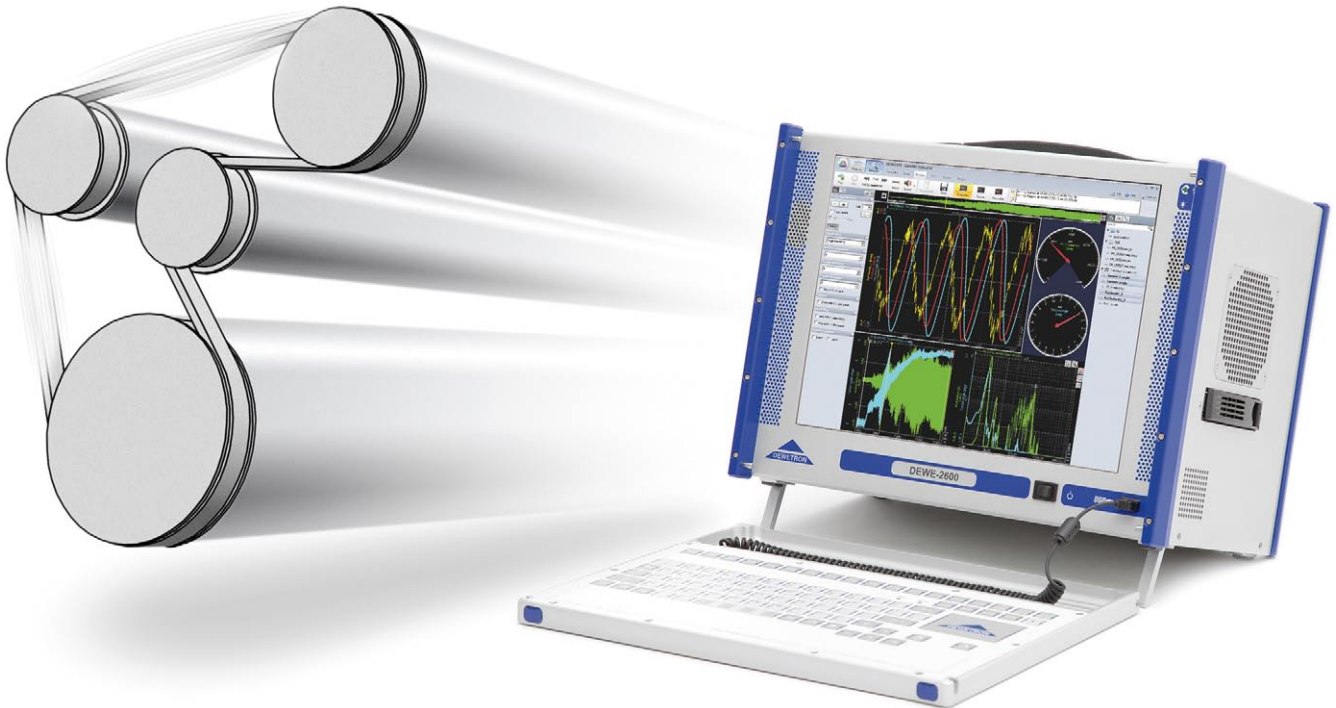


Automotive
Energy & Power Analysis
Aerospace
Transportation
General Test & Measurement



Torsional and Rotational Vibration

Rotating machines and engines are sources of rotational and torsional vibration. Rotational vibration is a result of the change in shaft speed during one revolution and torsional vibration is due to angular twist in the shaft or drive train which may cause fatigue.

So you will observe: vibration, force, strain, voltage, current, power, CAN data and rotational- and torsional vibration with only one instrument at the same time.

That's unique!

