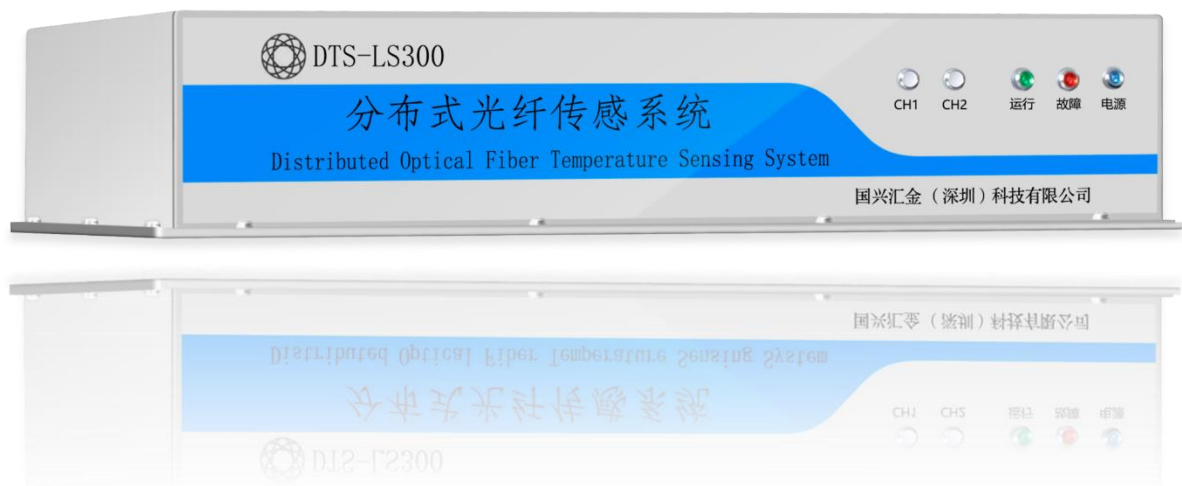




国兴汇金  
GUO XING HUI JIN

# Distributed Fiber Analyzer

## DTS-LS300





## Product Introduction

The DTS LS-300 is a lightweight distributed fiber optic temperature sensor. It operates based on Optical Time-Domain Reflectometry (OTDR) and Raman scattering principles. When optical pulses travel through the fiber, Raman scattered light carries temperature information. With high sensitivity and precision, it can accurately detect and locate temperature changes along long-distance optical fibers. Its compact and portable design allows for easy installation in complex environments across industries such as power, petrochemical, and transportation, ensuring system safety and providing reliable temperature monitoring solutions.

## Product Features

- Highly reliable modular system design
- Loopback length: 2km; Single-path length: 4km
- Sampling intervals of 0.25m or 0.5m selectable
- Spatial resolution of 1.0m
- Supports simultaneous measurement with standard and high-temperature fibers
- Flexible system networking mode
- Industrial standard output interface, supports relay output expansion
- Suitable for harsh working environments
- Customizable system requirements

## Application Fields

- Power cable monitoring
- Substation equipment monitoring
- Generator monitoring
- Highway and subway tunnel monitoring
- Bridge structure monitoring
- Fire monitoring in smart buildings
- Production process monitoring
- Warehouse environment monitoring

## Advantages

- **Real-time Monitoring:** Capable of monitoring temperature changes in real time and responding promptly to anomalies.
- **High-Precision Measurement:** Provides high measurement accuracy and precise location of temperature anomalies.
- **Long-Distance Monitoring:** A single optical fiber can cover a monitoring range of up to 4 kilometers.



## Technical Specifications

Data Acquisition		
Spatial Resolution	1m	
Temperature Measurement Range <sup>①</sup>	-40℃ ~ 300℃	
Sampling Intervals	0.25m / 0.5m	
Temperature Measurement Accuracy <sup>②</sup>	≤±0.5℃	
Temperature Resolution	≤0.5℃ @10s, 4km	≤0.3℃ @30s, 4km
Maximum Length	4km	
Number of Channels	2	
Optical		
Fiber Type	62.5/125 μm MMF	50/125 μm MMF
Interface Type	E2000 APC	
Laser Wavelength	900nm	
Chassis		
Specifications	2U	
Instrument Dimensions(H*W*D)	90 x 430 x 300 mm	
Weight	3kg	
Material	Metal	
Transport Box Dimensions(H*W*D)	110x 480 x 350 mm	
Transport Weight	8kg	
Environmental		
Operating Temperature	-20℃ ~ 55℃	
Operating Humidity	< 95% RH Non-condensing	
Storage Temperature	-40℃ ~ 65℃	
Storage Humidity	< 95% RH Non-condensing	
Electrical and Hardware Interfaces		
Power Supply	110 ~240 V AC	
Power Consumption	25W	
Ethernet Port	1x100Mbps	
Modbus	MODBUS TCP	
RS485 <sup>③</sup>	1	
Software		
Software Name	DfaStudio	

