

Ninth Annual QUIKLOOK Users Group Meeting

Marion, MA
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TEDS



TELEDYNE TEST SERVICES
Everywhereyoulook™

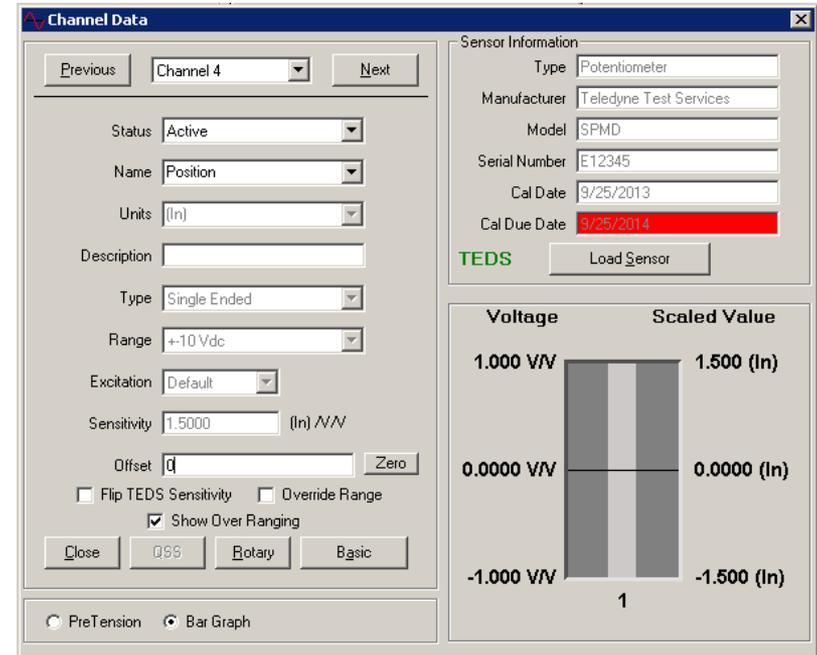
TEDS – Transducer Electronic Data Sheet

IEEE Standard - IEEE P1451.4/2.0

- All Sensors will have a TEDS Chip
- TEDS Chip may contain all - none of the configuration data.
 - Units
 - Type
 - Range
 - Excitation
 - Sensitivity
 - Description
 - Type
 - Manufacturer
 - Model
 - Serial Number
 - Cal Date
 - Cal Due Date

Channel Data Form

- TEDS fields containing data are disabled
- Fields in red can mean:
 - Out of date cal
 - Bad system date (Cal date in future)
 - Missing data – User input required
- Fields with missing data are unlocked



Channel Data

Previous Channel 4 Next

Status: Active

Name: Position

Units: (In)

Description:

