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QUIKLOOK 3.5-FS
Valve Diagnostic System

Key Features

- **MOV/AOV/Check and Solenoid valve capable**

- **Plug and Play sensor recognition**

- **(14) Analog input channels with automated remote excitation voltage sensing**

- **(2) Digital input channels to accommodate precise linear and rotary encoders**

- **Analog voltage and current output**

- **Stand-alone test platform**

- **No external PC required**

- **Wireless or wired remote operation via laptops, tablets and smartphones**

- **Hot swappable battery operation**

- **Up to 5 hours run time between battery charges**

- **Large 15" touch screen display**

- **Built-in water-resistant keyboard**

- **Sealed rugged waterproof case**

Capable of testing all types of valves, the QUIKLOOK 3.5-FS Valve Diagnostic System acquires clean and accurate data, minimizes setup time, and maximizes ALARA. The powerful, flexible QUIKLOOK FS Pro software provides a variety of diagnostic tools and time-saving features to simplify valve testing. Support for industry standard sensors as well as a large 15" touch screen, water-resistant keyboard and hot-swappable battery power provide convenient setup and easy operation. The QUIKLOOK 3.5-FS system features a modern design utilizing the Windows 10 operating system to accommodate our new QUIKLOOK FS Pro software.

Accurate Data, Clean Traces

QUIKLOOK 3.5-FS acquires data with 24-bit resolution and user selectable sample rates from 10 Hz to 50 kHz. This high-resolution acquisition combined with advanced signal processing produces extremely clean traces even in the highest EMI/RFI environments.
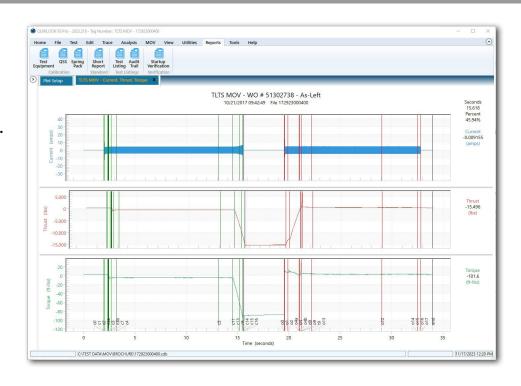
Flexible, Time-Saving Software

The intuitive QUIKLOOK FS Pro software is easy to set up and shortens test times. Automated trace marking for AOVs and MOVs as well as automated report generation simplify operation.

Convenient Setup and Operation

Utilizing open-source industry standard IEEE P1451.4/2.0 (TEDS) plug and play sensor recognition technology, the QUIKLOOK 3.5-FS greatly reduces test setup time and increases setup data reliability. As a stand-alone system no external PC is required. The integrated 15" touch screen display provides easy access to all QUIKLOOK FS Pro diagnostic tools. The system can also be accessed remotely with a wired or wireless connection. The QUIKLOOK 3.5-FS can be operated on line-power or battery power. The two Lithium-Ion battery packs can run the system for up to 5 hours and can be "hot swapped" in a matter of seconds.

QUIKLOOK FS Pro Valve Testing & Analysis Software - MOV

The powerful, flexible QUIKLOOK FS Pro software platform provides a variety of diagnostic tools and time-saving features for the QUIKLOOK 3.5-FS. Supporting data acquisition rates up to 50,000 samples per second, the Windows-based QUIKLOOK FS Pro analysis software features a variety of standard and customizable reports to ensure accurate, concise documentation of MOV test results.

Key MOV Features

Analysis

- Auto-marking of traces
- Average running loads, lights and stroke times
- Stem Factor and COF calculations
- Analysis of motor power phasing with sensor self-correction feature
- Calculated channels are recalculated when the dependent channel is revised
- FFT may be performed on a trending plot
- Unlimited number of math channels
- Delta Y function
- Spike Removal

Configuration

- Channel configuration is automatically loaded through sensor recognition technology
- 14 analog input channels may be configured for strain gage, single ended or differential
- 2 digital channels for linear and rotary displacement encoders
- Channel configuration includes sensor details such as calibration information
- RMS, filter, and motor power channels may be predefined
- QSS and C-Clamp sensitivity calculator with pretension warning
- Warning for out-of-cal sensors
- Auto-detection of over-ranged sensors to identify clipped test data

Plots

- Up to 6 plots can be shown on a single tab at once. Up to 12 plot tabs can be opened simultaneously.
- Plots are independently resizable
- Plot annotations available: data point values, text and footnotes
- Markers shown on trending plots: none, all, or currently-selected test only
- XY plotting including markers
- Plot preference controls: color/background, maximum number of points, default title, legend style and channel unit groups
- Customized plots can be saved or exported in .pdf format
- FFT Y-axis scaling may be logarithmic or linear; additional resolution choices available
- Marker filtering

