

SinCosYzer[®] Workstation (OVERVIEW) ^{preliminary}

Sine Encoder Signal Acquisition With Graphical Analysis



Rev C1, Page 1/4

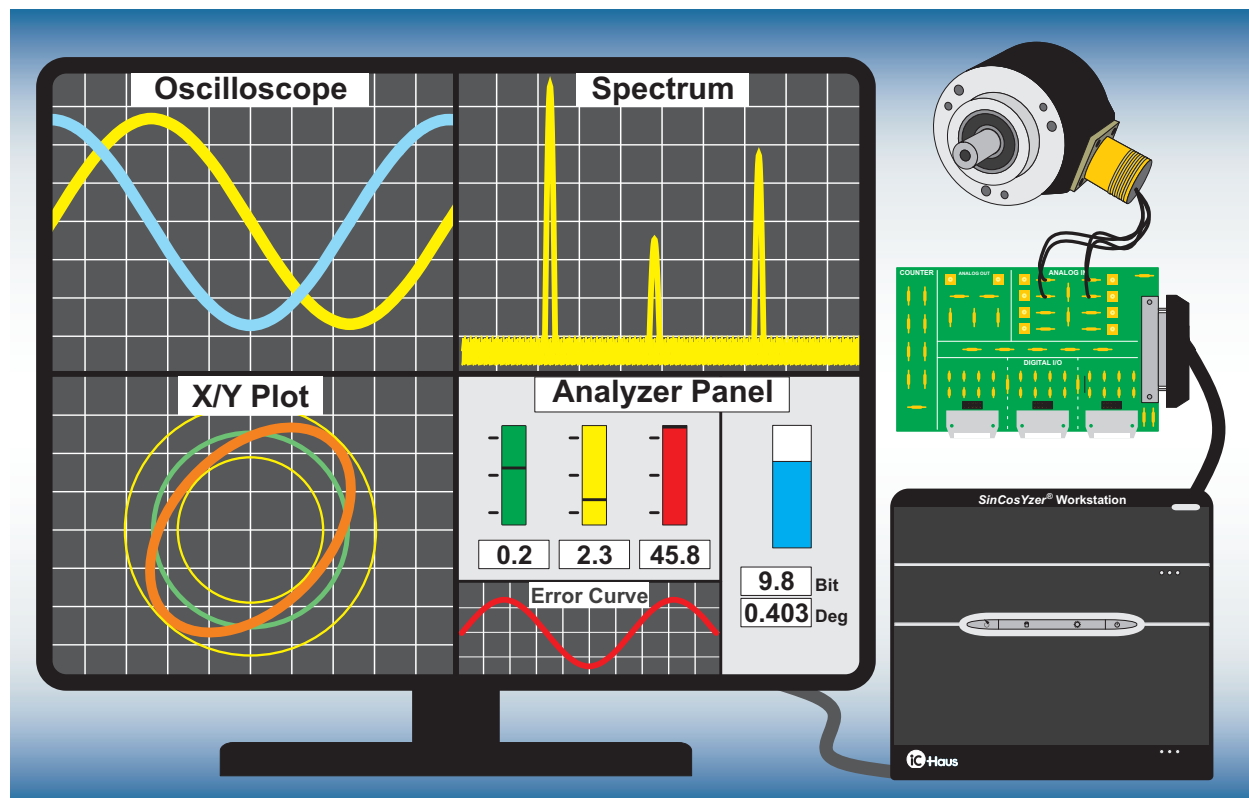
FEATURES

4 differential input channels for $\pm 1.25\text{ V}$ to $\pm 10\text{ V}$
Fast synchronous signal sampling at up to 800 kS/s
High ADC resolution of better than $50\ \mu\text{V}$ at $\pm 1.25\text{ V}$ FS
Modes of operation: 4-channel oscilloscope, spectral signal analysis, Lissajous X/Y plotting
Oscilloscope mode with measurement utilities: DC offset and amplitude (AC, AC(RMS), Min., Max.), cross screening of 2 channels for amplitude differences and phase deviations
Spectral signal analysis with calculation of harmonics and THD
Lissajous X/Y plotting with tolerance and limit indication
Probe card for easy wiring to DUTs or housed encoders
Stand-alone operation with external keyboard/screen or notebook connected to an LAN
Delivery: ready-to-operate *SinCosYzer Workstation* with instrumentation software (GUI), data cable and probe card
Remote controllable, configurable and measurement output via a TCP/IP interface
Optional module 1 (encoder adjuster): sine encoder error analysis with color bar display of good/bad limit values
Optional module 2 (reference analyzer): referenced signal analysis with graphical evaluation

