

## Application Story

*Dynamic*

# Dynamic flatness measuring using Displacement S Series



Precision. Quality. Reliability

[www.solartronmetrology.com](http://www.solartronmetrology.com) • [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)

## The Product

The S Series of LVDT displacement transducers is the culmination of many years' experience gained from Solartron Metrology's highly successful Mach One range plus careful note of market feedback. The stainless steel body with improved sealing options of IP65 or IP67, coupled with new polymer guides with rigid carriers, ensure that the transducers keep working accurately and reliably, especially in wet or corrosive conditions.



Range: 5 to 300 mm  
Linearity: Up to 0.2% of reading  
Resolution: Up to 0.1 µm

## The Challenge

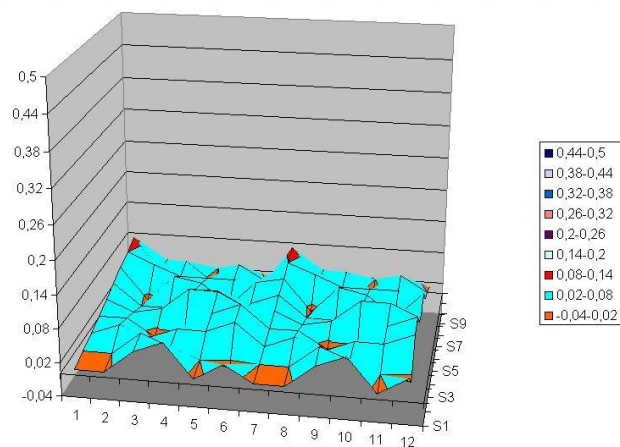
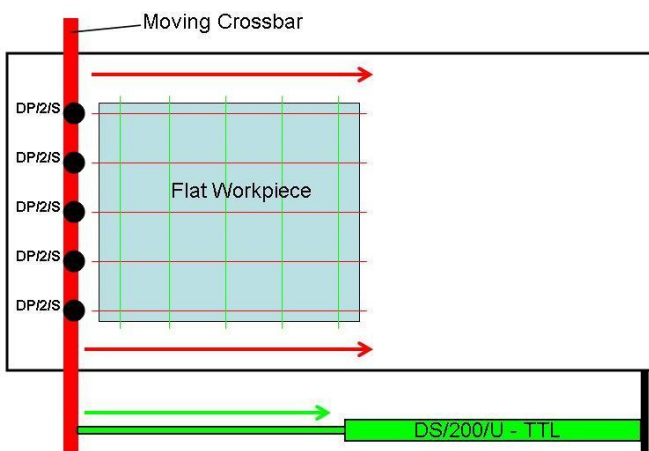
Manufacturing companies undertaking the measurement of flatness of surface need to take precise readings for the smallest degree of change, whilst needing to have a concise output for easy readability.

## The Solution

The Orbit® 3 Network is able to take synchronised readings of several digital probes, using the Orbit® Dynamic-Mode which runs at high speed. A displacement sensor, such as the S Series, can be used alongside an output module, such as a TTL, for synchronisation.

The displacement sensor measures the path of a motor-driver linear guided crossbar. There are several digital probes fixed onto the crossbar, on moveable mounting brackets.

A flat work-piece, fixed on the table, can be measured with the crossbar. With a simple Excel programme on a PC, the values can be read and stored, which can then be visualised in a virtual 3D model.



#### 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

#### 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  
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](http://www.solartronmetrology.com)



Q09540

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

Datasheet 52624  
Issue 61  
EDCR20423

**AMETEK**<sup>®</sup>  
ULTRA PRECISION TECHNOLOGIES

## Precision. Quality. Reliability

[www.solartronmetrology.com](http://www.solartronmetrology.com) • [sales.solartronmetrology@ametek.com](mailto:sales.solartronmetrology@ametek.com)