

SICK

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ENGLISH

1. Physical layer

SIO Modus	yes
Min Cycle Time	2300 µs
Baudrate	COM2
Process Data Length	8 Bit

2. Process data

Record: 1 Byte									
Bitoffset	7	6	5	4	3	2	1	0	
Byte 0							Bit1	Bit0	
Subindex							Boolean	2 Boolean	1

3. Service data

IO-Link specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Range	Remark
0 (0x00)	Direct Parameters 1	Record	16 Byte	ro			
1 (0x01)	Direct Parameters 2	Record	16 Byte	rw			
13 (0x0D)	Profile Characteristic	Array	8 Byte	ro		Unsigned Integer16[4]	
14 (0x0E)	PDInput Descriptor	Array	3 Byte	ro		Octet String[1]	
15 (0x0F)	PDOOutput Descriptor	Array	3 Byte	ro		Octet String[1]	
16 (0x10)	Vendor Name	String	7 Byte	ro	SICK AG		
18 (0x12)	Product Name	String	18 Byte	ro			
19 (0x13)	Product ID	String	7 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	4 Byte	ro			
24 (0x18)	Application Specific Name	String	32 Byte	rw	*****		
33 (0x21)	Last Event	Record	3 Byte	ro			
1 (0x01)	Event Qualifier	Bit (16)	8 Bit				
2 (0x02)	Event Code	Bit (0)	16 Bit				
40 (0x28)	Process Data Input	PD In	1 Byte	ro			
58 (0x3A)	Teach-In Channel	UInt	8 Bit	rw		0...2 Default BDC	
59 (0x3B)	Teach-In State	Record	1 Byte	ro			
1 (0x01)	Teach State	Bit (0)	4 Bit			0 IDLE 1 SP1 SUCCESS 5 BUSY	
2 (0x02)	Teach Flags	Bit (4)	1 Bit			true = Teachpoint 1 successfully taught false = Teachpoint 1 not taught	
60 (0x3C)	Setpoint 1	Record	3 Byte	rw			
2 (0x02)	SP2	Bit (0)	8 Bit		0	0 SP2 not used	
1 (0x01)	Sensing Range	Bit (8)	16 Bit			0...65534 65535 Value out of range	Default value device specific [mm]
61 (0x3D)	Q1 configuration	Record	4 Byte	rw			
3 (0x03)	Hysteresis	Bit (0)	16 Bit			0 Auto-defined hysteresis	
2 (0x02)	Mode	Bit (16)	8 Bit			128 Vendor specific	
1 (0x01)	Inverter 1	Bit (24)	8 Bit		0	0 not inverted 1 inverted	
62 (0x3E)	Setpoint 2	Record	3 Byte	rw			
2 (0x02)	SP2	Bit (0)	8 Bit		0	0 SP2 not used	
1 (0x01)	Sensing Range	Bit (8)	16 Bit			0...65534 65535 Value out of range	Default value device specific [mm]
63 (0x3F)	Q2 configuration	Record	4 Byte	rw			
3 (0x03)	Hysteresis	Bit (0)	16 Bit			0 Auto-defined hysteresis	

¹ro = read only (nur lesen), wo = write only (nur schreiben), rw = read/write (lesen/schreiben)

DEUTSCH

1. Physikalische Schicht

SIO Modus	ja
Min. Zykluszeit	2300 µs
Baudrate	COM2
Prozessdatenlänge	8 Bit

2. Prozessdaten

Record: 1 Byte									
Bitoffset	7	6	5	4	3	2	1	0	
Byte 0							Bit1	Bit0	
Subindex							Boolean	2 Boolean	1

