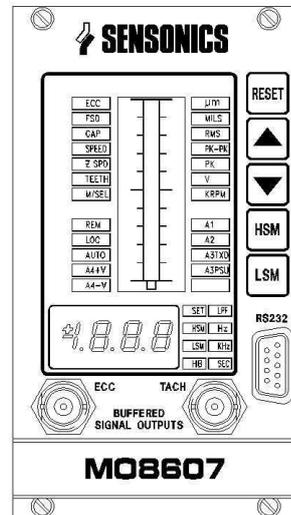


SENTRY SYSTEM



MO8607 - DUAL MODE ECCENTRICITY MODULE



- * INPUT 1: ECCENTRICITY - ECP
- * INPUT 2: SPEED/PHASE - ECP or TTL
- * OPERATES DOWN TO 2 RPM
- * HIGH SPEED AND LOW SPEED MODES
- * TRACKING ELLIPTICAL FILTER
- * MODULAR, RACK MOUNTED
- * INDEPENDENT MICROPROCESSOR
- * PROGRAMMABLE SET UP VIA RS232
- * INDEPENDENT POWER SUPPLY
- * HIGH VISIBILITY DISPLAY
- * 4 ALARM RELAYS PER MODULE
- * 6 RECORDER OUTPUTS PER MODULE
- * DESIGNED TO MEET API 670

The Sensonics MO8607 Module forms one of the SENTRY Microprocessor based series and is a signal conditioning unit for monitoring from the eccentricity signal from an eddy current probe. 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 eccentricity in the selected units (selectable on the front panel). The bar graphs will display the level of eccentricity 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 eccentricity reading after a preset time.

Signal Conditioning

The module accepts an eccentricity signal from an Eddy current probe and a speed/phase signal. The input is conditioned to measure in displacement and the reading displayed in terms of pk to pk, pk or RMS. The signal may be displayed in one of four selectable ranges using metric or imperial units.

The module has two operating modes, high speed and low speed, with the changeover point either at an internally programmed speed or under external control from a Speed Module. In the low speed mode (LSM) the measurement method is pk to pk, but with a tracking elliptical filter following shaft speed, removing all high frequency components (due to burrs, gouges, rope marks etc), allowing the signal to represent true shaft eccentricity. In the high speed mode (HSM) an RMS measurement method is used.

There are 2 independent eccentricity level alarms in each mode, 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. 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 Reading Invalid alarm monitors the gap between each probe and the shaft, the A4 alarm relay tripped will indicate 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.

The main filtering is performed by a 6 pole low pass filter, the cut off of which may be fixed or may track the rotational speed of the shaft from 50 - 4000rpm. The module can accept a TTL "tacho" signal and when present an indication of shaft speed will be available. When the tracking option is selected a constant user programmable ratio will be maintained between filter cut off and shaft speed.

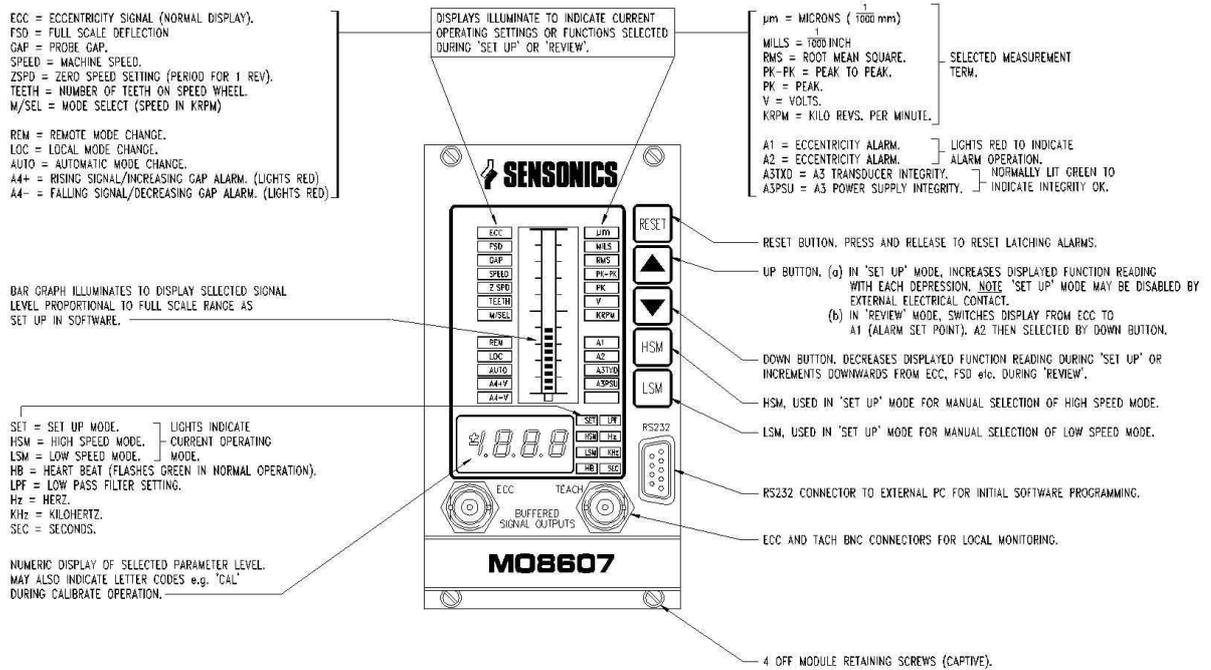
Signal Outputs

A variety of static and dynamic outputs may be configured and routed to the 6 output drivers independently of the front panel display.

SENTRY SYSTEM

MO8607 - DUAL MODE ECCENTRICITY MODULE

Front Panel Facilities and Functions



SPECIFICATIONS

Input

Sensitivity	200 mV/ thou or 100mV/ thou
Transducer Type	Eddy current probe system (or TTL pulse)
Speed range	2 - 4000 RPM
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 measured 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)

DS1037



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