

DIMETIX

LASER DISTANCE SENSORS



Field Requirement

Information for the next generation

 SWISS PRECISION


9100 Herisau/Switzerland • www.dimetix.com

Agenda

- Sensor specification
- USP's Dimetix
- USP's laser distance sensors
- Accessories
- Q & A



Application Information



Application information

Application description:

Contact information (Company Name, contact person, e-mail):

Estimated annual number of units?

Drawing: If possible, please provide us the drawing of the application installation.

Product specification:

Needed measurement range?

Needed accuracy?

Single measurements? Yes No

Continuous measurements? Yes No

Needed measuring frequency [Hz]?

Target:

Does the target move? Yes No

If yes, how fast [m/s]?

Are you using a reflection foil? Yes No

Material and quality of the target?

Color of the target?

Temperature of the environment?

Is the target visible? Yes No

Ambient condition:

Kind of application? Indoor Outdoor

Working temperature range?

Is there fog or dust? fog dust neither

Interface:

AO / DO RS232 RS422 / 485 SSI

PROFINET EtherCAT EtherNET/IP combination of Bus systems

Controller information: PC PLC own controller:

Competitor information:

Do you already use laser sensors?

Names of the competitors?

Competitive product types?


Price information?

Market information: Branch?

Customer type? Distributor Integrator End user

Remarks?

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Sensor requirements next generation (Example)

Important to read before filling out:
Are these requirements that can open up new applications? Are these functions that represent added value for the customer (and for which he is willing to pay something)?

Target market & application:

Market industry / sector, customer type (distributor, integrator, end user), short application description

Contact information (Company name, contact person, e-mail):

Name of the person completing the form

Estimated annual number of units? 20, 50, 100, 200, others?

Measurement specifications:

Measurement range (min / max)? 0.05...500m, others?

Measurement surface & material? Natural surface (given by application), selectable surface?

Measurement accuracy (@2σ)? ±1mm, ±3mm, others?

Measuring frequency [Hz]? 510Hz (others), 100Hz, 1kHz, others?

Moving target / sensor [m/s]? Only static, max. 1m/s, max. 10m/s, others?

Product specifications:

Dimensions? No matter, smaller than D-Series, specific size?

Connection? No matter, screw terminal, connector M8 / M12, others?

Mounting options? No matter, long holes, threaded holes, others?

IP class? No matter, IP65, IP68, others?

Kind of application? Indoor Outdoor

Working temperature range? -10...+50°C, -10...+60°C, -40...+60°C, others?

Interfaces:

AO / DO / DI RS-232 RS-422 / 485 SSI PROFINET

EtherCAT EtherNet/IP

IO-Link, SPE (10BASE-T1/LT/TS, 100BASE-T1), Bluetooth, WLAN, others?

Enhanced functionalities?

Signal monitoring, additional camera, trigger functionality, others?

Special requirements?

Ex proof, safety level (SIL), special admissions, others?

Important for easy integration?

Display, push button e.g. to switch on laser, special mounting, youtube movies, Application Notes / Examples, others?

Accessories and tools?

Configuration software, logging tool, alignment unit, numeric display, special measurement targets, telescopic sight, others?

Remarks?

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Specification of the Sensor

Measurement specifications:

Measurement range (min / max)?

0.05...500m, others?

Measurement surface & material?

Natural surface (given by application), selectable surface?

Measurement accuracy (@ 2σ)?

$\pm 1\text{mm}$, $\pm 3\text{mm}$, others?

Measuring frequency [Hz]?

$\leq 10\text{Hz}$ (slow), 100Hz, 1kHz, others?

Moving target / sensor [m/s]?

Only static, max. 1m/s, max. 10m/s, others?

- Natural surface range (D-Series) up to 80...100m
- Reflex foil 0,05 bis.....300m? or 500m?
- Which accuracy is needed → which repeatability
- Which measurement frequencies are needed
- Sensor or reflex foil is mounted on moving system (Stacker crane shuttle)



Specification of the Sensor

Product specifications:

Dimensions?

Connection?

Mounting options?

IP class?

Kind of application?

Working temperature range?

No matter, smaller than D-Series, specific size?

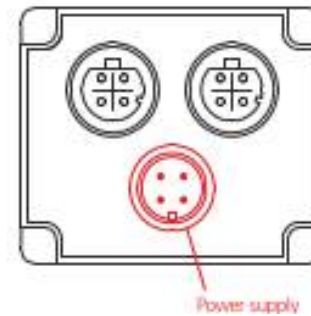
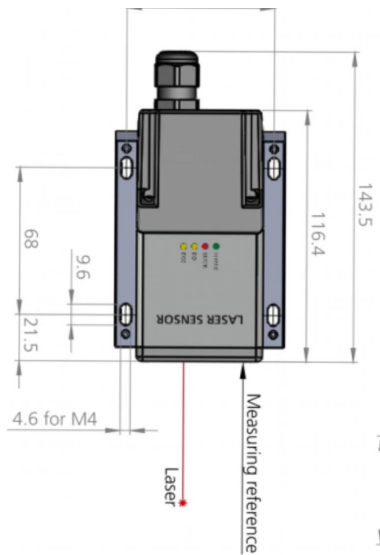
No matter, screw terminal, connector M8 / M12, others?

