
Type/Subindex																							
																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, Find me and SLTI Version

IO-Link specific							
[A] ATTENTION: Deviating default values can be possible. See device data sheet for details: <a href="http://www.sick.com/[articlenumber]">www.sick.com/[articlenumber]</a>							
Index dec (hex)	Name	Format (Offset)	Length	Access <sup>1</sup>	Default Value	Value / Range	Remark [Unit]
12 (0x0C)	Device Access Locks	Record <sup>3</sup>	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	***** [A]		
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							
[A] ATTENTION: Deviating default values can be possible. See device data sheet for details: <a href="http://www.sick.com/[articlenumber]">www.sick.com/[articlenumber]</a>							
Index dec (hex)	Name	Format (Offset)	Length	Access <sup>1</sup>	Default Value	Value / Range	Remark [Unit]
13 (0x0D)	Profile characteristic	Array <sup>3</sup>	10 Byte	ro		Unsigned Integer16 [5]	
14 (0x0E)	PDInput descriptor	Array <sup>3</sup>	6 Byte	ro		Octet String [2]	
15 (0x0F)	PDOutput descriptor	Array <sup>3</sup>	3 Byte	ro		Octet String [1]	
58 (0x3A)	Teach-in channel	UInt	8 Bit	rw	0 [A]	0...2 = Default BDC	
59 (0x3B)	Teach-in state	Record <sup>3</sup>	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 Byte	rw			
1 (0x01)	SP1 sensing range	Bit (8)	16 Bit	rw	[A]	75...600	Default value device specific [mm]

<sup>1</sup> ro = read only, wo = write only, rw = read/write

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

<sup>3</sup>Subindex access not supported

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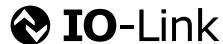
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SICK device specific							
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Index dec (hex)	Name	Format (Offset)	Length	Access <sup>1</sup>	Default Value	Value / Range	Remark [Unit]
2 (0x02)	SP2 sensing range	Bit (0)	8 Bit	rw	[A]	0 = SP2 not used	
61 (0x3D)	Qint.1 configuration	Record	4 Byte	rw			
1 (0x01)	Switchpoint logic	Bit (24)	8 Bit	rw	128 [A]	128 = Vendor specific	
2 (0x02)	Switchpoint mode	Bit (16)	8 Bit	rw	128 [A]	128 = Vendor specific	
3 (0x03)	Switchpoint hysteresis	Bit (0)	16 Bit	rw	0 [A]	0 = Autodefined hysteresis	
62 (0x3E)	Qint.2 SP1 / SP2	Record	3 Byte	rw			
1 (0x01)	SP1 sensing range	Bit (8)	16 Bit	rw	[A]	75...600	Default value device specific
2 (0x02)	SP2 sensing range	Bit (0)	8 Bit	rw	[A]	0 = SP2 not used	
63 (0x3F)	Qint.2 configuration	Record	4 Byte	rw			
1 (0x01)	Switchpoint logic	Bit (24)	8 Bit	rw	128 [A]	128 = Vendor specific	
2 (0x02)	Switchpoint mode	Bit (16)	8 Bit	rw	128 [A]	128 = Vendor specific	
3 (0x03)	Switchpoint hysteresis	Bit (0)	16 Bit	rw	0 [A]	0 = Autodefined hysteresis	
64 (0x40)	Device / function name	String	32 Byte	rw	***** [A]		
97 (0x61)	Sender configuration	Ulnt	8 Bit	rw	0 [A]	0 = Sender active 1 = Sender not active	
114 (0x72)	Quality of teach	Ulnt	8 Bit	ro		0...100	[%]
121 (0x79)	Pin 2 configuration	Ulnt	8 Bit	rw	32 [A]	0 = Deactivated / no function 1 = External input 16 = Sender off 17 = Teach-in 32 = Detection output Q/ 34 = Switching signal QL2 35 = Detection output Qint.1 39 = Switching signal QL1	
204 (0xCC)	Find me	Ulnt	8 Bit	rw	0 [A]	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 <sup>3</sup>	1 Byte	ro			
1 (0x01)	Detection output Q.int1	Bit (0)	1 Bit	ro		false = No object detected true = Object detected	
227 (0xE3)	Notification handling	Ulnt	8 Bit	rw	0 [A]	0 = All enabled 1 = All disabled 2 = Events enabled, PD invalid flag disabled 3 = Events disabled, PD invalid flag enabled	
1080 (0x438)	SLTI Version	String	8 Byte	ro			
1083 (0x43B)	Logic 1	Ulnt	8 Bit	rw	0 [A]	0 = DIRECT 1 = AND 2 = OR 3 = Window Mode 4 = Hysteresis	
1084 (0x43C)	Logic 2	Ulnt	8 Bit	rw	0 [A]	0 = DIRECT 1 = AND 2 = OR 3 = Window Mode 4 = Hysteresis	
1085 (0x43D)	Timer 1 Mode	Ulnt	8 Bit	rw	0 [A]	0 = deactivated 1 = T-on delay 2 = T-off delay 3 = T-on/T-off delay 4 = Impulse (one shot)	
1086 (0x43E)	Timer 2 Mode	Ulnt	8 Bit	rw	0 [A]	0 = deactivated 1 = T-on delay 2 = T-off delay 3 = T-on/T-off delay 4 = Impulse (one shot)	
1087 (0x43F)	Time 1 Setup	Ulnt	16 Bit	rw	1 [A]	1...30000	[ms]
1088 (0x440)	Time 2 Setup	Ulnt	16 Bit	rw	1 [A]	1...30000	[ms]
1089 (0x441)	Inverter 1	Ulnt	8 Bit	rw	0 [A]	0 = not inverted 1 = inverted	
1090 (0x442)	Inverter 2	Ulnt	8 Bit	rw	0 [A]	0 = not inverted 1 = inverted	

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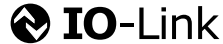
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### ENGLISH

Standard command					
Index dec (hex)		Access <sup>1</sup>	Value	Name	Remark [Unit]
2 (0x02)	Standard Command	wo	65 130	Single value teach Restore Factory Settings	

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	
36005 (0x8CA5)	Teach / value out of specified range	Notification		Teach / distance value out of specified range	

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	

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