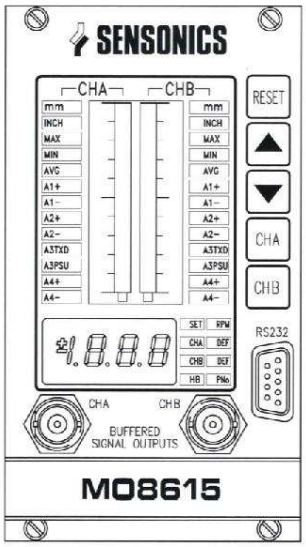
TECHNICAL INFORMATION

PREDICTIVE MAINTENANCE SYSTEMS

SENSONICS LTD

SENTRY SYSTEM

MO8615 - DUAL CHANNEL AIR GAP MODULE



*** SYNCHRONISED GAP MEASURMENT**
*** MODULAR, RACK MOUNTED**
*** INDEPENDENT MICROPROCESSOR**
*** PROGRAMMABLE SET UP VIA RS232**
*** INDEPENDENT POWER SUPPLY**
*** HIGH VISIBILITY DISPLAY**
*** 4 OR 6 ALARM RELAYS PER MODULE**
*** 6 RECORDER OUTPUTS PER MODULE**
*** DESIGNED TO MEET API 670**

The Sensonics MO8615 Module forms one of the SENTRY Microprocessor based series and is a signal conditioning unit for monitoring the linearised gap signal from two capacitive or inductive probes in conjunction with a phase reference signal. The modules in the SENTRY series are 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 display indicates gap distance in the selected units (selectable on the front panel) from either channel. The bar graphs will display the levels of displacement 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 reading after a preset time.

Signal Conditioning

The module accepts 2 input signals with levels proportional to distance from the 2 probes. These are conditioned to give two independent measurements of gap accurate to within +/- 0.5% of the true level, displayed in the selected units. Three measurement modes are available for each channel, MAX, MIN and AVG. The MAX and MIN when selected respectively will display the maximum or minimum gap measurement made between the synchronisation or 1/REV pulses at the selected sample rate. The sample rate per revolution can be programmed in to the unit, for example, number of poles (Rotor / Stator gap measurement). The display of the max / min values will flash between the gap measurement and the sample number or pole number corresponding to the measurement. The AVG measurement will display the averaged gap measurement made between the synchronisation or 1/REV pulses. Selecting RPM on the front panel will display the speed calculated from the 1/REV pulse.

For each channel there are 2 independent level alarms, A1 and A2 and will operate in both positive and negative directions. 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 channel integrity alarm A3, monitors the Transducer/PSU and Microprocessor for each channel and a common A3 alarm relay is provided. An A4 Channel Integrity alarm monitors the appropriate inputs for each channel and an A4 alarm tripped indicates that the reading is "not valid" or outside the set measurement window. . A common A4 alarm relay is available, and an individual indication is available for each channel by the illumination of a red A4 LED.

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 configured for inverted operation.

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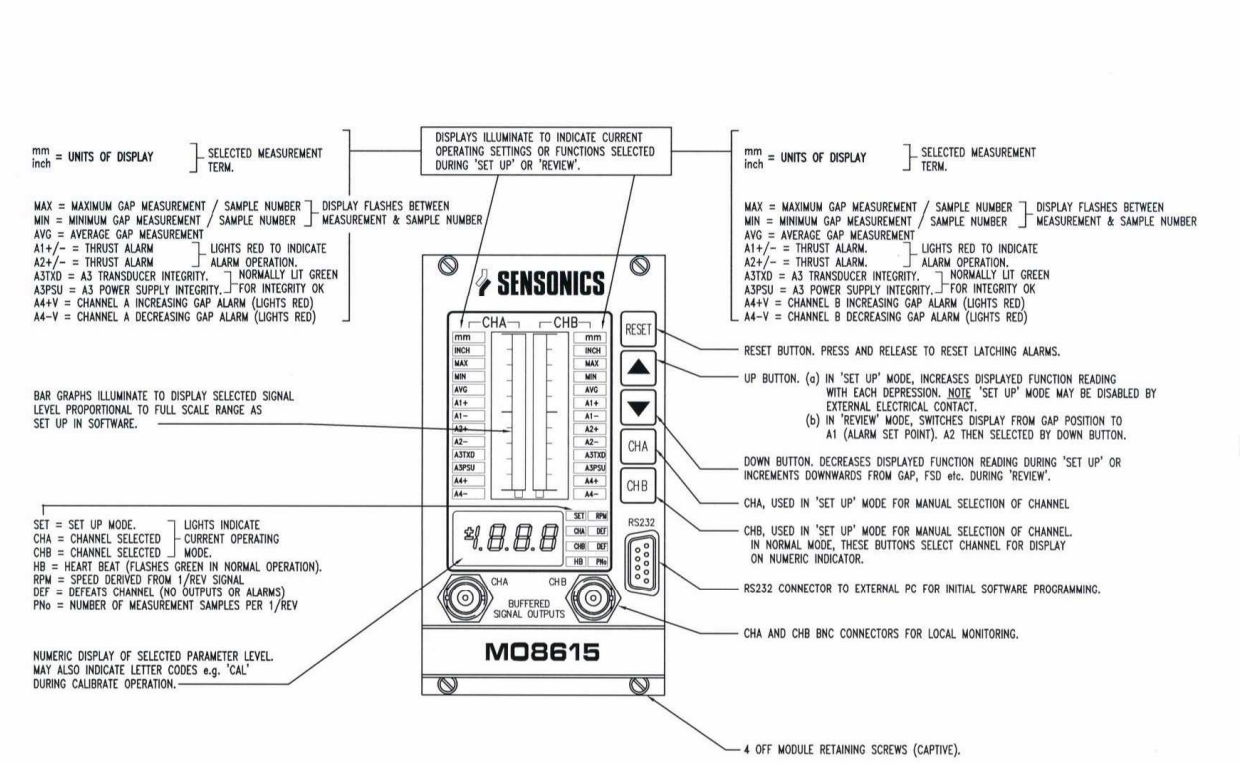
Front Panel Facilities and Functions



SPECIFICATIONS

Inputs

Transducer Sensitivity	Programmable to suit measurement range
Transducer Type	Inductive (-24V) or Capacitive (+24V) 4- wire probe system
Input Impedance	200 kOhm
Tacho	Proximity probe or TTL
Power Supply	110V or 240V AC 50-60 Hz
Serial Data Interface	RS232, 9600, 8, None, 1
Operating temperature range	0°C to 50°C

Outputs

Gap Measurement	Max, Min & Average Gap distance
Gap Synchronisation	Max and Min sample positions (max 32 samples)
Speed	Display of speed in RPM
Displays	21-segment bargraph and 3 1/2 digit indicator.
Meter accuracy	+/- 0.5% 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 / out of measurement range alarm
Buffered output	BNC connectors on front of panel, and rear of rack connections.

Mechanical

Height	128.8mm (3U)
Width	70.7mm (14HP)
Operating temperature range	0°C to 50°C

DS1210

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