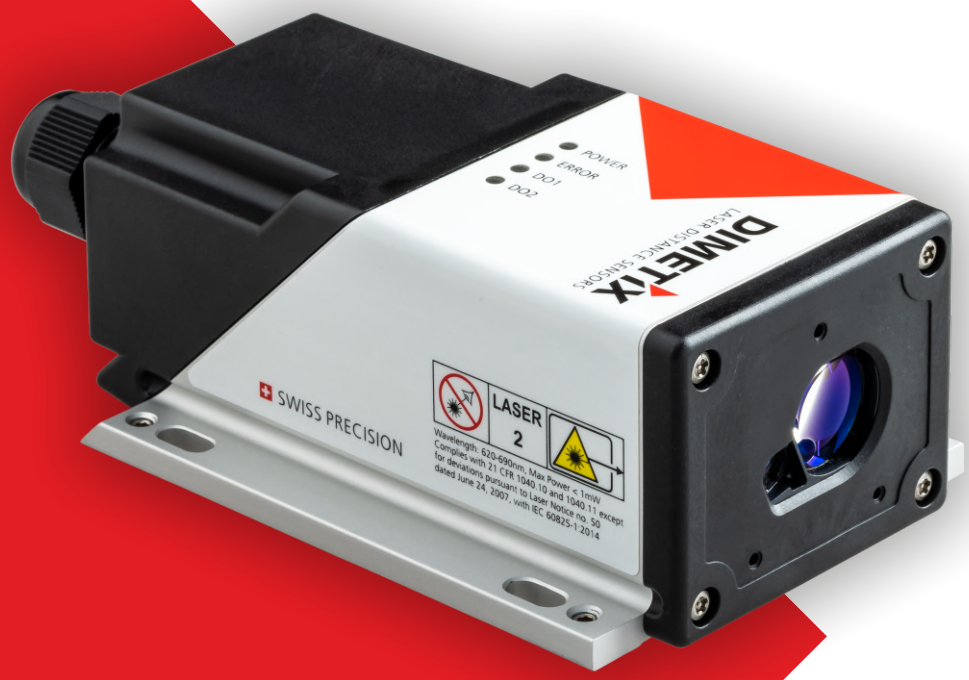
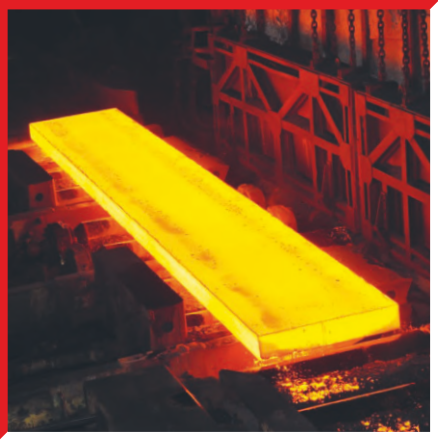
DIMETIX
LASER DISTANCE SENSORS





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

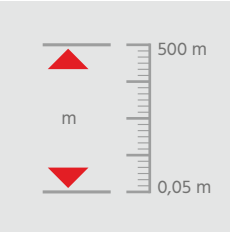
DIMETIX
LASER DISTANCE SENSORS

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.

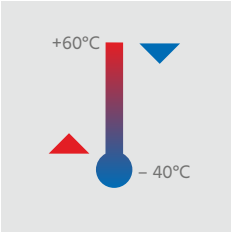
An **analog 0/4 ... 20 mA output** and digital **in- and outputs** are standard. While the serial interfaces as well as further features can be configured by the customer.



