
DC-DC LVDT in Force Generation System

This testing equipment manufacturer has been using our Series 240 DC-DC LVDTs for many years in their force generation systems. These sophisticated devices offer a wide range of force/torque capabilities geared for structural testing applications. Each system consists of an Exciter Head, Master Controller, and Hydraulic Power Supply.

The Models 0243-00000 and 0244-00000 DCDTs are typically located in the Linear Exciter Head. Position feedback from the DCDT provides control of the test variables. Force transducers are also installed to measure force or torque for the structure being tested. Torsional and inertial mass Exciter Heads are also available for different applications.

The VDC output from the DCDT allows for the independent control of static position of the piston. Dynamic excitation -



as monitored by a load cell - is also controlled using the DCDTs feedback signal. This is an important feature when testing compliant structures, such as tires and automotive suspensions as shown in the photo above.

The Master Controller provides closed loop control and display of the static and dynamic test variables, while producing a very high electro-hydraulic frequency response. The controller matches static parameters - such as the displacement measurement by the LVDT - with dynamic control variables such as force,

displacement, velocity, acceleration or strain for maximum test flexibility.

Trans-Tek LVDT's are often used as part of force measuring systems - similar to this application - to detect displacement of the structural member being tested.