

## DISTANCE MEASURING

contactless and reliable

Accuracy 1 mm

Measuring range 50 m / 150 m / 500 m

Measuring rate 250 Hz

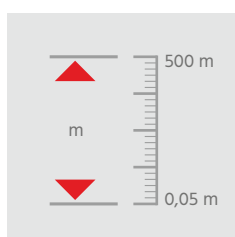
# Highest measuring performance for uncompromising results

Highlights of the Dimetix Laser Distance Sensors are precision, robustness, flexibility and speed. Our Laser Distance Sensors measure over the complete measuring range with an **accuracy** of 1 mm and with a repeatability of 0.3 mm. The **measuring range** is between 0 and 500 meters. The devices work with a **measuring rate** up to 250 Hz and have an output rate up to 1 kHz.

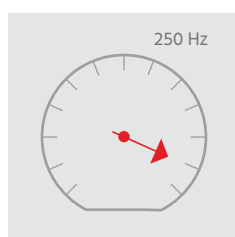
Due to many years of innovations and continuous development, Dimetix Laser Distance Sensors work under arduous external conditions. It is possible to even measure on **black surfaces with solar irradiation**. Extreme working **temperatures** from -40 up to +60 °C and a **robust housing** help them withstand the hardest environments.

The Dimetix Laser Distance Sensors are equipped with a multitude of serial interfaces as standard. Besides synchronous and asynchronous **interfaces**, PROFINET, EtherNet/IP, EtherCAT and PROFIBUS are also available.

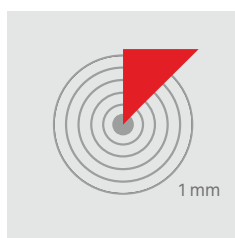
An **analog 0/4 ... 20 mA output** and digital **in- and outputs** are standard. While the serial interfaces as well as further features can be configured by the customer.



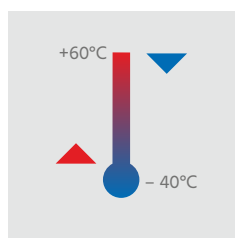
Measuring range



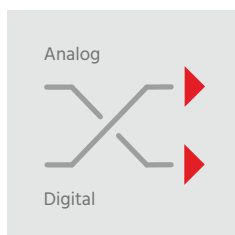
Measuring rate



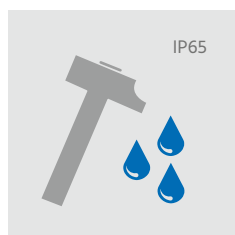
Accuracy



Temperature

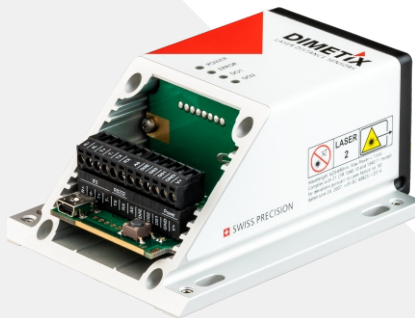


Interfaces



Degree of protection

# Laser-Distance-Sensors D-Series



integrated interfaces\*



optional interfaces



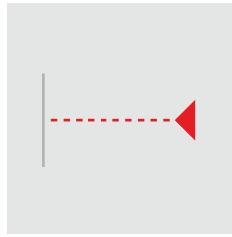
PART NUMBER	DPE-10-500	DPE-30-500	DEN-10-500	DEH-30-500
SPECIFICATION	500630	500636	500637	500638
Typical Accuracy @ $\pm 2\sigma$ (@ $\pm 1\sigma$ )	$\pm 1$ ( $\pm 0.5$ )mm	$\pm 3$ ( $\pm 1.5$ )mm	$\pm 1$ ( $\pm 0.5$ )mm	$\pm 3$ ( $\pm 1.5$ )mm
Typical repeatability @ $\pm 2\sigma$ (@ $\pm 1\sigma$ )	$\pm 0.3$ ( $\pm 0.15$ )mm	$\pm 0.7$ ( $\pm 0.35$ )mm	$\pm 0.3$ ( $\pm 0.15$ )mm	$\pm 0.7$ ( $\pm 0.35$ )mm
Measuring range on natural surfaces	0.05...~ 100 m	0.05...~ 100 m	0.05...~ 100 m	0.05...~ 100 m
Measuring range on reflective foil	~ 0.5...500 m	~ 0.5...500 m	~ 0.5...500 m	~ 0.5...500 m
Max. measuring rate	250Hz	250Hz	100Hz	100Hz
Max. output rate	1kHz	1kHz	100Hz	100Hz
Operating temperature	- 40... +60°C	- 40... +60°C	-10 ... +50°C	-10 ... +60°C
Degree of protection	IP65	IP65	IP65	IP65
Power supply, voltage range	12...30 VDC	12...30 VDC	12...30 VDC	12...30 VDC
current consumption@ 24 VDC	0.5 A	0.5 A	0.15 A	0.15 A
Laser red, visible (Laser Class 2, < 1 mW)	✓	✓	✓	✓
Typical diameter of laser dot@ 10 m / @ 50 m	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm
Dimension (L × W × H)	140 × 78 × 48 mm	140 × 78 × 48 mm	140 × 78 × 48 mm	140 × 78 × 48 mm
Weight	350g	350g	350g	350g
<b>INTERFACES</b>				
Analog output, programmable*	0/4...20 mA	0/4...20 mA	0/4...20 mA	
Max. error analog output	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	
Digital input, programmable*	1	1	1	1
Digital output programmable / error display*	2/1	2/1	2/1	0/1
Digitale output type, programmable				
NPN / PNP / Push-Pull*	✓	✓	✓	✓
RS-232*	✓	✓	✓	✓
RS-422 / RS-485*	✓	✓	✓	✓
SSI, programmable*	✓	✓	✓	✓
USB, configuration only*	✓	✓	✓	✓
Optional				
PROFIBUS (extern)	✓	✓	✓	✓
PROFINET / EtherNet/IP / EtherCAT	✓	✓	✓	✓

