



Long range distance sensors Dx500, DT500, CAN (Layer 2)

DT500-A123



Model Name > [DT500-A123](#)
Part No. > [1040468](#)



At a glance

- Measurement range 0.2 m ... 70 m
- One analog output, RS-422 or CAN
- Highest measurement resolution, repeatability and accuracy without a reflector
- Simple adjustment using red laser light
- Metal housing with integrated heating option for cold store applications
- Weather protection housing optional
- Alignment bracket optional

Your benefits

- High-precision measurement reliably indicates product position for exact machine control, reducing scrap and increasing throughput
- Red laser light as well as adjustable mounting brackets (optional accessory) enable fast and easy alignment, ensuring on-time and cost-effective installation
- A tough metal housing with internal heating ensures reliability in rough ambient conditions, such as cold store warehouses
- User-friendly display with easy-to-use menu along with external PC/PLC programming offers fast and cost-efficient setup
- Serial interfaces or an analog output offer flexible integration into application
- Wide measurement range of 0.2 m to 70 m enables automated measurement on natural targets where reflectors can't be used



Performance

Measuring range:	0.2 m ... 18 m, 6 % remission 0.2 m ... 30 m, 90 % remission
Resolution:	≤ 0.1 mm
Repeatability ¹⁾ , ²⁾ :	1 mm
Accuracy ³⁾ :	± 3 mm
Light source ⁴⁾ :	Laser, red
Typ. light spot size (distance):	10 mm (at 7 m) 100 mm (at 70 m) 45 mm (at 30 m)
Output rate:	250 ms
Laser class:	2 (EN 60825/21 CFR 1.040)

^{1) 3)} 6 % ... 90 % remission ²⁾ Statistical error 1 σ ⁴⁾ Average service life of 50,000 h at $T_A = +25^\circ\text{C}$

Interfaces

Data interface:	CAN (Layer 2)
Resolution CAN:	0.1 mm
CAN address:	11 bit, setup via display
Laser off input:	> 12 V

Mechanics/electronics

Supply voltage V_s :	DC 10 V ... 30 V, reverse polarity protected, $U_s \geq$ DC 24 V for devices with heating
Ripple ¹⁾ :	5 Vpp
Initialization time:	500 ms
Weight:	1,000 g
Power consumption:	Typ. 3 W
Connection type:	Connector M12, 8-pin

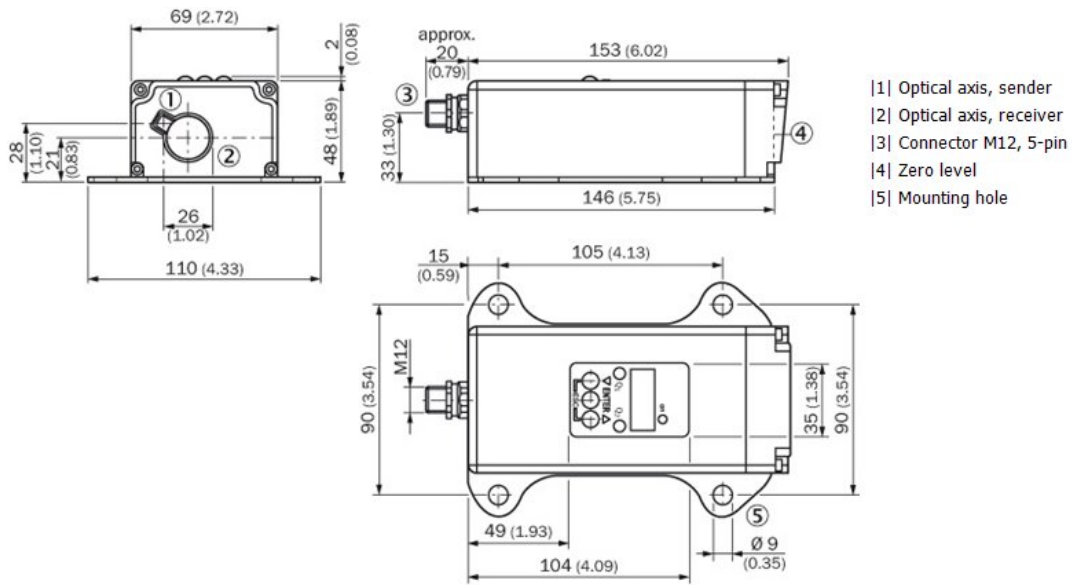
¹⁾ May not fall short of or exceed V_s tolerances