Type: Single Ended

Range: +10 Vdc

Excitation: Default

Sensitivity: 1.5000 (In) V/V

Offset: 0 Zero

Flip TEDS Sensitivity Override Range

Show Over Ranging

Close OSS Rotary Basic

PreTension Bar Graph

Sensor Information

Type: Potentiometer

Manufacturer: Teledyne Test Services

Model: SPMD

Serial Number: E12345

Cal Date: 9/25/2013

Cal Due Date: 9/25/2014

TEDS Load Sensor

Voltage Scaled Value

1.0000 V/V 1.5000 (In)

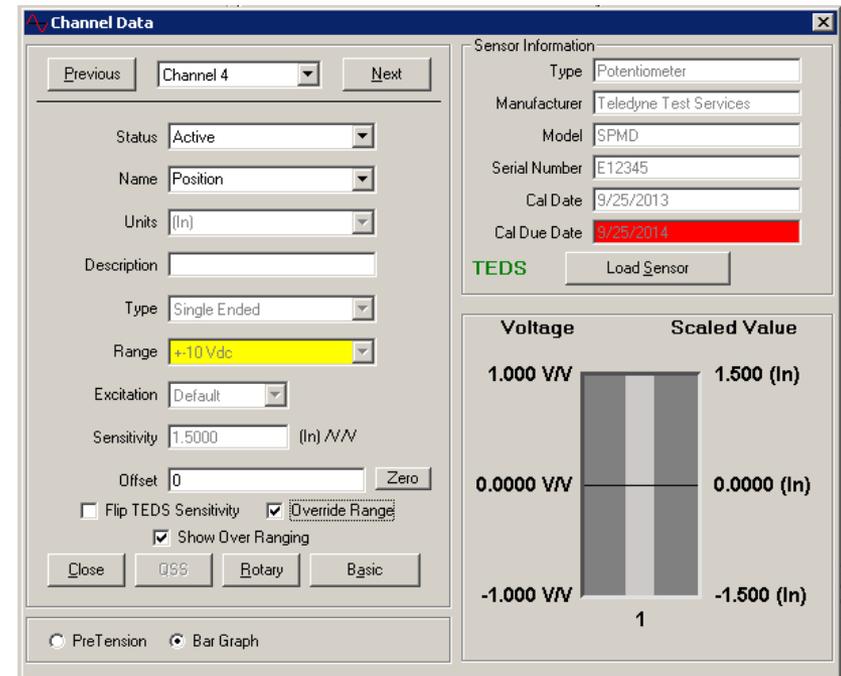
0.0000 V/V 0.0000 (In)

-1.0000 V/V -1.5000 (In)

1

Channel Data Form TEDS Overrides

- Flip TEDS Sensitivity
 - Will invert trace
- Override Range
 - Will allow user to change range
 - Range fields will be highlighted Yellow



Channel Data

Previous Channel 4 Next

Status: Active
Name: Position
Units: (In)
Description:
Type: Single Ended
Range: +10 Vdc
Excitation: Default
Sensitivity: 1.5000 (In) V/V
Offset: 0 Zero
 Flip TEDS Sensitivity Override Range
 Show Over Ranging
Close OSS Rotary Basic

Sensor Information

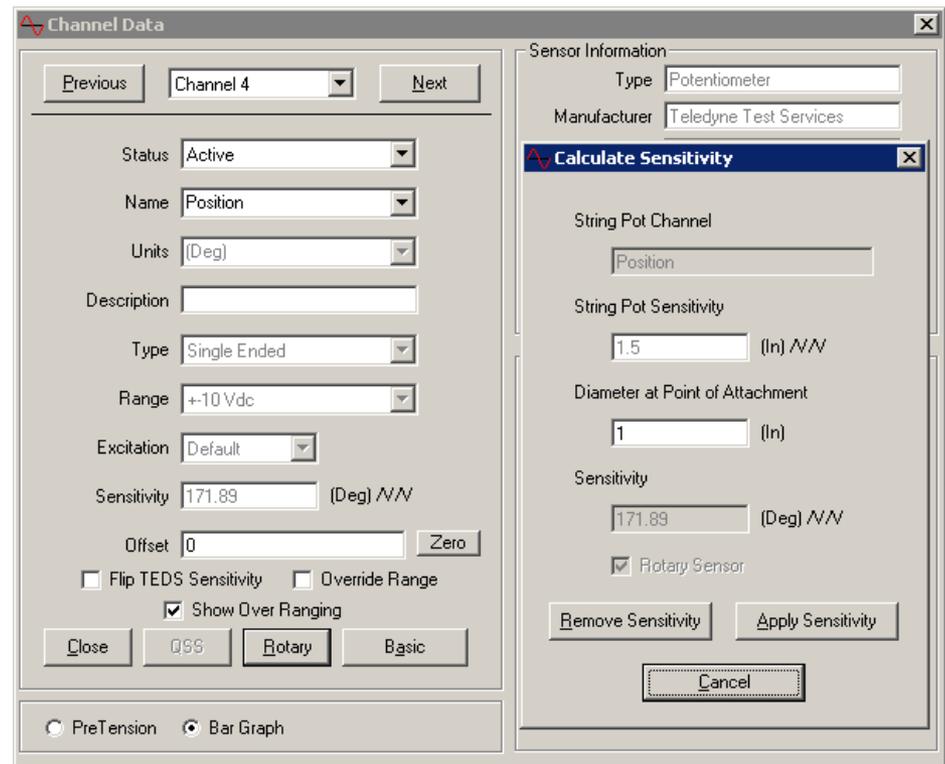
Type: Potentiometer
Manufacturer: Teledyne Test Services
Model: SPMD
Serial Number: E12345
Cal Date: 9/25/2013
Cal Due Date: 9/25/2014
TEDS Load Sensor

