

# Acoustic Emission Sensors and Instrumentation



## MODEL SA2000 ACOUSTIC SENSOR WITH INTEGRAL PRE-AMPLIFIER

- Integral pre-amplifier
- Fully sealed construction
- Integral connector
- 190 or 450 kHz versions
- Optional magnetic mounting kit



The **SA2000** high performance, acoustic emission transducers offer high sensitivity-low noise measuring capability for a wide range of industrial applications. The sensor is fully encapsulated and housed together with the integral amplifier, in a die cast aluminium box. Mounting is achieved using silicon rubber or epoxy adhesives. Alternatively, an optional isolated magnetic clamp, together with silicon grease couplant, can be used. Two adjustable machine screws in the base of the housing enable the sensor to be correctly aligned with the surface of the metal being monitored.

The integral pre-amplifier has a gain of 40 dB and the electronics board utilises surface mount components for high reliability and space saving. The amplifier is electrically isolated from the electronics unit.

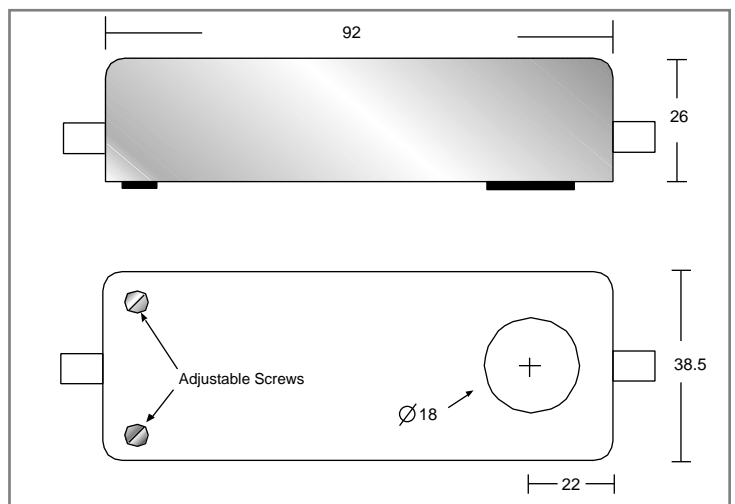
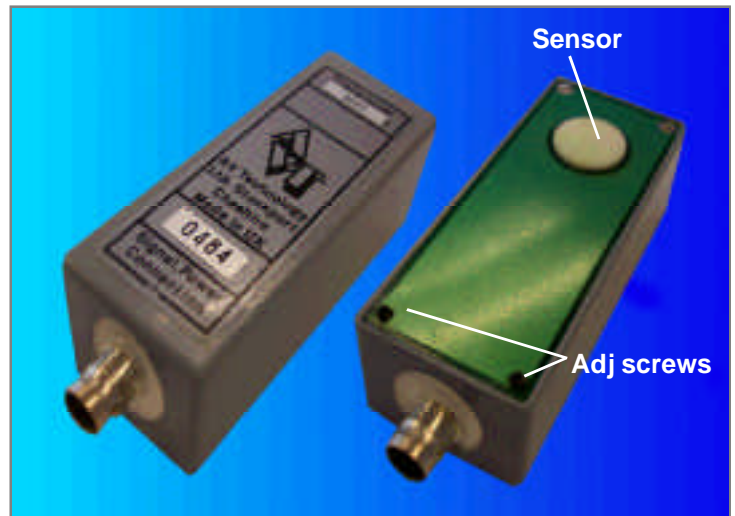
A separate **SP2000** pulser unit is available for configuring self-checking systems.



# Specifications

## SENSOR MODELS SA190 & SA450

Type :	Tuned resonant pzt piezoelectric	
Nominal Centre Frequency:	SA190	190 kHz
	SA450	450 kHz
Temp Range :	-25°C to +80°C	
Sealing :	Epoxy potting	
Coupling Shoe :	Ceramic	
Couplant :	Silicon rubber/epoxy mounting adhesive or silicon grease	
Total Weight :	235 g approx	



## INTEGRAL PRE-AMPLIFIER

Type:	Pre-amplifier *
Gain :	40 dB
Input Impedance :	33 k /20 pF
Output :	±10 V into 50
Filters Available :	200 kHz bandpass 450 kHz bandpass (48 dB per octave)
Noise (RTI) :	<2 µV RMS
Current Drain :	30 mA
Supply :	28-30 VDC

\*Separate SP2000 pulser unit available

