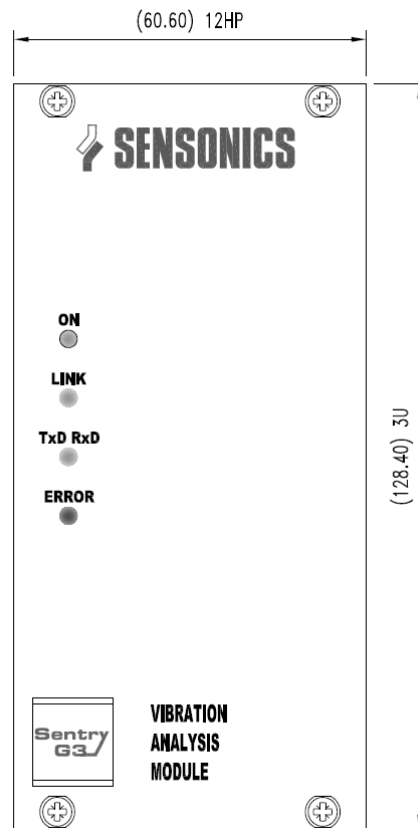




G3 – VAM VIBRATION ANALYSIS MODULE



- Time and FFT Data Capture
- Order Locked Analysis
- 16 / 32 dynamic channels
- Up to 8 phase reference channels
- Dual TCP/IP interface
- Fits Slot 6 Sentry G3 Rack
- SD Card Storage for Dynamic data

The Sentry G3 Vibration Analysis Module is designed to acquire transient analysis data from up to 32 dynamic channels across two G3 rack systems. The module is located in slot 6 of the G3 master rack and connects to the G3 monitor modules through the rack backplane, connecting to the secondary slave rack backplane through a multi-way cable assembly.

Order locked time data and asynchronous FFT's are acquired by the module according to the phase reference allocation and module configuration. All data is communicated via TCPIP for storage on a local server and PC based software is utilised to access the data to perform the required offline analysis of the data files. Internal Flash storage is utilised within the module for capturing pre and post static and transient data on alarm.

The separate SentryG3 VAM hardware concept ensures the protection element of the machine monitoring system is separate and diverse from the analysis acquisition and associated software tools.

Acquisition modes and the alarm configurations are programmed directly to the Sentry VAM module through the remote user interface. Other plant data can be captured and trended through both OPC and TCPIP Modbus protocols to the Server.

G3 - VAM

TECHNICAL SPECIFICATION

HARDWARE

Number of Channels	Max 32 channels 256 kHz sampling
Transducer Select	Accelerometer Velocity Transducer Proximity Probe
Accelerometer Sensitivity	10.00mV/g to 1.0V/g
Velocity Sensitivity	1mV/mm/s to 50mV/mm/s
Proximity probe Sensitivity	3.94mV/um or 7.84mV/um
Proximity probe gap range	-20.0V to -0.1V
Dynamic Range	-20.0V to +20.0V
Resolution	24-bit
Phase Reference	Up to 8 Channels TTL from G3 rack or auxiliary bus
Acquisition	Simultaneous parallel acquisition and asynchronous acquisition via FFT in all modes.
Synchronous Acquisition Modes	Delta RPM Delta Time On Alarm
Synchronous Waveform Sampling Rates	128 samples / rev 16 revolution average 64 samples / rev 32 revolution average 32 samples / rev 16 revolution average
Synchronous Measurements	Magnitude and Phase Order 1 – 100 Sub-synchronous and Non-synchronous levels available through analysis software

FFT Resolution	800 line Spectrum Up to 4000Hz Frequency Range all with Anti-Alias Filtering
FFT Acquisition Modes	Delta RPM Delta Time Online Delta Time
Alarm Data	Collection of static and dynamic data internal to module for user defined pre and post period.
Available Memory	32GByte
Rack Communication	KANBUS for collection of protection module settings, alarms and static values.
Module Set Up	Configuration of the module is carried out through the TCPIP interface utilising the SentryCMS application.

SOFTWARE

SentryCMS SW for Windows 64-bit
Software Analysis Options

1. Bode Plot, Amplitude versus RPM or Time
2. Polar Plot
3. FFT Waterfall, Z-axis time
4. Orbit Plot, X&Y
5. Shaft Centreline
6. Multi-Parameter trending versus time
7. Bar Graph
8. Text data format
9. Synchronous and Asynchronous analysis

Alarms when in Online Mode

1. Overall Vibration / magnitude Change
2. Phase Change
3. Harmonics
4. Defined Frequency bands
5. FFT bands
6. Acceptance region

Time Synchronisation through TCPIP Network

LAN

Ethernet 10/100 Mbps, RJ45, Auto MDI/MDIX, dual port
Protection Built-in 1.5KV magnetic isolation

Power Consumption

250mA max, 24Vdc, through rack +24V backplane power supply

Front Panel Indicators

ON – Indicates **green** when module is correctly powered on. Power supply fault results in LED turning off.

LINK – Indicates **green** when the unit is operating correctly. Off indicates faulty module.

TxD RxD – Flashes **green** when communicating data through TCPIP either direction.

ERROR – Indicates **red** when the unit is in error or an IP conflict. Indicates **red** while module booting on power up.

Alarm Relays

PSU OK Normally energised, non-latching, change over contacts
COMMS OK Normally energised, non-latching, change over contacts
Both SPST configuration (250VAC / 1A)

Temperature

Operating -20°C to +65°C
Storage -30°C to +65°C

DS1260

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