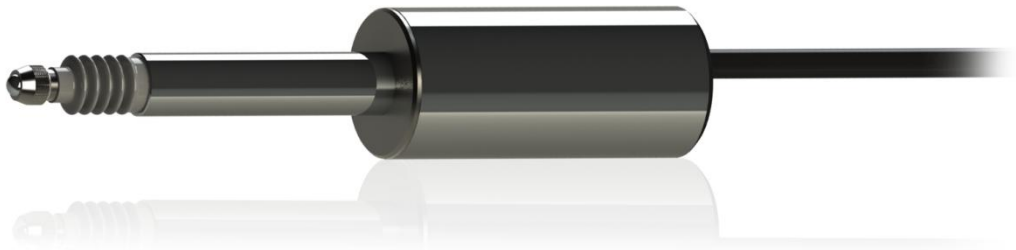


Application Story

Test & Measurement

Mechanical testing for civil engineering using G-Type Displacement Sensor



Precision. Quality. Reliability

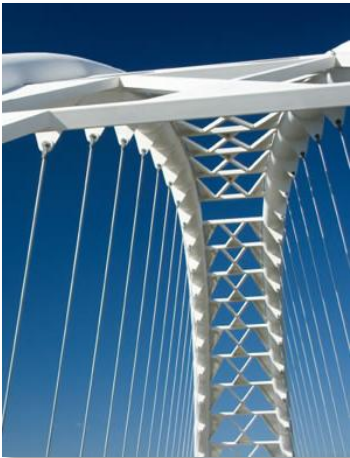
www.solartronmetrology.com • sales.solartronmetrology@ametek.com

The Product

The G-Series of analogue DC/DC Displacement probes is based on the LVDT sensing principle and features a high accuracy, long life linear ball bearing (as AX-Series).

All models incorporate a Linear Variable Differential Transformer (LVDT) as the measuring element, together with high performance conditioning electronics for low noise and superior linearity whilst being able to cope with a wide supply range.

Range: 12 or 25 mm – Accuracy: Up to 0.4 μm – Repeatability: Up to 0.1 μm – Resolution: Up to 0.05 μm



The Challenge

Test instruments supplied to the civil engineering industry can be used to survey the mechanical properties of soil and rock conditions of civil engineering sites prior to construction, alongside laboratory testing of new materials.

Linear Displacement Transducers compliment data logging electronics on testing machines to replace the use of manual dial gauges and thus reduce the risk of error, creating a cost- and time-efficient alternative. A key requirement for this was to match the output signal of the current linear displacement transducers to interface with the existing electronic equipment. The transducers' pre-travel also had to be reduced to an absolute minimum to aid mechanical interfacing.



