

 MODEL 531 FIELD CALIBRATION PROCEDURE	DOCUMENT NO. 531-0300	841 Holt Road Suite 1 Webster New York 14580 Business: (585) 872-9350 Fax: (585) 872-2638
Created by: R. Cicale	DATE: 5-5-05	Sheet 1 of 2

Rev.	Date	Appd	BRIEF CHANGE DESCRIPTION
A	5-5-05	MJK	INITIAL RELEASE

Equipment Needed:

1. Precision Current Meter with accuracy of $\pm 0.025\%$ at 20mA.
2. Precision Current Source with accuracy of $\pm 0.025\%$ at 20mA

Enabling Calibration:

Place in fresh batteries and allow one hour for the Model 531 to stabilize to the ambient temperature. Remove the battery cover and the Phillips head screws. While holding the Model 531 face up in one hand, carefully separate the top and bottom of the housing. Place the unit into calibration mode by putting the switch into the OFF position and shorting the calibration via labeled on the PCB with a shorting jumper or tweezers. Verify the Model 531 is in calibration mode by viewing the LCD for the words "CALIBRATION REQUIRED".

Read mA Calibration:

Turn the Model 531 on by moving the on/off switch to either "Read" or "Source". Connect the Model 531 terminals to a Current Source.

LO Calibration:

1. Slide the EZ-Check™ Switch to the LO position indicated by displaying a "LO" on the left side of the LCD.
2. Set the current source to 0.000 mA.
3. Press and hold the EZ-Dial in for a few seconds.
4. The display will flash "STORED" to confirm that the displayed calibration constant value was stored.

HI Calibration:

1. Slide the EZ-Check™ Switch to the HI position indicated by displaying a "HI" on the left side of the LCD.
2. Set the current source to 20.000 mA.
3. Press and hold the EZ-Dial in for a few seconds.
4. The display will flash "STORED" to confirm that the displayed calibration constant value was stored.

Source mA Slope Calibration:

This must be done right after read calibration or the Model 531 will dial incorrectly in source mode.

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Turn the unit off then back on to source mode by putting the on/off switch in the high position.
Connect the Model 531 terminals to a Current Meter.

LO Calibration:

1. Slide the EZ-Check™ Switch to the LO position indicated by displaying a “LO” on the left side of the LCD.
2. Allow the current meter to settle and for the microprocessor to store 4mA.

HI Calibration:

1. Slide the EZ-Check™ Switch to the HI position indicated by displaying a “HI” on the left side of the LCD.
2. Allow the current meter to settle and for the microprocessor to store 20mA.

Check the linearity calibration in source mode by dialing the Model 531 from 4.00mA to 4.01mA. If the linearity is calibrated correctly the unit will go from 4.00mA to 4.01mA. If this fails, repeat the calibration from the start.

This is the completion of calibration.