DEWESoft®

WELCOME TO THE DEWESOFT EXPERIENCE. ONE SOFTWARE, ONE HARDWARE, ONE SOLUTION.

HARDWARE HIGHLIGHTS

HIGHEST ACCURACY
Even though extremely small, Dewesoft power analyzer is highly accurate with 0.03 % accuracy.

HIGH SAMPLE RATE
Dewesoft data acquisition hardware features high sampling rate amplifiers with a 1 MS/s sampling rate for the HS series.

FULLY ISOLATED
The worry free solution provides isolation on the sensor side (channel to GND, as well as, channel-to-channel) and even isolated sensor excitation! Less noise, no ground loops, best signal quality.

FULLY SYNCHRONIZED
Data from various sources are perfectly aligned: Analog, Digital, Counter, Vehicle buses, Video, ...

VOLTAGE INPUTS
Measurement ranges up to 1600 V DC (CAT II 1000V).

1 MS/s

SYNCHRONIZED

0.03 %

DISTRIBU

1600 V DC

R3

R2DB

SIRIUS

TOTAL SOLUTION

Combine your power measurements with NVH, combustion analysis, Vehicle Dynamics and other powerful Dewesoft tools.

INTERFACES

Intelligent Interfaces for simple and reliable integration to other systems. DCOM, CAN, EtherCAT®, Ethernet, XCP.

SMALLEST POWER ANALYZER

SIRIUS technology allows us to build the world's smallest power analyzer.

PLUG AND PLAY

Any device, sensor or signal. Smart sensors with TEDS are recognized automatically.

FLEXIBLE AND SCALABLE

Dewesoft allows the user to customize the instrument exactly to their needs. Select the instrument and amplifiers and build your perfect measurement instrument. Use the All-In-One Instruments with up to 64 input channels for high channel counts or synchronise any number of modular SIRIUS units for distributed measurement applications.

TEMPERATURE RANGE

Our instruments are the perfect solution for summer and winter testing. The wide operating temperature range allows using them down to -30° C.

ALL-IN-ONE

UTABLE

RUGGED

PORTABLE

R8DB

KRYPTON

KRYPTON 1

HARDWARE OVERVIEW

Low Voltage input	
ADC type	16 bit SAR with 100 kHz 5th order analog AAF filter or bypass
Sampling rate	Simultaneous 1 MS/s
Ranges	±100V, ±50V, ±20V, ±10V, ±5V, ±2V, ±1V, ± 500mV, ±200mV, ±100mV and 50mV
Input impedance (100 V range)	10 (1) MΩ between IN+ or In- and GND
Sensor Excitation	2 to 30 V bipolar / 0 to 24 V unipolar, sw programmable (16 bit DAC), max 0.2 A / 2 W
Overvoltage protection	Range < 10 V: 100V (200 V peak for 10msec); Range ≥ 10 V: 300 V cont.; 1000 V with banana plug
Connector	BNC, DSUB 9, Banana, Screw Connector
Accuracy (DC – 1kHz)	0.03% of reading & 0.02% of range

High Voltage input	
ADC type	16 bit
Sampling rate	Simultaneous 1 MS/s
Ranges	±1600 V, ±800 V, ±400 V, ±200 V, ±100 V, ±50 V, ±20 V
Input impedance	10 MΩ in parallel 2pF
Overvoltage protection	In+ to In-: 4 kVpk-pk , Inx to GND: 2 kVpk-pk , CAT II 1000V, CATIII 600V
Accuracy (DC – 1kHz)	0.03% of reading & 0.02% of range

SIRIUS® MODULAR

Most flexible and distributable single slices with USB and EtherCAT® interface

R4

Integrated solution with 4 SIRIUS slices and powerful SBOX computer or USB hub in one unit with real-time EtherCAT® slave interface

KRYPTON® 1 SERIES

Distribute your measurements down to a single channel

KRYPTON DISTRIBUTED MEASUREMENTS

For Temperature, Digital In & Out and Low speed signals

R8DB/R8

Integrated instrument with 8 SIRIUS slices, powerful SBOX computer, optional 19" display (R8D) and batteries (R8DB) and real-time EtherCAT® slave interface (R8rt)

CUSTOMIZABLE

Our systems are completely customizable to the customers' needs. Amplifiers and connectors can be chosen as well as number of signal inputs and the number of measurement inputs.
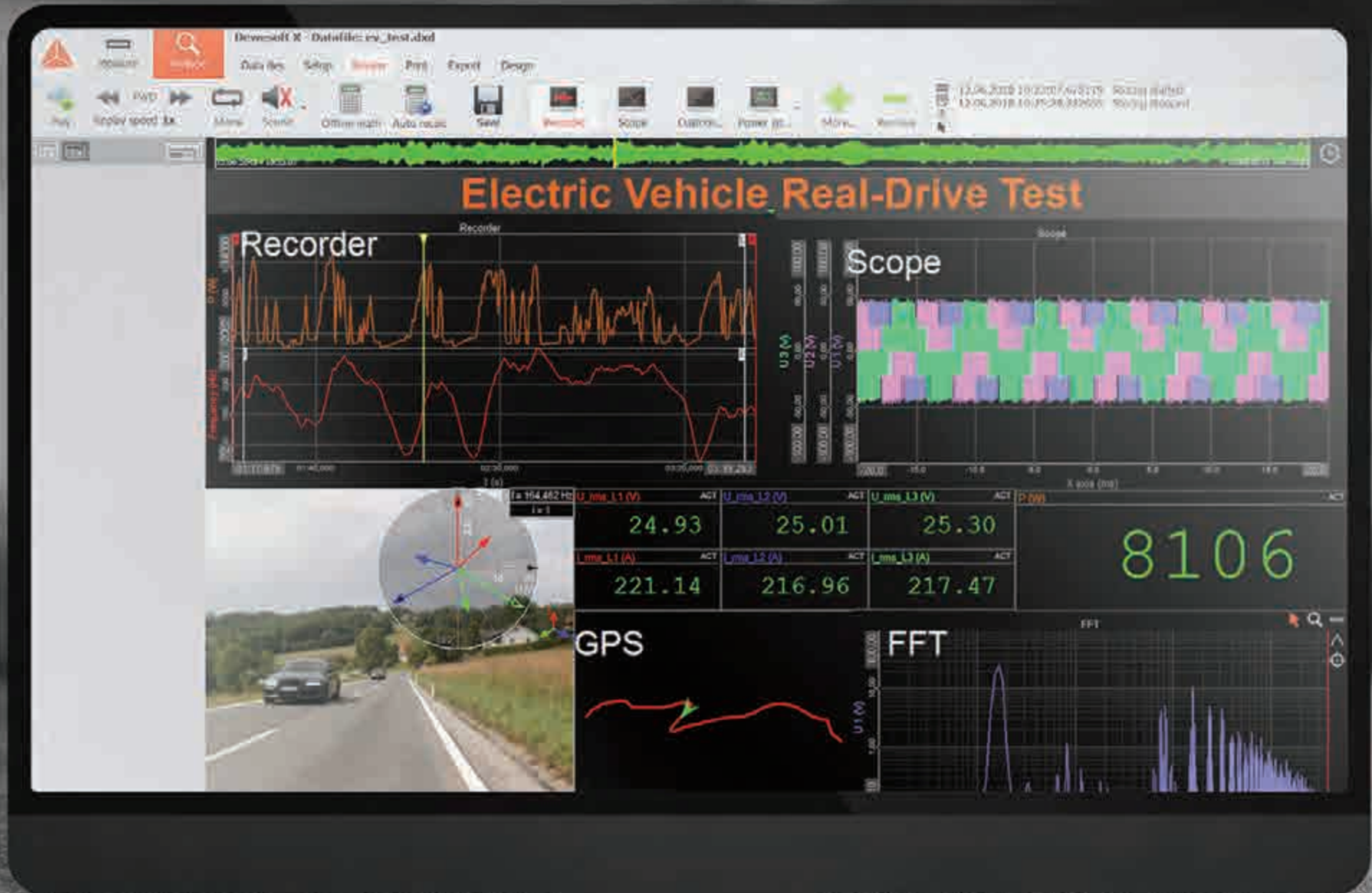
R1DB/R2DB

