

# QUIKLOOK Software TEDS

Presented by:  
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**TELEDYNE LECROY TEST SERVICES**  
Everywhereyoulook™

## TEDS – Transducer Electronic Data Sheet

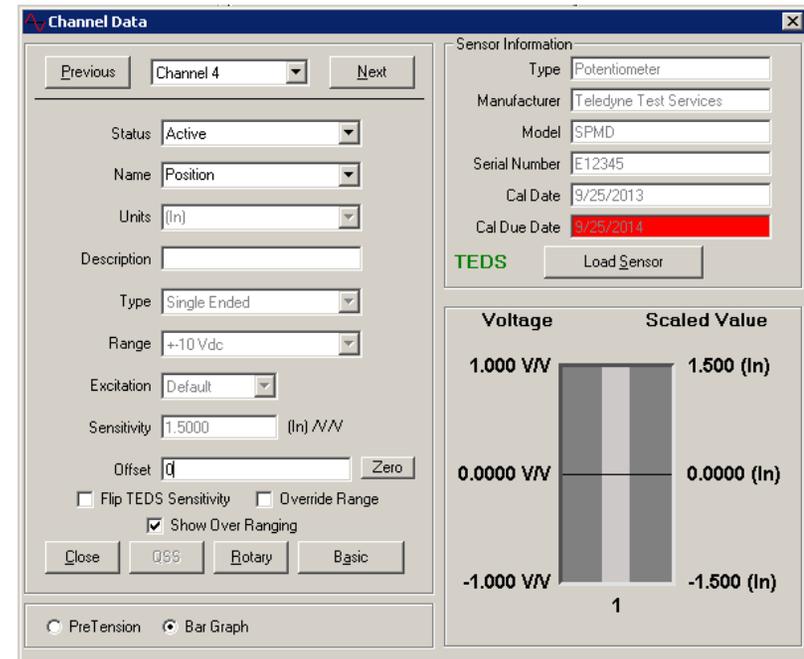
IEEE Standard - IEEE P1451.4/2.0

- 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
  - New for 2016
  - Not implemented in Quiklook until 2017
    - Channel Name
    - Define Graph Maximum
    - Define Graph Minimum
    - Serial Number renamed M&TE Number
    - Serial Number (TTS Serial Number)



## 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  - Out of date cal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 1.500 (In)

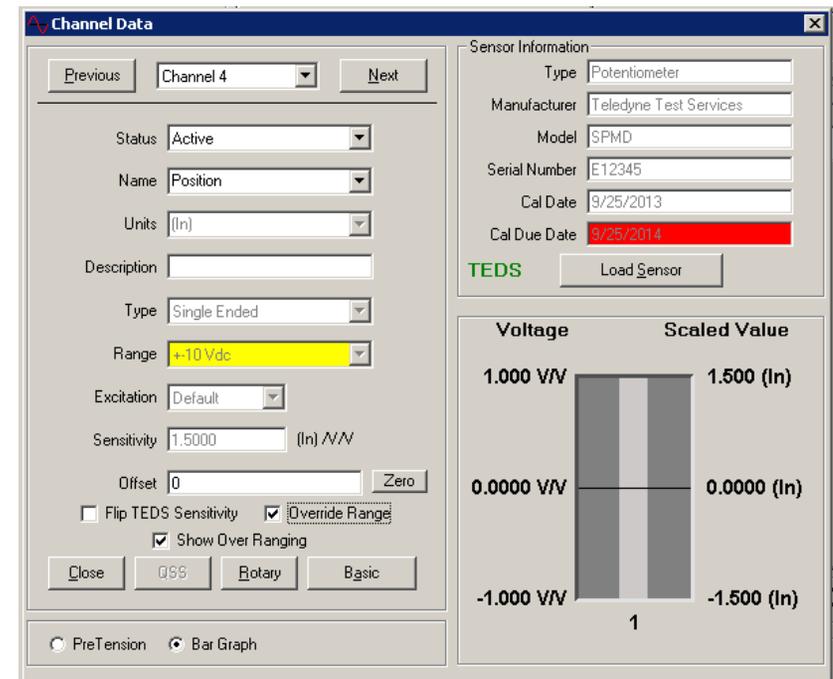
0.0000 V/V 0.0000 (In)

