DTS Integrated Module

Distributed Temperature Fiber Sensing(DTS) module based on the Raman scattering principle, a single optical fiber as a transmission, the use of optical fiber inside the Stokes light and anti-Stokes light on the temperature of the different degree of sensitivity to temperature resolution, widely used in electric power, cable temperature monitoring, oil and gas pipeline temperature measurement and detection, subway, tunnels, buildings and other fire detection.

FIBERWDM for distributed fiber optic temperature sensing field, launched the DTS integrated module with data acquisition card, internal integration of DTS Raman light source, WDM, APD and data acquisition card, the network port directly output temperature information. And the module is highly integrated, with small size and high reliability.

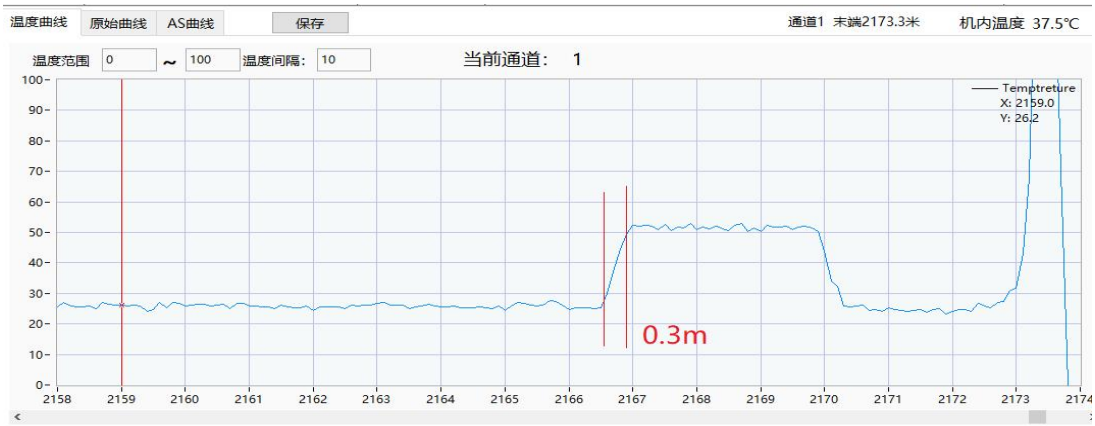
Features

- Built-in DAQ: output temperature directly
- Sensing Distance： 25km(SM), 15km(MM), 5km(High Accuracy)
- Shorten customer R&D cycle

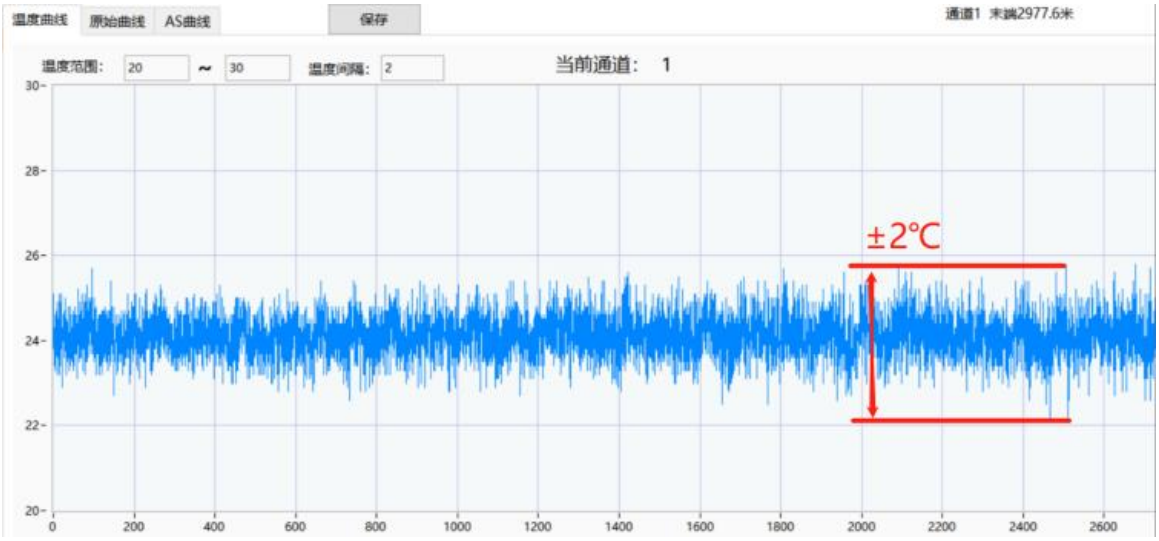
Applications

- Power Cable Temperature Monitoring
- Oil & Gas Pipeline Temperature Measurement
- Oilfield Chemical Fire Detection
- Fire Detection in Subways, Tunnels and Buildings

Spatial Resolution:



Temperature Accuracy:



Product Specification

Parameters	Multi-mode	High Accuracy	Single-mode	Unit
Model	FW-DTS-15-1.0	FW-DTS-05-0.3	FW-DTS-25-5.0	-
Max Sensing Distance	15	5	25	km
Sampling Resolution	0.4	0.1	0.4	m
Spatial Resolution	1.0	0.3	5	m
Position Accuracy	2	0.4	5.0	m
Measurement Time	6	6	180 ~ 300	s
Temperature Accuracy	±2		±3	℃
Fiber Type	MM		SM	
Temperature Resolution	0.1			℃
Temperature Range	-20 ~ +120			℃
Note: 1)The unit can be used with optical switch, such as 1*4 or 1*8 2)Wider temperature measurement range with special fiber optic				

Parameters		Indicator	Remark
Electrical	Power Supply	DC +12V/GND	
	Power Consumption	<25W	Full-temperature
Mechanical	Dimensions	250*150*35mm	
	Pigtail Type	62.5μm MM/SM	Customized
Communication	Output	RS485	Modbus
		RJ45	UDP/TCP-IP
	Interface	Output temperature	

Parameters	Min	Max	Unit
Working Temperature	-10	+50	℃
Storage Temperature	-40	+70	℃
Relative Humidity	5	90	%

Mechanical