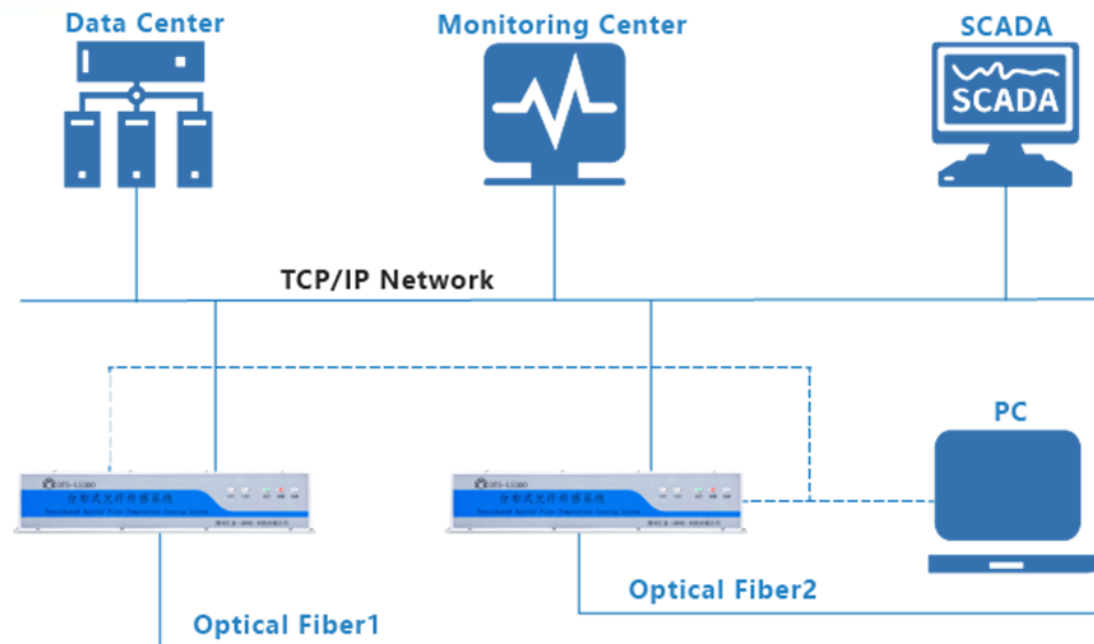
① The temperature measurement range depends on the actual usable temperature range of the sensing optical fiber. Based on the temperature resistance of the protective coating on the optical fiber, there are three different types of fibers: standard, medium temperature, and high temperature. Medium and high-temperature fibers can be specially calibrated as needed.

② The equipment's operating temperature range is from -20°C to 55°C, and a version with higher precision is available upon request.

③ According to customer needs to add.



## System Connection Example



## Installation and Maintenance

- **Installation:** Simple and quick installation with no need for complex wiring; a single passive optical fiber achieves long-distance monitoring.
- **Maintenance:** Maintenance-free, long service life, wide coverage, and precise detection of all temperature anomaly events.

## Technical Support and Services

Guoxing Huijin (Shenzhen) Technology Co., Ltd. provides comprehensive technical support and after-sales services, including but not limited to:

- **Technical Consultation:** Offering product technical consultations and solutions.
- **Installation Guidance:** Providing on-site installation guidance services.
- **Training Services:** Offering training services for operators.
- **After-sales Services:** Providing product repair and maintenance services.

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Note: This specification sheet is for reference only. Specific product parameters and features may vary depending on the model and customer requirements. For more detailed information, please contact Guoxing Huijin (Shenzhen) Technology Co., Ltd. or an authorized distributor.