No matter, long holes, threaded holes, others?

No matter, IP65, IP68, others?

Indoor Outdoor

-10...+50°C, -10...+60°C, -40...+60°C, others?

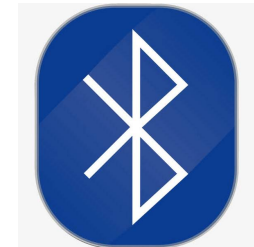


Specification of the Sensor

Interfaces:

- AO / DO / DI
- RS-232
- RS-422 / 485
- SSI
- PROFINET
- EtherCAT
- EtherNet/IP
- IO-Link, SPE (10BASE-T1L/T1S, 100BASE-T1), Bluetooth, WLAN, others?

- **RS-232 / RS-422 / SSI**
- **Analog 0/4...20mA**
- **AO / DO / DI**



Specification of the Sensor

Enhanced functionalities?

Signal monitoring, additional camera, trigger functionality, others?

Special requirements?

Ex proof, safety level (SIL), special admissions, others?

Important for easy integration?

Display, push button e.g. to switch on laser, special mounting, youtube movies, Application Notes / Examples, others?

Accessories and tools?

Configuration software, logging tool, alignment unit, numeric display, special measurement targets, telescopic sight, others?

Remarks?



USP's Dimetix

- 100% tested and individually calibrated
- Distinguished flexibility, applications, sensor configurations, interfaces, etc.
- Advanced measuring technology / Most advanced measuring technology
- Simple sensor selection, few and clear types, high flexibility (every sensor can do almost everything)
- Reliable, clear specifications of accuracy without exceptions
- Delivery from stock
- Fast and competent technical and sales support by manufacturer
- High level of standard interfaces integrated
- Easy to use (simple handling), one configuration software for all devices, Quickstart Guide, configuration file for fast configuration

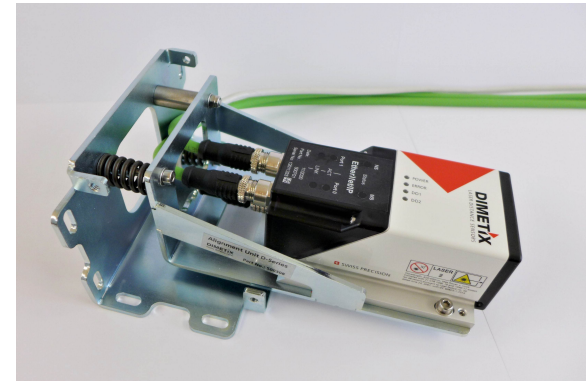
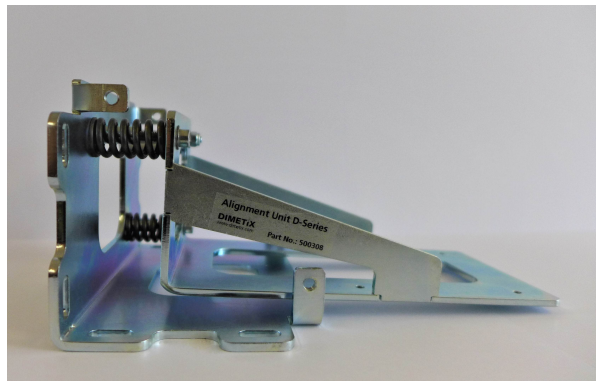
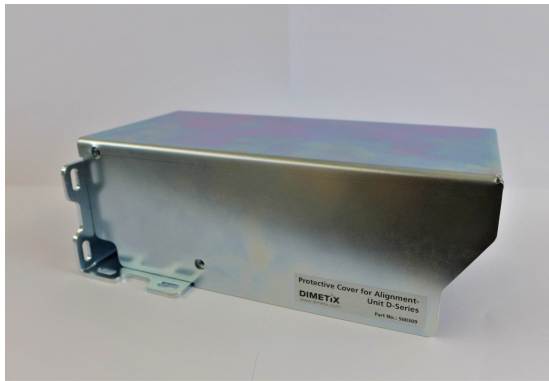


USP's laser distance sensors

- Unique measuring accuracy $\pm 1 \text{ mm @ } 2\sigma$ ($\pm 0.5 \text{ mm @ } 1\sigma$)
- Unique measuring repeatability $\pm 0.3 \text{ mm @ } 2\sigma$ ($\pm 0.15 \text{ mm @ } 1\sigma$)
- High measuring performance on natural surfaces (up to 100 m, no special expensive measuring surface) or on reflective plate / foil (up to 500 m, up to 1 kHz)
- Easy installation and alignment thanks to visible red laser beam
- Operation in a large temperature range $-40\dots+60^\circ\text{C}$
- Wide range of accessories: Alignment unit, protective cover, air-cooling jacket, etc.
- Solid and robust housing
- Maintenance-free operation



Accessories what do we need??



- Easy to install
- Suitable for Dimetix sensors
- [Alignment Unit](#) D-Series and others for longer distances
- [Protective Cover](#) for Alignment Unit D-Series and others
- Compatible against competitors?!



Questions





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Thank you

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