-1.0000 V/V -1.500 (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

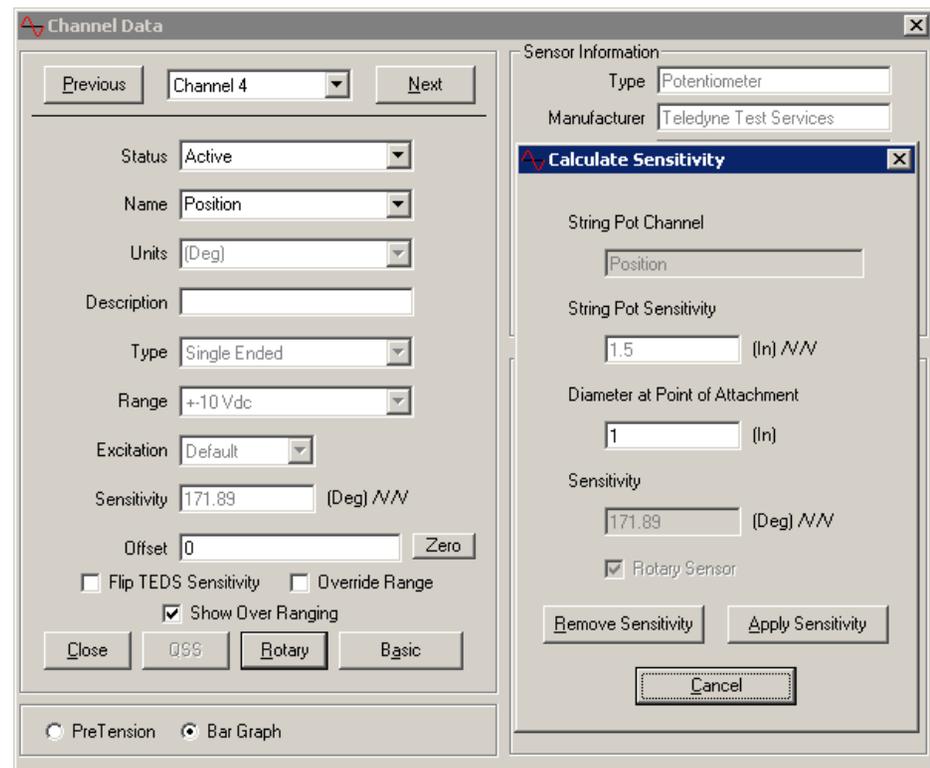
Status: Active  
Name: Position  
Units: (In)  
Description:  
Type: Single Ended  
Range: +10 Vdc  
Excitation: Default  
Sensitivity: 1.5000 (In) mV  
Offset: 0 Zero  
 Flip TEDS Sensitivity  Override Range  
 Show Over Ranging  
Close OSS Rotary Basic

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.