The D-Series Dimetix Laser Distance Sensors are at the forefront of our continuous development and innovation. They measure long distances with the highest precision reliable and speed, even in the most difficult situations. The D-Series can measure on dark surfaces even in bright outdoor environments. The Laser Distance Sensors have the ability to measure distances at rates up to 250 Hz with a maximal output rate of 1 kHz for applications involving fast moving targets.

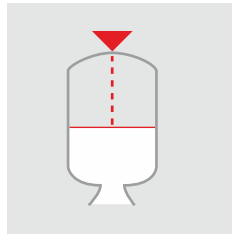
### Highlights

- Measuring range 0 to 500 m
- Max. measuring rate 250 Hz
- 1 mm accuracy
- Serial interfaces
- High precision analog output (0.1%)
- Digital input
- Two programmable digital outputs
- Digital output for error signalization
- PROFIBUS interface (optional)
- PROFINET, EtherNet/IP and EtherCAT interfaces (optional)
- Solid housing IP65
- Extended temperature range – 40 ... + 60 °C

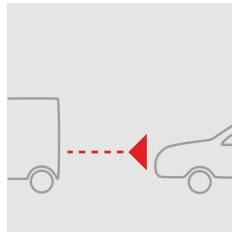
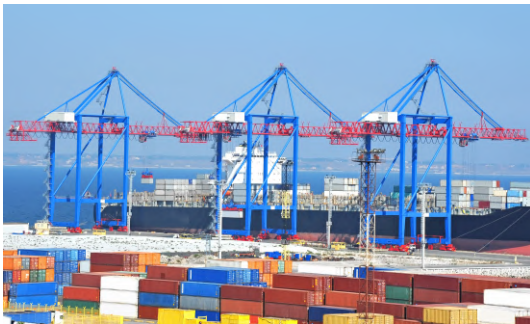
PART NUMBER SPECIFICATION	DAN-10-150 500632	DAN-30-150 500634	DAE-10-050 500633	DBN-50-050 500635
Typical Accuracy @ $\pm 2\sigma$ (@ $\pm 1\sigma$ )	$\pm 1$ ( $\pm 0.5$ )mm	$\pm 3$ ( $\pm 1.5$ )mm	$\pm 1$ ( $\pm 0.5$ )mm	$\pm 5$ ( $\pm 2.5$ )mm
Typical repeatability @ $\pm 2\sigma$ (@ $\pm 1\sigma$ )	$\pm 0.3$ ( $\pm 0.15$ )mm	$\pm 0.7$ ( $\pm 0.35$ )mm	$\pm 0.3$ ( $\pm 0.15$ )mm	$\pm 1.8$ ( $\pm 0.9$ )mm
Measuring range on natural surfaces	0.05...~ 100 m	0.05...~ 100 m	0.05...~ 50 m	0.05...~ 50 m
Measuring range on reflective foil	~ 40...150 m	~ 40...150 m		
Max. measuring rate	100 Hz	100 Hz	100 Hz	10 Hz
Max. output rate	100 Hz	100 Hz	100 Hz	10 Hz
Operating temperature	-10 ... +50 °C	-10 ... +50 °C	- 40... +60 °C	-10 ... +50 °C
Degree of protection	IP65	IP65	IP65	IP65
Power supply, voltage range	12...30 VDC	12...30 VDC	12...30 VDC	12...30 VDC
current consumption@ 24 VDC	0.15 A	0.15 A	0.5 A	0.15 A
Laser red, visible (Laser Class 2, < 1 mW)	✓	✓	✓	✓
Typical diameter of laser dot@10 m / @ 50 m	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm	7 × 3 mm / 28 × 13 mm
Dimension (L × W × H)	140 × 78 × 48 mm	140 × 78 × 48 mm	140 × 78 × 48 mm	140 × 78 × 48 mm
Weight	350 g	350 g	350 g	350 g
<b>INTERFACES</b>				
Analog output, programmable*	0/4...20 mA	0/4...20 mA	0/4...20 mA	0/4...20 mA
Max. error analog output	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.2\%$
Digital input, programmable*	1	1	1	1
Digital output programmable / error display*	2/1	2/1	2/1	2/1
Digitale output type, programmable NPN / PNP / Push-Pull*	✓	✓	✓	✓
RS-232*	✓	✓	✓	✓
RS-422 / RS-485*	✓	✓	✓	
SSI, programmable*	✓	✓	✓	
USB, configuration only*	✓	✓	✓	✓
Optional				
PROFIBUS (extern)	✓	✓	✓	
PROFINET / EtherNet/IP / EtherCAT	✓	✓	✓	



