DATS(Distributed Acoustic & Temp. Sensing System)

OVERVIEW

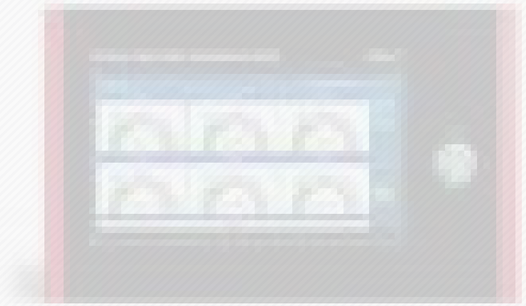
Our Distributed Acoustic & Temperature Sensing System (DATS) is designed to simultaneously measure acoustic-vibration, temperature, and sound in a single device. This innovative measurement method, developed by our company, combines what used to be separate distributed temperature monitoring equipment (DTS) and distributed acoustic-vibration monitoring equipment (DAS), which were traditionally sold as separate devices. Previously, measuring these physical quantities required the use of two devices and more than two optical fibers. However, with our composite monitoring equipment, you can measure the desired physical quantities using just one device and one optical fiber.

SPECFICATIONS

Measurement Properties	Temperature	
Measurement temp. range	−30 to 150 ℃	Depend on sensor cable
Temperature resolution	±0.5 ℃	Depend on data average
Spatial resolution	0.5 m	
Measurement Properties	**Acoustic & Vibration**	
Sampling resolution	1 m	10 km Measurement distance
	2 m	20 km Measurement distance
	4 m	40 km Measurement distance
Measurement frequency	1 kHz or higher	
Spatial resolution	5 m	

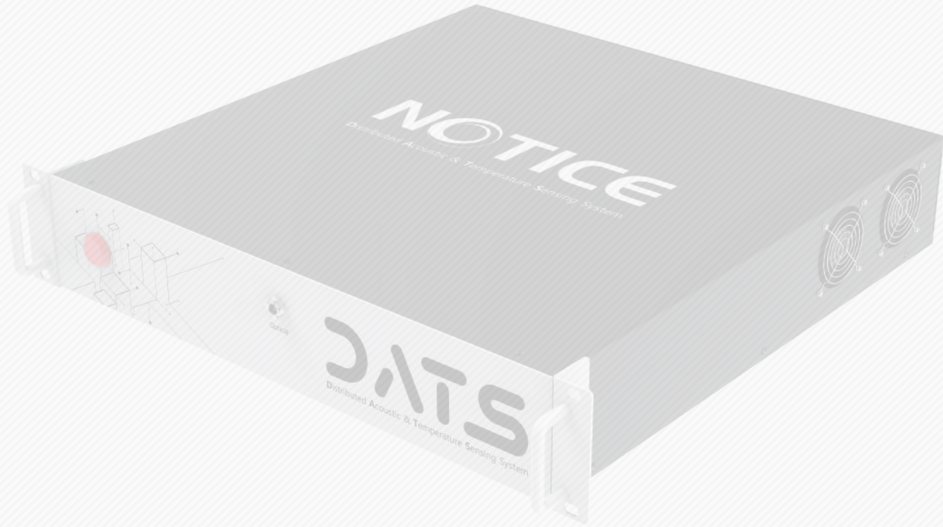
General Properties

General Properties		
Measurement range	40 km	SMF−28
Connector type	SC/APC	Depends on user's requirement
Number of channels	1/4 Channels	No. of channels can be changed
Interface	1Gbit Ethernet (655.36Mbps)	
Dimensions	Standard 19 inch 2U	
Operating temperature	0 to 60 ℃	
Power	DC +24V	



Optical Fiber Sensing System

DTS DAS DATS



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DTS (Distributed Temperature Sensor System)

OVERVIEW

Our Distributed Temperature Sensor(DTS) with operating system is designed for easy installation and management in the field. Several DTS units can be controlled remotely by Ethernet configuration. Thus, it is possible to construct database for the analysis of a certain crisis. This allows our DTS to be used for effective maintaining and risk management even in wide range area. The DTS unit using MMF can be optimized for 16 km ranges allowing for enhanced temperature resolution (especially, 30 km range for SMF version).

SPECIFICATIONS

Measurement Properties			
Measurement range		16 km	50/125 GI-MMF
		30 km	SMF-28
Data measurement		Double-ended	Single-ended is possible.
Spatial resolution		0.5 m	10 to 90% Step
Measurement temp. Range		-30 to 150℃	Depend on sensor cable
Temperature resolution		±0.5℃	Depend on data average

General Properties			
Connector type		LC/APC, E2000/APC	Depends on user's requirement
Number of channels		4/8 Channels	No. of channels can be changed
Operating temperature		0 to 60℃	
Storage temperature		-40 to 80℃	
Humidity		5 to 95 %	Relative humidity
Interface	Ethernet	1Gbit Ethernet (655.36Mbps)	
Dimensions		Standard 19 inch 2U	
		440mm(W) x 450mm(D) x 85mm(H)	
Power		DC +24V	
Power consumption		45W	

DAS(Distributed Acoustic Sensing System)

OVERVIEW

Our Distributed Acoustic Sensor (DAS) with excellent pattern recognition software can detect and locate the distributed thousands of acoustic or vibration events. Whenever any vibration or sound around its sensing fiber is detected, our DAS system will process the measured data in real-time and its pattern recognition software will recognize the types of the events, such as digging, pipeline leakage, fence breach, vehicle moving and person walking. And, the detected events are reported to the alarm server to help operators take actions to protect their facilities.

SPECIFICATIONS

Measurement Properties			
Measurement range		40 km	SMF-28
Spatial resolution		5 m	
Sampling resolution		1 m	10 km Measurement distance
		2 m	20 km Measurement distance
		4 m	40 km Measurement distance
Measurement frequency		1kHz or higher	

General Properties			
Connector type		SC/APC	Depends on user's requirement
Number of channels		1/4 Channels	No. of channels can be changed
Operating temperature		0 to 60℃	
Storage temperature		-40 to 80℃	
Humidity		5 to 95 %	Relative humidity
Interface	Ethernet	1Gbit Ethernet (655.36Mbps)	
Dimensions		Standard 19 inch 2U	
		440mm(W) x 450mm(D) x 85mm(H)	
Power		DC +24V	
Power consumption		30W	