Voltage Scaled Value

1.000 V/V 1.500 (In)
0.000 V/V 0.000 (In)
-1.000 V/V -1.500 (In)
1

Channel Data Form Rotary – String Pots

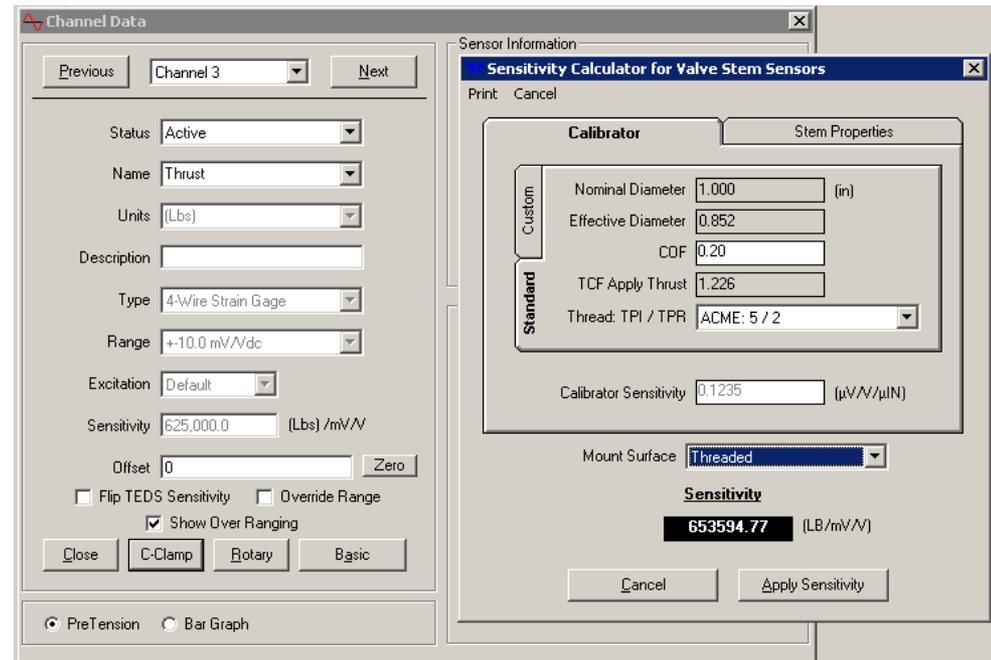
- Sensitivity on chip is entered into rotary calculation
- Diameter at point of attachment is used to calculate actual sensitivity
- Units are automatically set to (Deg)
- Recalc of sensitivity is automatic if a different string pot is plugged in.



The screenshot displays the 'Channel Data' window for 'Channel 4'. The 'Status' is 'Active', 'Name' is 'Position', and 'Units' are '(Deg)'. The 'Type' is 'Single Ended' and the 'Range' is '+10 Vdc'. The 'Sensitivity' is 171.89 (Deg) / V. The 'Offset' is 0. The 'Excitation' is 'Default'. The 'Show Over Ranging' checkbox is checked. The 'Rotary' button is selected. The 'Sensor Information' panel shows 'Type' as 'Potentiometer' and 'Manufacturer' as 'Teledyne Test Services'. The 'Calculate Sensitivity' sub-window is open, showing 'String Pot Channel' as 'Position', 'String Pot Sensitivity' as 1.5 (In) / V, and 'Diameter at Point of Attachment' as 1 (In). The 'Sensitivity' is 171.89 (Deg) / V. The 'Rotary Sensor' checkbox is checked. The 'Apply Sensitivity' button is visible.

