Laser Distance Sensors
D-Series

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 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 1 kHz.

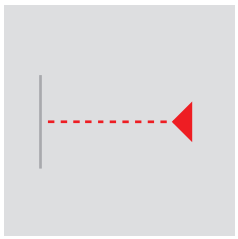
Highlights

- Measuring range 0 to 500 m
- Max. measuring rate 1 kHz
- 1 mm 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	DPE-30-150	DAN-10-150	DAE-10-050	DAN-30-150
PART NUMBER	**500630**	**500631**	**500632**	**500633**	**500634**
SPECIFICATION					
Typical accuracy @ ±2σ (@ ±1σ)	±1 (±0.5) mm	±3 (±1.5) mm	±1 (±0.5) 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	±0.3 (±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, <1 mW)	✓	✓	✓	✓	✓
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	±0.1 %	±0.1 %	±0.1 %	±0.1 %	±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	✓	✓	✓	✓	✓

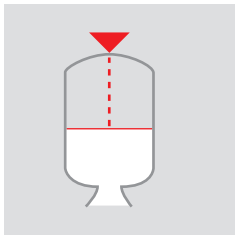
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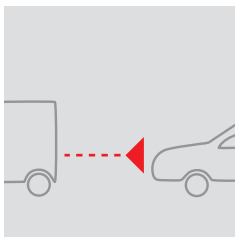
Distance monitoring





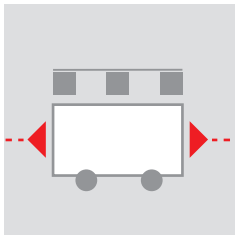
Level measuring





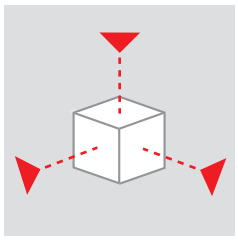
Collision prevention





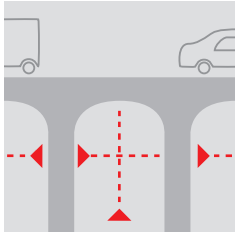
Positioning





Dimension measuring





Monitoring