Import of Fibex description files

Ipetronik has made a new version of its measurement data logging software available: Ipemotion 2016 R1 offers an advanced range of functions for data analysis and measurement data logging of high-speed signals.

Example of a Campbell diagram (Photo: Ipetronik)

The data logging software permits acoustic analyses on the basis of the Campbell diagram, evaluates Flextay traffic, and optimizes the filling of DAQ lists. In addition, the software features a color grid instrument for depicting 2D classifications. Ipemotion 2016 R1 is compatible with Windows 10.

With regard to measurement data logging, the latest version offers useful extensions. To optimize fill level calculation, when importing A2L description files, it is possible to simplify the filling of DAQ lists via the parameter setting of the ODT (Object Descriptor Table). Since this version supports additional CAN import formats, users can now also import Fibex description files via CAN interfaces in order to perform CANdb measurements.

In terms of the analysis, Ipemotion 2016 R1 analyses Flexray traffic and depicts the results from 2D classifications (e.g. Rainflow) in a color grid. To process the dynamic time raw data files with acoustic programs such as the PAK system from Mueller BBM, the software offers the advanced ATFX data export facility, which also supports individual reference variables. Last but not least, audio signals from G.I.N microphones, based on the CAN traffic format, can be exported to WAV format in order to play back audio recordings.

Acoustic analysis with Campbell diagram

In addition to the control and climate modules, the software also features a module for processing acoustic signals and vibrations. This acoustic module is available as an option in the Professional, Developer, and Analysis editions. The four-channel 100-kHz measurement module Mx-Sens2 4, which is integrated via the associated X-Plugin, serves as a hardware platform.

The acoustic module allows users to analyze large volumes of data from structure and air-borne sound vibrations using standard filter and evaluation functions such as db-A, db-C, linear, etc. as well as the associated indicating instrument. The data is processed in the form of color carpet diagrams such as the Campbell diagram. These diagrams allow the frequency spectra to be calculated via random reference variables, for example in order to establish a reference to the motor or compressor speed.

Overview of the new features of the latest Ipemotion version

Integrated data traceability through to MDF4 export

For all users who place high requirements on data traceability, Ipemotion 2016 R1 presents a solution thanks to key-value pairs. These are supported by all Ipetronik data-loggers and improve the traceability of data, since they combine measured values on channel level with all relevant meta data. As a result, not only is the origin of the data fully transparent throughout the entire hierarchy of the data acquisition system, but also the complexity and hierarchy of file structures are simplified, which in turn facilitates the post-processing. Customer-specific key-value pairs are stored on data-logger level in the form of an XML file. These can be exported individually to the MDF4 format.

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