

Model 3507 Reciprocating Compressor Monitor

General Specifications

STANDARD FEATURES

Accuracy

Accelerometer

2Hz to 40 kHz 2% Plus
transducer error

0.5 Hz to 50kHz +/- 3 db Plus
transducer error

INPUTS

Contact factory

Output

AC

100 mV/g buffered for analyzers.

DC

0 to 1.0 vdc for optional set
points and local displays

Loop

4 to 20 mA. Approx. 32 mA
current limit

POWER REQUIREMENTS

Module Power

< 25mA

Loop Power

25 mA Max

ENVIRONMENTAL

Operating Temperature

40 to +85 Degrees C

Contact Information

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STANDARD FEATURES

This unit was designed to be an inexpensive alternative to the more elaborate and sometimes ineffective monitoring systems used in today's industry.

- * Galvanically Isolated Loop
- * Small Size
- * Connects to PLC/DCS via
isolated 4-20mA output

Outputs

Impact monitoring looks for those
"high frequency clanks, bangs, and
pings" and is not responsive to
"normal" vibration and movement

at running speed. Impact monitoring can detect loose rod nuts, loose cylinder and valve plate bolts, detonation, piston slap, liquids in the compressor cylinder, cracked rods, worn cross head slippers, and other occurrences that create striking of any machine surface.

Applications

The Model 3507 Impact Conditioner is the most cost effective method of measuring the destructive forces related to the vibration in reciprocating machinery. Impact Monitoring can be defined as "the shock waves created when the rod load changes direction." This is when excessive clearances are abruptly closed. A bell creates impact when the clapper hits the bell. This analogy works for reciprocating machinery. Just as the repetition rate of ringing the bell, has no influence on the tone of the bell, the running speed of a recip has no effect on frequencies generated by impacts. A bell continues to ring between strikes because it is designed to propagate the ring. A recip tends to sound like a "thud" or a "clank" but is a ring that is severely dampened. Some impacts are dampened so severely that they are not audible. There are normally several components connected together and they all tend to ring at different frequencies. This is generally at frequencies above 1,000 cycles per second.

The 3507 vibration transmitter is a specialized instrument and will only accept a standard 100mV/g transducer input. If a different types of transducers are used, please contact your local GTI representative with your application. All special filtering should be noted at the end of the 3507 part number with the appropriate filter type and range i.e., 3507-100--HP 2Hz..

