

**ENGLISH**

**Distance Sensor**  
with laser light  
**Operating Instructions**

<b>MAX. OUTPUT ≤ 22.7 mW</b> <b>PULSE DURATION = 1 ns</b> <b>WAVELENGTH = 650 nm</b>	 <b>LASER APERTURE</b>
<b>IEC 60825-1:2007</b> <b>Complies with 21 CFR 1040.10</b> <b>and 1040.11 except for</b> <b>deviations pursuant</b> <b>to laser notice No. 50</b> <b>dated June 24, 2007</b>	 <b>LASER RADIATION</b> <b>DO NOT STARE INTO BEAM</b> <b>CLASS 2 LASER PRODUCT</b>

**Safety Specifications**

- > Read the operating instructions before starting operation.
- > Connection, assembly, and settings only by competent technicians.
- > Protect the device against moisture and soiling when operating.
- > No safety component in accordance with EU machine guidelines.
- > **CAUTION:** Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

**Proper Use**

The DT500 distance sensor is an opto-electronic sensor and is used for optical, non-contact detection of objects, animals, and people.

**Starting Operation**

We recommend to use SICK accessories.

**1** Connect and secure cable receptacle tension-free.

The following apply for connection in **B**: brn=brown, blu=blue, blk=black, gra=grey, wht=white.

**C** MF multi-functional input.

Connect cables.

Fix sensor to suitable holders (e.g. SICK mounting bracket).

Connect distance sensor to operating voltage (see type label).

Adjustment of light reception:

Position object. Position light spot on object. Red sender light spot visible on object.

**Settings RS 422:**

ASCII 5 characters <12345><CR><LF>

19.2 kBaud, 8 data bits, 1 stop bit, no parity.

**Error performance or no object in measurement range:**

Error: measurement value output 00.00; analogue interface: 0/3.5 mA; serial interface: 00000 CR LF.

No object in measurement range:

measurement value output 99.99; analogue interface: 20.5 mA; serial interface: 99999 CR LF.

**Settings analogue output:**

Selection of a current range.

**1a** Setting of the distance in cm to current value 0 (4) mA.

**1b** Setting of the distance in cm to current value 20 mA.

**1c** Currently measured distance.

**1d** Program abort:

The currently measured distance is always displayed after the program is aborted.

Reset to ex-works setting:

Press the two arrow keys at the same time and connect the distance sensor to the operating voltage.

4 ... 20 mA, 4 mA = 0,2 m, 20 mA = 0,8 m.

**Maintenance**

SICK sensors do not require any maintenance. We recommend that you clean the external lens surfaces and check the screw connections and plug-in connections at regular intervals.

**DEUTSCH**

**Distanzsensor**  
mit Laserlicht  
**Betriebsanleitung**

<b>MAX. LEISTUNG ≤ 22,7 mW</b> <b>TAKTZEIT = 1 ns</b> <b>WELLENLÄNGE = 650 nm</b>	 <b>LASERÖFFNUNG</b>
<b>IEC 60825-1:2007</b> <b>entspricht 21 CFR 1040.10</b> <b>und 1040.11 außer bei</b> <b>Abweichungen gemäß</b> <b>Laserhinweis Nr. 50</b> <b>vom 24. Juni 2007</b>	 <b>LASERSTRAHLUNG</b> <b>NICHT IN DEN STRAHL BLICKEN!</b> <b>LASER KLASSE 2</b>

**Sicherheitshinweise**

- > Vor der Inbetriebnahme die Betriebsanleitung lesen.
- > Anschluss, Montage und Einstellung nur durch Fachpersonal.
- > Gerät bei Inbetriebnahme vor Feuchte und Verunreinigung schützen.
- > Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie.