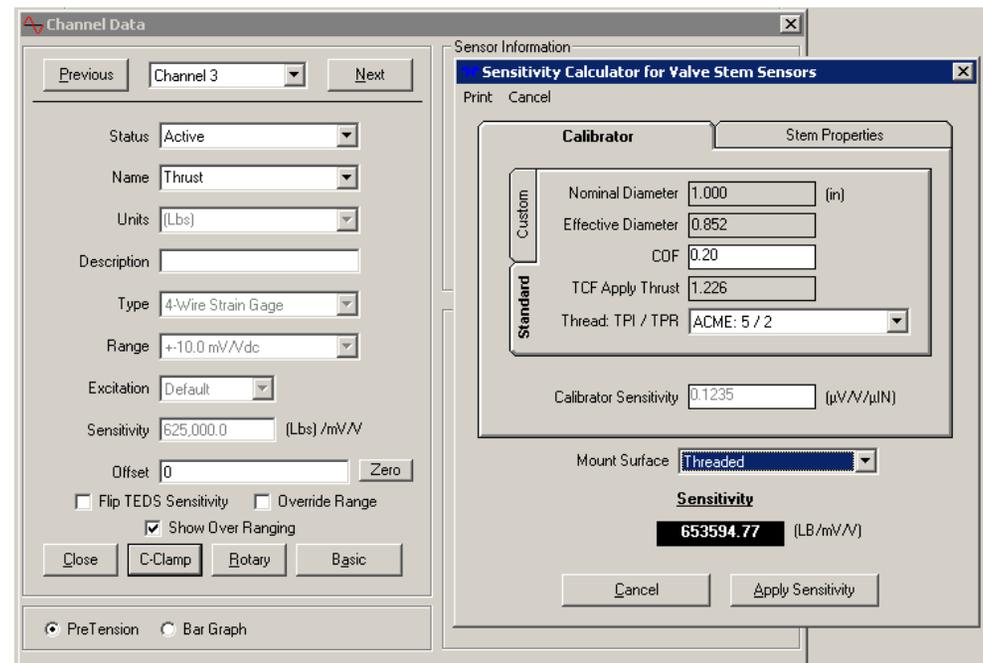


The screenshot displays the 'Channel Data' window for 'Channel 4'. The 'Sensor Information' section shows the sensor is a 'Potentiometer' from 'Teledyne Test Services'. The 'Calculate Sensitivity' sub-window is active, showing the following values: String Pot Channel: Position; String Pot Sensitivity: 1.5 (In) / VV; Diameter at Point of Attachment: 1 (In); Sensitivity: 171.89 (Deg) / VV. The 'Rotary Sensor' checkbox is checked. The main window also shows the sensor is 'Active', 'Single Ended', with a range of '+10 Vdc' and an excitation of 'Default'. The 'Rotary' button is selected at the bottom.

## Channel Data Form

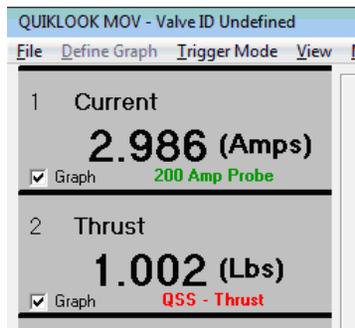
### C-Clamps

- 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 c-clamp is plugged in.



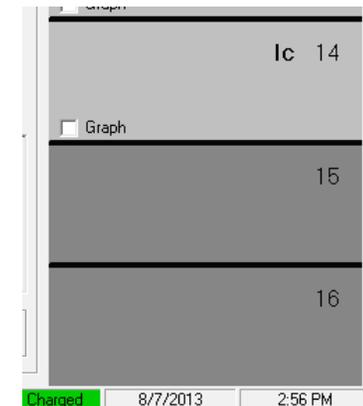
The screenshot shows two overlapping software windows. The background window is titled "Channel Data" and displays the following fields: "Previous" (Channel 3), "Next", "Status" (Active), "Name" (Thrust), "Units" (Lbs), "Description", "Type" (4-Wire Strain Gage), "Range" (+10.0 mV/Vdc), "Excitation" (Default), "Sensitivity" (625,000.0 (Lbs) /mV/V), "Offset" (0), "Zero", "Flip TEDS Sensitivity", "Override Range", "Show Over Ranging", "Close", "C-Clamp", "Rotary", "Basic", "PreTension", and "Bar Graph". The foreground window is titled "Sensitivity Calculator for Valve Stem Sensors" and contains a "Calibrator" tab with "Custom" and "Standard" sections. The "Custom" section includes "Nominal Diameter" (1.000 (in)), "Effective Diameter" (0.852), "COF" (0.20), "TCF Apply Thrust" (1.226), and "Thread: TPI / TPR" (ACME: 5 / 2). The "Standard" section includes "Calibrator Sensitivity" (0.1235 (μV/V/μIN)). Below these sections is a "Mount Surface" dropdown (Threaded) and a "Sensitivity" display showing "653594.77 (LB/mV/V)". Buttons for "Print", "Cancel", and "Apply Sensitivity" are also visible.

