

	PIECAL 434 FIELD CALIBRATION PROCEDURE	DOCUMENT NO. 434-0300	841 Holt Road Suite 1 Webster New York 14580 Business: (585) 872-9350 Fax: (585) 872-2638
Created by: Paul B-G	DATE: 6-30-2010	Sheet 1 of 3	

Rev.	Date	Appd	BRIEF CHANGE DESCRIPTION
A	6-30-10	MJK	INITIAL RELEASE

Equipment Needed:

1. Precision Current Meter with accuracy of $\pm 0.0025\%$ of reading at 4, 8, 12, 16, 20 & 24 mA.
2. Precision Voltage Source with accuracy of $\pm 0.0125\%$ of setting at 99.00V.

Enabling Calibration:

Remove the rubber boot and the battery cover. Place fresh batteries in and allow 15 minutes for the PIECAL 434 to stabilize to the ambient temperature. Above the battery compartment there is an opening in the housing that allows access to the DIP switches. Move DIP switch 2 (the switch furthest from the batteries) to the left (ON). Turn the PIECAL 434 ON. The words "CALIBRATION MODE ENTERED" will appear on the display after the normal splash screen. Verify it is in calibration mode by making sure the word "CAL" is in the bottom left corner of the LCD.

Note: Press the EZ-DIAL knob to save the data for each step even if no adjustment is required. *If any step is skipped or performed out of order the calibration for that section (READ DC Voltage or Source mA) must be started over from the beginning.*

Read DC Voltage Calibration:

Connect the leads of the 434 to the Precision Voltage Source.

LO Calibration:

1. Move the POWER switch to VDC, the MODE switch to READ and the EZ-CHECK switch to 0%. The bottom line of the display will show "CAL : 0.00V IN"
2. Set the voltage source to 0.00 V.
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

HI Calibration:

1. Move EZ-CHECK switch to 100%. The bottom line of the display will show "CAL : 99.00V IN"
2. Set the voltage source to 99.00 V.
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

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Source mA Calibration:

Connect the leads of the 434 to the Precision Current Meter. Move the POWER switch to mA.

4 mA Calibration:

1. Move the MODE switch to SOURCE and the EZ-CHECK switch to 0%. The bottom line of the display will show "CAL : 4.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 4.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

20 mA Calibration:

1. Move the MODE switch to READ and the EZ-CHECK switch to 100%. The bottom line of the display will show "CAL : 20.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 20.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

24 mA Calibration:

1. Move the MODE switch to SOURCE and leave the EZ-CHECK switch at 100%. The bottom line of the display will show "CAL : 24.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 24.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

8 mA Calibration:

1. Move the MODE switch to 2 WIRE and the EZ-CHECK switch to DIAL. The bottom line of the display will show "CAL : 8.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 8.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

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12 mA Calibration:

1. Move the MODE switch to READ and leave the EZ-CHECK switch at DIAL. The bottom line of the display will show "CAL : 12.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 12.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

16 mA Calibration:

1. Move the MODE switch to SOURCE and leave the EZ-CHECK switch at DIAL. The bottom line of the display will show "CAL : 16.00 mA OUT"
2. Turn the EZ-DIAL knob on the 434 to adjust the output so that the reading on the Precision Current Meter reads 16.000 mA
3. Press & hold down the EZ-Dial™ Knob.
4. The display will flash "DATA SAVED" to confirm that the value was stored. Release the knob.

Completion of Calibration:

Turn the PIECAL 434 OFF and Move DIP switch 2 (the switch furthest from the batteries) to the right (OFF). The next time the unit is turned on the PIECAL 434 will be calibrated and in normal operational mode. Replace the battery cover and rubber boot.