

TS-P Series Laser Triangulation Displacement Sensor*7



TS-P80_80W_80U Product Parameter



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|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reference Distance*1 | 80 mm |
| Measurement Range | ±15 mm |
| Spot Diameter | Φ70 μm, Approx.70*800 μm (W) , Approx.70*2200 μm (U) |
| Repeatability*2 | 0.5 μm, 0.25 μm (U) |
| Repeatability*3 | 0.1 μm |
| Linear Error*4 | < ±6 μm |
| Outer Diameter*Length | 93*78*37 mm |
| Weight | 359 g |
| Sample Frequency | Max. 160 kHz, Max. 25 kHz (U) |
| Light Source*5 | 655 nm, Max.4.9 mW |
| 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-P80_80W_80U Product Dimension Drawing

