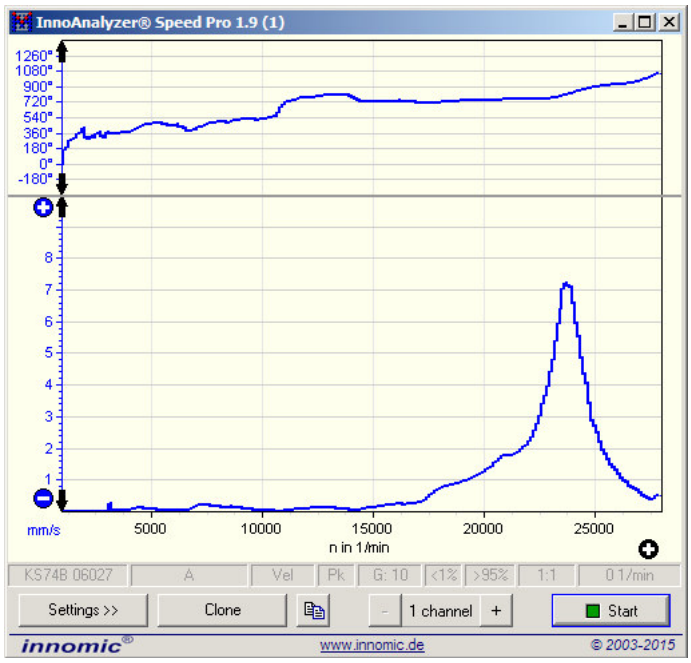
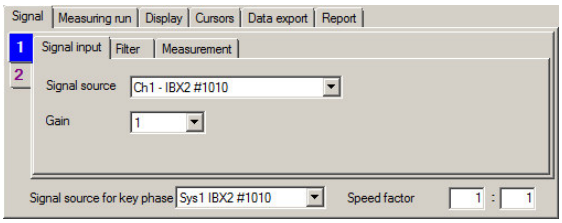
InnoAnalyzer® Speed 1.9

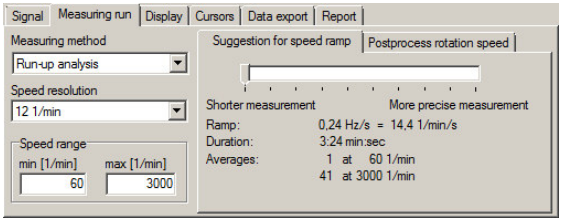
Run-up/Coast-down Tracking Analyzers



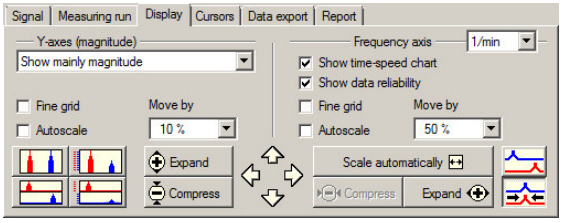
Magnitude and phase for adjustable orders



Simple signal conditioning



Settings for the measuring run, speed ramp



Arrange, zoom, compress graphs acc. to your demands or move them in direction of the frequency axis and display all orders stacked

Application

Rotating parts in drives, gears, pumps, fans and many other technical products cause perturbing vibrations. Different rotation speeds cause different vibrations since the measurement objects develop or do not develop resonant behaviour at certain rotation speeds.

These differences become obviously in run-up or coast-down measurements. A rotor changes its rotation speed when run up or coast down and excites the whole system at different frequencies.

The InnoAnalyzers Speed measure the vibration level and phase angle at the rotation speed or a multiple and graphically display them at the respective rotation speed. This way, for instance resonant rotation speed levels are detected. The progression of the rotation speed is displayed graphically as well.

For rotation speed detection, different photoelectric reflex switches and contrast scanners are directly supplied by the InnoBeamer and their signal is read. Optionally, an existing rotation speed signal can be fed as pulse/revolution or reference can be taken towards a transformed rotation speed.

Properties

The InnoAnalyzers Speed masters order-tracked filtering and band-pass filtering. Thus it can display magnitude and phase of (pre-filtered) orders but also wide-band overall values in dependance on the rotational speed.

Speed range and frequency resolution can be adjusted. Using these parameters, the InnoAnalyzer Speed calculates optimum settings for the speed change rate, which you can enter for instance into a frequency converter.