Small size instrument with embedded computer, 12" display and batteries

R3

Up to 3 SIRIUS slices in a rack mounted lab unit with standard easy-to-upgrade computer

SOFTWARE HIGHLIGHTS

THE DEWESOFT POWER ANALYZER COMBINES THE FUNCTIONALITY OF MULTIPLE INSTRUMENTS IN JUST ONE COMPACT INSTRUMENT.

OUR POWER ANALYZER ISN'T JUST THE SMALLEST ONE IN THE WORLD - IT'S ALSO THE MOST CAPABLE. OUR FLEXIBLE HARDWARE COMBINED WITH DEWESOFT X SOFTWARE CREATES A WHOLE NEW WORLD OF TESTING POSSIBILITIES FOR ELECTRICAL MEASUREMENT APPLICATIONS.
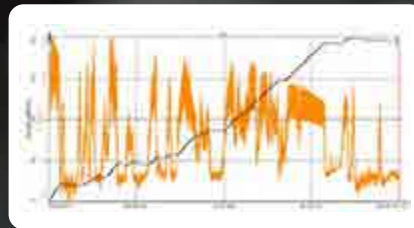
POWER ANALYZER
P, Q, S, PF, cos phi,… Possibility of more than 100 calculable values.
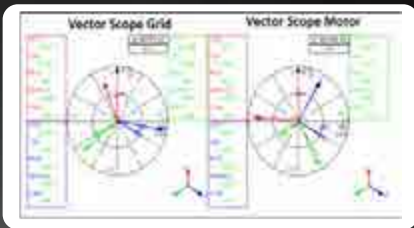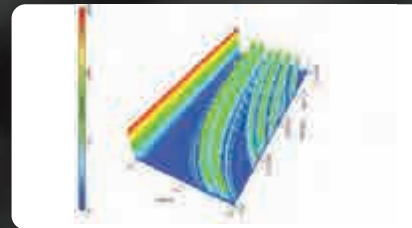
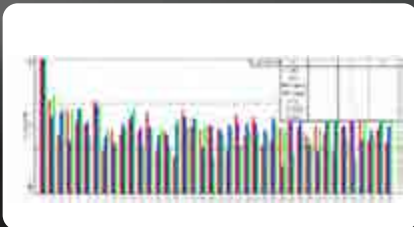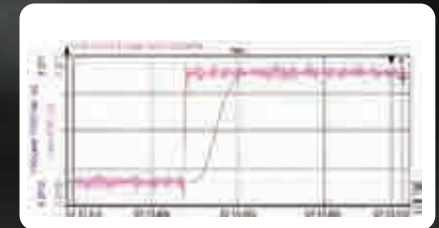### RECORDER / DATA LOGGER
Raw data storing at full sampling rate.

FFT ANALYSIS
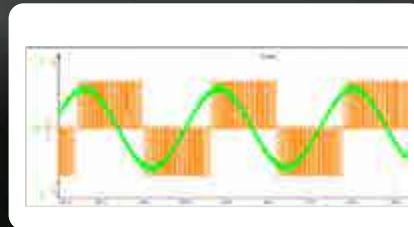2D FFT, 3D FFT, Sideband Marker etc.

POST PROCESSING
Powerful analysis after measurement.

POWER QUALITY
FFT, Harmonic FFT, Harmonics, Interharmonics, Higher Frequencies, Flicker, Flicker emission etc.

STANDARDS
The instruments comply to a list of international standards such as the **IEC61000-4-30** among others.

RAW DATA
Raw Data is essential for a detailed analysis of any electric machine. Transients and oscillations can be captured continuously or with a trigger condition. Power values together with raw data allows the detection of anomalies.
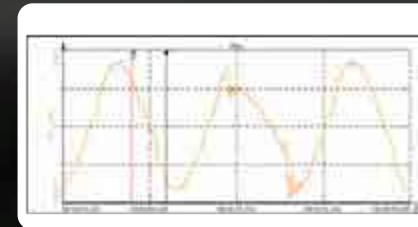
TRANSIENT RECORDING
Triggering on analogue, math or power channels.

STATIC AND DYNAMIC TESTING
Our sophisticated Power calculation algorithms ensure amazing results during both static and dynamic recording conditions. Analysis of both low-speed wind turbine power (<10 Hz), up to high speed electric vehicle motors (<3000 Hz) is possible. Detailed analysis of period-based values is also included.

POWER ANALYZER

HIGH-SAMPLING RATE, HIGH-BANDWIDTH, AND HIGH-ACCURACY HARDWARE FOR POWER ANALYSIS ON ELECTRIC MOTORS, INVERTERS, TRANSFORMERS, SWITCHES AND ANY OTHER ELECTRONIC EQUIPMENT. IN CONJUNCTION SENSORS CAN BE CONNECTED FOR TEMPERATURE, VIBRATION, RPM AND TORQUE MEASUREMENT.

PRECISION POWER ANALYSIS

Dewesoft measurement instruments are unique because of their high accuracy input amplifiers. The basic accuracy from DC to 1 kHz is 0.03 % (of reading). Especially for Power Analysis high-accuracy amplifiers are absolutely necessary. This is unique on the power analyzer market and especially for measurements with variable frequency drives absolutely necessary in order to reach the highest possible accuracy for the measurement results.

Other manufacturers often only have high accuracy levels at 50Hz/60Hz and the accuracy below and above these levels are a lot worse (see chart grey line).

FULLY ISOLATED

Our worry-free solution provides sensor isolation (channel-to-ground), as well as channel-to-channel isolation, and even excitation isolation! Less noise, no ground loops, and the best possible signal quality.
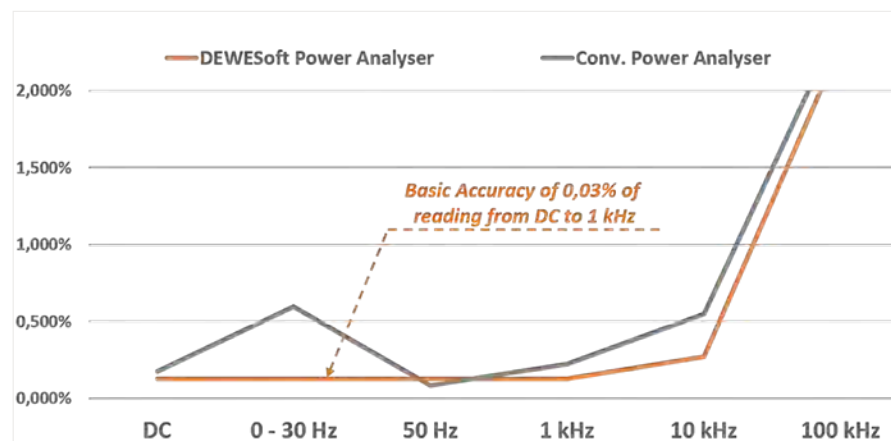
1600 V DC / CAT II 1000 V/ CAT III 600 V

Direct input and acquisition of high voltage signals.