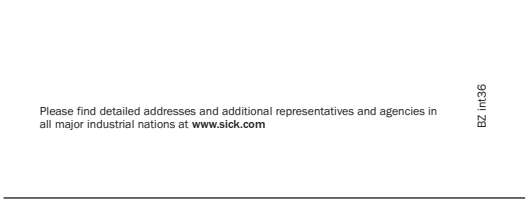
# SICK

8010693.US31 0511 GO

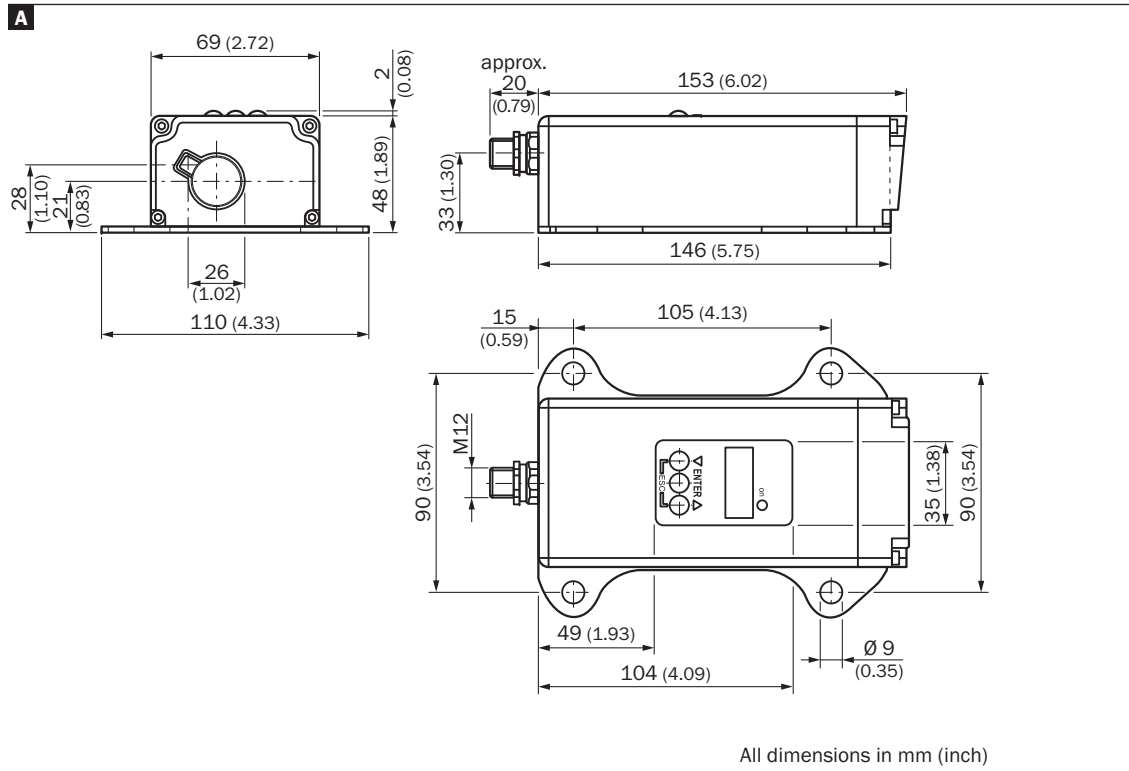
# SENSICK

## DT500

<p><b>Australia</b> Phone +61 3 9497 4100</p> <p><b>Belgium/Luxembourg</b> Phone +32 (0)2 466 55 66</p> <p><b>Brasil</b> Phone +55 11 3215-4900</p> <p><b>Ceska Republika</b> Phone +420 2 57 91 18 50</p> <p><b>China</b> Phone +852-2763 6966</p> <p><b>Denmark</b> Phone +45 45 82 64 00</p> <p><b>Deutschland</b> Phone +49 211 5301-301</p> <p><b>España</b> Phone +34 93 480 31 00</p> <p><b>France</b> Phone +33 1 64 62 35 00</p> <p><b>Great Britain</b> Phone +44 (0)1727 831121</p> <p><b>India</b> Phone +91-22-4033 8333</p> <p><b>Israel</b> Phone +972-4-999-0590</p> <p><b>Italia</b> Phone +39 02 27 43 41</p> <p><b>Japan</b> Phone +81 (0)3 3358 1341</p> <p><b>Niederlande</b> Phone +31 (0)30 229 25 44</p> <p><b>Norge</b> Phone +47 67 81 50 00</p>	<p><b>Österreich</b> Phone +43 (0)22 36 62 28 8-0</p> <p><b>Polska</b> Phone +48 22 837 40 50</p> <p><b>Republic of Korea</b> Phone +82-2 786 6321/4</p> <p><b>Republika Slovenija</b> Phone +386 (0)1-47 69 990</p> <p><b>România</b> Phone +40 356 171 120</p> <p><b>Russia</b> Phone +7 495 775 05 34</p> <p><b>Schweiz</b> Phone +41 41 619 29 39</p> <p><b>Singapore</b> Phone +65 6744 3732</p> <p><b>South Africa</b> Phone +27 11 472 3737</p> <p><b>Suomi</b> Phone +358-9-25 15 800</p> <p><b>Sverige</b> Phone +46 10 110 10 10</p> <p><b>Taiwan</b> Phone +886 2 2375-6288</p> <p><b>Türkiye</b> Phone +90 216 528 50 00</p> <p><b>United Arab Emirates</b> Phone +971 4 8865 878</p> <p><b>USA/Canada/México</b> Phone +1(952) 941-6780</p>
--	--