Ambient data

Enclosure rating:	IP 65
Protection class ¹⁾ :	II
Temperature drift:	Typ. 0.05 mm/K
Ambient temperature:	Operation: -10 ... 50 °C Operation with cooling case: -10 ... 75 °C Storage: -25 ... 75 °C
Mechanical load:	Noise: EN 600 68-2-64 Shock: EN 600 68-2-27 / -2-29 Sine: EN 600 68-2-6
Electromagnetic compatibility (EMC):	EN 61000-6-2, EN 55011 / EN 60947-5-7: 2003-9

¹⁾ Reference voltage DC 32 V

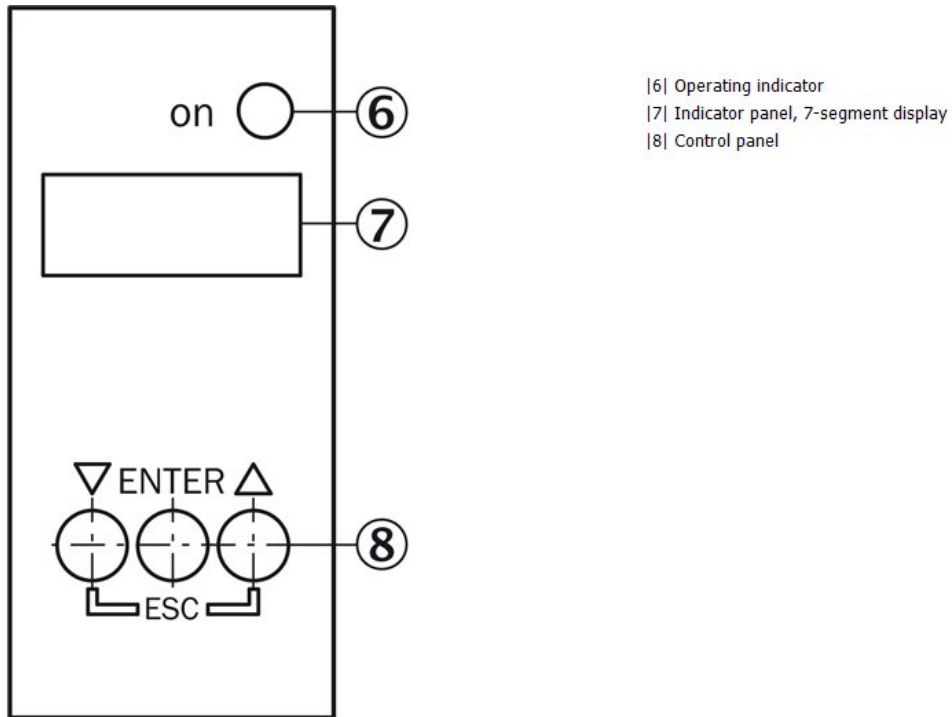
Dimensional drawing



- |1| Optical axis, sender
- |2| Optical axis, receiver
- |3| Connector M12, 5-pin
- |4| Zero level
- |5| Mounting hole

