EVOLUTION MEASUREMENT

www.EvolutionMeasurement.com

SCANIVALVE MPS – GROUND-BREAKING MINIATURE PRESSURE SCANNER

BRINGING A HIGH PERFORMANCE, COMPACT PRESSURE SCANNER INTO WIND TUNNEL TESTING

Results:

- ✓ Very compact form factor
- ✓ Achieves higher channel count in a smaller footprint
- ✓ Reduction in system hardware complexity and cost
- ✓ Higher data gathering rate achieved

THE CHALLENGE

INDUSTRY: AUTOMOTIVE / AERODYNAMIC TESTING

Application

Wind Tunnel Model Testing

Application Specifics

A requirement existed in the automotive wind-tunnel testing market for the incorporation of multiple miniature pressure scanners to operate in a wind tunnel model. Available space is always a major consideration and is especially at a premium in a model, due to the stringent size constraints and the significant amount of hardware required for the number of measurements to be made. The small footprint of the scanner was a major advantage over other solutions.

Customer

A major UK Automotive manufacturer

Challenge

Traditionally, scanners have been limited in size, by only offering analogue outputs, in order to minimise the hardware required inside the model. Analogue measurements were then transferred to separate devices within the measurement system for conversion into a more useable digital signal and outputs in engineering units. This meant that a lot of additional hardware was required both inside the model (power supplies) and externally (data conversion).

THE RESULT

HOW MPS RESOLVED THE PROBLEM

The Scanivalve MPS is an all-new miniature pressure scanner that uniquely offers direct output of temperature-corrected engineering data over an Ethernet network, requiring very little physical cabling or its associated labour, weight, complexity, space or cost.

It can be programed by the user to output in any unit that the user desires at controlled data rates from fractions of Hz to up to 2500Hz per channel. Compact electrical connectors and specially-developed proprietary miniature Ethernet hubs enable up to 512 channels to be measured at the same data rate. Importantly, all of this data is achieved through a single daisy-chained outbound Ethernet cable and a power feed, resulting in a significantly reduced overhead.

This means that the customer can locate more scanners in the same footprint as before, thus increasing the number of measurement points and improving data rates. This helps to significantly optimise rapid development and understanding of the model.

The Scanivalve MPS has been designed from the start to offer unsurpassed accuracy in this application, combining high performance and reliability with ease of integration and use.