0,03% ACCURACY

We offer high accuracy amplifiers and sensors for voltage and current measurement with accuracy as high as 0,03%.

CURRENT SENSORS

We offer high-accuracy current sensors like zero-flux current transducers, AC/DC current clamps, Rogowsky coils and shunts with the power supply out of the box.

1 MS/S SAMPLING RATE

Dewesoft data acquisition hardware features high sampling rate amplifiers with 1 MS per second sampling rate.

ADVANCED ONLINE AND OFFLINE MATH PROCESSING

Dewesoft X includes an easy-to-use mathematics engine. You can apply math functions in real time, as well as during post-processing.

ALL-IN-ONE SOLUTION

OUR POWER ANALYZER ISN'T JUST THE SMALLEST ONE IN THE WORLD - IT'S ALSO THE MOST CAPABLE. FLEXIBLE HARDWARE COMBINED WITH DEWESOFT X CREATES A WHOLE NEW WORLD OF TESTING POSSIBILITIES FOR ELECTRICAL MEASUREMENT APPLICATIONS.

BATTERY   INVERTER

DC POWER   POWER MOTOR   TORQUE / SPEED   POWER LOAD

ALL-IN-ONE
Multiple power modules can be integrated in a single device.

DISTRIBUTABLE
Several devices can be distributed across the world and are still perfectly synchronized for failure location analysis.

HIGH PRECISION POWER ANALYSIS
High-accuracy Dewesoft hardware combined with Dewesoft X Power software guarantees reliable measurement results.

RAW DATA
Raw Data is essential for detailed analysis of your electric machine. Transients and oscillations can be captured continuously or by a trigger condition. Power values in conjunction with raw data allow for immediate anomaly detection.

STATIC AND DYNAMIC TESTING
Our sophisticated Power calculation algorithms ensure amazing results during both static and dynamic recording conditions. Analysis of both low-speed wind turbine power (<10 Hz), up to high-speed electric vehicle motors (<3000 Hz) is possible. Detailed analysis of period-based values is also included.

POWER CALCULATIONS
The system will calculate more than 100 power parameters like P, Q, S, PF, cos phi and many others. All these calculations can be done online or in post-processing.

SCOPE AND FFT
In addition to the power analysis other useful tools and visualisations are Scope, Vector Scope, Harmonic FFT, 2D FFT, and 3D FFT. For example the 3D FFT of a motor run-up will yield valuable information about the behaviour of the machine in a single plot.

POWER QUALITY ANALYZER

MEASURE ALL THE POWER QUALITY PARAMETERS ACCORDING TO IEC 61000-4-30 CLASS A. DO MORE DETAILED ANALYSES E.G.: RAW DATA STORING, BEHAVIOUR AT FAULTS, CALCULATION OF ADDITIONAL PARAMETERS AND MORE.

VOLTAGE, CURRENT

VIBRATIONS

TEMPERATURE
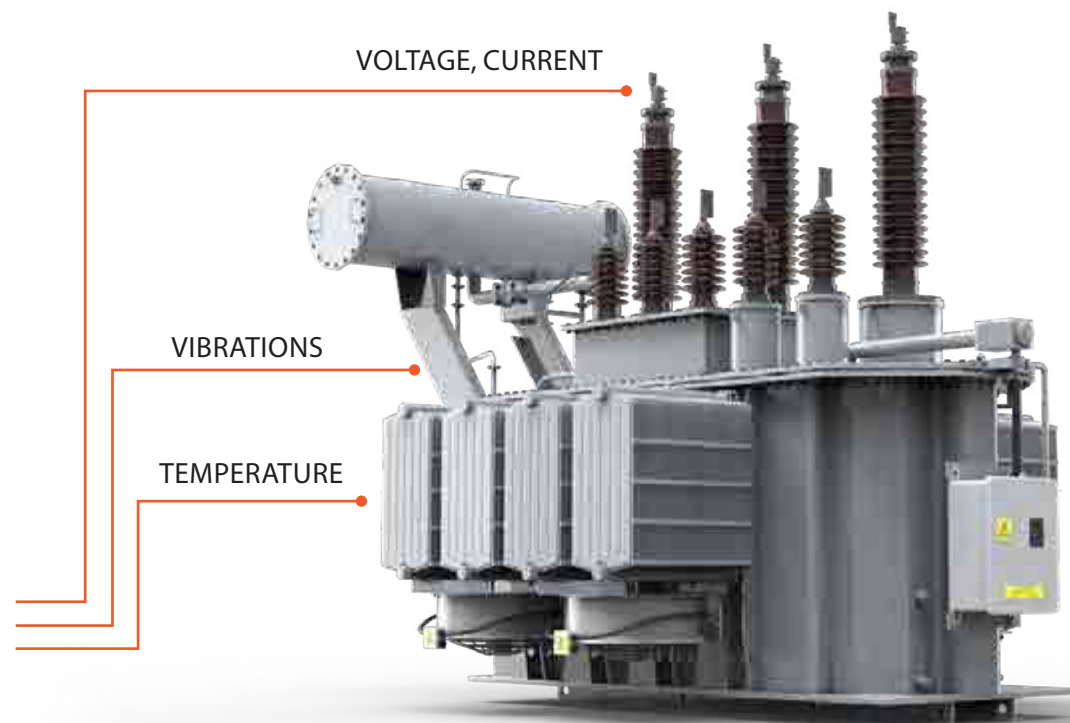
HARMONICS UP TO 150 kHz
Measure and analyze harmonics for voltage, current and THD with frequencies up to 150 kHz. All measurements according to international standards (e.g. IEC-61000-4-7). In addition to the RMS values of each harmonic, the phase angle, active power, reactive power and the impedance are also calculated.

SYMMETRICAL COMPONENTS
Calculation of positive, negative and zero sequence system for voltage, current as well as for active, reactive and apparent power.

THD CALCULATION
Calculation of THD (overall harmonic content) for voltage and current up to the 3000th order.

INTERHARMONICS & HIGHER FREQUENCIES
Measure and analyze interharmonics and higher frequencies. The higher frequency parts can be grouped in 200 Hz bands and/or 2000 Hz bands up to 150 kHz.

FLICKER, FLICKER EMISSIONS & RVCS
Automatic flicker and flicker emission parameters calculation according to IEC-61400-4-15 and IEC-61400-21 standards.

WIND & SOLAR TESTING

THE POWER ANALYSIS MODULE ALLOWS FOR COMPREHENSIVE TESTING OF RENEWABLE POWER GENERATION SOURCES LIKE WIND, SOLAR OR COMBINED HEAT AND POWER (CHP) UNITS. PERFORM ALL OF THAT WITH A SINGLE INSTRUMENT.

POWER PERFORMANCE

A highly accurate Power Analysis for static & dynamic operation at any point (Rotor, Inverter, Grid). Evaluation of Reactive Power provision and power/frequency behaviour. Additional acquisition of wind speed allows for a power performance evaluation according to IEC61400-12.

