TS-P Series Laser Triangulation Displacement Sensor*⁷



TS-P1000_1000H Product Parameter



Reference Distance*1	1000 mm
Measurement Range	±500 mm
Spot Diameter	Ф320 μm
Repeatability*2	12 μm
Repeatability*3	1
Linear Error*4	<±500 μm
Outer Diameter*Length	180*85*40 mm
Weight	785 g
Sample Frequency	Max. 160 kHz
Light Source*5	655 nm, Max.4.9 mW; 660 nm, Max.50 mW (H)
Temperature Characteristics	0.01% of F.S./°C
Industrial Interface*6	Ethernet,RS-485 serial port,analog signal output(Max.±10 V, 4~20 mA)
Measurement & Control Software	Comes with TSLaserStudio measurement & control software,C++&C# SDK
Operating Mode	Operates independently without a controller. The head can be configured as a master or slave, the master controls the slave to achieve functions such as synchronous thickness measurement, alternating exposure for interference resistance
Supply Voltage	DC 9~36 V,maximum allowable ±10% fluctuation
Power Consumption	Approx.2.5 W
IP Grade	IP67 (IEC60529)
Operating Temperature	0 to +50°C

^{*1} Calculation based on the center position of the measurement range;

^{*2} Measurement of standard white ceramic sample, 50kHz without averaging, taking the root mean square deviation (1 σ) of 65536 sets of measurement data; U series probes, 8kHz without averaging, taking the root mean square deviation (1 σ) of 65536 sets of measurement data;

^{*3} Measurement of standard white ceramic sample, 50kHz with 1024 averaging times, taking the root mean square deviation (1 σ) of 65536 sets of measurement data; U series probes, 8kHz with 1024 averaging times, taking the root mean square deviation (1 σ) of 65536 sets of measurement data;

^{*4} Calibration and verification using nanometer-level high-precision laser interferometer;

^{*5} Laser power can be customized according to different application requirements, some models provide 405nm blue light version;

^{*6} The probe can independently provide voltage, current, and RS-485 output, Optional analog voltage/current output module.

^{*7} For the sub-series, PD indicates a split-type structure, and PM indicates a mirror-reflection calibration type. The different suffixes are distinguished as follows: W for wide spot, U for ultra-wide spot, B for blue laser, and H for high-power laser.

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TS-P1000_1000H Product Dimension Drawing