Magnitude and phase of arbitrary orders can be displayed at their actual frequency or they can be displayed frequency-transformed and stacked in relation to order 1.

The clone function makes it possible to operate several InnoAnalyzers at the same time.

The export of the measurement graph as graphic or pairs of numbers in text format into other applications provides additional fields of application.

Technical Data

	InnoAnalyzer Speed Pro	InnoAnalyzer Speed
Signal Processing		
Measurands	Alternating measurands: Vibration acceleration, velocity, displacement; force, pressure, sound pressure, voltage, user-defined measurands	
Integrated Measurands	Acceleration → Velocity and displacement	
Units	m/s², mm/s², µm/s², nm/s², pm/s², g, mg, µg, km/s², kg, dB | m/s, mm/s, µm/s, nm/s, pm/s, in/s, mil/s, µin/s, dB | m, mm, µm, nm, pm, ft, in, mil, µin , dB | kN, N, mN, µN, nN, lb, oz | bar, mbar, MPa, kPa, hPa, Pa, mPa, µPa, nPa, psi | V, mV, µV, nV, pV | A, mA, µA, nA, pA	
Characteristics of Order Analysis	Peak value, Peak-to-peak value, r.m.s. value, phase	
Character. of Wide-Band Analysis	Instantaneous value, peak value absolute / positive / negative, peak-to-peak value, true r.m.s. value	
Orders in Order Analysis	Freely adjustable ratio m : n (m, n: 1 ..1 000)	
Frequ. Range in Wide-Band Analysis	Freely adjustable range 0.1 .. 40 000 Hz **	
Measurands and Units X-Axis	Frequency (Hz) / Rotational speed (1/min)	
Frequency Resolution	0.05 / 0.1 / 0.2 / 0.5 / 1 / 2 / 5 / 10 / 20 Hz (3, 6, 12, 30, 60, 120, 300, 600, 1200 min^{-1})	
Graphical Presentation		
Number of Graphs	1 .. 4 for magnitude, 1..4 for phase, 1 time-speed chart	
Refresh	1 .. 16 times per second *	
Interval Y-Axis	Magnitude: 0.1 .. 10000 / Phase: 0..360°, -180 .. +180°, -3600 .. 3600 ° / Zeit: 1 min .. 14 days	
Interval X-Axis	0.2 .. 40 000 Hz / 2 .. 2 400 000 min^{-1} **	
Measuring Methods	Switchable without restart: Run-up/Coast down (rising/falling rotation speeds with average only), Run-up/coast-down monotonous(rising/falling rotation speed without average only), free analysis (all rotation speeds with average)	
Frequency Shift	All orders can be transformed to order 1 for a better comparison	
Statistics	Visualization of number of averages for each speed interval by means of line thickness and color	
Status Indicators	Sensor, measuring channel, measurand, characteristic, gain, underload, overload	
Cursors	2 lines, freely adjustable by mouse or button, display of cursor values and difference	
Recommended Screen Resolution	From 1024 x 768 pixels on	
Data Export		
Control	Manually or time-triggered	
Formats	Bitmap, PNG, Enhanced Meta File (EMF), text	
Destinations	Clipboard or file	
Miscellaneous		
Measuring Run	Optimum speed change rate is calculated and indicated	
Available in a Kit	VMSet-03 .. 07	-
General Functions	Measurement data is held after switching off, instrument is cloneable	

* Centrally managed in the InnoMaster

** When working with InnoBeamer L2: Maximum frequency 2000 Hz, maximum rotation speed 120 000 min^{-1}, when working with InnoBeamer LX2: Maximum frequency 3200 Hz, maximum rotation speed 192 000 min^{-1}

Changes without prior notice

February 2016

D e u t s c h l a n d

IDS Innomic
Gesellschaft für Computer- und Messtechnik mbH
Zum Buchhorst 35
29410 Salzwedel

(03901) 305 99 50
(03901) 305 99 51
info@innomic.de
www.innomic.de

I n t e r n a t i o n a l

IDS Innomic GmbH
Zum Buchhorst 35
D-29410 Salzwedel
Germany

+49 (3901) 305 99 50
+49 (3901) 305 99 51
info@innomic.de
www.innomic.com/en