BEHAVIOUR AT FAULTS

Using raw data for Low Voltage Ride Through (LVRT) analysis. Calculation of symmetrical components (Positive, Negative, Zero-Sequence) as Period Values and calculation of Half-Wave RMS values allows for the evaluation of any kind of fault. All tests can be fully automated using the Sequencer function.
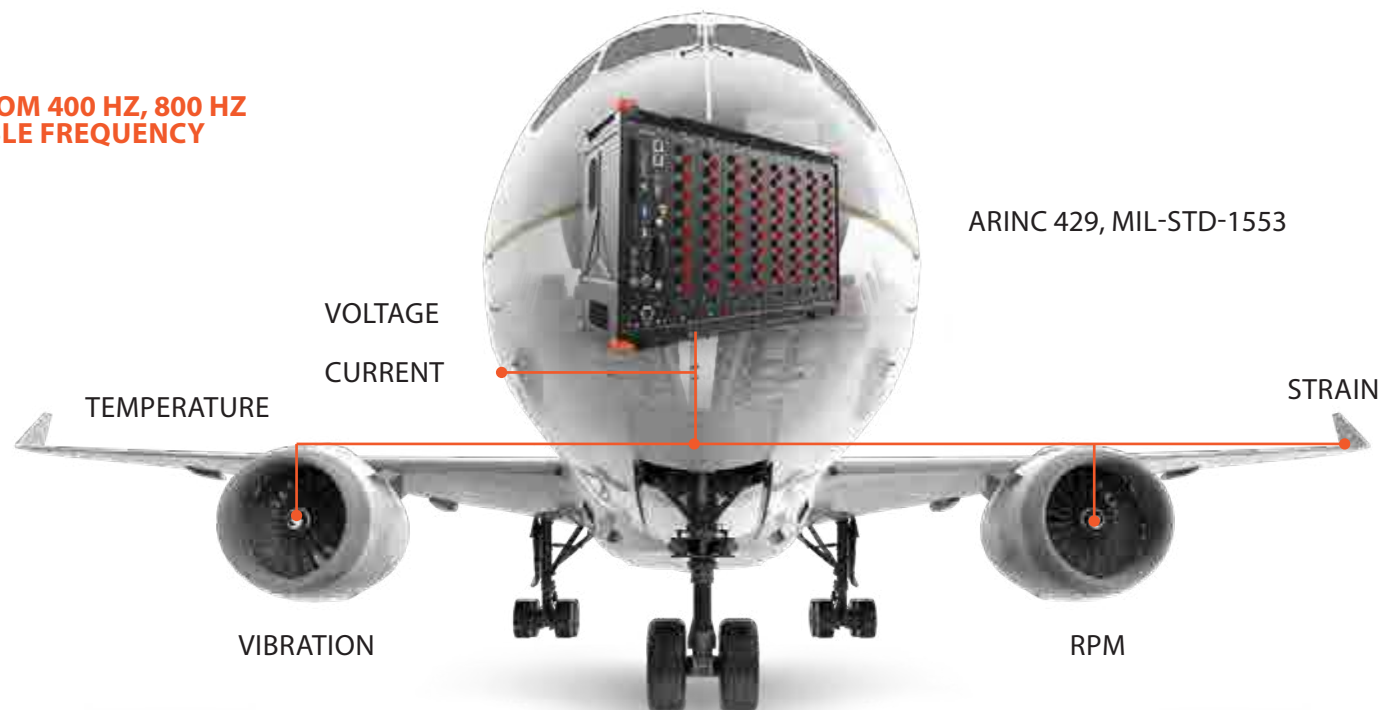
POWER QUALITY ANALYSIS

Calculation of all required parameters like Harmonics, Interharmonics, Higher Frequencies, THD, Unbalance, Flicker coefficient, Flicker Emission and evaluation according to international standards (IEC61400-21, FGW-TR3, VDE AR4105, etc.)

VOLTAGE,
CURRENT

WIND SPEED,
WIND DIRECTION

RPM

100m

STRAIN,
VIBRATION

170m

ELECTRICAL GRID AND POWER SYSTEM TESTING

THE DEWESOFT POWER ANALYSER IS USED IN A WIDE RANGE OF APPLICATIONS. ANY KIND OF ELECTRICAL EQUIPMENT CAN BE TESTED.

POWER FROM 400 HZ, 800 HZ OR VARIABLE FREQUENCY

ARINC 429, MIL-STD-1553

VOLTAGE

CURRENT

TEMPERATURE

STRAIN

VIBRATION

RPM

ELECTRICAL GRID
The typical application is the Power Quality Analysis according to standards and regulations. This system is the perfect tool for troubleshooting. The combined functionalities of a Power Quality Analyser, Scope and Raw Data Logger will find the root of any problem.

RAILWAY
Trains or Railways are operated either with DC or AC at different system frequencies (16.7 Hz, 25 Hz, 50 Hz, 60 Hz). Applications are Pantograph & Conductor Rail testing, Short Circuit tests, Interference Current Analysis, Power Quality and Power System testing.

AIRCRAFT
Aircraft are often operated at 400 Hz or 800 Hz and in addition have standard 50 Hz AC as well as DC systems. PQ Analysis with Harmonic Measurement up to 150 kHz according to ABD or EUROCAE standards, Fault and Transient Recording and Generator testing are just a few of the applications.

MARINE
Electrical Power Systems of ships include electrical equipment like generators, motors, inverters and pumps, etc. which are operated at different voltage levels and frequencies. Testing and Troubleshooting of all the equipment as well as Power Quality Analysis are typical applications here.

ELECTRIC VEHICLE TESTING

ADVANCED YET EASY TO USE SOLUTIONS FOR COMPLETE ELECTRIC AND HYBRID VEHICLE DEVELOPMENT, VALIDATION AND PRODUCTION. THE ELECTRIC MOTOR AND INVERTER TESTING, BATTERY AND BATTERY CHARGE TESTING, COMBUSTION ANALYSIS, HYDROGEN TESTING AND MORE.

