# MESSCAN Launches TC25 Compact Laser Distance Sensor for OEM Optical and Electro-Optical Integration

*MESSCAN's TC25 laser distance sensor brings 3–1,200 m range and ±1 m accuracy to a 15 g, 47 × 25 mm module with UART output for OEM builds.*



TC25-1000 Laser Rangefinder Module

CHENGDU, SICHUAN, CHINA, November 17, 2026 / EINPresswire.com/ -- MESSCAN today introduced the TC25, a compact laser distance sensor developed for equipment manufacturers that need to embed reliable distance measurement into optical instruments and customized electronic systems. The module is available for evaluation and OEM integration projects through the company's product page at messcan website.

The TC25 laser distance sensor measures 47 × 25 mm and weighs approximately 15 g. Its cylindrical housing is designed for installations where available space and component weight directly affect the overall system, a common constraint in handheld optics, gimbals, and portable instruments.

905 nm Class 1 Emitter with a 1,200 m Range

The laser distance sensor uses 905 nm Class 1 laser technology. Under a target reflectivity condition of 70 percent, it provides a measurement range of 3 to 1,200 m. Accuracy is ±1 m below 200 m and 0.5 percent above 200 m, with a resolution of 0.1 m. The maximum single measurement time is approximately one second.

Because the emitter operates in the near-infrared band, the measuring beam is invisible to the

human eye during normal use. Class 1 classification indicates the module is eye-safe under normal operating conditions and does not require additional protective measures by the integrator. This combination of range, accuracy, and optical safety is what makes the unit practical for outdoor and field-deployed equipment rather than laboratory-only setups.

## UART Interface and a 3.3–5 V Supply Simplify Integration

For electronic integration, the TC25 supports UART communication with a default baud rate of 115200 bps. Its TTL 3.3 V serial interface is compatible with TTL 5 V, and the operating voltage ranges from 3.3 to 5 V DC, so the module can share a rail with common logic and battery-powered subsystems without an additional conversion stage.

Communication parameters, including baud rate and module identification, can be configured through commands rather than hardware changes. Multiple units can be addressed on a shared bus, allowing a single host controller to manage several laser distance sensor nodes in one system.

## TC25 Specifications at a Glance

- Model: TC25 (TC25-1200)
- Measuring range: 3 to 1,200 m at 70 percent target reflectivity
- Accuracy: ±1 m below 200 m; 0.5 percent above 200 m
- Resolution: 0.1 m
- Maximum single measurement time: approximately 1 second
- Laser source: 905 nm, Class 1
- Interface: UART, default 115200 bps, TTL 3.3 V (compatible with TTL 5 V)
- Operating voltage: 3.3 to 5 V DC
- Dimensions: 47 × 25 mm, cylindrical housing
- Weight: approximately 15 g
- Operating temperature: −20°C to +50°C

## Applications

These characteristics make the module suitable for evaluation in portable optical instruments, embedded electro-optical systems, outdoor measurement equipment, and customized industrial measurement devices. Typical integration scenarios include handheld rangefinders and binoculars, gimbal and UAV altitude reference, perimeter detection in security and surveillance systems, and distance sensing in automated industrial equipment.

Actual measurement performance depends on target reflectivity, target dimensions, ambient illumination, and environmental conditions. MESSCAN recommends application-specific testing before volume integration.

OEM and ODM Support for Equipment Manufacturers

MESSCAN also provides OEM and ODM support for equipment manufacturers. Project requirements may include mechanical dimensions, connector configurations, communication interfaces, and power supply specifications. Technical feasibility is evaluated according to individual project needs, and customization work is quoted after the requirement review.

The TC25 operates within a specified temperature range of −20°C to +50°C. Its compact structure and embedded communication interface provide equipment developers with a practical option for incorporating laser distance measurement into customized products without redesigning the host system around the sensor.

About MESSCAN

MESSCAN develops and supplies laser distance sensors and distance measurement solutions for equipment manufacturers and industrial customers. The company supports product selection, technical documentation, and OEM/ODM customization projects. Chengdu Messcan Technology Co., Ltd. is based in Chengdu, Sichuan, China, and works with integrators worldwide on laser measurement cores for ranging, positioning, and industrial sensing applications.

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