

Acquire, evaluate and analyze velocity profiles of electrical drives

DriveTest GmbH develops and produces test-systems for the worldwide use in the automotive and railway industry. As one of the pioneering companies in the field of pinch force measurement **DriveTest** offers solutions for variety of applications like elevator doors, car sunroofs and electrical gates. The service comprises the consultation, maintenance and calibration of the measuring devices. Major customers in the automotive industry include Webasto, Daimler, BMW and Volkswagen.

DriveTest MotionLab is a software to acquire, evaluate and analyze characteristics of electrical drives housed in their application. Characteristic drive qualities include velocity, current and voltage which can each be displayed and evaluated over position. MotionLab is available as graphical Windows software for manual acquisition and analysis. There is also the option to embed MotionLab as a LabVIEW library in automated processes. The library includes functionality for acquisition and evaluation.

MotionLab records current, voltage, velocity and hall signals of motions of electrical drives via the **DriveTest**

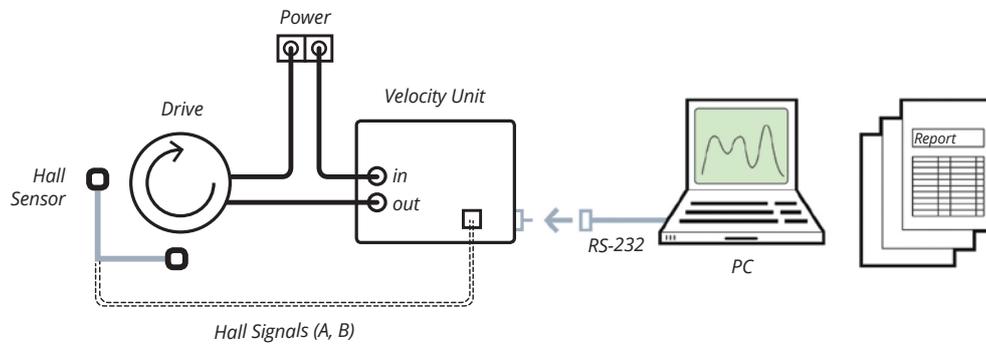
Velocity Unit device. It is connected to the PC by a RS-232 interface. Raw data is compiled by MotionLab software into so called Profile files. Profiles are stored in the convenient and disk saving TDMS file format.

Evaluation rules are defined in a XML file, which contains minimum and maximum values for the characteristic quantities of the drive. Rules can be applied with hall increment precision to an unlimited number of position ranges. Additionally, MotionLab allows the conversion of drive hall increment count to linear positions of an attached mechanical systems, e. g. the stroke of a car power window. This facilitates evaluation and analysis of the quality of the assembled device.

For analysis of profiles MotionLab visualizes recorded quantities and evaluation rules in a graph. The simultaneous display of various quantities, e. g. voltage and current in a combined single or multiple graphs is possible. MotionLab allows the simultaneous display of a large number of profiles, which makes trends and abnormalities recognizable instantly. A pass rate in percent of loaded evaluation rules is constantly visible.

MotionLab at a glance

- **Acquire** – Current, voltage and velocity of electrical drives can be recorded synchronously to a position signal.
- **Evaluate** – Grade signal courses over position.
- **Analyze** – Visualize single or large numbers of signal courses to find trends and abnormalities instantly.
- **Automated or manual** – User operated or automated acquisition of drive profiles.
- **Archive and exchange** – Drive profiles are efficiently stored in TDMS file format.



Scope of delivery:

Option A:

MotionLab stand-alone software for Windows for analysis and manual acquisition of drive profiles.

Option B:

MotionLab library for National Instruments LabVIEW for use in automated processes.

Hardware:

DriveTest Velocity Unit for synchronous measurement of current, voltage and Hall signals. Use with MotionLab stand-alone or LabVIEW library. The communication is realized over RS-232 interface. The operating voltage is 24V.