EL. MOTOR

INVERTER

BATTERY

AC VOLTAGE, CURRENT

DC VOLTAGE, CURRENT
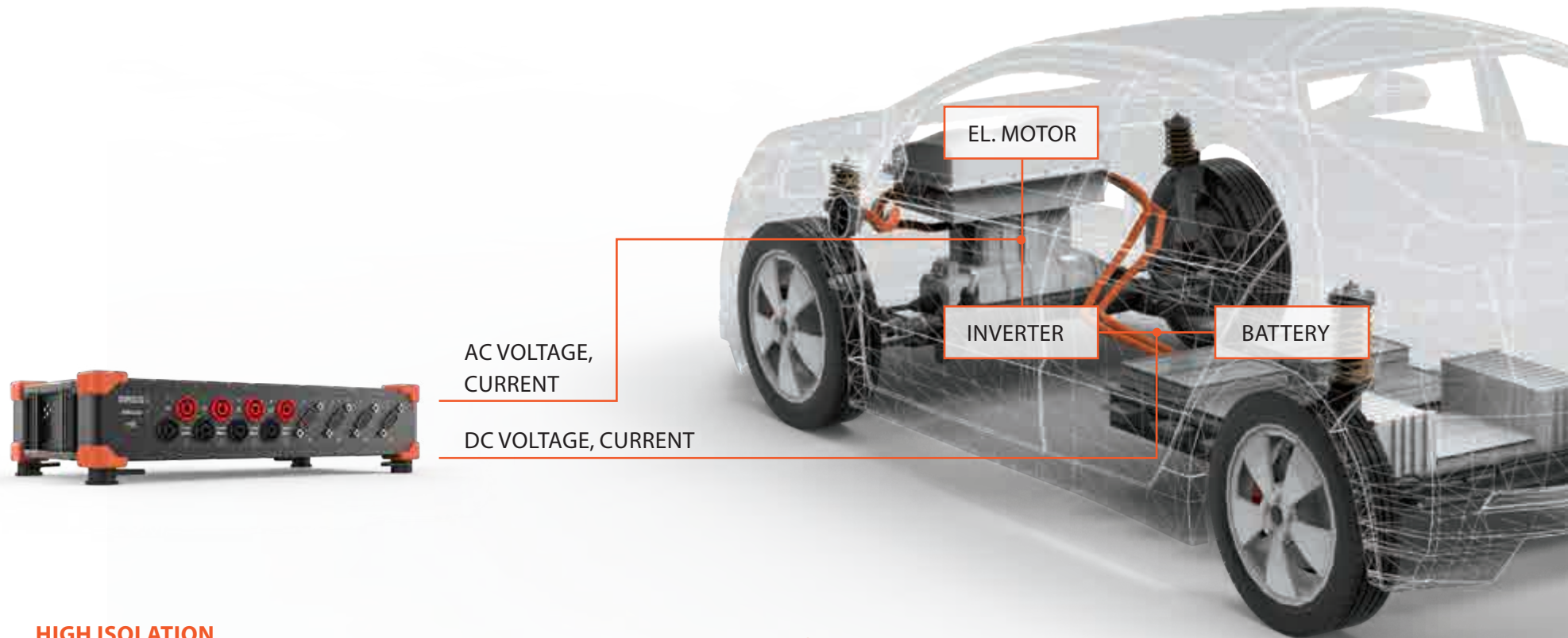
HIGH ISOLATION
Specially designed amplifiers allow for the measurement of voltages and temperatures of up to 1.6 kV DC.

MOTOR & INVERTER
Any kind of motor (1-12 phase AC) and any kind of inverter (DC-AC, AC-AC and switching frequencies up to 100 kHz) can be measured and analyzed by the power module.

DRIVETRAIN
A modular DAQ system allows measuring the power (AC or DC) at multiple points perfectly synchronized. This unique feature allows comprehensive analysis for all types of electric drivetrains: single motor, motor and generator, 2-4x in-wheel-motors.

CHARGING
Power Quality Analysis, Energy & Efficiency and Troubleshooting of EV Charging stations complement the features for EV testing.

WINTER & SUMMER TESTS
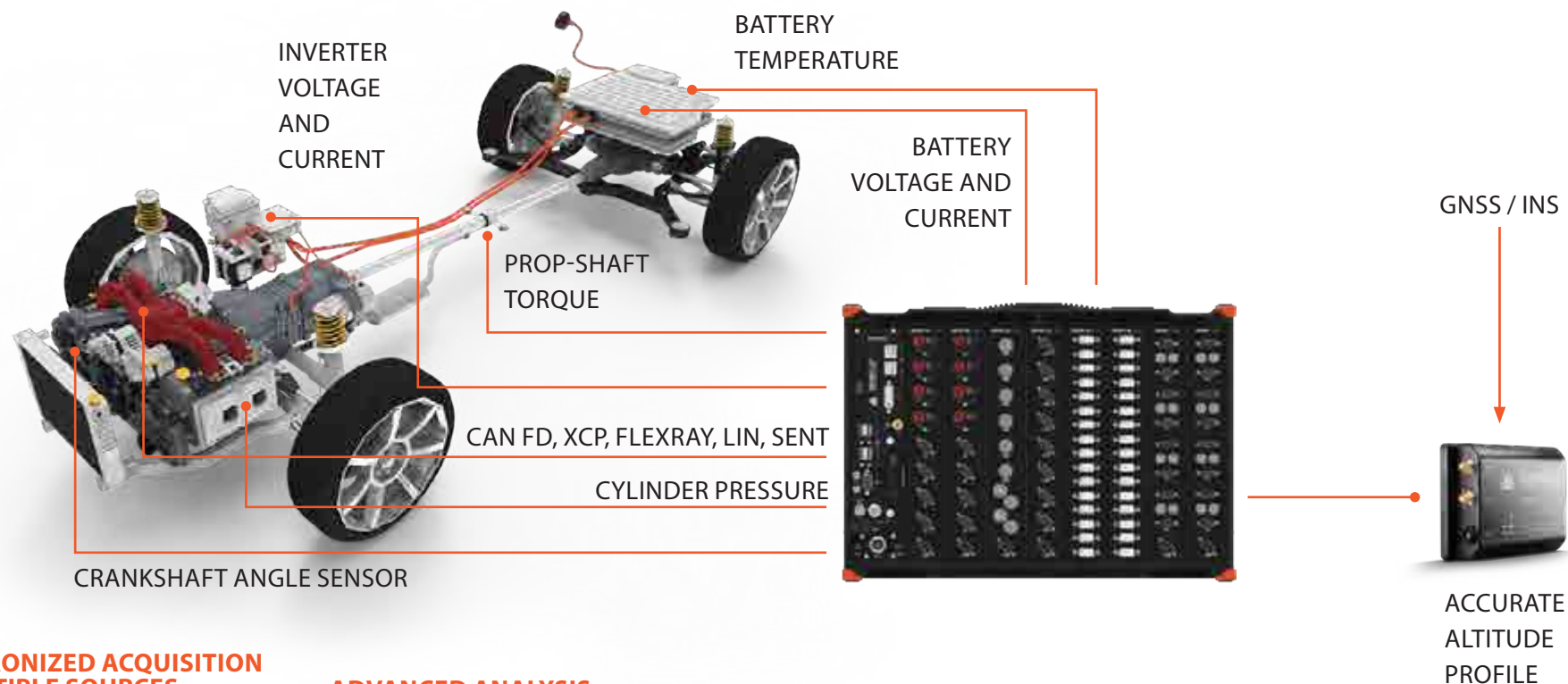This is made possible by the wide temperature operating range of our instruments.

BATTERY
As the central element of the electrical powertrain, the battery requires extensive testing. For dynamic tests (Misuse tests, Overcharge, Short-Circuit etc.) the HS series with 1 MS/s is the perfect fit, while the flexible and scalable IOLITE and KRYPTON series is ideal for static tests (voltage, current, temperature, monitoring etc.).

ALL-IN-ONE HYBRID ENGINE ANALYZER

HIGH-ACCURACY COMBUSTION ANALYZER SYSTEM FOR ENGINE RESEARCH, DEVELOPMENT AND OPTIMIZATION AS WELL AS TESTING OF IGNITION SYSTEMS, EXHAUST SYSTEMS, AND VALVE CONTROL GEAR.

INVERTER VOLTAGE AND CURRENT

BATTERY TEMPERATURE

BATTERY VOLTAGE AND CURRENT

PROP-SHAFT TORQUE

GNSS / INS

CAN FD, XCP, FLEXRAY, LIN, SENT

CYLINDER PRESSURE

CRANKSHAFT ANGLE SENSOR

ACCURATE ALTITUDE PROFILE

SYNCHRONIZED ACQUISITION OF MULTIPLE SOURCES
Synchronized acquisition of other sources, like CAN, OBDII, LIN, J1939, FlexRay, XCP/CCP, Video, etc., is possible within the same system.

