Datasheet:
Software Applications
Instrument Management

Introduction

The KELTON Instrument Management System (formerly KIMS.net) manages and records all activities relating to the validation of a metering system.

The flexible application can be configured to match your calculation options, calibration procedures, resolution and tolerances.

Key features

- Vast library of traceable calculations
- Instrument management
- User configurable
- Generic test forms configured to match your procedures and equipment
- Secure history
- Fully scalable
- Integrates with other KELTON MeterManager applications
- Integrates with flow computer systems as standard

Benefits

- Streamlines and provides visibility of calibration activities
- Improves accuracy
- Improves efficiency
- Reduces exposure to costly mis-measurement
- Demonstrates compliance with agreements and regulations

When managing a measurement system, calibration and verification are required to ensure traceability of measurement is maintained. Equally important is keeping a full record of the validation history so that traceability and compliance to agreements and standards can be demonstrated to third parties during audit. The application simplifies every aspect of recording, verifying and saving calibration data for all types of instrumentation.

The KELTON MeterManager database is configured to match your plant clearly identifying each instrument location by system, section and tag. Field and test equipment are maintained, and all relevant data recorded such as calibration results, constants and certificate information.

The application contains an extensive library of calculations that are used to construct test forms for validation and typically these include:

- Flow computation and integration checks
- Digital and analogue computer input checks
- Calculation of parameters from composition
- Density and volume referral between process conditions
- Calibration of secondary instrumentation
- Visual inspections

About KELTON™

Fully accredited, KELTON is the leading independent measurement consultancy and software developer for the oil and gas industry. For well over two decades, KELTON has helped many international and national operators to ensure their full compliance with industry regulations. Whether clients require inspection, auditing or certification as part of System Compliance, uncertainty calculations for System Assurance or System Support – in KELTON they find a partner they can trust.

Services include:

- System Compliance
  - Inspection
  - Audit
  - Certification
- System Assurance
  - Design uncertainty
  - Modelling
  - System uncertainty
- System Support
  - Support partnerships
  - Training
  - Manuals/Procedures
- Measurement Software
  - Desktop applications
  - Database applications
  - Pipeline applications

KELTON encompasses BS EN ISO 9001, ISO 14001 & ISO 45001 and UKAS type 'C' Accreditation, is Microsoft Certified and is recognised as an Investor in People. Support is available from strategic locations across the world. Find your nearest KELTON location here.

If additional information is required visit:

www.kelton.co.uk

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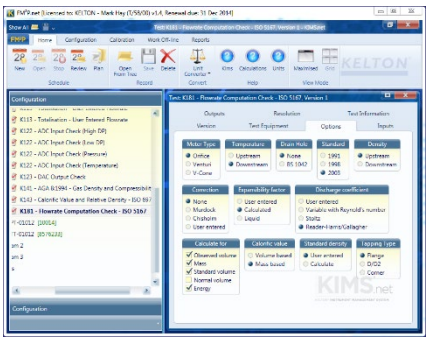
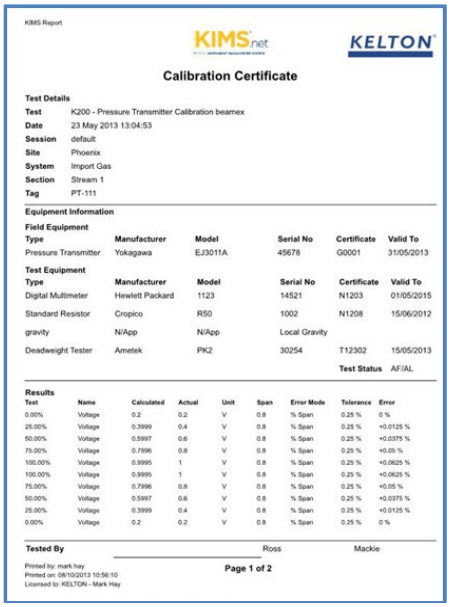


To allow for differences between metering system design, measurement standards and operating practices the application test forms contain numerous options that are set during configuration and these are simple and unambiguous.

The results of tests and calibrations can be easily reviewed and analysed.

Although the application is designed to be a completely electronic system, calibration certificates can be generated at any time for completed tests. These can be printed or saved as files.



KIMS Report

KIMS.net KELTON

Calibration Certificate

Test Details

Test	K200 - Pressure Transmitter Calibration beamex
Date	23 May 2013 13:04:53
Session	default
Site	Phoenix
System	Import Gas
Section	Stream 1
Tag	PT-111

Equipment Information

Field Equipment

Type	Manufacturer	Model	Serial No	Certificate	Valid To
Pressure Transmitter	Yokagawa	EJ3011A	45678	G0001	31/05/2013

Test Equipment

Type	Manufacturer	Model	Serial No	Certificate	Valid To
Digital Multimeter	Hewlett Packard	1123	14521	N1203	01/05/2015
Standard Resistor	Cropico	R50	1002	N1208	15/06/2012
gravity	N/App	N/App	Local Gravity		
Deadweight Tester	Ametek	PK2	30254	T12302	15/05/2013

Test Status AF/AL

Results

Test	Name	Calculated	Actual	Unit	Span	Error Mode	Tolerance	Error
0.00%	Voltage	0.2	0.2	V	0.8	% Span	0.25 %	0 %
25.00%	Voltage	0.3999	0.4	V	0.8	% Span	0.25 %	+0.0125 %
50.00%	Voltage	0.5997	0.6	V	0.8	% Span	0.25 %	+0.0375 %
75.00%	Voltage	0.7996	0.8	V	0.8	% Span	0.25 %	+0.05 %
100.00%	Voltage	0.9995	1	V	0.8	% Span	0.25 %	+0.0625 %
100.00%	Voltage	0.9995	1	V	0.8	% Span	0.25 %	+0.0625 %
75.00%	Voltage	0.7996	0.8	V	0.8	% Span	0.25 %	+0.05 %
50.00%	Voltage	0.5997	0.6	V	0.8	% Span	0.25 %	+0.0375 %
25.00%	Voltage	0.3999	0.4	V	0.8	% Span	0.25 %	+0.0125 %
0.00%	Voltage	0.2	0.2	V	0.8	% Span	0.25 %	0 %

Tested By Ross Mackie

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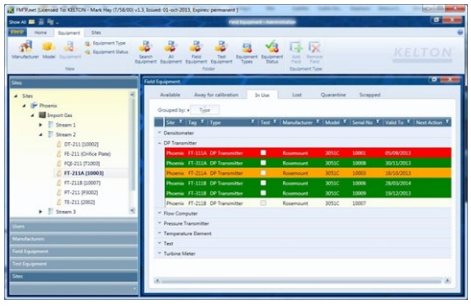
Tests can be planned using the inbuilt scheduler or carried out on an ad-hoc basis. Past and future tests can be viewed as a plan to help manage work load and monitor progress.

Validating flow computer calculations can be time consuming when parameters are manually read from one computer system and typed into a check calculation form. The likelihood of user error is high when calculations have numerous inputs such as with AGA 8 or ISO 6976 calculations where a complete gas composition has to be entered with full resolution.

A standard feature in the latest version of the application is the ability to automatically capture data from the flow computer system. When using this feature, complex calculation such as AGA 8 or ISO 6976 are validated in seconds by simply opening the form and clicking the calculate button.

Where a test requires repeated values, for example, the rising and falling increments during a pressure transmitter calibration the application can step through the process electronically capturing each recorded value from the flow computer.



The application is fully scalable. Although there are advantages when installing as a network solution with data securely stored on a SQL Server and made available across an organisation all components can, if required, be installed on a single laptop.