3. Servicedaten

IO-Link spezifisch									
Index dez (hex)	Name	Format (Offset)	Länge	Zugriff ¹	Standard Wert	Wertebereich	Bemerkung		
0 (0x00)	Direkte Parameter 1	Record	16 Byte	ro					
1 (0x01)	Direkte Parameter 2	Record	16 Byte	rw					
13 (0x0D)	Profile Characteristic	Array	8 Byte	ro		Unsigned Integer16[4]			
14 (0x0E)	PDInput Descriptor	Array	3 Byte	ro		Octet String[1]			
15 (0x0F)	PDOOutput Descriptor	Array	3 Byte	ro		Octet String[1]			
16 (0x10)	Herstellernamen	String	7 Byte	ro	SICK AG				
18 (0x12)	Produktname	String	18 Byte	ro					
19 (0x13)	Produkt-ID	String	7 Byte	ro					
20 (0x14)	Produkttext	String	45 Byte	ro					
21 (0x15)	Seriennummer	String	8 Byte	ro					
22 (0x16)	Hardwareversion	String	4 Byte	ro					
23 (0x17)	Firmwareversion	String	4 Byte	ro					
24 (0x18)	Anwendungsspezifischer Name	String	32 Byte	rw	*****				
33 (0x21)	Letztes Ereignis	Record	3 Byte	ro					
1 (0x01)	Ereigniskennzeichnung	Bit (16)	8 Bit						
2 (0x02)	Ereigniscode	Bit (0)	16 Bit						
40 (0x28)	Prozessdaten Eingang	PD In	1 Byte	ro					
58 (0x3A)	Teach-in-Kanal	UInt	8 Bit	rw		0...2 Standard-BDC			
59 (0x3B)	Teach-in-Status	Record	1 Byte	ro					
1 (0x01)	Teach Status	Bit (0)	4 Bit			0 Bereit 1 SP1 erfolgreich 5 In Arbeit			
2 (0x02)	Teach Flags	Bit (4)	1 Bit			true = Teachpunkt 1 gesetzt false = Teachpunkt 1 nicht gesetzt			
60 (0x3C)	Setpoint 1	Record	3 Byte	rw					
2 (0x02)	SP2	Bit (0)	8 Bit		0	0 SP2 nicht genutzt			
1 (0x01)	Schaltabstand	Bit (8)	16 Bit			0...65534 65535 Wert außerhalb der Spezifikation	Standardwert gerätespezifisch [mm]		
61 (0x3D)	Q1-Konfiguration	Record	4 Byte	rw					
3 (0x03)	Hysteresis	Bit (0)	16 Bit			0 Automatische Hysteresis			
2 (0x02)	Modus	Bit (16)	8 Bit			128 Herstellerspezifisch			
1 (0x01)	Inverter 1	Bit (24)	8 Bit		0	0 nicht invertiert 1 invertiert			
62 (0x3E)	Setpoint 2	Record	3 Byte	rw					
2 (0x02)	SP2	Bit (0)	8 Bit		0	0 SP2 nicht genutzt			
1 (0x01)	Schaltabstand	Bit (8)	16 Bit			0...65534 65535 Wert außerhalb der Spezifikation	Standardwert gerätespezifisch [mm]		
63 (0x3F)	Q2-Konfiguration	Record	4 Byte	rw					
3 (0x03)	Hysteresis	Bit (0)	16 Bit			0 Automatische Hysteresis			
2 (0x02)	Modus	Bit (16)	8 Bit			128 Herstellerspezifisch			

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ENGLISH							
IO-Link specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Range	Remark
3 (0x03)	Hysteresis	Bit (0)	16 Bit			0 Auto-defined hysteresis	
2 (0x02)	Mode	Bit (16)	8 Bit			128 Vendor specific	
1 (0x01)	Inverter 2	Bit (24)	8 Bit		0	0 not inverted 1 inverted	

SICK device specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Range	Remark
64 (0x40)	Device / function name	String	32 Byte	rw	*****		
81 (0x51)	Key lock	UInt	8 Bit	rw	0	0 Key unlock 1 Key lock	
97 (0x61)	Sender configuration	UInt	8 Bit	rw	0	0 Sender active 1 Sender not active	
121 (0x79)	Pin 2 configuration	UInt	8 Bit	rw	32	0 Deactivated 1 External input 16 Sender off 17 Teach-in 32 Detection output Q/ 34 Switching signal Q2	
205 (0xCD)	SICK profile version	String	4 Byte	ro			
212 (0xD4)	Timer 1 mode	UInt	8 Bit	rw	0	0 deactivated 1 T-on delay 2 T-off delay 3 T-on/T-off delay 4 Impulse (one shot)	
213 (0xD5)	Timer 2 mode	UInt	8 Bit	rw	0	0 deactivated 1 T-on delay 2 T-off delay 3 T-on/T-off delay 4 Impulse (one shot)	
214 (0xD6)	Time 1 setup	UInt	16 Bit	rw	1	1...30000	[ms]
215 (0xD7)	Time 2 setup	UInt	16 Bit	rw	1	1...30000	[ms]
216 (0xD8)	Logic 1	UInt	8 Bit	rw	0	0 DIRECT 1 AND 2 OR 3 Window Mode 4 Hysteresis	
218 (0xDA)	Logic 2	UInt	8 Bit	rw	0	0 DIRECT 1 AND 2 OR 3 Window Mode 4 Hysteresis	
226 (0xE2)	System state	Record	1 Byte	ro		true = Object detected false = No object detected	
1 (0x01)	Detection output Q.int	Bit (0)	1 Bit				