ADVANCED ANALYSIS
The same system can be used to perform simultaneous online analysis of torsional and rotational vibration, order tracking, combustion noise, sound power and more…

FLEXIBLE HIGH SPEED ANALOG INPUTS
Analog inputs with 1 MS/sec sampling rate and sensor supply. Any sensor and signal type - Charge, IEPE, High voltage, Current, Strain, Torque, Temperature...

TEST-BED AND INCA® INTEGRATION
The system can send combustion analysis results to the testbed via AK-protocol or to ETAS INCA® and similar systems via CAN or XCP.

STOCK CRANK-ANGLE SENSOR SUPPORT
The system allows direct connection of any gear-tooth sensor. From one gap to multiple gaps, with any number of missing teeth and asymmetric number of teeth between gaps.

HYBRID TESTING
With fully synchronized acquisition and processing of built-in power analyzer, Dewesoft is a perfect tool for testing of hybrid vehicles.

DISTRIBUTABLE

OUR UNIQUE SYSTEM ARCHITECTURE ALLOWS TO FULLY SYNCHRONIZE ANY KIND OF DEWESOFT DEVICE (SIRIUS, KRYPTON, DEWE43, ETC.)

100m

170m

SIRIUSI-HS

SIRIUSI-HS
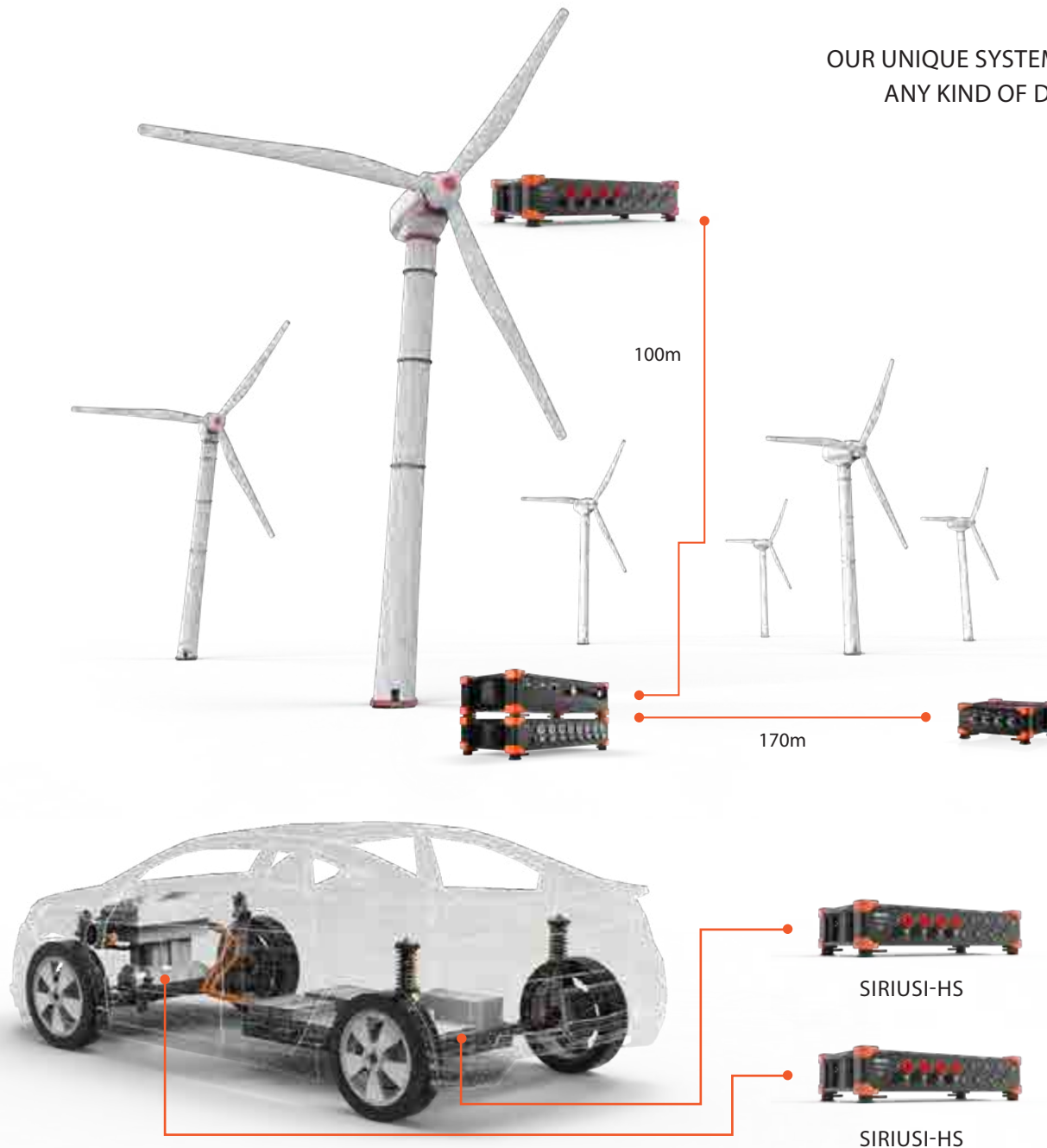
Whether you synchronize the devices directly via synchronization cable (up to 100m) or you need to synchronize measurement locations which are thousands of kilometers away from each other using GPS. Dewesoft allows for both, field tests and testbed operation, always the perfect measurement configuration and setup.

ELECTRIC VEHICLES
Measurements inside electric vehicles can be dangerous as high-voltage cables have to be guided to the measurement instrument. The Dewesoft architecture allows placing the measurement instrument exactly at the point where voltages and currents can be accessed - synchronous and safe measurement!

TESTBED
Synchronization for testbed operation allows the user to place the measurement system inside of the test chamber and just have the computer for data storing and analysis in the control chamber.

FIELD TEST
Wind power - measurement at wind power plants often need synchronized measurements at the nacelle, at the transformer and other locations (e.g. wind speed). Multiple Dewesoft instruments can be placed at different locations and still achieve completely synchronized measurements. All the measured data from the multiple devices can be viewed an analyzed on one computer simultaneously.

CLAMPS & TRANSDUCERS

INTERFACES & SENSORS

HIGH-ACCURACY SENSORS FOR AC/DC CURRENT MEASUREMENT AND POWER ANALYSIS. FROM CURRENT CLAMPS, HIGH-PRECISION ZERO FLUX CURRENT TRANSDUCERS, SHUNTS AND ROGOWSKI COILS.

UP TO 30 000 AMPS
Dewesoft offers a very wide range of current measurement ranges up to 30K amps.

FLEXIBLE
There are more than 1000 different current sensors available on the market. If you want to connect your own or other sensors we are happy to help you here. Dewesoft instruments allow connecting any type of current transducers.

-40°C TO +85°C
Dewesoft offers current transducers with wide temperature range - ideal for winter testing (-40°C) or summer testing (+85°C).

INTEGRATED SENSOR POWER SUPPLY
Current clamps and zero-flux transducer can be powered straight from the DAQ instrument like R2DB, R8 or with external SIRIUS slice compatible chassis.
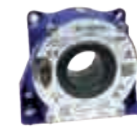
HIGH ACCURACY
Highly precise zero flux current transducers or fluxgate compensated clamps are a perfect fit for most demanding power measurements for E-mobility and inverter motors application.

AC/DC CURRENT MEASUREMENT
Dewesoft offers high-accuracy zero-flux current transducers, Rogowski coils, current clamps and shunts for AC and/or DC current measurement.

