

Machinery Protection System V6000



- V6000 system is a total solution for the vibration measurement and continuous on-line protection with condition monitoring (optional) of medium to large sized critical plant machinery

2 configurations available:

I) Vibration Protection System

Easy setup with V6000 configuration tool for performing protection monitoring of one or several machines.

Measured values are shown on the local indicators and also transmitted to PLC/ DCS/ HMI with Modbus RS485 or 4-20 mA output.

II) Protection & Conditional Monitoring

Connecting to condition monitoring and diagnostic software easily whatever. With V6000 there are no external modules, no additional wiring and no extra rack slots required. Simply use the Ethernet port in the V6000-G Rack Interface Module and a single network cable to communicate with our Vibsens-PRO software

Description of various V6000 cards:

V6000-G Communication Gateway (Optional):

The V6000 System monitor supports Modbus® protocol via serial (RS232/485) for digital communications with PLCs, DCSs and other instrument and automation platforms. Key lockable to prevent unauthorized tampering.

V6000-V Vibration Signals(required):

Four vibration inputs can be connected to Accelerometer, Velocity Sensor, Proximity Probes or Analog Signals (mA or VDC)

V6000-M 19" System Rack (required):

Aluminum Alloy - 426*277*259 mm All input and output terminals are available on the back plane with push-in type connectors.

Buffered Outputs

Every dynamic input signal is available on the front panel via BNC connectors for easy connection to portable data loggers / test instruments.

V6000-K V6000-DIAG (Optional):

Ethernet interface with Vibsens-PRO condition monitoring software via TCP/IP protocols

Local Monitor & key pad

Each monitor features a high visibility digital LED display. The displays show current values, set points and alarm status etc. In addition, operator can configure all settings for each input.

Analog Communications

All monitor module channels are available with analog 4-20 mA proportional outputs for compatibility with recorders, process control systems and other instrumentation.

V6000-M Multifunction Monitor (Optional):

This card can accept up to 8 4-20 mA process inputs and it has 8 configurable dry relays.

V6000-RPS Power Supply (required):

Accepts worldwide ac/dc voltages and frequencies and can be supplied redundant to assure uninterrupted the process

Trip Multiply Factor

Includes relay bypass and trip multiply configurable per channel

V6000-K Keyphasor® (Optional):

This card can process up to two tachometers for phase & speed measurements with 8 configurable dry relay outputs.



Compressor



Cooling Tower



Fan



Gear Box



Generator



Electromotor



Pump



Turbine



Wind Turbine



Hydro Turbine

Technical specifications of V6000 Machine Protection System

Characteristics	V6000	
Analogue inputs	IEPE / voltage mode accelerometer Proximity probe Velocity Sensors KeyPhasor®/ Tachometer Any type of voltage or current output transducers	
Input channel:	4 up to 28 vibration channels, 2 keyphasor channels and up to 8 multifunction channels (4-20mA)	
Signal Conditioner:	Amplifier/integrator to obtain velocity or displacement response by integration	
Analog Outputs:	Four 4-20mA outputs per card	
Logical outputs	8 (4 Alerts, 4 Danger) per card , 1 malfunction	
Relay Specification:	Form C, SPDT, 1 Amp 110 VAC, Latching or Non-Latching Selectable Normally Energized or Normally De-Energized (User Defined) Bypass Relay or Active Relay Selectable	
Alarm Time Delay:	1 to 60 Seconds (User Defined)	
Reset Function:	Push Button /Terminal for Remote Reset if Latching Alarms Selected	
Trip Multiply Function:	Terminal for None , variable 10 to 90% Alarm Trip multiply	
Communication with HMI	3 redundant Serial port RS-232/RS-485 Modbus RTU Protocol	HMI Software: Any standard HMI Software Like Wincc
Communication with CMS	Ethernet (10/100 base T) Vibsens Protocol	CMS Software: VibSenS-CMS
Environment	Protection: IP 55 Temperature range: -20°C, +60°C0 Humidity: 95% max without condensation	
Detection mode	RMS, True Peak, True Pk-Pk	
Alarm Indication:	OK = Green LED, Alert = Yellow LED, Danger = Red LED	
Local indicators:	Up to 20 parameters and adjusting configuration With 7Segment Front of Cards	
Accuracy:	1% Full Scale	
Dynamic Range:	65dB	
Phase Linearity:	(0.1 Hz to 10 kHz) ±1 deg	
Resolution:	12 bit	
Sample rate	Up to 4 KHz synchronous sampling	
Frequency Response:	Acceleration and Velocity and Displacement: 2 to 10,000 Hz (In Factory Defined) Thrust / Position :DC	
Buffered Outputs:	2 type Buffered Outputs :With sensor offset / without DC	