All input channel values are displayed in both volts and engineering units with the ability to zero channels. Other common display features are single-channel bar or pretension level / target range window. Self-check verification is performed on start-up.
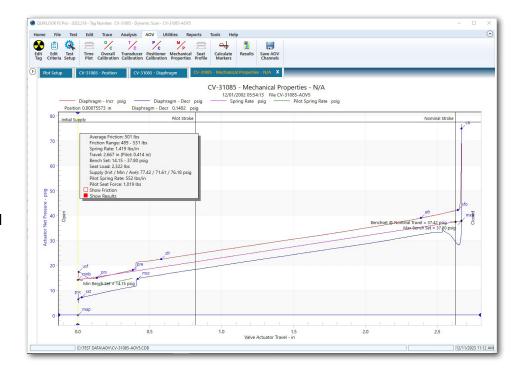
QUIKLOOK FS Pro Valve Testing & Analysis Software - AOV

Our QUIKLOOK FS Pro software is the result of a collaboration with Emerson Fisher to combine the QUIKLOOK and FlowScanner software packages. Many AOV features have been added including built-in design parameters for Fisher Valves, a new "tree" style file structure, and pass / fail criteria for test results.

Key AOV Features

Data Acquisition

- AOV control signal:
  - 0-24 mA
  - 0-55 mA
  - Internal I/P loopback for accuracy and convenience
- Tests performed:
  - Dynamic Scan
  - Step Change
  - Static Point
  - Step Study
  - Stepped Ramp
  - Sensitivity Test
  - HDRL Test
  - Sinewave
  - Drop Test
  - Custom Tests
- QUIKLOOK FS Pro software can manage up to 16 channels of input data including:
  - Pressures
  - Currents
  - Voltages
  - Strain Gages (Torque & Thrust)
  - Displacements (digital encoders)
- Channel configuration is automatically loaded through sensor recognition
- Acquisition screen supports manual control of the valve with readouts from all channels for valve setup
- Configuration Database with actuator design parameters

Test Data

- Unlimited comments may be stored with the test
- Channel names and numbers are customizable
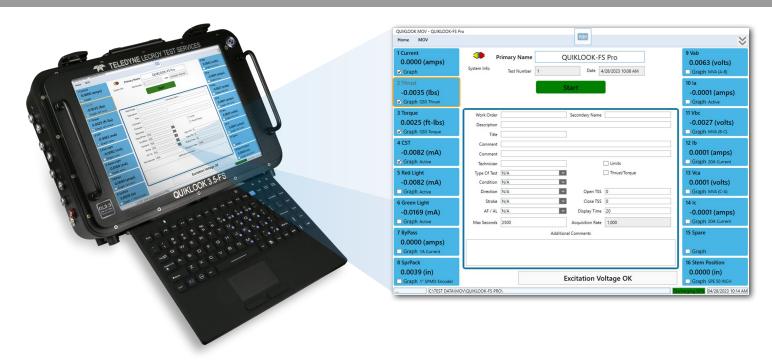
Plots

- Predefined plots used for analysis:
  - Overall Calibration
  - Mechanical Properties
  - Transducer Calibration
  - Positioner Calibration
  - Static Point
  - Drop Test
  - Stroke Time
  - Step Study
  - Sensitivity
- Time-based and XY plots
- Customized plots can be saved or exported in .pdf format

Analysis

- Automarking of traces
- Predefined Plots show applicable results on-screen
- Calculated results include:
  - Seat Load
  - Service Seat Load
  - Unseating Force
  - Valve Friction
  - Stroke Length
  - Spring Rate
  - Benchset
  - Supply Pressure: Initial, Ave. Min, Max, % Decrease
  - Pilot Stroke Length
  - Pilot Spring Rate
  - Pilot Seat Load
  - Transducer HD Error
  - Positioner HD Error
  - Overall HD Error
  - Stroke Times
  - Pressure Drop
- Unlimited number of math channels

Specifications

Input Channels	(14) User Programmable with Excitation Voltage Sensing, (2) Digital
Input Range	Differential & Single Ended: ten ranges from +/-10mV to +/-10V, Strain Gage +/-1, 3, 10mV/V
Sensor Excitation	10 V on all input channels, 100 mA max current per channel, 250mA max per channel bank
System Accuracy	Analog Inputs: 1 % reading, I/P Output: 1% of level, Excitation: 0.1% of level, Digital: +/- 1/2 count (2 Quad Counts)
Sample Rate	10, 50, 100, 1k, 2k, 5k, 10k, 20k, 50k samples/sec.
Analog Output Channels	(1) Selectable, 0-24 mA, 0-55 mA
Input Power	110/220 VAC (50/60 Hz), 9 watts
Battery Operation	(2) Hot Swappable Lithium-Ion, up to 5 hours continuous operation
Sensor Recognition	IEEE P1451.4/2.0 "TEDS" plug and play on all input channels
Operating System	Windows® 10 Pro
Ports	(3) USB, (1) Ethernet
Languages	English, French, and Spanish
Maximum Operating Temperature	125° F (52° C)
Application Software	QUIKLOOK FS Pro 2022.356 or later
Size	16.5" x 11.25" x 5.67 "
Weight	16 lbs. (without cover, keyboard, and batteries), 18 lbs. (without cover and keyboard), 22 lbs. (complete with cover, keyboard, and batteries)

Ordering Information

Product Description	Product Code
QUIKLOOK 3.5-FS Valve Diagnostic System	160800

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