

Distributed Optical Fibre Acoustic Monitoring System YOSC-DAS-M

YOSC-DAS-M distributed optical Fibre acoustic wave monitoring system is a highly reliable, industrial-grade optical fibre vibration sensing product developed by YOSC for industrial applications.

DAS fibre distributed acoustic monitoring system uses the spatial interference phenomenon of backscattered Rayleigh light, and realizes real-time demodulation of frequency, phase, amplitude and position of fast variable acoustic waves through high-speed signal acquisition and data processing technology. It can be widely used in distributed measurement of seismic wave and micro-vibration.



+ Features

- Measurement of phase, frequency, and amplitude of sound waves at each point within the entire fibre optic range
- Low level parallel computing, fast demodulation speed, and good realtime performance
- Periodic enhancement of scattering loss and high signal-to-noise ratio
- High precision, high stability, and high reliability

+ Applications

- Exploration of oil and gas ell resources
- Engineering structural health monitoring
- Earthquake disaster monitoring and early warning
- Underwater detection and security defense
- Cable dancing monitoring

+ Parameters

Items	YOSC-DAS-M
Passageway	1/2 channel
Working wavelength	1550nm
Fibre type	Single mode fibre/self-designed scattering periodic enhanced fibre
Measure distance	10km/20km/40km
Spatial resolution	1m/5m/10m
Sound wave frequency response range	0.5Hz~20kHz
Strain resolution	$87.6\mu\epsilon/\sqrt{\text{Hz}}$
Minimum measurable strain	300 $\mu\epsilon$
Dynamic range	90dB
Working temperature	-10~45°C
Communication interface	Ethernet, USB, RS232 optional
Working voltage	220V
Power dissipation	150w
Dimension	3U rack type, integrated (dimension customizable)

+ System Composition

