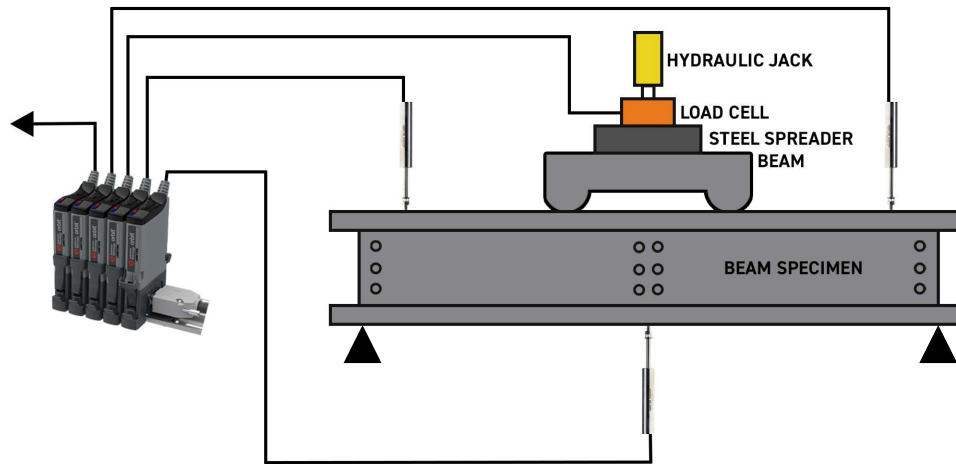


# Application Story

## Flexural tests of Concrete and Steel Beams



*Solartron's Orbit® Network can be used to connect multiple LVDT sensors, as well as Load Cells or other measurement instruments for a Flexure Test on a Steel Beam*

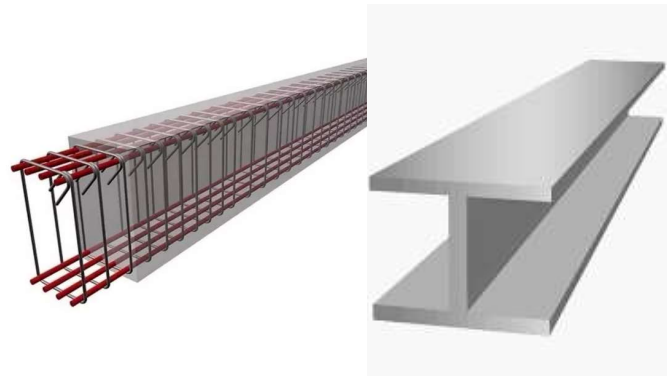
### The Challenge

To improve the life and safety of bridges and similar structures, Civil Engineering firms are often testing steel and concrete beams in laboratories to determine how they shift, distort or even buckle under extreme stress. To monitor these, they utilize measurement instruments that detect even the slightest movement under loads.

### The Solution

Solartron Metrology offers LVDT sensors that meet the needs of steel and concrete beams for Flexural tests, including:

- **High Resolution:** Solartron LVDTs offer resolution up to 0.01 micron, showing the slightest change in measurement that Linear Encoders cannot provide.
- **Rapid Response:** Any change in measurement is immediately output to any data logger or PC, with no signal delay.
- **Endurance:** Solartron sensors have been tested to millions of cycles, and are built in a stainless steel casing to withstand years of abuse, including vibration and heat. Special high temp and low temp versions are available.
- **Customization:** Elements such as special length cables or tips can be added. For harsher elements, transducers can be sealed to IP 67 or built to withstand extreme temperatures.
- **Multiple Outputs:** Solartron offers DC, 4-20mA, TTL, and other analog output options.
- **Digital Option:** In addition, Solartron's Digital Orbit® network offers a calibrated, digital unit, and enables multiple, synchronized readings into a PC or PLC.



*Solartron transducers offer a variety of configurations and outputs into data acquisition systems, including DC, 4-20mA, and Digital.*



*Solartron offers a Strain Gauge Interface Module, as well as an Analog Interface Module that can connect to Load Cells or other measurement devices, and then bring synchronized data into a PC or Readout*

## Orbit® – The Total Measurement System from Solartron Metrology

The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.



*S-Series*



*Special probes for low temperatures*



*SI 8500*



*Compact displacement*



*S-series transducer monitoring a crack*



*OP Series*



*Measurement of concrete compression*