APPLICATIONS

Accuracy analysis of sine encoders[®]
Factory calibration of sine/cosine signal conditioning circuits
Optical and magnetic position sensor calibration
Linear and rotary encoders
Feasibility studies of position sensing systems
Referenced accuracy measurements

SYSTEM VIEW



DESCRIPTION

The SinCosYzer Workstation features four fully differential simultaneous sampling channels, thus meeting the requirements for probing analog position encoders which supply differential sine and cosine signals.

A high 16 bit A/D converter resolution enables precise encoder signal analysis; fast 800 kS/s scanning permits signal frequencies of up to 400 kHz. Unique evaluation and measurement utilities for waveform and signal error are provided in five different modes

of operation. Oscilloscope mode, for example, cross screens two channels in order to identify sine to cosine signal deviations.

The optional signal error analysis module 1 allows the user to enter specified check values in a reference file which displays primary signal errors using red, yellow and green bars. At the same time the obtainable angle accuracy for the interpolation of the test signals is predicted and the dominant signal error identified.

Screens at a glance

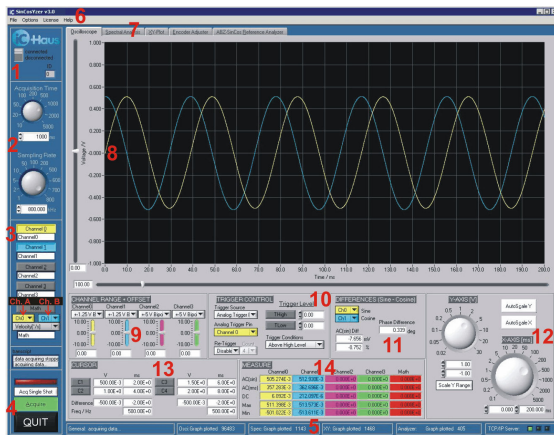


Figure 1: 4-Channel oscilloscope with AC/DC and sine/cosine measurement facilities.

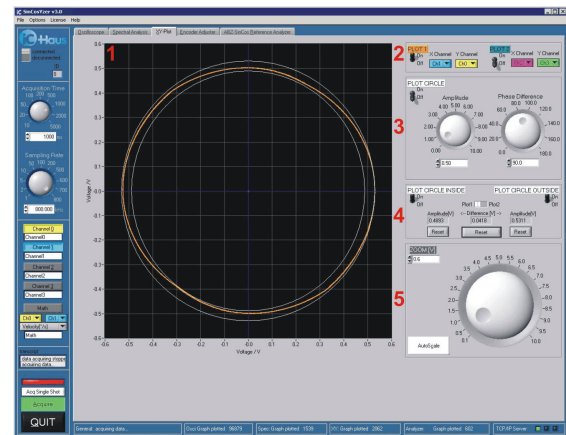


Figure 3: Lissajous X/Y plot with tolerance and limit indication.

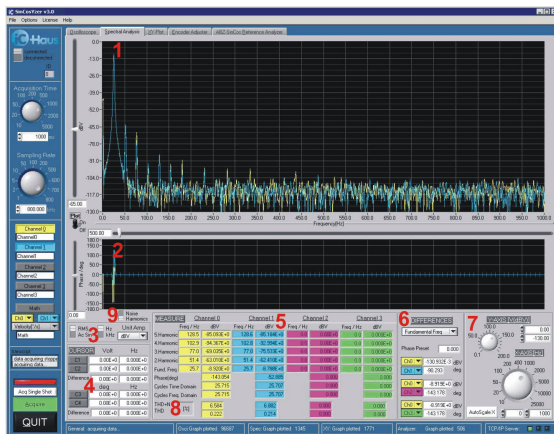


Figure 2: Spectral signal analysis (FFT) with calculation of harmonics and THD.

