

DISTANCE MEASURING

contactless and reliable

Accuracy 1mm

Measuring range 50 m / 150 m / 500 m

Measuring rate 250 Hz

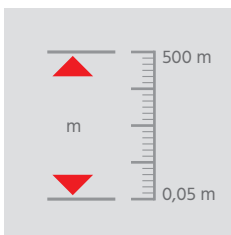
Highest measuring performance for uncompromising results

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 1mm and with a repeatability of 0.3mm. The **measuring range** is between 0 and 500 meters. The devices work with a **measuring rate** up to 250Hz and have an output rate up to 1kHz.

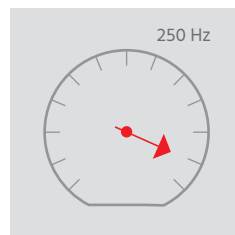
Due to many years of innovations and continuous development, Dimetix Laser Distance Sensors work under arduous external conditions. It is possible to even measure on **black surfaces with solar irradiation**. Extreme working **temperatures** from -40 up to $+60^{\circ}\text{C}$ and a **solid metal case** 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.

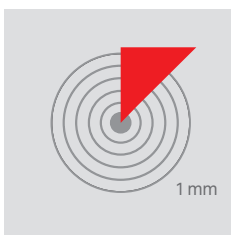
An **analogue 0/4...20mA output** and **digital in- and outputs** are standard. While the serial interfaces as well as further features can be configured by the customer.



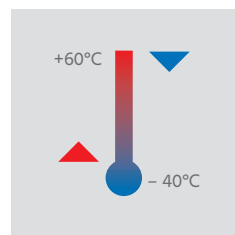
Measuring range



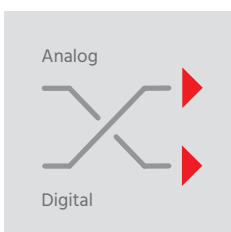
Measuring rate



Accuracy



Temperature



Interfaces



Solid metal case

Laser Distance Sensors C-Series



Dimetix Laser Sensors convince by high measuring accuracy ($\pm 1\text{mm}$) at distances up to 500 meters. The C-Series is made of undestroyable robustness and pleases by simple yet perfect design. His many-sidedness and flexibility speaks for itself: Dimetix Laser Distance Sensors of the C-Series in every day use thousandfold all over the world – not seldom under adverse external conditions.

Highlights

- Measuring range 0 to 500 m
- 1mm accuracy
- Serial interfaces
- High precision analog output (0.1%)
- Two programmable digital outputs
- Digital input
- Digital output for error signalization
- PROFIBUS interface (optional)
- D-Sub connector and screw terminal
- Solid metal case IP65
- Temperature range $-40 \dots +50^\circ\text{C}$

