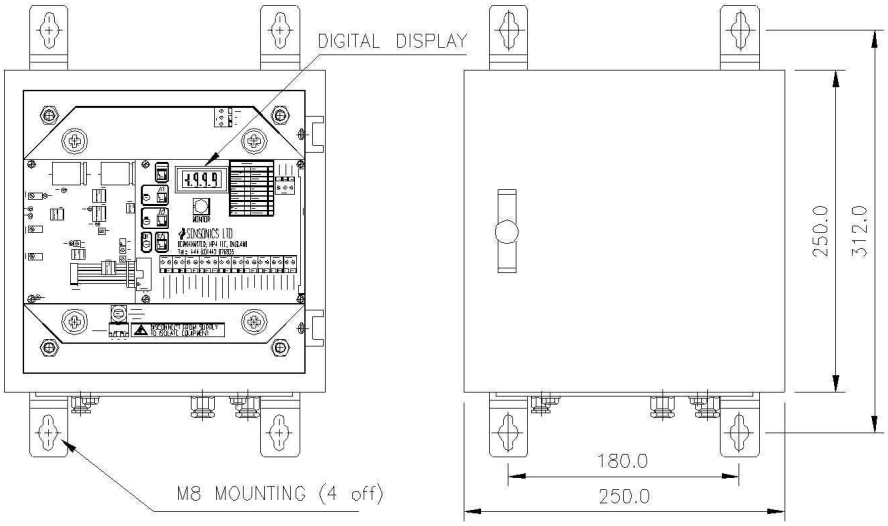
TECHNICAL INFORMATION

PREDICTIVE MAINTENANCE SYSTEMS

SENSONICS LTD

AEGIS SYSTEM

ME9601 – VIBRATION MONITORING ENCLOSURE



- ACCELEROMETER, VELOCITY TRANSDUCER OR VELOMETER INPUT.
- FULLY ADJUSTABLE DUAL LEVEL ALARMS.
- FIELD SELECTABLE MONITORING MODE (A, V or D).
- IDEAL FOR EARLY WARNING OF BEARING FAILURE.
- RECORDER OUTPUTS AVAILABLE.
- SUITABLE FOR MACHINE TRIP APPLICATIONS.
- TRANSDUCER INTEGRITY ALARM.
- MODULE SELF CONTAINED IN AN IP.66 WALL MOUNTING ENCLOSURE WITH INTEGRAL DISPLAY.

The ME9601 Vibration monitor has been designed to provide high integrity, cost effective protection for rotating machinery of all types including turbines, motors, fans compressors etc.

It is ideally suited to applications where constant surveillance is required to protect machinery against sudden deterioration in condition and avoid costly breakdowns.

The monitor uses only the highest quality components and has been extensively type tested to ensure effective monitoring and prevent spurious alarms.

ME9601 – VIBRATION MONITORING ENCLOSURE

The monitor is housed in an IP66 wall mounted enclosure. The level of the channel is brought up on the internal display in engineering units, by depressing the 'level' button after initial system power-up. Alarm levels are displayed by pressing and holding the A1 or A2 buttons.

The monitor has its own PSU for increased system integrity, an internal BNC presenting the transducer buffered raw signal and a calibration check facility.

Three off volt free change over relays are provided, A1 and A2 level alarms, and A3 transducer/PSU integrity. The status of A1 and A2 are indicated on the display panel by red LED's illuminating when the alarms are initiated. The A3 alarm is annunciated by a normally lit green LED in the display panel, this transducer/PSU integrity alarm is able to inhibit A1 and A2 relays when in the Alarm State. A time delay of up to 5 seconds can be applied to alarms and is strongly recommended when the unit is used for trip purposes.

The monitoring mode, (A, V or D and peak or RMS) scaling and filters can be field set by the positioning of on board switches.

One current and one voltage output are available for recording/analysis purposes at the terminal blocks on the display panel.

TECHNICAL SPECIFICATION

Input
Any Accelerometer, Velometer Transducer or Velometer. 2,3 or 4 wire devices.
Sensitivity – usually 100mV/g, others acceptable.

Monitoring Mode
Field selectable
Acceleration
Velocity
Or Displacement
In either Peak or RMS values.

Range
Field selectable
1–50g (Acceleration) 5 ranges
10–50mm/s (Velocity) 6 ranges
125–500 µm (Displacement) 3 ranges
Imperial ranges available if required.

Outputs
1X Current (4-20mA, or 0-10mA) others available.
1X Voltage (0-1V, 0-10V, 1-5V or Buffered Raw Signal)
Available at the terminal blocks on the display panel.
Also Buffered Raw Transducer Signal available on display panel BNC.

Alarms
A1 Field adjustable level alarms (positive or negative going)
A2 Field adjustable level alarms (positive or negative going)
A1 & A2 Field adjustable to be; Normally Open or Closed
Latching or Non-latching
Normally Energised or De-energised.
A3 Transducer Integrity alarm with selectable automatic defeat function of A1 & A2.

All alarms have display panel LED annunciation, and have relays rated to 0.5A @

110VAC and can have delays of up to 5 seconds.

Filters
Hi and Lo pass filters 12dB/Octave.

Field selectable between 5Hz and 10kHz.

