



## Long range distance sensors Dx500, DT500

DT500-A611



**Model Name** > **DT500-A611**  
**Part No.** > **1040467**

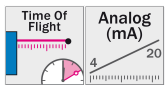


**At a glance**

- 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**

Measurement range:	0.2 m ... 30 m, 6 % remission 0.2 m ... 70 m, 90 % remission
Resolution:	12 bit
Repeatability <sup>1) 2)</sup> :	1 mm
Accuracy <sup>3)</sup> :	± 3 mm
Light source <sup>4)</sup> :	Laser, red
Typ. light spot size (distance):	10 mm (at 7 m) 100 mm (at 70 m) 45 mm (at 30 m)
Output rate:	0.15 s ... 6 s
Laser class:	2 (EN 60825/21 CFR 1.040)

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

## Interfaces

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Data interface:	Q <sub>A</sub>
Analog output:	0 mA ... 20 mA / 4 mA ... 20 mA (VS-2 V / 0.0205 A) <sup>1)</sup>
Laser off input:	> 12 V
Multifunctional input (MF) <sup>2)</sup> :	> 12 V

<sup>1)</sup> Max. load =  $U_v - 2 \text{ V} / 0,0205 \text{ A}$  <sup>2)</sup> Refer to function MF input

## Mechanics/electronics

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Supply voltage V <sub>s</sub> :	DC 10 V ... 30 V, reverse polarity protected, U <sub>s</sub> ≥ DC 24 V for devices with heating
Ripple <sup>1)</sup> :	5 V <sub>pp</sub>
Initialization time:	500 ms
Weight:	1,000 g
Power consumption:	Typ. 22 W
Connection type:	Male connector, M12, 5-pin

<sup>1)</sup> May not fall short of or exceed V<sub>S</sub> tolerances

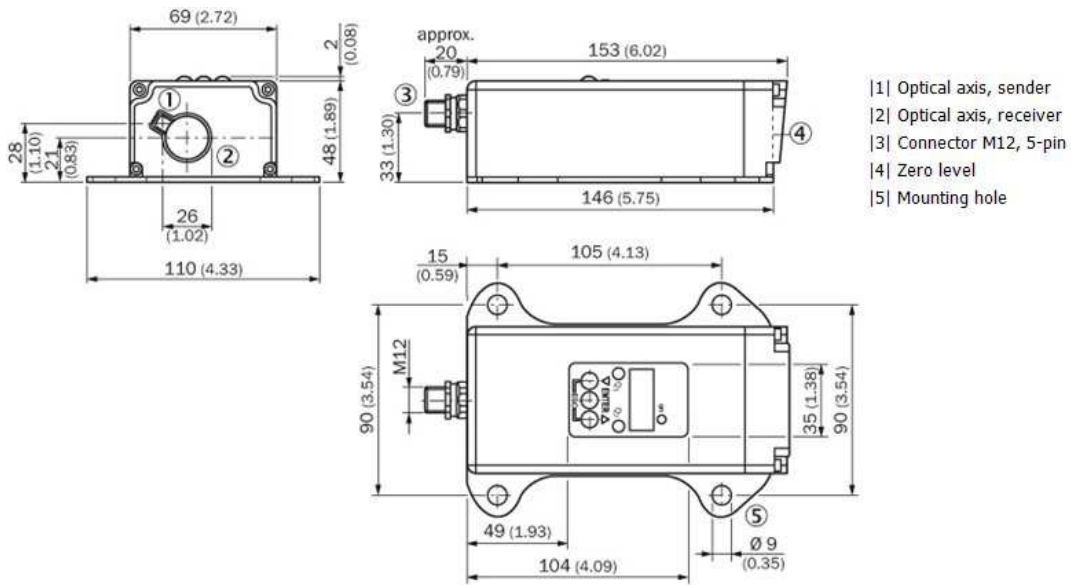
## Ambient data

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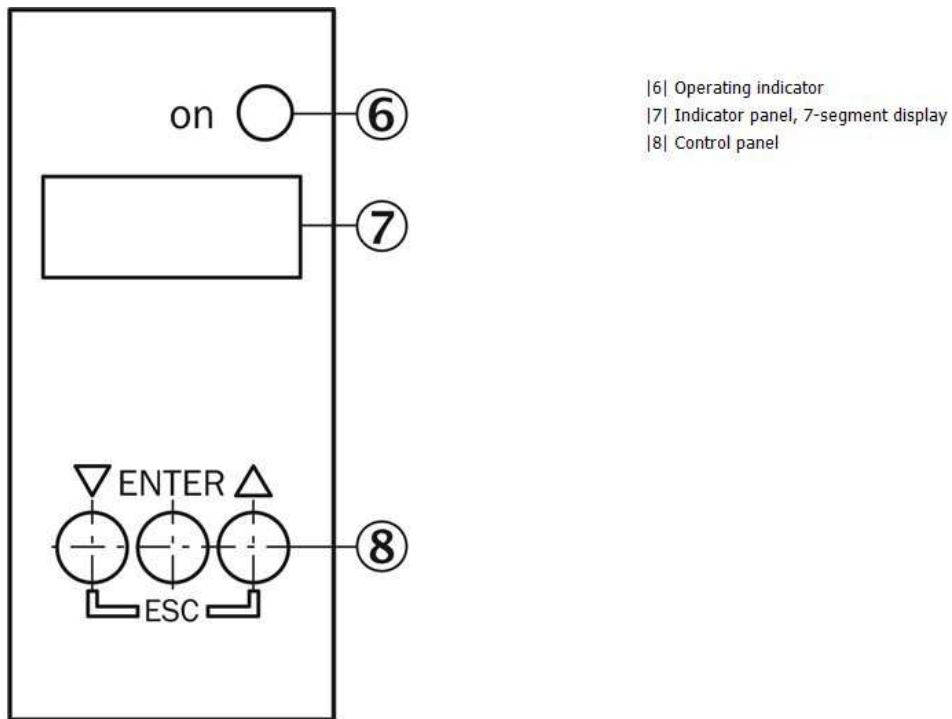
Enclosure rating:	IP 65
Protection class <sup>1)</sup> :	II
Temperature drift:	Typ. 0.05 mm/K
Ambient temperature:	Storage: -25 ... +75 °C Operation with heating: -40 ... +50 °C Operation with cooling case: -40 ... +75 °C
Mechanical load:	Noise: EN 600 68-2-64 Shock: EN 600 68-2-27 / -2-29 Sine: EN 600 68-2-6
Electromagnetic compatibility (EMC):	EN 61000-6-2, EN 55011 / EN 60947-5-7: 2003-9