## 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

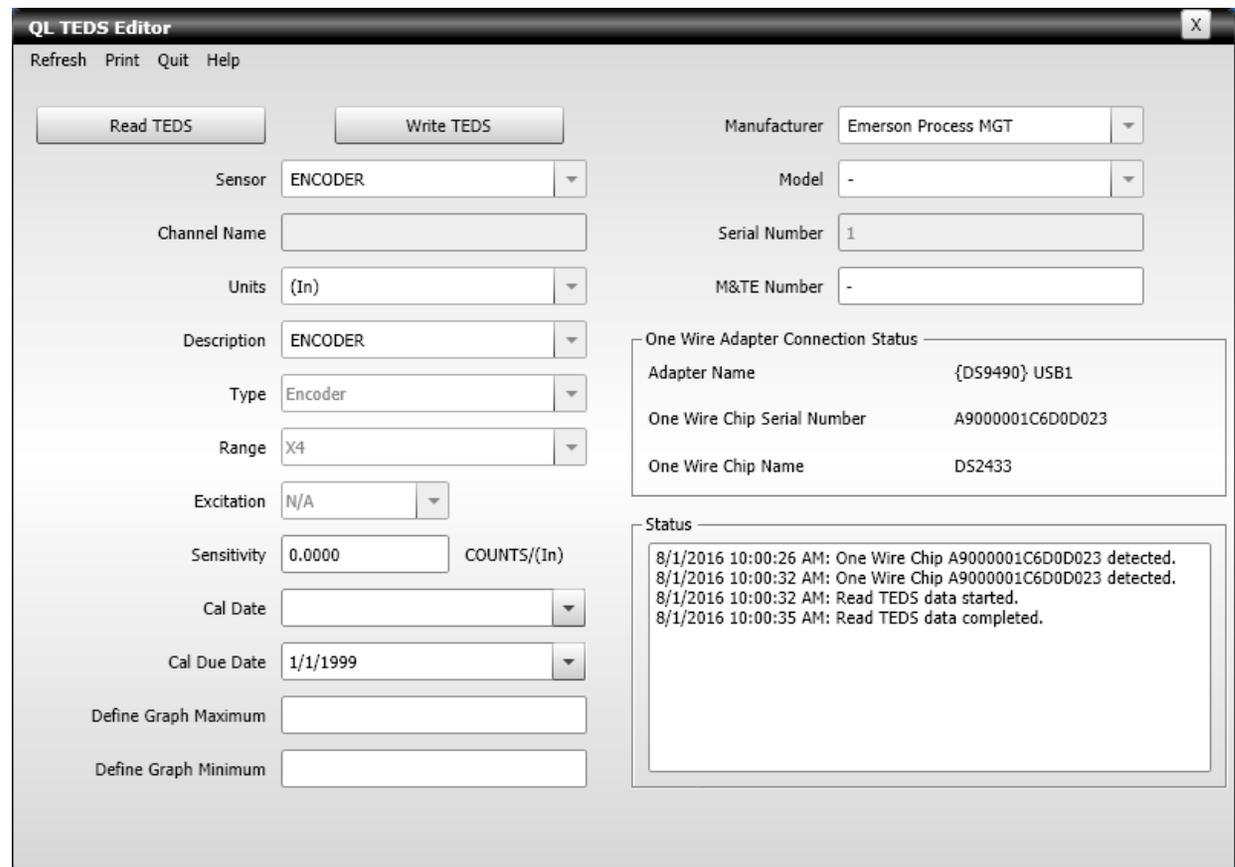
- Light Gray Box - Channel Active
- Dark Gray Box – Channel Inactive
- Red Box
  - Channel is Over Ranging
  - C-Clamp has lost pretension
- Green Box – C-Clamp – pretension is with acceptable limits
- Channel Name Shows for Active Channels
- Channels wo Sensors will Not be Acquired and will be Turned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



## QL TEDS Editor

Allows editing of:

- M&TE Number
- Sensitivity
- Cal Date
- Cal Due Date
- Define Graph Max
- Define Graph Min



The screenshot shows the QL TEDS Editor application window. It features a menu bar with 'Refresh', 'Print', 'Quit', and 'Help'. Below the menu are 'Read TEDS' and 'Write TEDS' buttons. The main interface is divided into several sections:

- Sensor Settings:** Includes dropdowns for 'Sensor' (ENCODER), 'Units' ((In)), 'Description' (ENCODER), 'Type' (Encoder), and 'Range' (X4). It also has a dropdown for 'Excitation' (N/A).
- Manufacturer/Model/Serial:** Includes a dropdown for 'Manufacturer' (Emerson Process MGT), a dropdown for 'Model' (-), a text input for 'Serial Number' (1), and a dropdown for 'M&TE Number' (-).
- Calibration:** Includes a text input for 'Sensitivity' (0.0000) with the unit 'COUNTS/(In)', a dropdown for 'Cal Date', and a dropdown for 'Cal Due Date' (1/1/1999).
- Graphing:** Includes text inputs for 'Define Graph Maximum' and 'Define Graph Minimum'.
- Status Log:** A scrollable area showing connection and read data status, including timestamps and adapter/chip information.

# Any Questions?

## THANK YOU



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