System command					
Index dec (hex)		Access ¹	Value		Remark
2 (0x02)	System Command	wo	65 130	Single Value Teach Restore Factory Setting	

Events				
Code dez (hex)	Name	Mode	Type	Remark
21520 (0x5410)	Short circuit on output	AppearDisappear	Warning	
25424 (0x6350)	Parameter changed	SingleShot	Message	
65426 (0xFF92)	Parameter Restored	SingleShot	Message	

DEUTSCH							
IO-Link spezifisch							
Index dez (hex)	Name	Format (Offset)	Länge	Zugriff ¹	Standard Wert	Wertebereich	Bemerkung
1 (0x01)	Inverter 2	Bit (24)	8 Bit		0	0 nicht invertiert 1 invertiert	

SICK spezifisch							
Index dez (hex)	Name	Format (Offset)	Länge	Zugriff ¹	Standard Wert	Wertebereich	Bemerkung
64 (0x40)	Gerätename/ - funktion	String	32 Byte	rw	*****		
81 (0x51)	Tastensperre	UInt	8 Bit	rw	0	0 Tastensperre AUS 1 Tastensperre EIN	
97 (0x61)	Einstellung Sender	UInt	8 Bit	rw	0	0 Sender aktiv 1 Sender nicht aktiv	
121 (0x79)	Pin-2-Konfiguration	UInt	8 Bit	rw	32	0 Deaktiviert 1 Externer Eingang 16 Sender Aus 17 Teach-in 32 Detektionsausgang Q/ 34 Schaltsignal Q2	
205 (0xCD)	SICK-Profilversion	String	4 Byte	ro			
212 (0xD4)	Timer 1 Modus	UInt	8 Bit	rw	0	0 deaktiviert 1 Einschaltverzögerung 2 Ausschaltverzögerung 3 Ein- / Ausschaltverzögerung 4 Impuls (One Shot)	
213 (0xD5)	Timer 2 Modus	UInt	8 Bit	rw	0	0 deaktiviert 1 Einschaltverzögerung 2 Ausschaltverzögerung 3 Ein- / Ausschaltverzögerung 4 Impuls (One Shot)	
214 (0xD6)	Zeitwert 1	UInt	16 Bit	rw	1	1...30000	[ms]
215 (0xD7)	Zeitwert 2	UInt	16 Bit	rw	1	1...30000	[ms]
216 (0xD8)	Logik 1	UInt	8 Bit	rw	0	0 DIREKT 1 AND 2 OR 3 Fenster-Modus 4 Hysterese	
218 (0xDA)	Logik 2	UInt	8 Bit	rw	0	0 DIREKT 1 AND 2 OR 3 Fenster-Modus 4 Hysterese	
226 (0xE2)	Systemstatus	Record	1 Byte	ro			
1 (0x01)	Detektionsausgang Q.int	Bit (0)	1 Bit			true = Objekt detektiert false = Kein Objekt detektiert	

Systemkommando				
Index dez (hex)		Zugriff ¹	Wert	Bemerkung
2 (0x02)	Systemkommando	wo	65 130	Einzelpunkt-Teach Auslieferungszustand wiederherstellen

Events				
Code dez (hex)	Name	Mode	Typ	Bemerkung
21520 (0x5410)	Kurzschluss an Ausgang	AppearDisappear	Warning	
25424 (0x6350)	Parameterwechsel	SingleShot	Message	
65426 (0xFF92)	Parameter wiederhergestellt	SingleShot	Message	

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