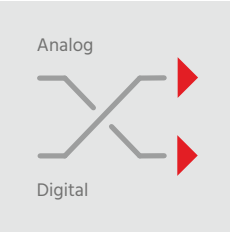
Measuring range

Measuring rate

Accuracy



Temperature



Interfaces

Degree of protection

Laser-Distance-Sensors D-Series

integrated interfaces*

optional interfaces

PROFINET EtherNet/IP EtherCAT

PART NUMBER	DPE-10-500	DPE-30-500	DEN-10-500	DEH-30-500
SPECIFICATION	500630	500636	500637	500638
Typical Accuracy @ ± 2σ (@ ± 1σ)	± 1 (± 0.5) mm	± 3 (± 1.5) mm	± 1 (± 0.5) mm	± 3 (± 1.5) mm
Typical repeatability @ ± 2σ (@ ± 1σ)	± 0.3 (± 0.15) mm	± 0.7 (± 0.35) mm	± 0.3 (± 0.15) mm	± 0.7 (± 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	250 Hz	250 Hz	100 Hz	100 Hz
Max. output rate	1 kHz	1 kHz	100 Hz	100 Hz
Operatingtemperature	– 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	350 g	350 g	350 g	350 g
INTERFACES				
Analog output, programmable*	0/4...20 mA	0/4...20 mA	0/4...20 mA	
Max. error analog output	± 0.1%	± 0.1%	± 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	✓	✓	✓	✓

DIMETIX
LASER DISTANCE SENSORS

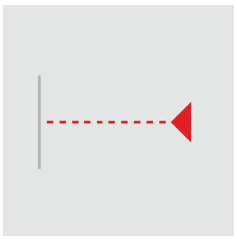
The D-Series Dimetix Laser Distance Sensors are at the forefront of our continuous development and innovation. They measure long distances with the highest precision reliable and speed, even in the most difficult situations. The D-Series can measure on dark surfaces even in bright outdoor environments. 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

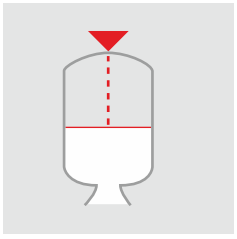
- Measuring range 0 to 500 m
- Max. measuring rate 250 Hz
- 1 mm accuracy
- Serial interfaces
- High precision analog output (0.1%)
- Digital input
- Two programmable digital outputs
- Digital output for error signalization
- PROFIBUS interface (optional)
- PROFINET, EtherNet/IP and EtherCAT interfaces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

PART NUMBER	DAN-10-150	DAN-30-150	DAE-10-050	DBN-50-050
SPECIFICATION	500632	500634	500633	500635
Typical Accuracy @ ± 2σ (@ ± 1σ)	±1 (±0.5) mm	±3 (±1.5) mm	±1 (±0.5) mm	± 5 (±2.5) mm
Typical repeatability @ ± 2σ (@ ± 1σ)	±0.3 (±0.15) mm	±0.7 (±0.35) mm	±0.3 (±0.15) mm	±1.8 (±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
Operatingtemperature	–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
INTERFACES				
Analog output, programmable*	0/4...20 mA	0/4...20 mA	0/4...20 mA	0/4...20 mA
Max. error analog output	±0.1%	±0.1%	±0.1%	±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	✓	✓	✓	

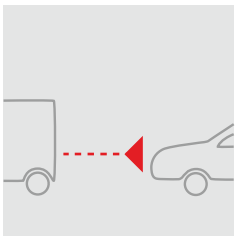
DIMETIX
LASER DISTANCE SENSORS



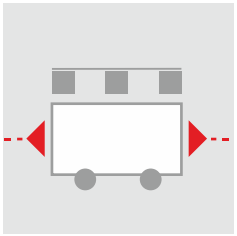
Distance monitoring



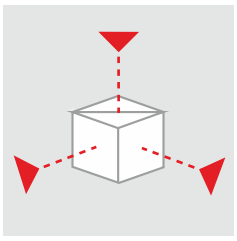
Level measuring



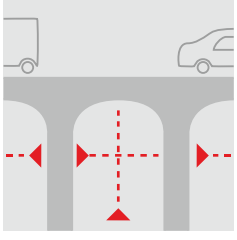
Collision prevention



Positioning



Dimension measuring



Monitoring

SWISS PRECISION

DIMETIX
LASER DISTANCE SENSORS

Swiss quality

For more than 15 years, Dimetix has developed and pro - duced 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 develop- ment. 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.

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