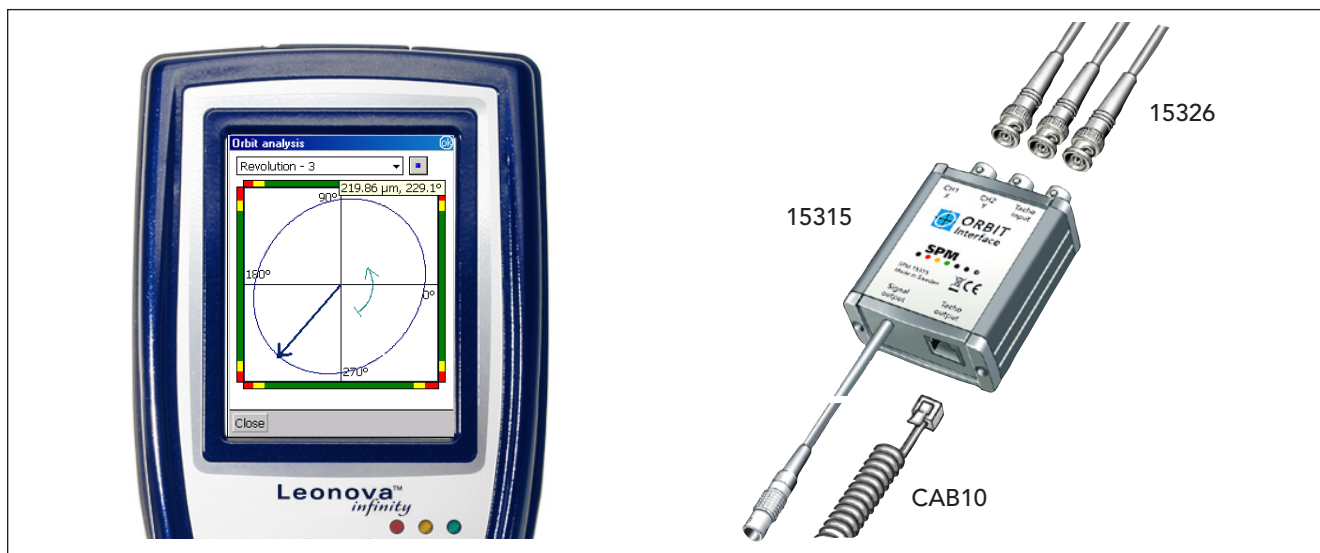


Leonova™ Infinity – Orbit analysis



Orbit analysis is a vibration measurement function offered with Leonova infinity, for either unlimited (LEO138) or limited use (LEO238). The resulting orbit graph shows the movement of the shaft's centerline and is used to detect failures like rubs, unbalance, misalignment or oil whip on machinery with journal bearings.

The measurements are normally made on the buffered outputs of a machine protection system via the Orbit Interface 15315. The interface is connected to the vibration and the tachometer inputs on Leonova. Signal inputs, channel X, channel Y and tachometer are connected via BNC connectors.

Measurements can also be made with e. g. accelerometers to get a two dimensional graph of machine movement. Required are two channel simultaneous vibration measurement and two transducers placed at an angle of 90° to each other, plus a trigger signal from a tachometer probe.

Settings include transducer type, signal unit and filter type, either bandpass (default) or lowpass. Orders is set to 1 by default, but the user can select from 1 to 5 orders. The number of revolutions parameter, max. 25, specifies the number of shaft revolutions to acquire and display in the orbit graph.

During measurement, the result window shows displacement in the x and y direction per revolution. When the measurement is complete, the average of the measured number of revolutions is shown.

The orbit graph shows an overlay of the graphs for each measured revolution plus their average. The user can select each individual revolution as well as the average of all revolutions.

The selected graph is marked blue, with a blue arrow showing the angle and the x/y values at that angle. The user can move the arrow on the screen via tap and hold on the orbit graph.

When the orbit assignment is set up in Condmaster Nova, alarm limits can be set on the X and Y axis, resulting in an evaluated measurement (green - yellow- red scale).

Technical data

Orders:	1 to 5, default 1
Filter types:	None, band pass, low pass
Signal unit:	DISP, VEL, ACC
Trig threshold:	Automatic
Measuring time:	1 to 25 revolutions
RPM range:	15 to 20 480 rpm
Transducer types:	Buffered outputs from API670 approved protection systems via Orbit Interface 15315, alternative vibration transducers SLD144 or IEPE (ICP®) type transducers with voltage output

Ordering numbers

LEO138	Orbit analysis, unlimited use
LEO238	Orbit analysis, limited use
15315	Orbit Interface with belt clip
15326	Set of measuring cables, 3 x BNC - BNC
CAB10	Tachometer cable, spiral

