Test and measurement application for time based and triggered data acquisition

The software package ups64 was developed to monitor the quality of components in a series production. In addition to the actual measurement and data recording, the ups64 focuses on the automatic evaluation of waveforms and limits. Statistic functions allow optimization of parameters on comparable, repeated measurements in a series production. For years the software is successfully in use on test stations build by thyssenkrupp System Engineering.

ups64-Xpress

Being a direct derivative, now the ups64-Xpress is available as an autonomous software product. It is tailored to the time-based and triggered measurement task of analog values and waveforms. The ups64-Xpress can be used as well as in a manual laboratory environment or an automated production processes.

For all users and system integrators, who want to implement a measurement task without programming effort, the ups64-Xpress is the fast track to their target. By setting parameters and using graphical features, the test procedures and quality control figures will be generated with minimum effort, specific to the application needs.

Application in use

Want to know what ups64 offers? The overall package ups64 includes an enhanced range of functions for measurement, evaluation, data analysis and handling of component variants. The best overview provides our product video on our website www.thyssenkrupp-system-engineering.com under "Automotive Industry - Powertrain Testing - ups64".

The data analysis with ups64-Xpress will be done with the use of the locally stored XML-result files. The data can be accessed during idle times via the application installed on the test place. As an upgrade option a license for separate analysis workplace is possible.

Not implemented are procedures for order and spectral analysis. The test application language can be set and switched to German or English.

engineering.tomorrow.together.
Software - test it now!
You can download the installation package for the ups64-Xpress at any time from our web page www.thyssenkrupp-system-engineering.com under "Automotive Industry - Powertrain Testing - ups64". Fill the contact form, sign the software license agreement and you receive the installation package and the temporary license key. Now, nothing hinders the immediate test run of the ups64-Xpress. Afterwards you can purchase an unlimited license for your target computer.

"We care about the customer requirements and ensure that the ups64-Xpress develops with the users and the technology in mind. Quality control by our team of experts included."

Hardware

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<td>Analog inputs</td>
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The data acquisition equipment specified for ups64-Xpress can be ordered from National Instruments directly, check online under http://www.ni.com/data-acquisition/compactdaq.

Parameterization of new evaluation limits will be done with the integrated Parameter Manager. Individual evaluation criteria can be defined for each waveform and are considered for the overall test result validation of the test sequence (OK/NOK).

Each evaluation method can be applied to any waveform as many times as wanted.

The following evaluation methods are available:
- Minimum, position of the minimum, relative minimum
- Maximum, position of the maximum, relative maximum
- Negative integral, relative negative integral
- Positive integral, relative positive integral
- Range/area
- Zero point, number zero positions, position of the first zero position
- Standard deviation
- Average
As you may have a certain test sequence in mind already, you just use the graphical sequence editor to set up the test to your needs.

Various elements are available for the test sequence generation:
- Sensor check
- Measurement of analog channels (parameters: channel number, channel name, recording frequency, recording time, ...)
- Recalculation of two measured waveforms to one new curve (e.g. force against displacement)
- Wait for digital input
- Set digital outputs
- Idle times
- Function to allow parallel processes
- Output of the overall result to a digital output
- and others

The measurement of the analog channels can be triggered for up to six times within one test cycle. Multistage processes can be created easily.

Along with the installation package you will receive a exemplary test cycle for your modification or duplication. If you prefer you can also start from scratch.

For common applications in power train assembly you can also purchase ready-to-go test setups from us. During the commissioning phase only application-specific parameters such as e.g. idling times need to be configured.
Interfaces

Following functions are available to control the application with a PLC or key panel:

- Allocation of part type and number via TCP/IP, barcode scanner or keyboard control
- Each part type can get his own test cycle
- Alternative Selection of up to 8 different test cycles via 3 binary coded digital inputs
- Start of the test sequence via digital input
- Test sequence “abort” via digital input
- Data reset via digital input
- Eight events (DI) for processing during test sequence
- Start trigger to start data logging
- Twelve (12) outputs for data processing during test cycle
- Digital output "test result OK"
- Digital output "Measurement in progress"
- Digital output „Ready for measurement start“
- Data storage in XML format
- Manual data export to csv file

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Engineering Support

Professional help and assistance can be booked through our Service department and any time.

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