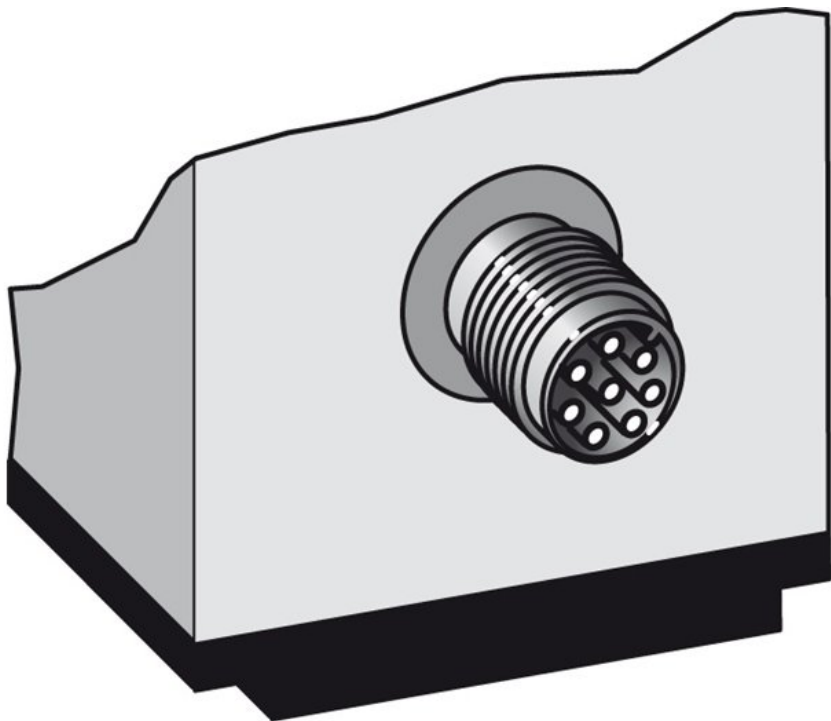
All dimensions in mm (inch)

Adjustment possible

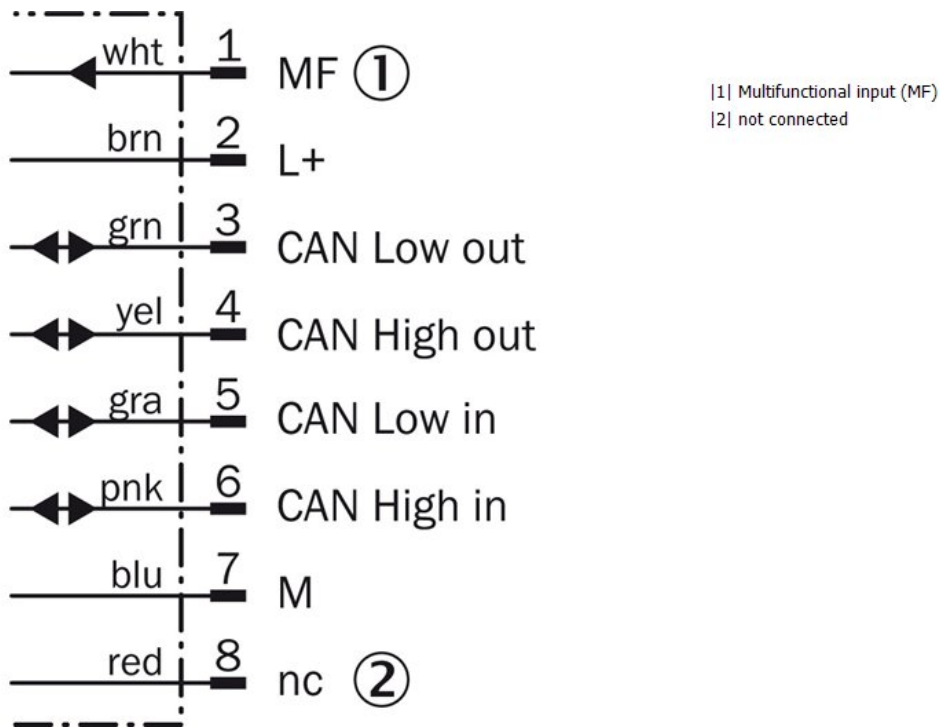


- |6| Operating indicator
- |7| Indicator panel, 7-segment display
- |8| Control panel

Connection type



Connection diagram



Function MF input

Function MF input

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

Additional information

Extern Teach ET via MF ①

Teach-In	MF active	Model
0 mA	100 ms	Current measurement value is used
4 mA	200 ms	
20 mA	300 ms	
Laser off	> 450 ms	

① Multi functional input.

Error performance or no object in measurement range

Measurement not possible

Measurement value output display	Analog interface	CAN Bus	Serial interface
0.000	0/3.5 mA	00000	00000 CRLF

No object in measurement range or laser off

Measurement value output display	Analog interface	CAN Bus	Serial interface
99.99	20.5 mA	99999	99999 CRLF

Australia

Phone +61 3 9457 0600
1800 334 802 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail sac@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail kundenservice@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 3358 1341
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederlands

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail austefjord@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail admin@sicksgp.com.sg

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com