



8027471 0922
9357197 0922
WLA12L_DID8389340
8389340
4110212877
9357196 0922 (1.1.0)

Australia Phone +61 3 9457 0800	Osterreich Phone +43 (0)22 36 62 28 8-0
Belgium/Luxembourg Phone +32 (0)2 468 55 66	Norge Phone +47 67 61 50 00
Brasil Phone +55 11 5215-4900	Polka Phone +48 22 837 40 50
Canada Phone +1 905 771 14 44	România Phone +40 356 171 120
China Phone +86 4000 121 000 +852 2553 6300	Russia Phone +7 495 775 05 30
Danmark Phone +45 45 82 64 00	Schweden Phone +46 10 110 10 00
Deutschland Phone +49 211 5361 301	South Korea Phone +82 2 786 632/4
España Phone +34 93 480 31 00	Suomi Phone +358 9 25 15 800
France Phone +33 1 64 62 39 00	Sverige Phone +46 10 110 10 00
Great Britain Phone +44 (0)1727 83121	Taiwan Phone +886 2 2375 0288
India Phone +91 22 4033 8333	Türkiye Phone +90 (216) 528 50 00
Italy Phone +39 24 6801000	USA/Mexico Phone +1 952 351 4 585/5 878
Japan Phone +81 (0)3 5309 2112	USA/Mexico Phone +1 952 351 4 585/5 878
Magnetsveiz Phone +36 1 371 2680	
Niederland Phone +31 (0)30 229 25 44	

SICK AG, Erwin-Sick-Strasse 1, D-79183 Waldkirch

Please find detailed addresses and additional representatives and agencies in all major industrial nations at www.sick.com

8219483

More representatives and agencies at www.sick.com - Subject to change without notice - The specified product features and technical data do not represent any guarantee.

Weitere Niederlassungen finden Sie unter www.sick.com - Irrtümer und Änderungen vorbehalten - Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.

Plus de représentations et d'agences à l'adresse www.sick.com - Sujet à modification sans préavis - Les caractéristiques de produit et techniques indiquées ne constituent pas de déclaration de garantie.

Para mais representantes e agências, consulte www.sick.com - Alterações poderão ser feitas sem prévio aviso - As características do produto e os dados técnicos apresentados não constituem declaração de garantia.

Flere repræsentanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De afrittede produkttegninger og tekniske data udgør ikke nogen garantioplysning.

Altri rappresentanti ed agenzie si trovano su www.sick.com - Contenuti soggetti a modifiche senza preavviso - Le caratteristiche del prodotto e i dati tecnici non rappresentano una dichiarazione di garanzia.

Meer vestigingen en vertegenwoordigingen vindt u op www.sick.com - Wijzigingen en correcties voorbehouden - Aangegeven producteigenschappen en technische gegevens vormen geen garantieverklaring.

Más representantes y agencias en www.sick.com - Sujeto a cambio sin previo aviso - Las características y los datos técnicos especificados no constituyen ninguna declaración de garantía.

欲了解更多代表机构和代理商信息，请登录 www.sick.com - 如有更改，不另行通知 - 对所给出的产品特性和技术参数 的正确性不予保证。



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	V1.36111
Valid for IO-Link version	1.1.0

2. Process data

Record³: 2 Byte

Bitoffset																
Byte 0	15	14	13	12	11	10	9	8								
Type/Subindex	Unsigned Integer 14															
Bitoffset																
Byte 1	7	6	5	4	3	2	1	0	2	1	0					
Type/Subindex	Unsigned Integer 14															

3. Service data

The following ISDUs will not be saved via Data-Storage: Profile characteristic, Teach-in channel, Teach-in state, Device specific tag, Sender configuration, Quality of teach, Temperature zone, Quality of run, Current receiver level (live), Find me and SLTI Version

