

**PREDICTIVE
MAINTENANCE
SYSTEMS**

**PROTECTING
YOUR
INVESTMENT**

SENSORS

**Sentry
Machinery
Protection System**

Sentry Machinery Protection System



**PREDICTIVE
MAINTENANCE
SYSTEMS**

PROTECTING
YOUR
INVESTMENT

SENSONICS

SENTRY MACHINERY

Effective and Unobtrusive Machinery Protection Design

Effective And Unobtrusive Machinery Protection

The Sentry Monitoring and Protection System has been designed using the latest technology to give maximum warning of impending machine failure without producing costly spurious alarms. It is intended to be permanently installed and requires little or no intervention from operators until a real event occurs.

Designed To Have The Flexibility To Suit Any Monitoring Requirement

Because each Sentry Monitor Module has its own microprocessor controller it is almost entirely user configurable, offering the most flexibility available whilst retaining the levels of reliability that Sensonics is renowned for.

Racking System

- Available in 19" or 10.5" versions to hold 6 or 3 modules.
- Panel mount facility
- High integrity design
- Detachable connector blocks for ease of maintenance
- Standard module mating connectors with polarity keys

System Set-Up

- Standard PC compatibility
- Logical, user friendly, multiple choice question/answer format
- Library facility to record standard set-up configurations
- Protected configuration
- High speed downloading of information via RS232 link to module front panel



Sentry Monitoring Series Standard Features

- High visibility LED display with wide viewing angle
- Modular self contained conditioning units
- Completely configurable via front panel or PC based software
- Independent power supplies for increased system integrity
- Individual Intel microprocessor in each module
- Bargraph and digital display on applicable modules
- Conforms to API 670 and GDCD 96
- Compact 3U racking system
- Up to 6 independent current or voltage outputs per module
- Individual dual level alarms
- System integrity alarm
- Transducer/PSU integrity alarm
- Up to 6 alarm relays per module
- Transducer power supply
- Raw transducer signal via front panel
- BNC connectors
- Networkable serial outputs

PROTECTION SYSTEM

Designed For Flexibility Suits Any Monitoring Regime



MO8601

Dual Channel Absolute Vibration

- 2 off accelerometer or velocity transducer inputs
 - Display selectable between acceleration, velocity or displacement with peak, peak to peak or RMS detection
 - Programmable transducer sensitivity
 - Channel defeat function
- For more information see Data Sheet DS1031



MO8602

Dual Channel Relative Vibration

- 2 off eddy current probe input
 - Peak, peak to peak or RMS detection
 - Fixed or tracking filters
 - Programmable transducer sensitivity
 - Gap alarm
 - Zero speed alarm
 - Channel defeat function
- For more information see Data Sheet DS1032



MO8603

Dual Channel Thrust

- 2 off eddy current probes inputs
 - Dual positive & negative going alarms
 - Zero and calibration adjustment
 - Out-of-range indication
 - Programmable transducer sensitivity
 - Channel defeat function
- For more information see Data Sheet DS1033



MO8604

Dual Channel Rod Drop

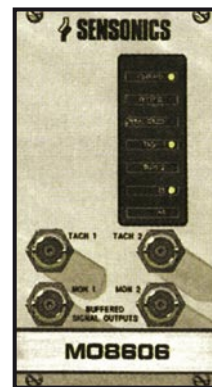
- 2 off eddy current probe inputs
 - Averaging or instantaneous point monitoring
 - Dual alarms
 - Shaft vibration monitoring
 - Out-of-range indication and alarm
 - Zero adjustment
 - Channel defeat function
- For more information see Data Sheet DS1034



MO8605

Four Channel Temperature

- RTD or Thermocouple input
 - Digital display for any channel or scan facility
 - 2 Channel version available
 - Channel defeat function
- For more information see Data Sheet DS1035



MO8606

Reverse Rotation

- 2 off eddy current probe inputs
 - Reverse rotation alarm
 - Transducer integrity alarms
- For more information see Data Sheet DS1036



MO8607

Single Channel Eccentricity

- Dual mode high & low speed detection with automatic changeover from peak to RMS detection via speed input
 - Zero speed alarm
 - Gap alarm
- For more information see Data Sheet DS1037



MO8608

Speed Monitor

- Eddy current probe or TTL input
 - 4.5 digit LCD display
 - Positive & negative going alarms
 - Transducer integrity alarms
 - Suitable for overspeed trip
- For more information see Data Sheet DS1038



