STI Vibration Monitoring Inc.

Vibration Monitoring and Machine Protection Systems

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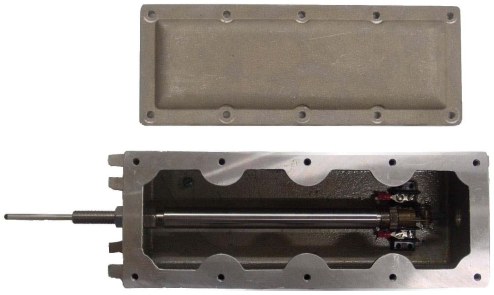
www.stiweb.com / www.stiwebstore.com

Condition Monitoring Custom Products

CMCP-LVDT-AC
Spring Loaded Displacement Sensor

Features:

- 2" Standard Range
- Rugged Cast Housing
- 0 to ±10 VDC and available 4-20 mA output
- 2 versions, Low and High Temp
- Repeatability of 0.000025 inches
- Chrome plated hardened tool steel tip



Description:

In Turbine Supervisory Instrumentation (TSI), case expansion is an important measurement. Case expansion (or shell expansion) is the growth of the machine case with increase of temperature during machine startup and on-line operations. The LVDT is mounted to the foundation at the opposite end from where the turbine casing is attached. The LVDT provides information on the change of position of the point measured relative to the foundation.

Case expansion should be measured by a pair of LVDTs. This provides information on the position of both of the sliding feet on the machine case. This allows for a comparison of readings preventing damage should one foot become obstructed or jammed.

Case expansion measurements also allow determination of whether expected thermal growth differentials are being exceeded on the machine. This is primarily a startup parameter allowing the machine casing and rotor growth to increase at a similar rate. Thermal growth at different rates can cause internal rubbing between rotating and stationary parts of the machine.

How a case expansion transducer works

The spring loaded rod in the LVDT presses against the machine, and as the machine case grows the rod moves inside the LVDT. The change of position of the rod causes a change in the output signal of the LVDT. The signal is conditioned electronically and is output to a monitor for display and alarms.

Sales Technology's Linear Variable Differential Transformers are available in two options. The DC version is rated to 105° C and the transmitter is located inside of the housing. This version requires two (2) power supplies + and—15 VDC and has a 0-10 VDC output only. The AC version is rated to 150° C and utilizes an external transmitter. The AC version used 24 VDC power and has a 0-10 VDC output as well as a 4-20 mA output. STI can also manufacture custom LVDTs with a range, up to 6".

Ordering Information:

CMCP-LVDT-DC	**Standard Temp. LVDT**
CMCP-LVDT-AC	**High Temp. LVDT**

To Order Online Please Visit
www.stiwebstore.com