	EDS-C 30	DLS-C 30	DLS-C 15	FLS-C 10	FLS-CH 10
PART NUMBER	550502	500621	500622	600502	600504
SPECIFICATION					
Typical accuracy @ $\pm 2\sigma$ (@ $\pm 1\sigma$)	± 3 (± 1.5) mm	± 3 (± 1.5) mm	± 1.5 (± 0.75) mm	± 1 (± 0.5) mm	± 1 (± 0.5) mm
Typical repeatability @ $\pm 2\sigma$ (@ $\pm 1\sigma$)	± 1.5 (± 0.75) mm	± 0.5 (± 0.25) mm	± 0.4 (± 0.2) mm	± 0.3 (± 0.15) mm	± 0.3 (± 0.15) mm
Measuring range on natural surfaces	0.05 ... 30 m	0.05 ... ~ 65 m	0.05 ... ~ 65 m	0.05 ... ~ 65 m	0.05 ... ~ 65 m
Measuring range on reflective foil		~ 25 ... 150 m	~ 25 ... 150 m	~ 0.5 ... 500 m	~ 0.5 ... 500 m
Max. measuring rate	3 Hz	6 Hz	6 Hz	250 Hz*	250 Hz*
Max. output rate	3 Hz	6 Hz	6 Hz	250 Hz*	250 Hz*
Operating temperature	$-10 \dots +50^\circ\text{C}$	$-10 \dots +50^\circ\text{C}$	$-10 \dots +50^\circ\text{C}$	$-10 \dots +50^\circ\text{C}$	$-40 \dots +50^\circ\text{C}$
Degree of protection	IP65	IP65	IP65	IP65	IP65
Power supply, voltage range	24 ... 30 VDC	9 ... 30 VDC	9 ... 30 VDC	9 ... 30 VDC	24 ... 30 VDC
Current consumption @ 24 VDC	0.1 A	0.6 A	0.6 A	0.6 A	2.5 A
Laser red, visible (Laser Class 2, <1mW)	✓	✓	✓	✓	✓
Typical diameter of laser dot @ 10, 50, 100 m	8, 25, 40 mm	8, 25, 40 mm	8, 25, 40 mm	8, 25, 40 mm	8, 25, 40 mm
Dimension (L x W x H)	106 x 62 x 45 mm	150 x 80 x 55 mm	150 x 80 x 55 mm	150 x 80 x 55 mm	150 x 80 x 55 mm
Weight	280 g	690 g	690 g	690 g	720 g
INTERFACES					
Analog output, programmable	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA
Max. error analog output	$\pm 0.3\%$	$\pm 0.2\%$	$\pm 0.2\%$	$\pm 0.1\%$	$\pm 0.1\%$
Digital input, programmable		1	1	1	1
Digital output, programmable / error display		2/1	2/1	2/1	2/1
Digital output type, programmable					
NPN		✓	✓	✓	✓
PNP / Push-Pull					
RS-232	Configuration only	✓	✓	✓	✓
RS-422 / RS-485		✓	✓	✓	✓
SSI, programmable				✓	✓
USB, configuration only				✓	✓
Optional					
PROFIBUS (external)		✓	✓	✓	✓
PROFINET / EtherNet/IP / EtherCAT					
CONNECTION					
M12 connector (5 pin)	✓				
D-Sub connector (15 pin)		✓	✓	✓	✓
Internal screw terminals		✓	✓	✓	✓
FEATURES					
Automatic mode for stand-alone operation	✓	✓	✓	✓	✓
Direct connectivity of an external display		✓	✓	✓	✓
User distance offset / gain, programmable		✓	✓	✓	✓
Filter functions, programmable		✓	✓	✓	✓
Adjustable measurement behaviour		✓	✓	✓	✓
Programmable device ID		✓	✓	✓	✓
Trigger functionality		✓	✓	✓	✓

* For moving target applications only (no distance jumps)

Laser Distance Sensors D-Series

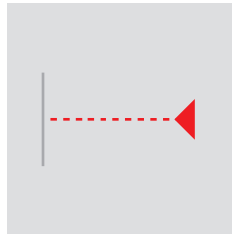


The D-Series Dimetix Laser Distance Sensors are at the forefront of our continuous development and innovation. They measure long distances with the highest precision reliable and speed, even in the most difficult situations. The D-Series can measure on dark surfaces – even in exterior applications with solar irradiation. With this series, which presents itself in a new modern design, Dimetix expands its product range with a device, that has an output rate of 1kHz.