MO8609

Single Channel LVDT

- Any LVDT accepted
 - Positive & negative going alarms
 - Choice of engineering units or % full scale
 - Imperial or metric units
- For more information see Data Sheet DS1039



MO8610

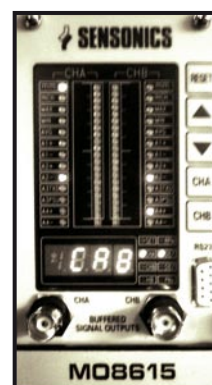
Dual Channel Phase Marker

- Single eddy current probe
 - TTL or other pulse output
 - Zero speed alarm and calibration check facility
- For more information see Data Sheet DS1040



MO8612

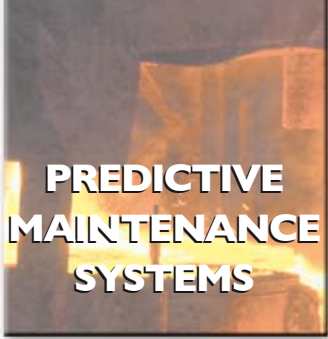
- ### Single Channel Mark Space Ratio Differential Expansion
- 1 off eddy current probe input
 - Alternative version with V-mag sensor input
 - Dual positive & negative going alarms
 - Adjustable or tracking threshold trigger
 - Predominantly for large steam turbines
 - Utilises 8mm tip probe for large measurements
 - Requires mark-space plates/pattern on shaft/collar
- For more info see Data Sheet DS1145



MO8615

Air Gap Module

- Rotor / Stator Gap Monitor
 - Max / Min & Average gap displayed
 - Two independent channels
 - Synchronises to phase marker for pole no. identification
 - For use with capacitive gap probes in hydro generator applications
- For more information see Data Sheet DS1210



**KEEPING
INDUSTRY
TURNING**



Sentry Overspeed Trip Systems

Dual Redundant (1oo2) and TMR (2oo3) to IEC61508 SIL 3



Proven reliability for Gas Turbine, Steam Turbine and Critical Pump Overspeed Protection



Voting Module 2oo3 / 1oo2

- TMR Voting logic
- Signal injection mode for on-line OS testing
- Independent channel control for run or test mode
- Trip level divide facility
- Visual alarm status
- Key switch protection

For more information see Data Sheet DS1206



Overspeed Trip Systems

- IEC61508 SIL 3 rated
- Dual redundant PSU
- Compact 3U format
- Overspeed mode for maximum speed capture during trip event
- Full on-line testing capability
- Zero speed facility
- Front panel 'Lock-Out'

For more information see Data Sheet DS1211

Further Module Options



Power Supply Module

- Dual redundant option
- Power up to two racks
- 110VAC/240VAC
- Integrity lamp and relay
- For use with all Sentry module options at +/-15V

For more information see Data Sheet DS1216



Communications Module

- MODBUS/TCP/IP Interface
- Remote access to measurement and alarm parameters & settings
- Access up to 32 Sentry modules
- IP Address configurable
- Flash upgradeable

For more information see Data Sheet DS1201



Sentry Set Up Software

- 32-bit Windows
- Full configuration of alarm and measurement settings
- Save and download facility
- RS-232 compatible
- Commissioning assist modes

Due to Sensonics policy of constant improvement, designs may be subject to alteration without notice.

To order or request a sample or further information

Call Sensonics NOW on:

+44 (0) 1442 876833

or FAX us on: +44 (0) 1442 876477

or email on: sales@sensonics.co.uk

www.sensonics.co.uk

Also Available From Sensonics

- Eddy current proximity probes
- Accelerometers
- LVDT's & RVDT's
- Portable vibration meters
- Other signal conditioning systems
- On line vibration monitoring
- Seismic monitors and sensors

Sensonics Can Also Undertake

- Feasibility studies
- System integration
- Installation and commissioning (turnkey projects)
- Conditioning monitoring surveys and contracts
- Diagnostic services
- Product & application training



Cert. No. FM26920

Sensonics Ltd, Northbridge Road, Berkhamsted, Hertfordshire HP4 1EF England
Telephone: +44 (0) 1442 876833 Facsimile: +44 (0) 1442 876477 email on: sales@sensonics.co.uk
www.sensonics.co.uk

If you are at all unsure about any application of the Sensonics products & systems please do not hesitate to call our technical sales department, who will be delighted to offer advice without obligation.