PVTS

Portable Vacuum Transfer Standards

- ***Calibrate gauges in-situ***
  - ***Reduce down time***
  - ***Diagnose process problems***
  - ***Improve process yield***

- ***High accuracy***
  - ***Percent of reading uncertainty provides wide useable range***

- ***UKAS (ISO17025) certified***
  - ***Accepted by regulatory bodies***
  - ***Aids QA compliance***

- ***Rugged case***
  - ***Protects the instruments from contamination and damage***

Description

PVTS Series Portable Vacuum Transfer Standards provide a rugged and easy to operate means of calibrating process transducers and transmitters in-situ. Available in absolute or differential pressure versions, the capacitance manometers used are unaffected by residual gas composition and offer basic uncertainties (non-linearity and hysteresis) as low as 0.05% of reading. The dedicated power supply/display is programmed to correct repeatable non-linearity, and the whole system is covered by a UKAS (ISO17025) calibration certificate.

Operation

The PVTS can be conveniently carried to the device under test (DUT) in its case. The capacitance manometer should be connected to the vacuum system, as close to the DUT as possible, and its power supply/display connected to a suitable mains supply (mains cable and 3m interconnecting cable supplied). Where possible, absolute pressure standards should be pumped below their resolution and zeroed, differential pressure standards should be cross ported and zeroed. After allowing the standard to warm up and stabilise it can then be compared against the DUT at various points through its range. After use the standards isolation valve should be closed before venting the vacuum system. It can then be removed and stored under vacuum in its case.

Instruments

Specifications

Flow Transducer	
Full-scale range	1,10, 100, 1000 Torr/mbar (or equivalents). Others on request
Units of measure	Torr, mbar, Pa, "H2O, "Hg
Measurement type	Absolute pressure, differential pressure
Vacuum connection	Any common vacuum fitting
Uncertainty	+/-0.15% of reading +/- temp coefficients Optional +/-0.5% of reading +/- temp Coefficients
Temperature coefficients (0-50°C): Zero Span	 <0.005%FS/°C Optional 0.001%FS/°C <0.02% of reading/°C Optional 0.005% of reading/°C
Resolution	0.01% of FS Optional 0.001% of FS
Power Supply / Display	
Display type	5 digit linearising, 14.2mm red LED
Uncertainty	0.03% of reading plus 3 mV
Measurement resolution	16 bit
Acquisition speed	20 readings/second
Outputs	Optional retransmitted analogue input (after linearisation), RS232 or RS485
Power requirements	90-240 VAC, 50/60 Hz, 15 VA
Case	
Material	Ultra high impact structural copolymer shell with high density foam padding
Protection	Air and water tight, dustproof, chemical resistant and corrosion proof

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