Calibration Verification Report for Unit '' on 1/11/2026

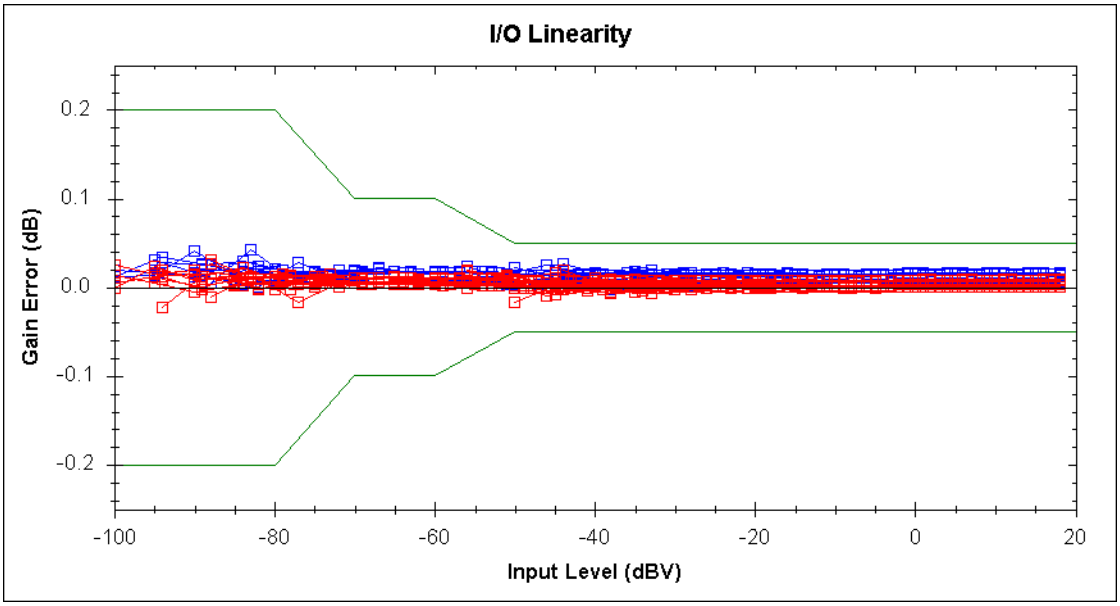
Measurement Settings

Parameter	Value	Parameter	Value
Date:	1/11/2026 7:28 AM	Analyzer Serial Number:	(not specified)
Range Set:	0.2 V / 2.0 V / 20 V	Test Frequency (Hz):	1000
DVM Model:	Rigol DM3068	DVM Serial Number:	123456
Ambient Temperature:	25 °C		
Low-range DVM Error (Range / Reading):	±0.04% / ±0.06%		
Mid-range DVM Error (Range / Reading):	±0.03% / ±0.06%		
High-range DVM Error (Range / Reading):	±0.04% / ±0.08%		

Measurement Results

Generator Output (Vrms) [DVM Measurement Range]	DVM Measured (Vrms)	Measured Error (%)	DVM Uncertainty (%)	Combined Worst-Case Error (%)
0.19 [0.2 V range]	0.19	+0%	±0.102105%	±0.102105%
0.475 [2 V range]	0.475	+0%	±0.186316%	±0.186316%
1.9 [2 V range]	1.9	+0%	±0.091579%	±0.091579%
6.65 [20 V range]	6.65	+0%	±0.200301%	±0.200301%

Linearity Plot



Summary

The Measurement Results table above uses a calibrated AC DVM to check the QA40x generator output at operating points in each output relay range. For each point, the measured error is combined with the DVM's own uncertainty to form a worst-case combined error (analyzer + DVM). In these checks, the largest combined worst-case error is approximately ±0.2%.

The Linearity plot shows gain error (output minus input, in dB) versus input level for each analyzer input range. Each range is swept from its full-scale input level (0, 6, 12 dBV, etc.) down to roughly 100 dB below full scale. Over the region from about 50 dB below full-scale up to full-scale, the worst-case gain deviation observed in this run was approximately ±0.016 dB (≈ ±0.19%). Note that measurement settings can have a huge impact on amplitude accuracy. For example, a poor window choice and a non-coherent frequency can result in substantial amplitude error. In your measurements, you need to ensure your settings are appropriate for the measurement you are making to achieve the accuracy shown here.

If we conservatively add the worst-case linearity deviation to the worst-case absolute error from the DVM checks, we obtain an overall upper bound on level accuracy of roughly ±0.39% over the region from about 50 dB below full-scale input up to full-scale. In practice, typical errors will be smaller than this bound.