Key Features

- Time domain measurement
- Angle based view
- Additional to all other functions (analog, CAN, GPS, video, ...)
- Configurable display
- Direct sensor connection
- 80 MHz time base
- High resolution $\pm 0,03\text{rpm}$ $\pm 2\text{mdeg}@12000\text{rpm}$

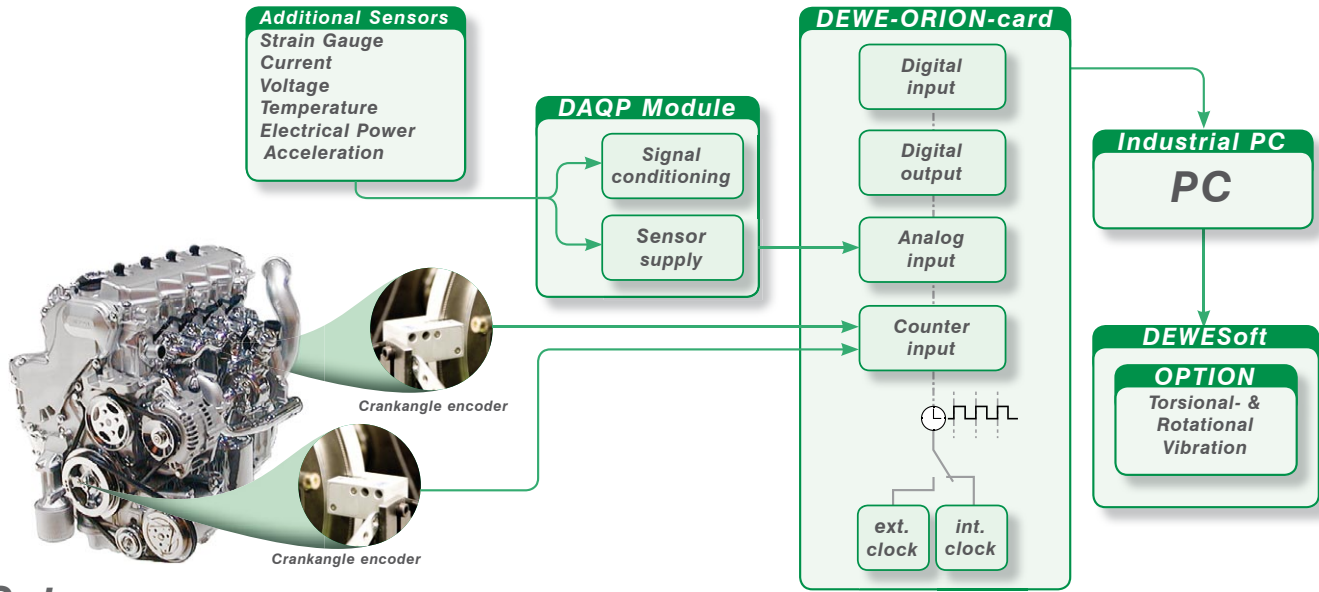
Applications

- Power train
- Paper mill
- Combustion engine
- Belt drive
- Engine test bench
- Power plant testing and monitoring
- Examination of rotating field

Re-inventing Data Acquisition

worldwide
DEWETRON
www.dewetron.com

Overview



Setup

For rotational vibration measurement one rpm sensor is used to determine the rpm deviation and for torsional vibration there is one at each end of the power train. DEWETRON supports a wide range of different sensors e.g. encoder, pickup, RIE-360/720 and many other sensors. All these are connected directly to a counter input of the DEWETRON system. Each counter input provides a power supply, three differential inputs with selectable trigger level compatible with all sensor outputs.

A ready to use template makes it easy to setup the measurement within a few minutes. Digital input filters, a sensor database and a reference curve eliminates sensor errors.

Various output channels are immediately provided for further investigation:

- Reference angle [deg]
- RPM [rpm]
- Rotational angle [deg]
- Rotational velocity [deg/s]
- Rotational acceleration [w/s]
- Torsion angle [deg]
- Torsion velocity

The picture on the right shows a typical analysis screen.

Data is shown either in

- time domain or
- angle domain

together with all other measured channels.

By selecting the order analysis module you will get order based results.

System Requirements

Any DEWETRON system equipped with

- DEWE-ORION series AD card
- 4 available counter inputs
- Software option DEWESoft-OPT-TORVIB

Please ask for your customized solution!

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