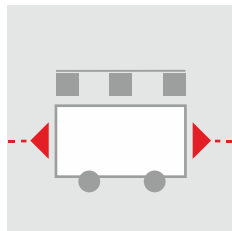
Distance monitoring



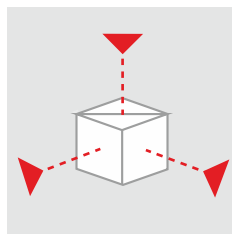
Level measuring



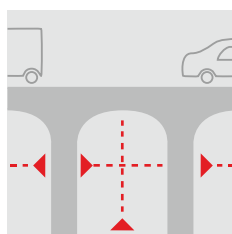
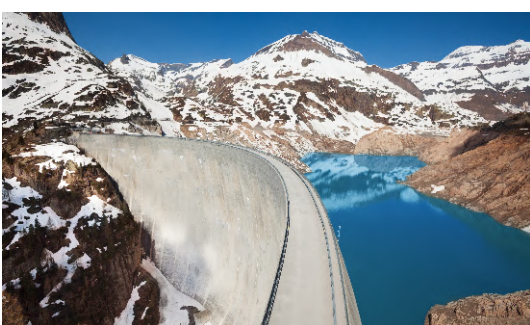
Collision prevention



Positioning



Dimension measuring



Monitoring

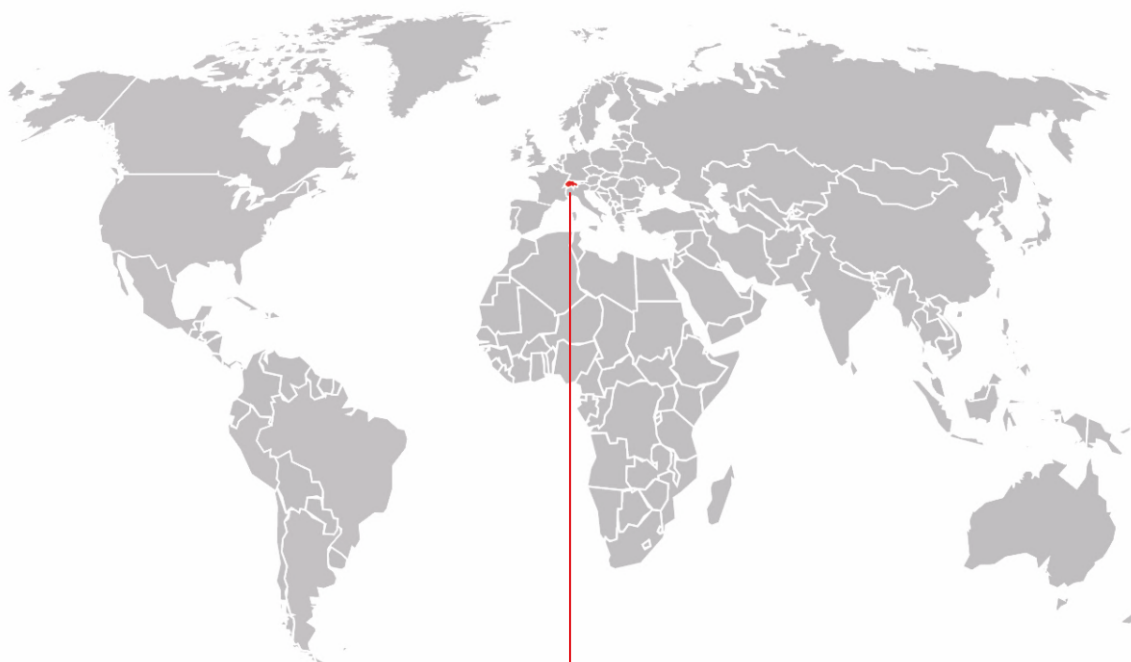


**Swiss quality**

For more than 15 years, Dimetix has developed and produced in Switzerland high quality Laser Distance Sensors for the international market. According to our highest quality claims, we guarantee 100% Swiss quality for all our sensors. Our perfectly educated and motivated team works towards this and continuous product development. Thanks to the permanent high availability we can keep the delivery times short.

Short communication paths, continuous contact with clients and partners worldwide are of great importance to us as well as the highest quality of our Laser Distance Sensors. Customer service doesn't end at Dimetix with selling a Laser Sensor: Unbureaucratic technical support is for Dimetix a matter of course.

The good cooperation with our international clients – with you – motivates us to develop and improve our Laser Distance Sensors continuously.



Find your local agent on our website.

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