Subject to change without notice  
Irrtümer und Änderungen vorbehalten  
Sujet à modification sans préavis  
Alterações poderão ser feitas sem prévio aviso  
Med forbehold for ændringer og fejl  
Contenti soggetti a modifiche senza preavviso  
Wijzigingen en correcties voorbehouden  
Sujeeto a cambio sin previo aviso  
如有更改，不另行通知



**B**

**DT500-A\_1**      **DT500-A\_2**

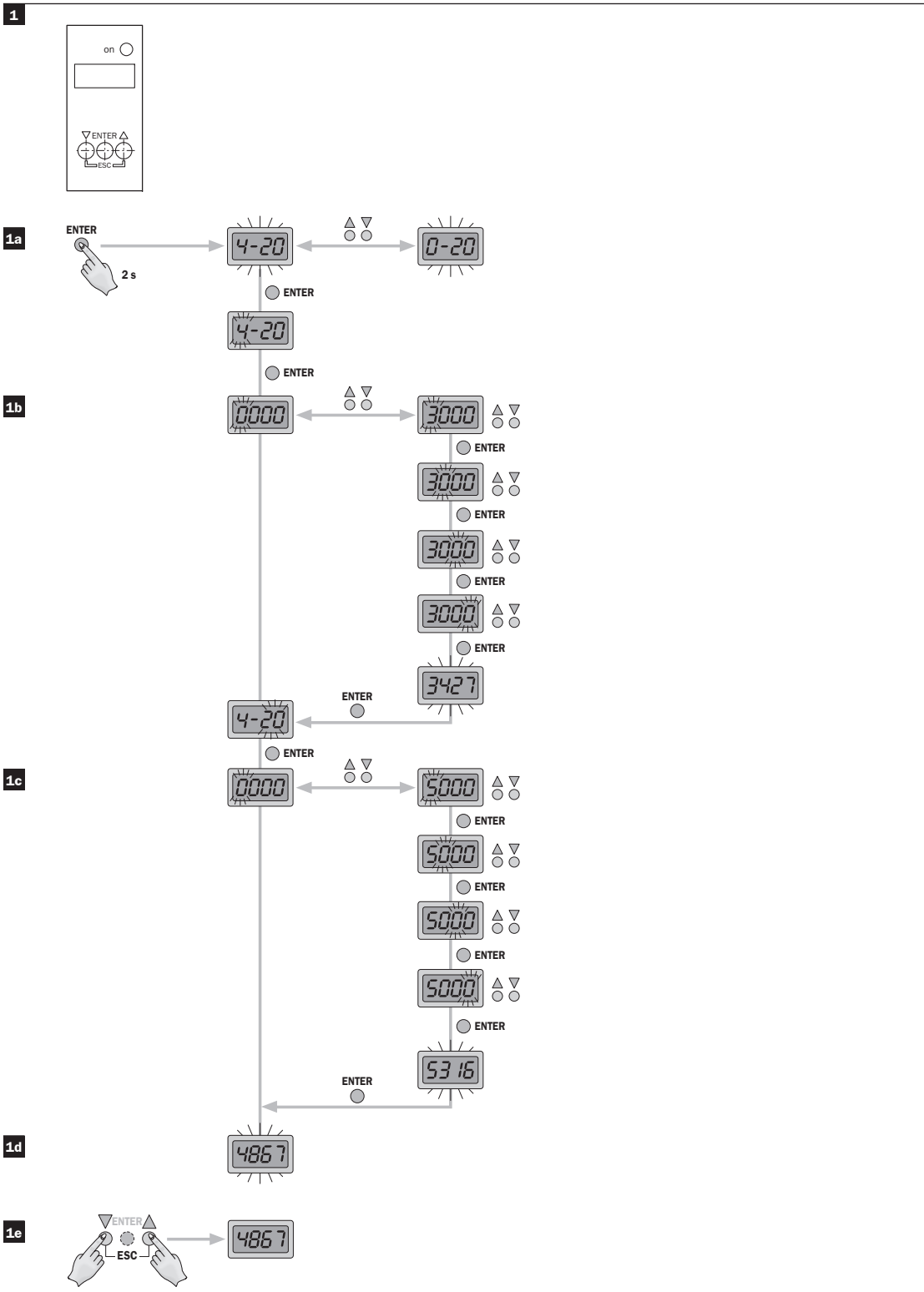
Teach	0 mA	60 ms < MF < 150 ms
Teach	4 mA	150 ms < MF < 250 ms
Teach	20 mA	250 ms < MF < 350 ms
Laser off		450 ms < MF < ∞

