1-809

Vibration Monitor & Transmitter

Applications

- Turbochargers
- Generators
- Industrial Fans & Blowers
- Compressors

Features

- Dual Programmable Alarms
- 4-20 mA Output
- Selectable Filtering
- Buffered Vibration Output
- Three-way Isolation

Description

The 1-809 is a single channel Vibration Monitor designed to measure and protect critical machinery. The machinery vibration level is displayed on a 4-digit LED display. The reading can be displayed in inches per second (ips) velocity, g's acceleration, or mils displacement. A 4-20 mA output signal is provided proportional to a pre-determined vibration level. Two alarms are provided for early warning or machine shut-down due to excessive vibration.

The 1-809 is a panel-mount vibration monitor designed to accept a velocity or acceleration transducer input. The input signal is filtered via an order-specified bandpass filter with very sharp cut-off characteristics. This allows the 1-809 to track only those energies present within the filter's band-width. The resulting vibration level is then displayed on the 4-digit LED display located on the front panel of the 1-809. The display indicates the current vibration level in user-specified units, velocity (ips, peak), acceleration (g's, peak), or displacement (mils, peak-to-peak).

Two programmable alarms are provided to indicate warning when trip levels have been exceeded. A start-up trip delay of thirty seconds is available to prevent false alarms during start-up situations. The 1-809 also includes a scaled 4-20 mA output for use in PLC and DCS applications.

Monitoring Systems

CEC Vibration Products • 746 Arrow Grand Circle • Covina, California 91722 • USA
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1-809 Vibration Monitor & Transmitter

Performance Specifications

Output Mode (Unit of Measure)	
Velocity:	inches per second (ips), Peak
Acceleration:	g's, Peak
Displacement:	mils, Peak-to-Peak
Vibration Range:	Full scale range is programmable
Sensitivity:	Sensor sensitivity is programmable
Frequency Range:	2 - 20,000 Hz
Fixed Filter Options:	High pass & low pass (see order matrix)
Temperature Range	
Operating:	0°F to +158°F (-18°C to +70°C)
Storage:	-67°F to +185F (-55°C to +85°C)
Humidity:	0 to 95% relative humidity (non-condensing)
Dual Alarm Limits:	Programmable, 0 to full scale
Alarm Outputs:	SPST Normally Open & Normally Closed Latching and Non-latching (outputs are isolated from system electronics)
Resistive Load:	3 A at 240 VAC, 50/60 Hz, 3 A at 30 VDC (power factor = 1)
Inductive Load:	3 A at 240 VAC, 50/60 Hz, 3 A at 30 VDC(p.f. = 0.4) (L/R = 7ms)
Analog Output:	Active 4-20 mA current loop proportional to full scale
Alarm Reset/Start Inputs:	External inputs shorted to common to activate
Display:	4-digit LED display with decimal point delay and alarm limit LED's
Power:	24 VDC @ 150 mA Power is isolated from signal I/O and 4-20 mA output

Hazardous Approvals

CSA c/us Class I, Division 2, Groups A, B, C and D
Ex nA/AEx nA IIC T4

Ordering Information

In keeping with CEC's policy of continuing product improvement, specifications may be changed without notice.

CEC P/N 1-809-0 A B C

A — SENSOR INPUT TYPE

0 =	mV/ips	self-generating (Velocity Coil)
1 =	mV/ips	constant current (Integrated Accelerometer)
2 =	mV/g	constant current (Integrated Accelerometer)
3 =	mV	millivolt input (Customer Defined)

B — HIGH PASS FILTER (42 dB / octave)

0 =	None	5 =	30 Hz	A =	200 Hz
1 =	2 Hz	6 =	50 Hz	B =	350 Hz
2 =	5 Hz	7 =	70 Hz		
3 =	10 Hz	8 =	100 Hz		
4 =	20 Hz	9 =	150 Hz		

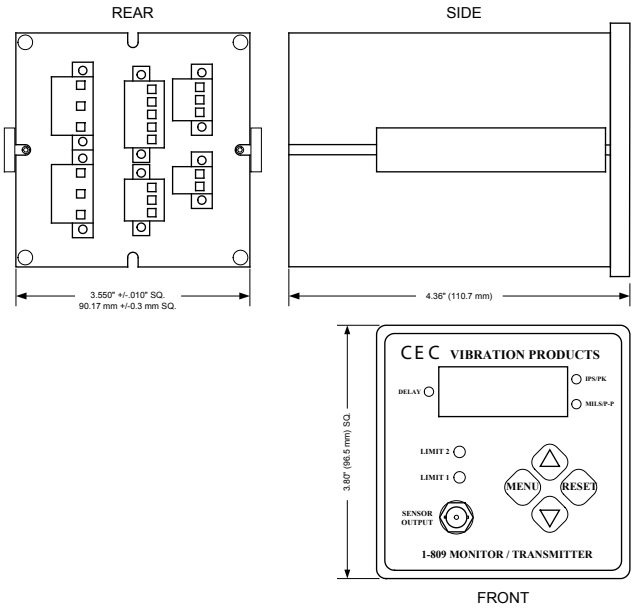
C — LOW PASS FILTER (56 dB / octave)

0 =	None	5 =	250 Hz	A =	1,000 Hz
1 =	50 Hz	6 =	300 Hz	B =	2,000 Hz
2 =	100 Hz	7 =	400 Hz		
3 =	150 Hz	8 =	500 Hz		
4 =	200 Hz	9 =	800 Hz		

NOTE: Special configurations can be accommodated. Please consult the factory for assistance.

Example: ***P/N 1-809-0*** **0 3 A**

The example unit is receiving its input from a self-generating velocity transducer. The filtering includes a 10 Hz high pass and 1,000 Hz low pass.



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