Channel Data Form C-Clamps

- Sensitivity on chip is entered into c-clamp sensitivity calculation
- Previously entered stem information is used to calculate actual sensitivity
- Entering 0 for stem diameter will give you a sensitivity of 0. Quiklook will then ignore all sensitivity info and allow user to enter the sensitivity
- Recalc of sensitivity is automatic if a different string pot is plugged in.



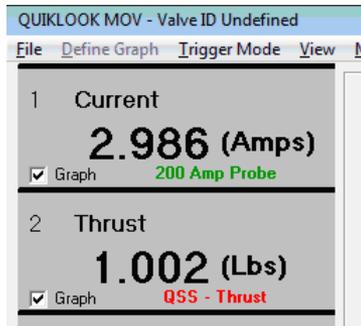
The image shows two overlapping software windows. The background window is titled "Channel Data" and contains the following fields and controls:

- Buttons: Previous, Channel 3 (dropdown), Next
- Status: Active (dropdown)
- Name: Thrust (dropdown)
- Units: (Lbs) (dropdown)
- Description: (empty text box)
- Type: 4-Wire Strain Gage (dropdown)
- Range: +/-10.0 mV/Vdc (dropdown)
- Excitation: Default (dropdown)
- Sensitivity: 625,000.0 (Lbs) /mV/V (text box)
- Offset: 0 (text box) with a Zero button
- Checkboxes: Flip TEDS Sensitivity, Override Range, Show Over Ranging
- Buttons: Close, C-Clamp, Rotary, Basic
- Radio buttons: PreTension, Bar Graph

The foreground window is titled "Sensitivity Calculator for Valve Stem Sensors" and contains the following fields and controls:

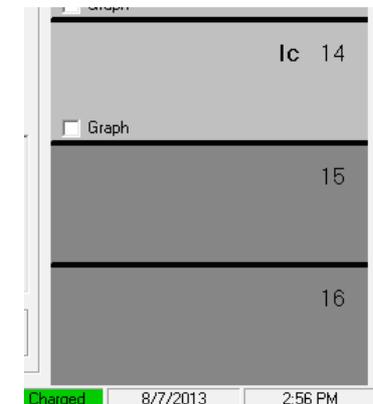
- Buttons: Print, Cancel
- Tabbed interface with "Calibrator" and "Stem Properties" tabs.
- Under "Custom" tab:
 - Nominal Diameter: 1.000 (in) (text box)
 - Effective Diameter: 0.852 (text box)
 - COF: 0.20 (text box)
 - TCF Apply Thrust: 1.226 (text box)
 - Thread: TPI / TPR: ACME: 5 / 2 (dropdown)
- Under "Standard" tab:
 - Calibrator Sensitivity: 0.1235 (µV/V/µIN) (text box)
- Mount Surface: Threaded (dropdown)
- Sensitivity**: 653594.77 (LB/mV/V) (text box)
- Buttons: Cancel, Apply Sensitivity