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ORDER INFORMATION ME9601 AND MO9601 VIBRATION MONITORS

1) POWER SUPPLY

What is the power supply to the unit? (*tick one box*)

a) 110v AC ..... ( ) (standard)
b) 240v AC ..... ( )
c) 24v DC ..... ( )

2) INPUT (*If buying the vibration sensor with this monitor unit from Sensonics, please go to question 3*)

i) What is the input? (*tick one box*)

a) Accelerometer ..... ( ) *Go to 2ii*
b) Velocity Transducer ..... ( ) *Go to 2iii*
c) Eddy Current Probe ..... ( ) *Go to 2iv*
d) Other (*please provide specification*) ..... ( )

ii) Is the Accelerometer? (*tick one box*)

a) 2 wire 100mV/g, 24Vexc, constant current .. ( ) (ICP device)
b) 3 or 4 wire 100mV/g, 24Vexc, constant volt . ( )
c) Other, (*please provide specification*) ..... ( )

iii) Is the Velocity Transducer? (*tick one box*)

a) 2 wire 4mV/mm/Sec,24Vexc, constant current( )
b) 3 or 4 wire, 4mV/S, 24Vexc,const volt ..... ( )
c) Passive 4mV/mm/Sec,self generating device ( )
d) Other, (*please specify*) ..... ( )

iv) Is the Eddy Current Probe? (*tick one box*)

a) 200mV/thou, -24Vexc..... ( )
b) 100mV/thou, -24Vexc ..... ( )
c) Other, (*please specify*) ..... ( )

3) MONITORING MODE (*Speak to Sensonics Sales Staff if assistance is required.*)

Please choose one of the following measurement ranges. (*tick one box from accel., vel. or disp.*)

N.B. *If you have an eddy current probe input, choose a displacement range only. If you have a velocity transducer input, choose velocity or displacement only. If you have an accelerometer input, choose any measuring range, acceleration velocity, or displacement.*

Acceleration

a) 0 - 1g RMS ..... ( )
b) 0 - 2g RMS ..... ( )
c) 0 - 2.5g RMS ..... ( )
d) 0 - 5g RMS ..... ( )
e) 0 - 10g RMS..... ( )
f) 0 - 25g RMS ..... ( )
g) 0 - 50g RMS ..... ( )

Velocity

N.B. *velocity measurement is recommended by ISO2372 for monitoring of machines with rotational speeds from 600 to 12000 RPM.*

a) 0 - 10mm/S RMS ..... ( )
b) 0 - 15mm/S RMS ..... ( )
c) 0 - 20mm/S RMS ..... ( )
d) 0 - 25mm/S RMS ..... ( )
e) 0 - 50mm/S RMS ..... ( )
f) 0 - 0.5 inch/S RMS ..... ( )
g) 0 -1.0 inch/S RMS ..... ( )
h) 0 - 2.0 inch/S RMS ..... ( )

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Displacement

a) 0 - 125uM pk-pk ..... ( )
b) 0 - 200uM pk-pk ..... ( )
c) 0 - 250uM pk-pk ..... ( )
d) 0 - 500uM pk-pk ..... ( )
e) 0 - 5 thou pk-pk ..... ( )
f) 0 - 10 thou pk-pk ..... ( )
g) 0 - 20 thou pk-pk ..... ( )

4) FILTER FREQUENCIES

i) Higher frequency – 'low pass' filter
(*please tick one box*)

a) 100 Hz ..... ( )
b) 500 Hz ..... ( )
c) 1 KHz ..... ( ) (ISO2372 recommended)
d) 3.3 KHz ..... ( )
e) 6.6 KHz ..... ( )
f) 10 KHz ..... ( )

ii) Lower frequency 'high pass' filter
(*please tick one*)

a) 0.35 Hz ..... ( )
b) 5 Hz ..... ( )
c) 10 Hz ..... ( ) (ISO2372 recommended)
d) 50 Hz ..... ( )
e) 25 Hz ..... ( )

5) ANALOGUE OUTPUTS

No outputs required …….. ( )

i) Output 1 (*please tick one box*)

a) DC current 0-10mA proportional to measurement range ..... ( )
b) DC current 4-20mA proportional to measurement range ..... ( ) (standard)

ii) Output 2 (*please tick one box*)

a) DC voltage 0-5V proportional to measurement range ..... ( )
b) DC voltage 0-10V proportional to measurement range ..... ( )
c) DC voltage 1-5V proportional to measurement range ..... ( )
d) DC voltage 2-10V proportional to measurement range ..... ( )
e) Dynamic voltage output ..... ( )

6) ALARMS

No alarms required …….. ( )

(A1and A2 level alarms and A3 integrity alarm)

i) Choice 1 - Alarm relay circuitry (*please tick one box*)

a) normally open, close to alarm ..... ( )
b) normally closed, open to alarm ..... ( )

ii) Choice 2 - Alarm regime (*please tick one box*)

a) fleeting alarms, non latching (return to normal state when condition is rectified)( )
b) latching alarms (requires reset signal to return to normal state)..... ( )

iii) Choice 3 - Relay (*please tick one box*)

a) normally energised relays, de-energise for alarm ..... ( )
b) normally de-energised relays, energise for alarm ..... ( )

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