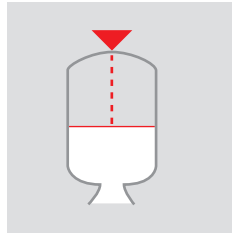
Highlights

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

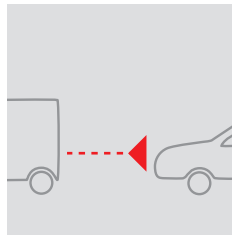
	DPE-10-500 500630	DPE-30-150 500631	DAN-10-150 500632	DAE-10-050 500633	DAN-30-150 500634
SPECIFICATION					
Typical accuracy @ $\pm 2\sigma$ (@ $\pm 1\sigma$)	± 1 (± 0.5) mm	± 3 (± 1.5) mm	± 1 (± 0.5) mm	± 1 (± 0.5) mm	± 3 (± 1.5) mm
Typical repeatability @ $\pm 2\sigma$ (@ $\pm 1\sigma$)	± 0.3 (± 0.15) mm	± 0.7 (± 0.35) mm	± 0.3 (± 0.15) 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 ... ~ 50 m	0.05 ... ~ 100 m
Measuring range on reflective foil	~ 0.5 ... 500 m	~ 0.5 ... 150 m	~ 40 ... 150 m	~ 40 ... 50 m	~ 40 ... 150 m
Max. measuring rate	250 Hz	250 Hz	50 Hz	50 Hz	50 Hz
Max. output rate	1 kHz	1 kHz	50 Hz	50 Hz	50 Hz
Operating temperature	-40 ... +60 °C	-40 ... +60 °C	-10 ... +50 °C	-40 ... +60 °C	-10 ... +50 °C
Degree of protection	IP65	IP65	IP65	IP65	IP65
Power supply, voltage range	12 ... 30 VDC	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	0.5 A	0.15 A
Laser red, visible (Laser Class 2, <1mW)	✓	✓	✓	✓	✓
Typical diameter of laser dot @ 10, 50 m	7 × 3; 28 × 13 mm	7 × 3; 28 × 13 mm	7 × 3; 28 × 13 mm	7 × 3; 28 × 13 mm	7 × 3; 28 × 13 mm
Dimension (L × W × H)	140 × 78 × 48 mm	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	350 g
INTERFACES					
Analog output, programmable	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA	0/4 ... 20 mA
Max. error analog output	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$	$\pm 0.1\%$
Digital input, programmable	1	1	1	1	1
Digital output, programmable / error display	2/1	2/1	2/1	2/1	2/1
Digital output type, programmable					
NPN	✓	✓	✓	✓	✓
PNP / Push-Pull	✓	✓	✓	✓	✓
RS-232	✓	✓	✓	✓	✓
RS-422 / RS-485	✓	✓	✓	✓	✓
SSI, programmable	✓	✓	✓	✓	✓
USB, configuration only	✓	✓	✓	✓	✓
Optional					
PROFIBUS (external)	✓	✓	✓	✓	✓
PROFINET / EtherNet/IP / EtherCAT	✓	✓	✓	✓	✓
CONNECTION					
M12 connector (5 pin)					
D-Sub connector (15 pin)					
Internal screw terminals	✓	✓	✓	✓	✓
FEATURES					
Automatic mode for stand-alone operation	✓	✓	✓	✓	✓
Direct connectivity of an external display	✓	✓	✓	✓	✓
User distance offset / gain, programmable	✓	✓	✓	✓	✓
Filter functions, programmable	✓	✓	✓	✓	✓
Adjustable measurement behaviour	✓	✓	✓	✓	✓
Programmable device ID	✓	✓	✓	✓	✓
Trigger functionality	✓	✓	✓	✓	✓



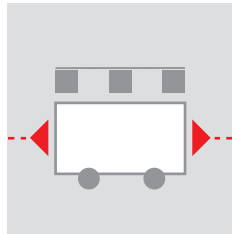
Distance monitoring



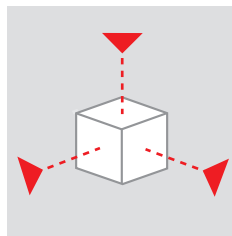
Level measuring



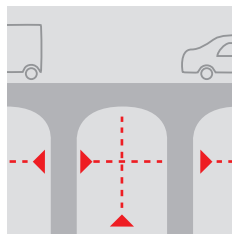
Collision prevention



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.



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