TECHNICAL INFORMATION

PREDICTIVE MAINTENANCE SYSTEMS

SENSONICS LTD

SENTRY SYSTEM

MO8601 - DUAL CHANNEL VIBRATION MODULE

*** 2 ACCELEROMETER OR VEL INPUTS.**
*** MODULAR, RACK MOUNTED.**
*** INDEPENDENT MICROPROCESSOR.**
*** PROGRAMMABLE SET UP VIA RS232**
*** INDEPENDENT POWER SUPPLY.**
*** MONITORS IN A,V & D.**
*** HIGH VISIBILITY DISPLAY.**
*** 4 ALARM RELAYS PER MODULE.**
*** 6 RECORDER OUTPUTS PER MODULE.**
*** DESIGNED TO MEET API 670**

The Sensonics MO8601 Module forms one of the SENTRY Microprocessor based series and is a signal conditioning unit for monitoring the signal from two Accelerometers or Velocity Transducers. The modules in the SENTRY series are designed to be housed in the Sensonics RA8600 series 19 inch 3U extended eurocard rack system.
The signal conditioning unit is fitted with a digital indicator and a dual bar graph display. The former will normally indicate vibration in the selected units (selectable on the front panel) from either channel. The bar graphs will display the levels of vibration as a percentage of the full scale range which has been set up in the software. Front panel buttons permit selected operational software settings to be viewed on the indicator/display. A "time out" function ensures that the display will revert to the normal vibration reading after a preset time.

Signal Conditioning
The module accepts 2 input signals with levels proportional to vibration from 2 transducers. These are conditioned to give two independent measurements of vibration accurate to within +/- 0.5% of the true level. The inputs are conditioned to measure acceleration, velocity or displacement and the reading displayed in terms of Pk, Pk to Pk or RMS. The reading will be displayed in one of five selectable ranges using metric or imperial units.
For each channel there are 2 independent vibration level alarms, A1 and A2. When the signal level exceeds an alarm level for a specified period the associated lamp will be illuminated on the display and the state of the appropriate relay changed. The module has four alarm relays as standard each of which may be set independently to be latching or non-latching, normally energised or de-energised and normally open or closed. There is provision for two extra relays to be fitted allowing the settings of the A1 and A2 alarm relays for each channel to be independent. A control input is provided which will cause the alarm levels to be multiplied by a factor of 2 or 3 as selected to prevent tripping during machine start-up.
A channel integrity alarm A3, monitors the Transducer/PSU and Microprocessor for each channel and a common A3 alarm relay is provided. A green A3 TXD and A3 PSU "OK" LED illuminates on the front panel for each channel. If the TXD or PSU are faulty (green LED unlit) then the associated A3 relay will change state.
An A4 Channel Integrity alarm monitors the appropriate integrated inputs for each channel and an A4 alarm tripped indicates that the reading is "not valid". A common A4 alarm relay is available, and an individual indication is available for each channel by the illumination of a red A4 LED.
Each channel has adjustable high and low pass filters to allow programmable bandpass filtering. The low pass filter has a range of 20Hz to 10khz and the high pass filter has a range of 1Hz to 3khz.
The module can also be configured to a dual path module with one transducer input signal applied to both channels.

Signal Outputs
The module will provide up to 3 outputs per channel of a combination of current and voltage outputs as required. The range of the outputs may be set independently of the display and may also be set to increase or decrease with an increasing vibration.

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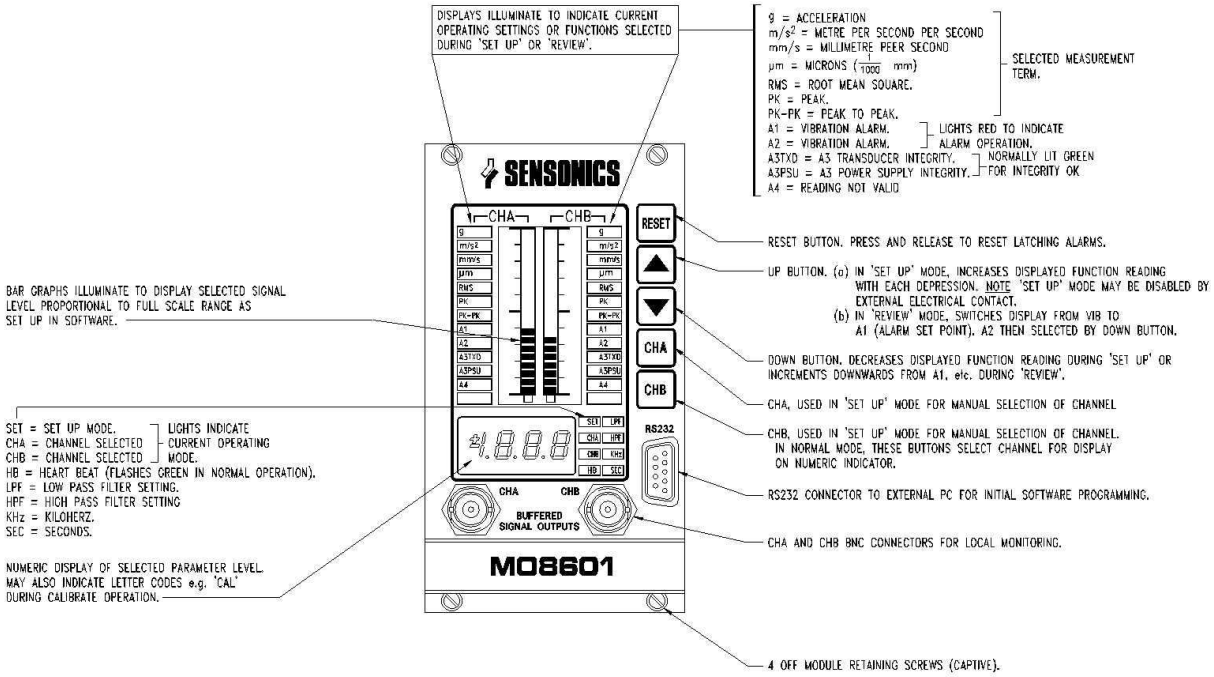
Front Panel Facilities and Functions



SPECIFICATIONS

Input

Sensitivity	100mV/ g - Acceleration 4mV/mm/sec - Velocity
Transducer Type	Accelerometer or Velocity Transducer
Frequency Range	5Hz to 10 KHz
Power Supply	110V or 240V AC 50-60 Hz
Operating temperature range	0°C to 50°C

Output

Displays	21 segment bargraph and 3 1/2 digit indicator.
Meter accuracy	+/- 5% of true value
Recorder outputs	Up to 6 voltage or current outputs per module
Relays	4 alarm relays per module as standard A1 and A2 - level alarms A3 - Channel integrity alarm A4 - Reading invalid alarm
Buffered output	BNC connector on front of panel, and rear of rack.

Dimensions

Height	128.8mm (3U)
Width	70.7mm (14HP)

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