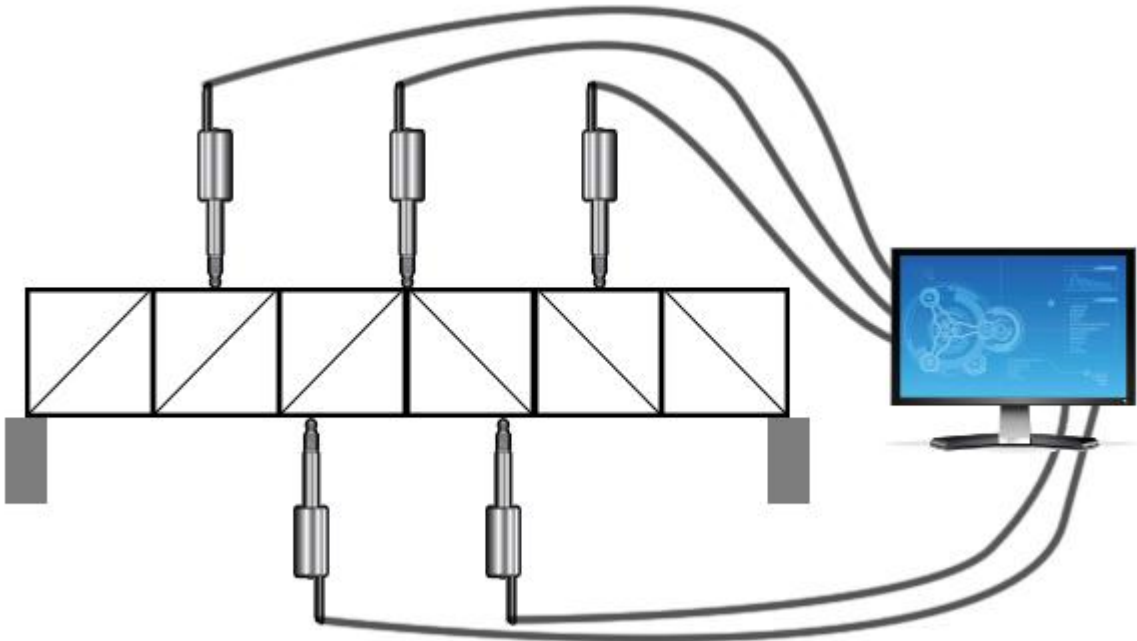
G-Type



DC Displacement Transducer

The Solution

Solartron's displacement probes fitted the specification, using two different ranges. The first, the DG Series (now labelled the G Type), boasts 0.2% linearity and <math><0.15\ \mu\text{m}</math> repeatability, with a range of outputs. The second, the DC displacement transducer, has a friction-free core incorporating LVDT technology as the measuring source. Solartron's ability to be flexible and adapt to different environments and applications drove the success of the application.



G-Type sensors checking bridge structure networking into a computer.

United Kingdom - Head Office

Solartron Metrology
Steyning Way
Bognor Regis
West Sussex
PO22 9ST
Tel: +44 (0) 1243 833333
Fax: +44 (0) 1243 833322
Sales.solartronmetrology@ametek.com

France

Solartron Metrology
Rond-point de l'Espine des Champs
Buroplus - Bat. D
Elancourt 78990
Tel: +33 (0)1 30 68 89 50
Fax: +33 (0)1 30 68 89 59
france.solartronmetrology@ametek.com

Germany

Ametek GmbH
Solartron Metrology Division
Rudolf-Diesel-Strasse 16
40670 Meerbusch
Tel: +49 (0) 2159 9136 500
Fax: +49 (0) 2159 9136 505
vertrieb.solartron@ametek.de

Brazil

Ametek do Brasil, Ltda
Rod. Eng Ermenio de Oliveira Penteado, Km 57, SP75
Bairro Tombadouro
13337-300, Indaiatuba, SP, Brazil
Tel: +55 19 2107 4126

AMETEK[®]
ULTRA PRECISION TECHNOLOGIES

India

Ametek Instruments India Private Limited
1st Floor, Left Wing
Prestige Featherlite Tech Park
Plot #148, EPIP II Phase
Whitefield, Bengaluru 560 066
Karnataka, India
Tel: +91 80 6782 3200
Fax: +91 80 6782 3232

USA

Solartron Metrology
USA Central Sales Office
915 N.New Hope Road, Suite C
Gastonia, NC 28054
Tel: +1 800 873 5838
Fax: +1 704 868 8466
usasales.solartronmetrology@ametek.com

China

AMETEK Commercial Enterprise (Shanghai) Co. Ltd
No. 155 Puhui Road
Ju Ting Economic Development Zone
Shanghai 200131, China
Tel: +86 21 5763 2509
Fax: +86 21 5866 0969 Ext. 261/262
china.solartronmetrology@ametek.com



**Solartron
Metrology**

Precision Driven

Offices worldwide
Agent and distributor details
available at
www.solartronmetrology.com



Q09540

Solartron pursues a policy of continuous development. Specifications in this document may therefore be changed without notice.

**SCIENCE
GATE**
Your Automation Partner



SCIGATE AUTOMATION (S) PTE LTD

No.1 Bukit Batok Street 22 #01-01 Singapore 659592
Tel: (65) 6561 0488 Fax: (65) 6562 0588
Email: sales@scigate.com.sg Web: www.scigate.com.sg
Business Hours: Monday - Friday 8.30am - 6.15pm

Precision. Quality. Reliability

www.solartronmetrology.com • sales.solartronmetrology@ametek.com