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	0	0 = unlocked 1 = locked	
4 (0x04)	Local User Interface Lock	Bit (3)	1 Bit	rw	0	0 = unlocked 1 = locked	
16 (0x10)	Vendor Name	String	7 Byte	ro	SICK AG		
17 (0x11)	Vendor Text	String	64 Byte	ro			
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	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	
37 (0x25)	Detailed Device Status	Array ³	9 Byte	ro		Octet String [3]	
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	12 Byte	ro		Unsigned Integer16 [6]	
14 (0x0E)	PDInput descriptor	Array ³	6 Byte	ro		Octet String [2]	
15 (0x0F)	PDOOutput descriptor	Array ³	3 Byte	ro		Octet String [1]	
58 (0x3A)	Teach-in channel	UInt	8 Bit	rw	0	0 = default Qint. = Qint.1 1 = Qint.1 2 = Qint.2	
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 7 = ERROR	

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

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

³Subindex access not supported

SICK

8027471 0922
9357197 0922
WLA12L_DID8389340
8389340
4110212877
9357196 0922 (1.1.0)

<p>Australia Phone +61 3 9457 0800</p> <p>Belgium/Luxembourg Phone +32 (0)2 468 55 66</p> <p>Brazil Phone +55 11 5215-4900</p> <p>Canada Phone +1 905 771 14 44</p> <p>China Phone +86 4000 121 000 +86202553 6300</p> <p>Danmark Phone +45 45 82 64 00</p> <p>Deutschland Phone +49 211 5361 301</p> <p>España Phone +34 93 480 31 00</p> <p>France Phone +33 1 64 62 35 00</p> <p>Great Britain Phone +44 (0)1727 83121</p> <p>India Phone +91-22-4033 8333</p> <p>Italy Phone +39 02 27 43 41</p> <p>Japan Phone +81 (03) 5309 2112</p> <p>Magnetsverige Phone +36 1 371 2680</p> <p>Niederland Phone +31 (0)30 229 25 44</p> <p>SICK AG, Erwin-Sick-Strasse 1, D 79183 Waldkirch</p>	<p>Osterreich Phone +43 (0)32 36 62 28 8-0</p> <p>Norge Phone +47 67 61 51 00</p> <p>Polska Phone +48 22 837 40 50</p> <p>România Phone +40 356 171 120</p> <p>Russia Phone +7 495 775 05 30</p> <p>Schweden Phone +41 41 619 29 39</p> <p>Sveits Phone +43 6744 3732</p> <p>Sveizera Phone +41 41 619 29 39</p> <p>South Korea Phone +82 2 786 6321/4</p> <p>Suomi Phone +358 9 25 15 800</p> <p>Sverige Phone +46 10 110 10 00</p> <p>Taiwan Phone +886 2 2375 6288</p> <p>Türkiye Phone +90 (216) 528 50 00</p> <p>United Arab Emirates Phone +971 (0)4 5855 878</p> <p>USA/Mexico Phone +1 950 941 6780</p>
---	--

Please find detailed addresses and additional representatives and agencies in all major industrial nations at www.sick.com

More representatives and agencies at www.sick.com - Subject to change without notice - The specified product features and technical data do not represent any guarantee.

Weitere Niederlassungen finden Sie unter www.sick.com - Irrtümer und Änderungen vorbehalten! Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.

Plus de représentations et d'agences à l'adresse www.sick.com - Sujet à modification sans préavis - Les caractéristiques de produit et techniques indiquées ne constituent pas de déclaration de garantie.

Para mais representantes e agências, consulte www.sick.com - Alterações poderão ser feitas sem prévio aviso - As características do produto e os dados técnicos apresentados não constituem declaração de garantia.

Fiere representanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De arfærte produktetskræber og tekniske data udgør ikke nogen garantierklæring.

Altri rappresentanti ed agenzie si trovano su www.sick.com - Contenuti soggetti a modifiche senza preavviso - Le caratteristiche del prodotto e i dati tecnici non rappresentano una dichiarazione di garanzia.

Meer vestigingen en correcties voorbehouden - Aangegeven producteigenschappen en technische gegevens vormen geen garantieverklaring.

Más representantes y agencias en www.sick.com - Sujeto a cambio sin previo aviso - Las características y los datos técnicos especificados no constituyen ninguna declaración de garantía.