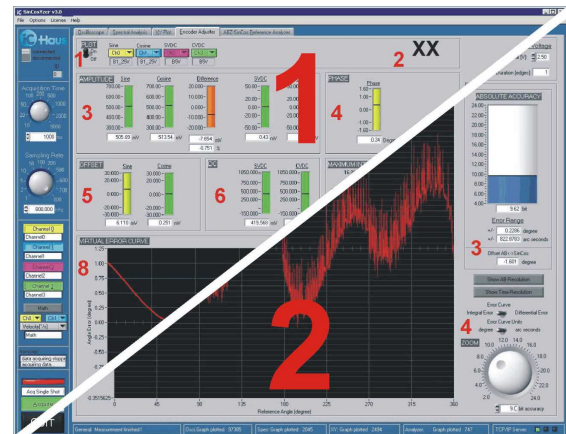


Figure 4: Optional modules 1 and 2 for signal balancing and error analysis.

SinCosYzer[®] Workstation (OVERVIEW) ^{preliminary}

Sine Encoder Signal Acquisition With Graphical Analysis



Rev C1, Page 3/4

iC-Haus expressly reserves the right to change its products and/or specifications. An Infoletter gives details as to any amendments and additions made to the relevant current specifications on our internet website www.ichaus.de/infoletter; this letter is generated automatically and shall be sent to registered users by email.

Copying – even as an excerpt – is only permitted with iC-Haus approval in writing and precise reference to source.

iC-Haus does not warrant the accuracy, completeness or timeliness of the specification on this site and does not assume liability for any errors or omissions in the materials. The data specified is intended solely for the purpose of product description. No representations or warranties, either express or implied, of merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information/specification or the products to which information refers and no guarantee with respect to compliance to the intended use is given. In particular, this also applies to the stated possible applications or areas of applications of the product.

iC-Haus conveys no patent, copyright, mask work right or other trade mark right to this product. iC-Haus assumes no liability for any patent and/or other trade mark rights of a third party resulting from processing or handling of the product and/or any other use of the product.

As a general rule our developments, IPs, principle circuitry and range of Integrated Circuits are suitable and specifically designed for appropriate use in technical applications, such as in devices, systems and any kind of technical equipment, in so far as they do not infringe existing patent rights. In principle the range of use is limitless in a technical sense and refers to the products listed in the inventory of goods compiled for the 2008 and following export trade statistics issued annually by the Bureau of Statistics in Wiesbaden, for example, or to any product in the product catalogue published for the 2007 and following exhibitions in Hanover (Hannover-Messe).

We understand suitable application of our published designs to be state-of-the-art technology which can no longer be classed as inventive under the stipulations of patent law. Our explicit application notes are to be treated only as mere examples of the many possible and extremely advantageous uses our products can be put to.

SinCosYzer[®] Workstation (OVERVIEW) ^{preliminary}

Sine Encoder Signal Acquisition With Graphical Analysis



Rev C1, Page 4/4

ORDERING INFORMATION

Type	Package	Order Designation
SinCosYzer Workstation	20 cm x 31 cm x 19 cm	iC-SCY SinCosYzer
SinCosYzer Encoder Adjuster	Optional software module 1	iC-SCY SinCosEncAdj
SinCosYzer ABZ Reference Analyzer	Optional software module 2	iC-SCY SinCosRefAna

For technical support, information about prices and terms of delivery please contact:

iC-Haus GmbH
Am Kuemmerling 18
D-55294 Bodenheim
GERMANY

Tel.: +49 (61 35) 92 92-0
Fax: +49 (61 35) 92 92-192
Web: <http://www.ichaus.com>
E-Mail: sales@ichaus.com

Appointed local distributors: http://www.ichaus.com/sales_partners