CURRENT TRANSDUCERS

	IT 60-S	IT 200-S	IT 400-S	IT 700-S	IT 1000-S	IN 1000-S	IN 2000-S
Primary Current Range DC, RMS Sinus	60 A	200 A	400 A	700 A	1000 A	1000 A	2000 A
Overload Ability Short Time (100 ms)	300 Apk	1000 Apk	2000 Apk	3500 Apk	4000 Apk	5000 Apk	10000 Apk
Max. burden resistor (100 % of Ip)	10 ohm	10 ohm	2.5 ohm	2.5 ohm	2.5 ohm	4 ohm	3.5 ohm
di/dt (accurately followed)	> 25 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs	> 100 A/µs
Temperature influence	< 2.5 ppm/K	< 2 ppm/K	< 1 ppm/K	< 1 ppm/K	< 1 ppm/K	< 0.3 ppm/K	< 0.1 ppm/K
Output Ratio	100 mA at 60 A	200 mA at 200 A	200 mA at 400 A	400 mA at 700 A	1 A at 1000 A	666 mA at 1000 A	1 A at 2000 A
Bandwidth (0.5 % of Ip)	DC ... 800 kHz	DC ... 500 kHz	DC ... 500 kHz	DC ... 250 kHz	DC ... 500 kHz	DC ... 440 kHz	DC ... 140 kHz
Linearity	< 0.002 %	< 0.001 %	< 0.001 %	< 0.001 %	< 0.001 %	< 0.003 %	< 0.003 %
Offset	< 0.025 %	< 0.008 %	< 0.004 %	< 0.005 %	< 0.005 %	0.0012 %	0.0012 %
Frequency Influence	0.04 %/kHz	0.06 %/kHz	0.06 %/kHz	0.12 %/kHz	0.06 %/kHz	0.1 %/kHz	0.1 %/kHz
Angular Accuracy	< 0.025° + 0.06°/kHz	< 0.025° + 0.05°/kHz	< 0.025° + 0.09°/kHz	< 0.025° + 0.18°/kHz	< 0.025° + 0.09°/kHz	< 0.01° + 0.05°/kHz	< 0.01° + 0.075°/kHz
Rated isolation voltage rms, single isolation CAT III, pollution deg. 2 IEC 61010-1 standards EN 50178 standards	2000 V 1000 V	2000 V 1000 V	2000 V 1000 V	1600 V 1000 V	300 V 300 V	1000 V -	1000 V -
Test voltage 50/60 Hz, 1 min	5.4 kV	5.4 kV	5.4 kV	4.6 kV	3.1 kV	4.2 kV	6 kV
Inner diameter	26 mm	26 mm	26 mm	30 mm	30 mm	38 mm	70 mm
Dewesoft Shunt	5 ohm	5 ohm	2 ohm	2 ohm	1 ohm	1 ohm	1 ohm

CURRENT CLAMPS AC/DC

INTERFACES & SENSORS

	DS-CLAMP-200DC	DS-CLAMP-500DC	DS-CLAMP-500DCS	DS-CLAMP-1000DC	DS-CLAMP-150DC	DS-CLAMP-150DCS	DS-CLAMP-1800DC
Type	Flux Gate sensor	Flux Gate sensor	Flux Gate sensor	Flux Gate sensor	Hall sensor	Hall sensor	Hall sensor
Range	200A DC or ACrms	500 ADC or AC rms	500 ADC or AC rms	1000 ADC or AC rms	150 A rms / 300 A peak	150 A rms / 300 A peak	1800A DC or ACrms
Bandwidth	DC to 500 kHz	DC to 100 kHz	DC to 200 kHz	DC to 20 kHz	DC to 100 kHz	DC to 100 kHz	DC to 20 kHz
Accuracy	0.3 % of reading	0.3 % of reading	0.3 % of reading	0.3 % of reading	1 % + 2 mA	1 % + 2 mA	0 - 1000 A: ±2.5 % of reading ±0.5 A 1000 - 1500 A: ±3.5 % of reading 1500 - 1800 A: ±5 % of reading
Phase	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	≤ 0.1 ° (up to 100 Hz)	-	-	-
TEDS	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported	Fully supported
Sensitivity	10 mV/A	4 mV/A	4 mV/A	2 mV/A	20 mV/A	20 mV/A	1 mV/A
Resolution	±1 mA	±1 mA	±1 mA	±1 mA	±1 mA	±1 mA	±200 mA
Overload Capability	500 A (1min)	1000 A DC	720 A DC	1700 A DC	500 A DC (1min)	500 A DC (1min)	2000 A DC (1min)
Dimensions (Ø opening)	153 x 67 x 25 mm (Ø 20 mm)	238 × 116 × 35 mm (Ø 50 mm)	153 x 67 x 25 mm (Ø 20 mm)	238 x 114 x 35 mm (Ø 50 mm)	205 x 60 x 15 mm ((Ø 32 mm)	106 x 100 x 25 mm ((Ø 25 mm)	205 x 60 x 15 mm (Ø 32 mm)

CURRENT CLAMPS AC / ROGOWSKY COILS AC

	DS-CLAMP-5AC	DS-CLAMP-15AC	DS-CLAMP-200AC	DS-CLAMP-1000AC
Type	Iron-Core	Iron-Core	Iron-Core	Iron-Core
Range	5 A	15 A	200 A	1000 A
Bandwidth	5 kHz	10 kHz	10 kHz	10 kHz
Accuracy	1 - 12 A: ± 0,5 % of reading 0.5 - 1 A: ± 1 % of reading 5 mA - 0,5 A: ± 2 % of reading	1% for currents of 1 - 15 A 2.5% for currents < 1 A	1% for currents of 100 - 240 A 2,5% for currents of 10 - 100 A 3,5% for currents of 0,5 - 10 A	0,3% for currents of 100A - 1200 A 0,5% for currents of 10A - 100 A 2 % for currents < 1A
Phase	1 - 12 A: ± 1 ° 0.5 - 1 A: ± 1 ° 5 mA - 0.5 A: ± 2 °	≤ 3° for currents of 1 - 15 A ≤ 5° for currents < 1 A	≤ 2,5° for currents of 100 - 240 A ≤ 5° for currents of 10 - 100 A not specified for currents of 0,5 - 10 A	0,7° for currents of 100A - 1200 A 1° for currents of 10A - 100 A not specified for currents of < 1A
TEDS	Fully Supported	Fully Supported	Fully Supported	Fully Supported
Sensitivity	100 mV/A	100 mV/A	10 mV/A	1 mV/A
Resolution	-	0.01 A	0.5 A	0.001 A
Overload Capability	-	Crest Factor of 3	Crest Factor of 3	1200 A for 40 minutes
Dimensions (Clamp opening)	102 x 34 x 24 mm (Ø 15mm)	135 x 51 x 30 mm (Ø 22mm)	135 x 51 x 30 mm (Ø 22mm)	216 x 111 x 45 mm (Ø 53mm)

Other Current Transducers for AC and DC measurement from 300 mA up to 4000 A on request.