**C**



<b>DT500</b>	<b>A111, A112</b> <b>A211, A212</b>	<b>A311, A312</b> <b>A411, A412</b>	<b>A511, A512</b> <b>A611, A612</b>
Measurement area (blk 6 ... 90 %) (blk 6 %) (wht 90 %)		0,2 ... 18 m <sup>2)</sup> 0,2 ... 30 m	0,2 ... 7 m <sup>1)</sup>  0,2 ... 30 m <sup>2)</sup> 0,2 ... 70 m
Light spot diameter/distance	Lichtflekdurchmesser/Entfernung	Diamètre de la tache lumineuse/Distance	Diâmetro do ponto de luz/distância
Reproducibility	Reproduzierbarkeit	Reproductibilité	Reproduçibilidade
Preciseness	Genauigkeit	Précision	Exatidão
Temperature drift	Temperaturdrift	Dérive due à la température	Temperatura de deriva
Supply voltage V <sub>s</sub>	Versorgungsspannung U <sub>v</sub>	Tension d'alimentation U <sub>v</sub>	Tensão de força U <sub>v</sub>
Response time	Ansprechzeit	Temps de réponse	Tempo de reação
Analogue output	Analogausgang	Sortie analogique	Saída analoga
MF: Extern Teach (Laser off)	MF: Extern Teach (Laser off)	MF: Apprentissage externe (Laser off)	MF: Extern Teach (Laser off)
RS 422	RS 422	RS 422	RS 422
Enclosure rating	Schutzart	Type de protection	Tipo de proteção
Ambient operating temperature with heating	Betriebsumgebungstemperatur mit Geräteheizung	Température ambiante avec chauffage de l'appareil	Temperatura ambiente de operação com aquecimento do aparelho

<b>DT500</b>	<b>A111, A112</b> <b>A211, A212</b>	<b>A311, A312</b> <b>A411, A412</b>	<b>A511, A512</b> <b>A611, A612</b>
Area di misurazione (blk 6 ... 90 %) (blk 6 %) (wht 90 %)		0,2 ... 18 m <sup>2)</sup> 0,2 ... 30 m	0,2 ... 7 m <sup>1)</sup>  0,2 ... 30 m <sup>2)</sup> 0,2 ... 70 m
Diametro punto luminoso/distanza	Lichtvlekdiameter/Bereik	Diámetro de mancha de luz/distancia de mancha de luz	光点直径/距离
Riproducibilità	Reproduceerbaarheid	Reproducibilidad	再現性
Precisione	Nauwkeurigheid	Exactitud	精确度
Drift temperatura	Temperatuurdrift	Deriva de temperatura	温度漂移
Tensione di alimentazione U <sub>v</sub>	Voedingsspanning U <sub>v</sub>	Tensión de alimentación U <sub>v</sub>	电源电压U <sub>v</sub>
Tempo di risposta	Aansprektijd	Tiempo de reacción	响应时间
Uscita analogica	Analoge uitgang	Salida analógica	模拟输出
MF: Teach esterno (Laser off)	MF: Extern Teach (Laser off)	MF: Extern Teach (Laser off)	MF: 外部示教 (激光关)
RS 422	RS 422	RS 422	RS 422
Tipo di protezione (IEC 144)	Beveiligingswijze (IEC 144)	Tipo de protección (IEC 144)	保护等级 (IEC 144)
Temperatura ambiente circostante con riscaldamento apparecchi	Bedrijfsomgevingstemperatuur Met apparaatverwarming	Temperatura ambiente de servicio con calefacción de aparato	加热时环境温度



<sup>1)</sup> Eenduidig alleen tot 7 m  
<sup>2)</sup> Eenduidig alleen tot 150 m  
<sup>3)</sup> Valori limite

<sup>1)</sup> Claramente solo hasta 7 m  
<sup>2)</sup> Claramente solo hasta 150 m  
<sup>3)</sup> Valores límite

<sup>1)</sup> 单值仅至 7 米  
<sup>2)</sup> 单值仅至 150 米  
<sup>3)</sup> 极限值残余纹波最大值 5 V<sub>SS</sub>