欲了解更多代表机构和代理商信息，请登录 www.sick.com。如有更改，不另行通知。对所给出的产品特性和技术参数的正确性不予保证。



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

ENGLISH

SICK device specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Value / Range	Remark [Unit]
60 (0x3C)	Qint.1 SP1 / SP2	Record	2 Byte	rw			
	1 (0x01) SP1 upper threshold (switch-on)	Bit (8)	8 Bit	rw	25	25	[%]
	2 (0x02) SP2 lower threshold (switch-off)	Bit (0)	8 Bit	rw	20	20	[%]
61 (0x3D)	Qint.1 configuration	Record	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	
62 (0x3E)	Switchpoint hysteresis	Bit (0)	16 Bit	rw	0	0 = Autodefined hysteresis	
	Qint.2 SP1 / SP2	Record	2 Byte	rw			
	1 (0x01) SP1 upper threshold (switch-on)	Bit (8)	8 Bit	rw	25	25	
63 (0x3F)	2 (0x02) SP2 lower threshold (switch-off)	Bit (0)	8 Bit	rw	20	20	
	Qint.2 configuration	Record	4 Byte	rw			
	1 (0x01) Switchpoint logic	Bit (24)	8 Bit	rw	128	128 = Vendor specific	
64 (0x40)	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	
	Device specific tag	String	32 Byte	rw	*****		
92 (0x5C)	Physical input / output type configuration pin2	UInt	8 Bit	rw	3	1 = PNP 2 = NPN 3 = Push/Pull	
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	40	0 = Deactivated / no function 1 = External input (Smart Task) 16 = Sender off 17 = Teach-in 33 = Quality of run alarm output 34 = Switching signal QL2 35 = Detection output Qint.1 39 = Switching signal QL1 40 = Switching signal QL1/	
154 (0x9A)	Temperature zone	UInt	8 Bit	ro		0 = Very cold 1 = Cold 2 = Moderate 3 = Warm 4 = Hot	Sensor-internal temperature
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	[%]
179 (0xB3)	Alarm thresholds for diagnostic parameters	Record	4 Byte	rw			
	1 (0x01) Operating hours threshold	Bit (0)	32 Bit	rw	40000	0...1000000	[h]
180 (0xB4)	Current receiver level (live)	UInt	8 Bit	ro		0...255	[%]
190 (0xBE)	Operating hours	Record	8 Byte	ro			
	1 (0x01) Total operating hours	Bit (32)	32 Bit	ro		0...1000000	[h]
	2 (0x02) Operating hours since last reset	Bit (0)	32 Bit	ro		0...1000000	[h]
204 (0xCC)	Find me	UInt	8 Bit	rw	0	0 = Find me deactivated 1 = Find me activated	
226 (0xE2)	System state	Record ³	2 Byte	ro			
	1 (0x01) Detection output Qint.1	Bit (0)	1 Bit	ro		false = No object detected true = Object detected	
	5 (0x05) Quality of run alarm output	Bit (6)	1 Bit	ro		false = Alarm not active true = Alarm active	
227 (0xE3)	6 (0x06) Input signal state Pin 2	Bit (7)	1 Bit	ro		false = External input FALSE true = External input TRUE	
	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	
	1080 (0x438)	SLTI Version	String	8 Byte	ro		
1083 (0x43B)	Logic 1	UInt	8 Bit	rw	0	0 = DIRECT 1 = AND 2 = OR	

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

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

³Subindex access not supported



8027471 0922
9357197 0922
WLA12L_DID8389340
8389340
4110212877
9357196 0922 (1.1.0)

