Solartron Metrology

AMETEK

# Application Story

## *Checking Battery Cell Expansion*

### The Challenge

In battery production, a key quality control parameter is the thickness of a battery cell. And when incurred with a charge, a battery cell can expand and potentially deform at a certain rate, impacting the environment around it. For this reason, laboratories often monitor how battery cells expand and contract. But for this, they require a high precision, cost effective system that easily feeds data into a PC.

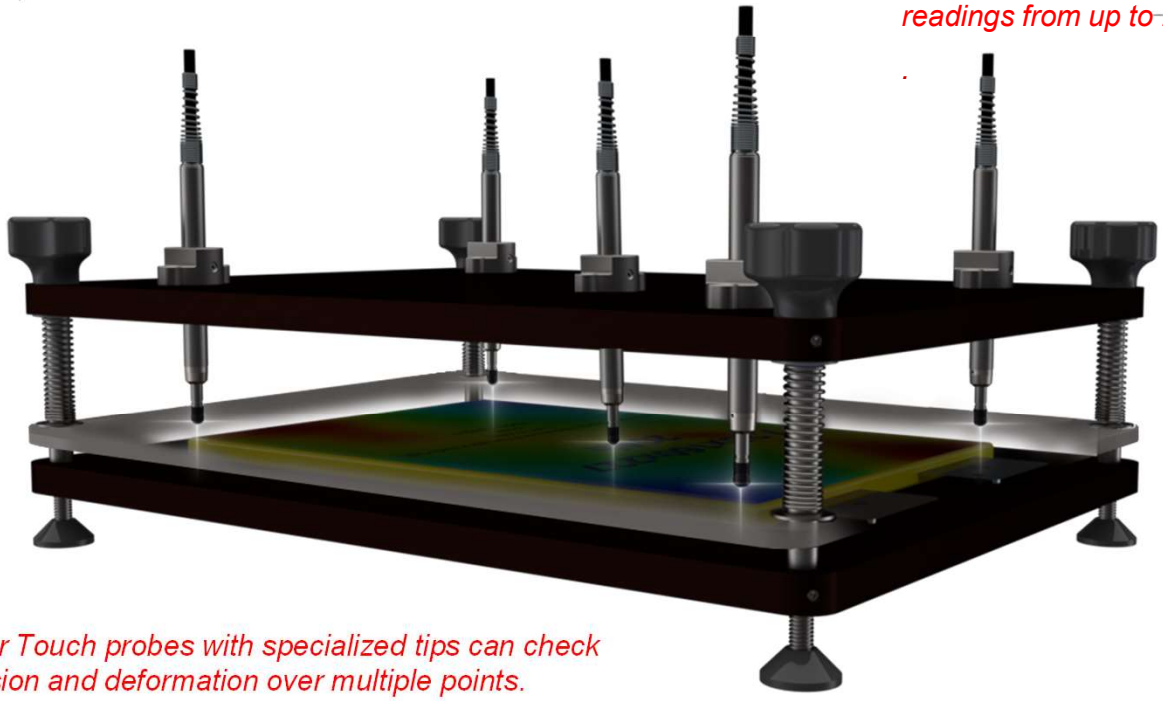

### The Solution

Solartron Metrology offers high precision Digital Probes and Non-Contact lasers that can be used to quickly gauge battery cells.

- **High Resolution**: Solartron Digital probes offer resolution up to 0.01 microns, which is excellent for checking flatness and height.
- **Quick and Easy Installation:** Solartron Digital probes come pre-calibrated, so customers can just rig them to gauges, master, and then measure.
- **Easily Network multiple sensors:** With Solartron's Orbit® network, up to *250 sensors* can be connected together, both contact and non-contact.
- **Track Data:** With Solartron's Orbit® Network, probe data can be output into a simple Excel pack or a complex SPC package. Plus Dynamic and Readburst modes mean rapid data output if needed.
- **Multiple Output Options**: With Orbit®, all readings can quickly be output to a PC with Solartron provided software, or the customer's software pack as well. There are also gateways for Profinet®, Ethernet/IP®, EtherCAT®, CC-Link®, and Modbus based PLCs.

*Solartron Feather Touch probes combine high resolution with a low tip force, making it ideal for thickness or flatness checks*

*Solartron's Orbit® Network can network and synchronize readings from up to 250 sensors*

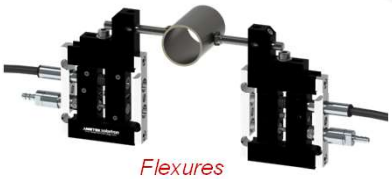


*Feather Touch probes with specialized tips can check expansion and deformation over multiple points.*

# Digital Probes & The Orbit® Network

## 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.

Flexures

Block Gauges

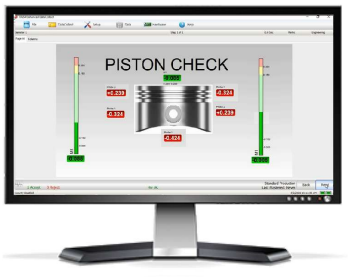
Displacement

Multi Channel Wireless Gauge

G-Type (With signal conditioning mounted at the end)

Bore Gauging

Orbit LT Lasers and Digital probes gauging a Battery Cell




Orbit Gauge Software 4.0


Measurement of Piston with Air Gauging checking ID, and connected to Orbit with the Air Gauge Module. OD Checked with Digital Probes.