



8025784 0620
9326453 0620
WTF16 A00
8389255
1655234160
9326451 0620 (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 +1 805 771 14 44 | România Phone +40 356 171 120 |
| China Phone +86 4000 121 000 +8623533 6300 | 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 | Sverige Phone +46 10 110 10 00 |
| España Phone +34 93 480 31 00 | Taiwan Phone +886 2 2375 4288 |
| France Phone +33 1 64 62 39 00 | Türkiye Phone +90 (216) 528 50 00 |
| Great Britain Phone +44 (0)1727 831121 | United Arab Emirates Phone +971 (0) 4 5565 878 |
| India Phone +91 22 4033 8333 | USA/Mexico Phone +1 (952) 941 6780 |
| Israel Phone +972 4 6801000 | |
| Italia Phone +39 02 27 43 41 | |
| Japan Phone +81 (0)3 5309 2112 | |
| Magnesium 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

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.

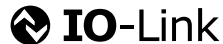
Flere repræsentanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De aftrykte produkttegnskaber og tekniske data udgør ikke nogen garantierklæring.

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

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 | V1.24983 |
| 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 | | | | | | | | | | | | | | | |
| 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: www.sick.com/[articlenumber] | | | | | | | |
| 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 | ***** [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: www.sick.com/[articlenumber] | | | | | | | |
| 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 [A] | 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 Byte | rw | | | |
| 1 (0x01) | SP1 sensing range | Bit (8) | 16 Bit | rw | [A] | 75...250 | Default value device specific [mm] |

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

SICK

8025784 0620
9326453 0620

WTF16 A00

8389255

1655234160

9326451 0620 (1.1.0)

Australia
Phone +61 3 9457 0800

Belgium/Luxembourg
Phone +32 (0)2 468 55 66

Swiss
Phone +41 51 9215-9900

Canada
Phone +1 905 771 14 44

China
Phone +86 4000 121 000
+852 2153 6300

Danmark
Phone +45 45 82 64 00

Deutschland
Phone +49 211 5301 301

España
Phone +34 93 480 31 00

France
Phone +33 1 64 62 39 00

Great Britain
Phone +44 (0)1727 831121

India
Phone +91-22-4033 8333

Italy
Phone +39 02 27 43 41

Japan
Phone +81 (0)3 5309 2112

Magnetsverige
Phone +36 1 371 2680

Niederland
Phone +31 (0)30 229 25 44

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

Osterreich
Phone +43 (0)32 36 62 28 8-0

Norge
Phone +47 67 61 50 00

Polska
Phone +48 22 837 40 50

România
Phone +40 356 171 120

Russia
Phone +7 495 775 05 30

Schweiz
Phone +41 41 619 29 39

Schweden
Phone +46 10 110 10 00

Severní Korea
Phone +82 2 786 6321/4

Spain
Phone +358 9 25 15 800

Sri Lanka
Phone +91 (0)11 427 3733

South Korea
Phone +82 2 786 6321/4

Taiwan
Phone +886 2 2375 6288

Türkiye
Phone +90 (216) 528 50 00

United Arab Emirates
Phone +971 (0)4 5565 878

USA/Mexico
Phone +1 952 941 6780

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.

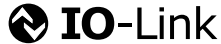
Flere repræsentanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De angivne produktdata og tekniske data udgør ikke nogen garanti erklæring.

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 correcties voorbehouden - Aangegeven producteigenschaften en technische gegevens vormen geen garantieverklaring.

Más representantes y agencias en www.sick.com - Sujeto a cambio sin preaviso - 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

[A] ATTENTION: Deviating default values can be possible. See device data sheet for details: [www.sick.com/\[articlenumber\]](http://www.sick.com/[articlenumber])

| Index dec (hex) | Name | Format (Offset) | Length | Access ¹ | 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...250 | 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 ³ | 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 | |

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

8025784 0620
9326453 0620

WTF16 A00

8389255

1655234160

9326451 0620 (1.1.0)

| | |
|---|---|
| <p>Australia Phone +61 3 9457 0800</p> <p>Belgium, Luxembourg Phone +32 (0)2 468 35 66</p> <p>Brasil Phone +55 11 5215-9900</p> <p>Canada Phone +1 905 771 14 44</p> <p>China Phone +86 4000 121 000 +852 2153 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 39 00</p> <p>Great Britain Phone +44 (0)1727 831121</p> <p>India Phone +91-22-4033 8333</p> <p>Israel Phone +972-4-6801000</p> <p>Italia Phone +39 02 27 43 41</p> <p>Japan Phone +81 (03) 5309 2112</p> <p>Magyarország 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)22 36 62 28 8-0</p> <p>Norge Phone +47 67 61 51 50 00</p> <p>Polina Phone +48 22 837 40 50</p> <p>România Phone +40 356 171 120</p> <p>Russia Phone +7 495 775 09 30</p> <p>Schweden Phone +41 41 619 29 39</p> <p>Singapore Phone +65 6744 3732</p> <p>Sveits Phone +386 (0)147 69 990</p> <p>South Africa Phone +27 11 472 3733</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 +1 952 941 6780</p> |
|---|---|

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

8211463

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.

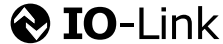
Flere repræsentanter og agenturer på www.sick.com - Med forbehold for ændringer og fejl - De angivne produkttegnelser og tekniske data udgør ikke nogen garantierklæring.

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

| Standard command | | | | | |
|------------------|------------------|---------------------|-----------|--|---------------|
| Index dec (hex) | | Access ¹ | 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 |

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