Acquisition Screen



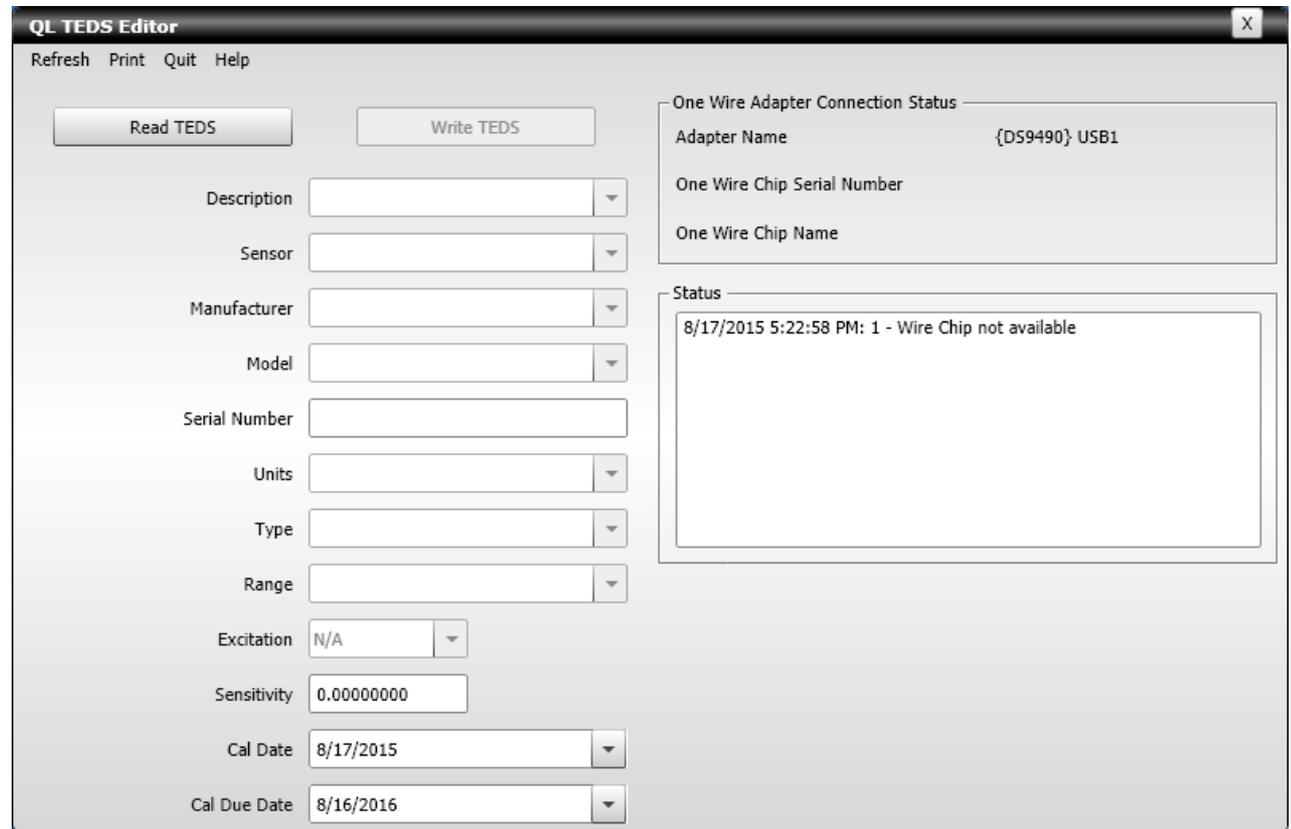
- When sensor is present Channel Values and Units Appear
- Sensor Description is Shown
 - **Green** – All sensor data is on chip no further configuration is necessary
 - **Red** – Some configuration data is missing. Configuration should be reviewed
 - **Black** – Configuration has been reviewed

- Light Gray Box - Channel Active
- Dark Gray Box – Channel Inactive
- Red Box
 - Channel is Over Ranging
 - C-Clamp has lost pretension
- Green Box – C-Clamp – pretension is with acceptable limits
- Channel Name Shows for Active Channels
- Channels wo Sensors will Not be Acquired and will be Turned Off



QL TEDS Editor

- Allows editing of:
- Serial Number
 - Sensitivity
 - Cal Date
 - Cal Due Date



The screenshot shows the QL TEDS Editor application window. The title bar reads "QL TEDS Editor" with a close button (X). The menu bar contains "Refresh", "Print", "Quit", and "Help".

At the top, there are two buttons: "Read TEDS" and "Write TEDS".

The main area contains several input fields and dropdown menus:

- Description: dropdown menu
- Sensor: dropdown menu
- Manufacturer: dropdown menu
- Model: dropdown menu
- Serial Number: text input field
- Units: dropdown menu
- Type: dropdown menu
- Range: dropdown menu
- Excitation: dropdown menu (value: N/A)
- Sensitivity: text input field (value: 0.00000000)
- Cal Date: dropdown menu (value: 8/17/2015)
- Cal Due Date: dropdown menu (value: 8/16/2016)

On the right side, there are two panels:

- One Wire Adapter Connection Status:** Adapter Name: {DS9490} USB1; One Wire Chip Serial Number; One Wire Chip Name.
- Status:** 8/17/2015 5:22:58 PM: 1 - Wire Chip not available.

Any Questions?

THANK YOU



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