

# PicoLogic ammeter technical information



- Up to 32 channels simultaneous readout
- Readout range approx. from -125 to 125 nA
- Resolution of approx. 4 pA for the given range
- 1 kHz recording frequency
- Photo-voltaic DC/DC isolated power supply
- Custom made housings for individual units
- Data from the units is sent to a LabView module via an FPGA board
- LabView drivers are included with the ammeter setups

Each unit is separately calibrated and receives its own calibration sheet, an example of which is given on the next page.

A prototype of the ammeter is described with more technical detail in the following NIM paper:

"A floating multi-channel picoammeter for micropattern gaseous detector current monitoring"

<http://dx.doi.org/10.1016/j.nima.2015.08.021>

## Channel 01, Ser No. 1250101

Board Type	PA125
Channel number	01
Serial number	1250101
Date of manufacture	09-08-2015
Calibration date	09-08-2015
Ambient temperature	25degC
Measurement range	$\pm 125$ nA
Gain	0.003954 nA/ADC count
Gain $\sigma$	$0.09070 \cdot 10^{-6}$ nA/ADC count
Offset	-0.08743 nA
Offset $\sigma$	0.00018 nA
Min. heating time	2 h
Hi Pot. Test	6 kV, 60 sec

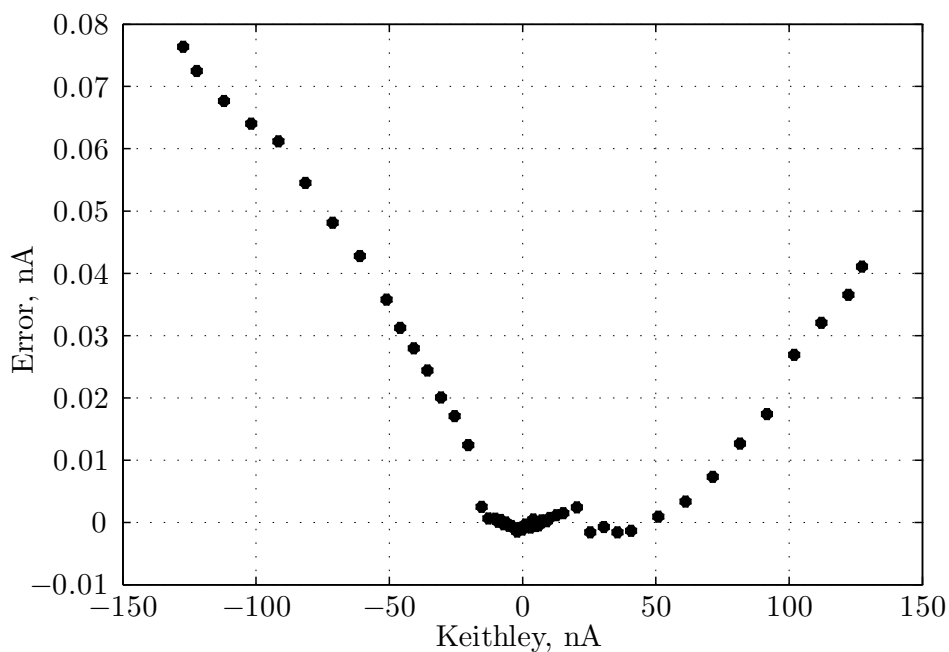


Figure 1: Measurement error 1250101 vs. Keithley 6485

**Fit function:**  $I_{01} = 0.003954 \cdot \text{ADC}_{01} - (-0.08743)$  [nA]