Australia Phone +61 3 9457 0800	Osterreich Phone +43 (0)22 36 62 28 8-0
Belgium/Luxembourg Phone +32 (0)2 468 55 66	Norge Phone +47 67 61 50 00
Spain Phone +34 93 480 31 00	Polka Phone +48 22 837 40 50
Canada Phone +1 905 771 14 44	România Phone +40 356 171 120
China Phone +86 4000 121 000 +862125333000	Russia Phone +7 495 775 09 30
Danmark Phone +45 45 82 64 00	Schweiz Phone +41 41 619 29 39
Deutschland Phone +49 211 5301 301	Singapore Phone +65 6744 3732
España Phone +34 93 480 31 00	Slovenija Phone +386 (0)147 69 990
France Phone +33 1 64 62 39 00	South Korea Phone +82 2 786 6321/4
Great Britain Phone +44 (0)1727 83121	 Suomi Phone +358 9 25 15 800
India Phone +91 22 4033 8333	Sverige Phone +46 10 110 10 00
Israel Phone +972 4 6801000	Taiwan Phone +886 2 2375 6288
Italy Phone +39 02 27 43 41	Türkiye Phone +90 (216) 528 50 00
Japan Phone +81 (03) 5309 2112	United Arab Emirates Phone +971 (0)4 5565 878
Mexico Phone +52 55 371 2680	USA/Mexico Phone +1 950 941 6780
Niederland Phone +31 (0)30 229 25 44	

SICK AG, Erwin-Sick-Strasse 1, D.79183 Waldkirch

Please find detailed addresses and additional representatives and agencies in all major industrial nations at www.sick.com

More representatives and agencies at www.sick.com - Subject to change without notice - The specified product features and technical data do not represent any guarantee.

Weitere Niederlassungen finden Sie unter www.sick.com - Irrtümer und Änderungen vorbehalten - Angegebene Produkteigenschaften und technische Daten stellen keine Garantieerklärung dar.

Plus de représentations et d'agences à l'adresse www.sick.com - Sujet à modification sans préavis - Les caractéristiques de produit et techniques indiquées ne constituent pas de déclaration de garantie.

Para mais representantes e agências, consulte www.sick.com - Alterações poderão ser feitas sem prévio aviso - As características do produto e os dados técnicos apresentados não constituem declaração de garantia.

Flere repræsentanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De angivne produktdata og tekniske data udgør ikke nogen garanti erklæring.

Altri rappresentanti ed agenzie si trovano su www.sick.com - Contenuti soggetti a modifiche senza preavviso - Le caratteristiche del prodotto e i dati tecnici non rappresentano una dichiarazione di garanzia.

Meer vestigingen en vertegenwoordigingen vindt u op www.sick.com - Wijzigingen en correcties voorbehouden - Aangegeven producteigenschappen en technische gegevens vormen geen garantieverklaring.

Más representantes y agencias en www.sick.com - Sujeto a cambio sin previo aviso - Las características y los datos técnicos especificados no constituyen ninguna declaración de garantía.

欲了解更多代表机构和代理商信息，请登录 www.sick.com - 如有更改，不另行通知 - 对所给出的产品特性和技术参数 的正确性不予保证。



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

ENGLISH

SICK device specific							
Index dec (hex)	Name	Format (Offset)	Length	Access ¹	Default Value	Value / Range	Remark [Unit]
1084 (0x43C)	Logic 2	UInt	8 Bit	rw	0	0 = DIRECT 1 = AND 2 = OR	
1085 (0x43D)	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)	
1086 (0x43E)	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)	
1087 (0x43F)	Time 1 Setup	UInt	16 Bit	rw	1	1...30000	[ms]
1088 (0x440)	Time 2 Setup	UInt	16 Bit	rw	1	1...30000	[ms]
1089 (0x441)	Inverter 1	UInt	8 Bit	rw	1	0 = not inverted 1 = inverted	
1090 (0x442)	Inverter 2	UInt	8 Bit	rw	1	0 = not inverted 1 = inverted	
1093 (0x445)	Inverter Ext. Input	UInt	8 Bit	rw	0	0 = not inverted 1 = inverted	

Standard command				
Index dec (hex)	Name	Access ¹	Value	Remark [Unit]
2 (0x02)	Standard Command	wo	65 130 228	Single value teach Restore Factory Settings Reset diagnostics parameter

Events			
Code dec (hex)	Name	Type	Remark [Unit]
30480 (0x7710)	Short circuit	Error	Shortcut on outputs
36001 (0x8CA1)	New parameters	Notification	Parameters have been changed
36004 (0x8CA4)	Quality of run alarm	Warning	Low device performance, clean sensor
36011 (0x8CAB)	Alarm operating hours	Warning	Threshold for operating hours violated

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

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)

³Subindex access not supported