

SI-530 Tri Output Vibration Module

- 1. Description.** The SI-530 Tri Output Vibration Module is designed to operate with 100mV/g constant current type accelerometers to provide three outputs useful in vibration monitoring and analysis. The unit is housed in a compact DIN-Rail mounting plastic case and operates from 24VDC at 25mA. Terminal connections are shown in Fig.1. overleaf.
- 2. Accelerometer Power.** The SI-530 provides a 3.6mA constant current supply to an accelerometer which connects directly to the module input terminals.
- 3. TDX OK LED.** A green LED on the front of the unit indicates correct connection of the accelerometer. The LED will not light if input wiring short or open-circuits are present. To prevent problems due to spurious input signals, both 0-10V outputs are set to 0V if the TDX OK LED is not lit.
- 4. AC Output.** A buffered, but un-filtered AC output proportional to the acceleration signal is provided via a BNC connector mounted on the front panel. The 100mV/g signal is not AC coupled and swings about the accelerometer bias voltage level. If a data-collector is used to monitor this signal for vibration analysis, **it must set for AC input and have its sensor power function turned off.**
- 5) Velocity Output.** This is a 0-10V output proportional to rms velocity in mm/s. The signal conditioner has high and low pass filters to limit the measurement bandwidth to 10Hz to 1kHz as defined in ISO 10816 which lists recommended vibration limits for rotating machines. The output range is set at the factory at 0-10V = 0-20mm/s as standard. For acceleration versions, this output is 0-10V proportional to g rms.
- 6) Enveloped g Output.** This 0-10V output is useful for detecting problems in ball or roller bearings where signals from high frequency impacts are masked by the lower frequency vibrations proportional to shaft rotational speed. The envelope input circuit bandwidth is 500Hz to 10KHz and the output range is set at the factory 0-10V =0-10gE as standard.
- 7) AC Envelope Output.** This is a buffered AC output from the envelope circuit which swings about a 9VDC reference level. The 100mV/g signal can be used for vibration analysis via a Data-Collector.

Fig.1.

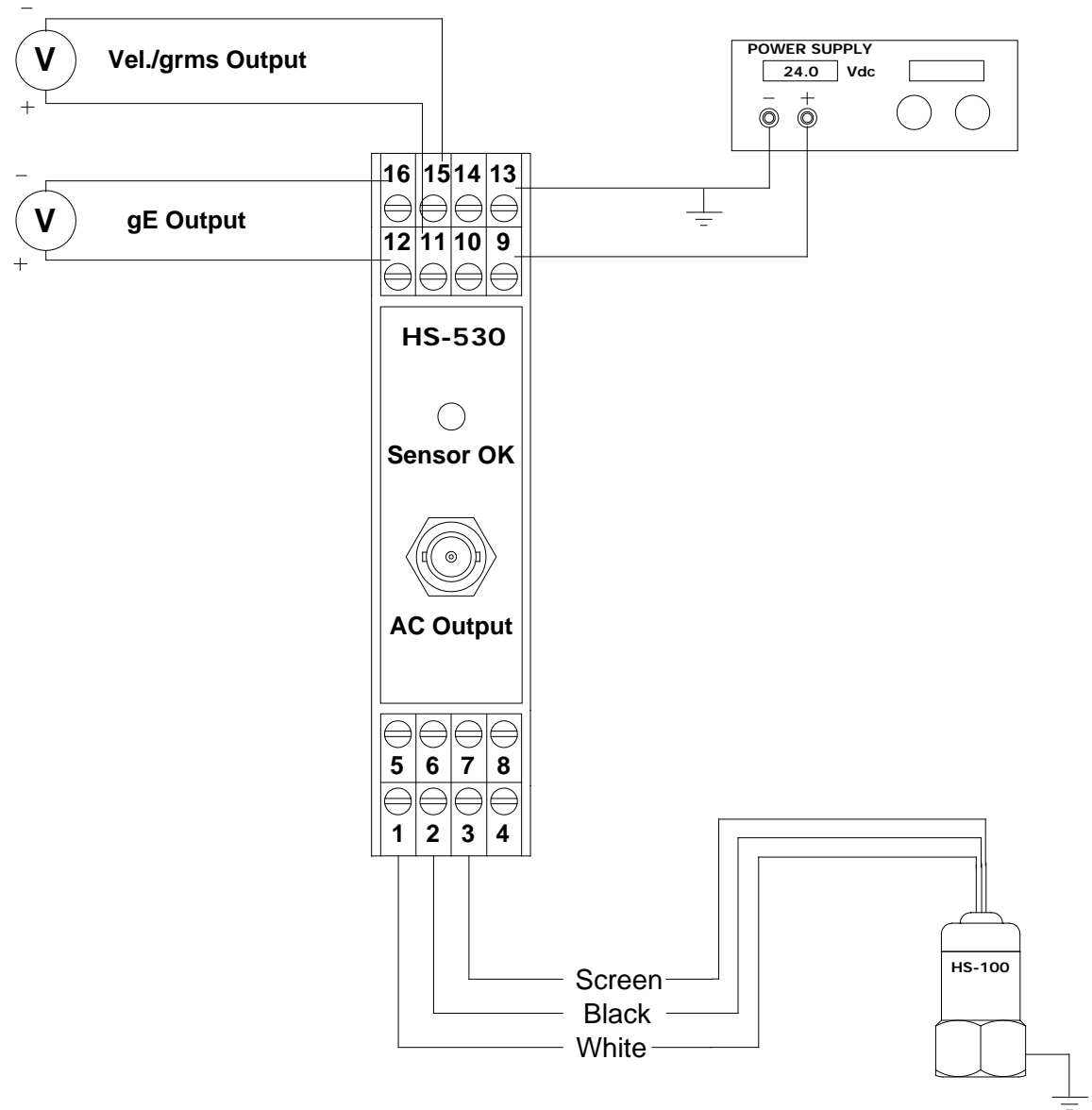
HS-530 Terminal Connections

- 13 - 0V Power In
- 14 - 0V Env. AC Output
- 15 - 0V (Vel./grms 0-10V Out)
- 16 - 0V (gE Output)

- 9 - +24Vdc In
- 10 - Env. AC Output
- 11 - Vel./grms 0-10V Out +
- 12 - gE Output +

- 5 - As 1
- 6 - As 2
- 7 - As 3
- 8 - No Connection

- 1 - Accel. + IN
- 2 - Accel. 0V IN
- 3 - Accel. Screen
- 4 - No Connection



Note: HS-530 and SI-530 are synonymous