<sup>1)</sup> Reference voltage DC 32 V

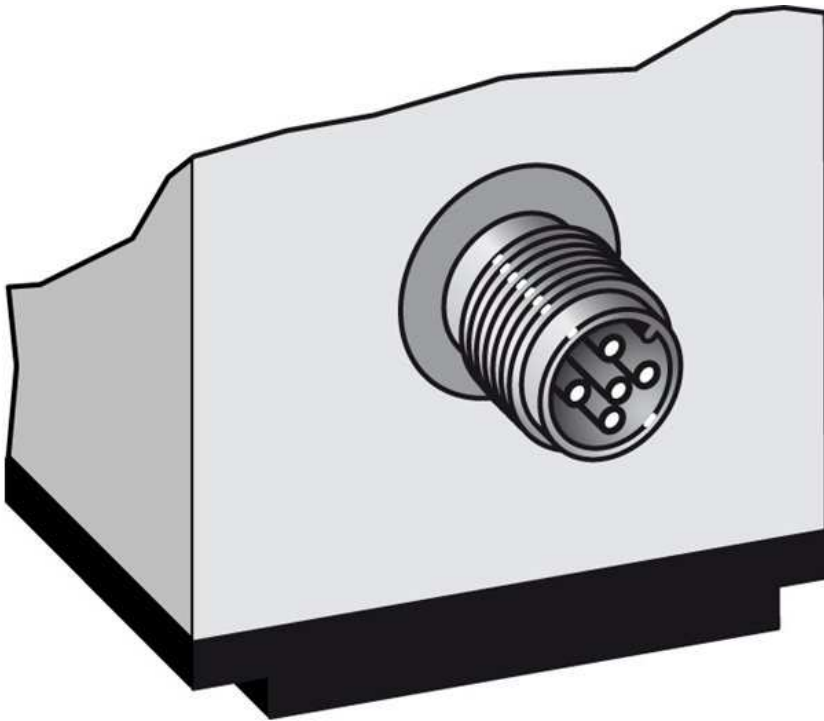
## Dimensional drawing



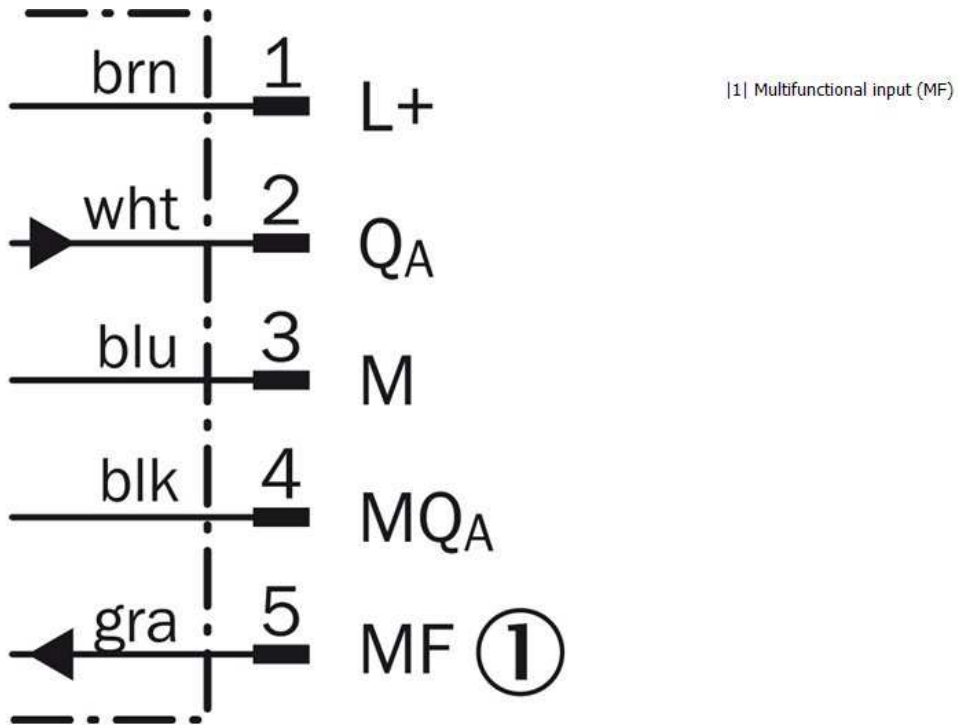
## Adjustment possible



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

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