	DS-FLEX-3000-17	DS-FLEX-3000-35	DS-FLEX-3000-35-HS	DS-FLEX-3000-80	DS-FLEX-30000-120
Type	Rogowski coil	Rogowski coil	Rogowski coil	Rogowski coil	Rogowski coil
Range	3 A, 30A, 300 A, 3000 A	3 A, 30A, 300 A, 3000 A	3000 A	3 A, 30A, 300 A, 3000 A	3 A, 300 A, 3000 A, 30000 A
Bandwidth	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	5 Hz - 1MHz	3 A: 10 Hz to 10 kHz Others: 10 Hz to 20 kHz	3 A: 10 Hz to 5 kHz Others: 10 Hz to 20 kHz
Accuracy	≤1,5 %	≤1,5 %	≤1,5 %	≤1,5 %	≤1,5 %
Coil Length	170 mm (Ø 145 mm)	350 mm (Ø 100 mm)	350 mm (Ø 100 mm)	800 mm (Ø 250 mm)	1200 mm (Ø 380 mm)
TEDS	Not Supported	Not Supported	Fully Supported	not supported	Not Supported

	DSIi-10A	DSIi-20A	DS-SHUNT-05
Type	Current Transducer	Current Transducer	Shunt
Current range	10 AC/DC	20 AC/DC	5A
Bandwidth	100 kHz	100 kHz	-
Accuracy	0.3%	0.3%	0,1%
Resistance	-	-	50 mOhm

SENSOR POWER SUPPLY

MOST OF THE CURRENT SENSORS CAN GET POWER SUPPLY DIRECTLY OUT OF THE AMPLIFIER (HS-LV OR LV) LIKE ROGOWSKI COILS, AC/DC CLAMPS, DSI-ADAPTERS. FOR CURRENT SENSORS WITH HIGH-POWER CONSUMPTION LIKE AC/DC FLUXGATE CLAMPS OR THE ZERO-FLUX TRANSDUCERS THERE IS AN ADDITIONAL POWER SUPPLY UNIT AVAILABLE, WHICH CAN BE FULLY INTEGRATED INTO ALL-IN-ONE INSTRUMENT (R8D, R2D) OR AS EXTERNAL SIRIUS BOX. THE MOST COMPACT POWER SUPPLY SOLUTION ON THE MARKET.

DIRECT CONNECTION TO THE AMPLIFIER (LV)

CONNECTION VIA SIRIUSi-PWR-MCTS2

SIRIUSI-PWR-MCTS2

SIRIUS-4XHS-HV, 4XHS-LV

DS-CLAMP-200DC

D9M-D9F-03M-CLAMP

SIRIUSI-PWR-MCTS 2

SIRIUSI-HS 4XHV, 4XLV

D9M-D9F-03M-CLAMP

IT-400S

D9M-D9F-5M-MCTS

SIRIUSi-PWR-MCTS2 / SIRIUSir-PWR-MCTS2	
Power supply	9-36V DC
Max power consumption	85 W
Physical dimensions	265 x 140 x 65 [mm]
Operating temperature	-20 to 50°C
Storage temperature	-40 to 85°C
Humidity (@60°C)	95% RH non-condensing
Output	4x Isolated Power supply (1500V DC, 60sec)
Output voltage	+/-15V DC
Maximum output per channel	20 W
Short circuit protection	indefinite (automatic recovery)
Over load protection	150 % of Iout max. typ

FUNCTIONALITIES

POWER ANALYSIS

Functionality	Dewesoft Power Analyzer
Power Analysis for DC and AC	✓
Power Analysis	P, Q, S, PF, cos phi, D (Distortion), DH (Harmonic distortion), QH (reactive power of harmonics) (for each phase and total)
Fundamental Power	P_H1, Q_H1, S_H1, cos phi_H1, phi_H1 (for each phase and total)
Voltage and Current	RMS, RM, AVE (star and delta)
Energy Calculation	Total, positive and negative (e.g. Recuperation)
Efficiency	✓
Wiring Schematics	DC, 1-phase, 2-phase, 3-phase delta, 3-phase star, 3-phase V, 3-phase Aron, 6-phase (R2DB, R8D), 7-phase (R2DB, R8D, 12-phase (R8D))
Star-Delta Calculation	✓ (waveform and RMS values)
Frequencies	16.7 Hz, 25 Hz, 50 Hz, 60 Hz, 400 Hz, 800 Hz, Variable from 0.5 Hz up to 1.5 kHz
Frequency Source	Voltage, current, external
Period Values	U, I, P, Q, S, symmetrical components for ½, 1, 2 or 4 periods and selectable Overlap up to 99%
Number of Cycles for Power Calculation	5 - 12
Power Averaging	Selectable - starting from 1ms , Multiple Averaging (e.g. 20 ms, 60 s, 600 s) possible

SOFTWARE FUNCTIONALITY

Functionality	Dewesoft Power Analyzer
Power Analysis	✓
Power Quality Analysis	✓
Database Storing	✓
Post Processing	✓
Math Library	✓
Data logging - Raw data storing	✓ (data Storing in Full Sampling rate of 1 MS/s per channel)
Scope	✓ (up to 8 graphs in one diagram, Zoom In- and Out)
Vector Scope	✓ (1-, 2-, 3-phase systems)
FFT	✓ (up to ½ of Sampling Rate)
Harmonic FFT	✓ (up to ¼ of Sampling Rate)
Transient Recording	✓ (up to 1 MS/s)
Triggering Channels	Analog, Digital, Counter, Math, Power, etc.
Triggering options	Simple edge (rising, falling), Window (two-levels: entering, leaving), Pulsewidth (longer or shorter than duration), Window and Pulsewidth, Slope Trigger (rising or falling slope with steepness)

POWER QUALITY

Functionality	Dewesoft Power Analyzer
Harmonics (according to IEC61000-4-7)	up to 150 kHz for voltage, current, active-, reactive power, phase angle and impedance
Variable Sidebands and Half Sidebands (according to IEC61000-4-7)	✓
Harmonic Smoothing Filter (according to IEC61000-4-7)	✓
Interharmonics (according to IEC61000-4-7)	✓
Total Harmonic Distortion (THD) (according to IEC61000-4-7)	Voltage and current (Total, odd and even) - selectable up to 150 kHz
Total Interharmonic Distortion (TIHD) and K-factor (according to IEC61000-4-7)	Voltage and current (Total, odd and even) - selectable up to 150 kHz

Higher Frequencies (according to IEC61000-4-7)	up to 150 kHz (grouping in 200Hz bands)
Flicker (according to IEC61000-4-15)	selectable PST and PLT
Flicker Emission (according to IEC61400-21)	✓
Rapid Voltage Changes (according to IEC61000-4-15)	selectable steady state and hysteresis
Symmetrical Components (according to IEC61000-4-30)	Zero-, positive- & negative system for voltage and current (absolute or relative to fundamental)
Additional Symmetrical Components (according to IEC61400-21)	Active and reactive parts for zero-, positive- & negative system

OUR COMPANY

BUILT WITH YOU
AND FOR YOU

The best solutions can be made only by a motivated team of people who love their work – those who design and build instruments with a spark in their eyes, and those who light up when they have an idea for improvement. Working with you, we are creating Dewesoft together.

EVERYTHING
IN HOUSE

Everything is made in our headquarters in the EU. We own our key technologies, like our software and hardware development labs, chassis manufacturing, pick & place, assembly and testing. It's all done in-house with our own committed employees.

BUILD TO
LAST

Dewesoft is built to last, strongly investing in people, our technology and our own sales network. Dewesoft is owned by the employees – self-financed, and with a AAA credit rating.

HIGHEST
QUALITY

Quality certificates are only the tip of the iceberg of our commitment to quality in all our processes. We are extremely proud that our work had been recognized for excellence with a variety of international and local awards, including NASA TECH award "PRODUCT OF THE YEAR" and Automotive Testing International magazine "SOFTWARE INNOVATION OF THE YEAR".
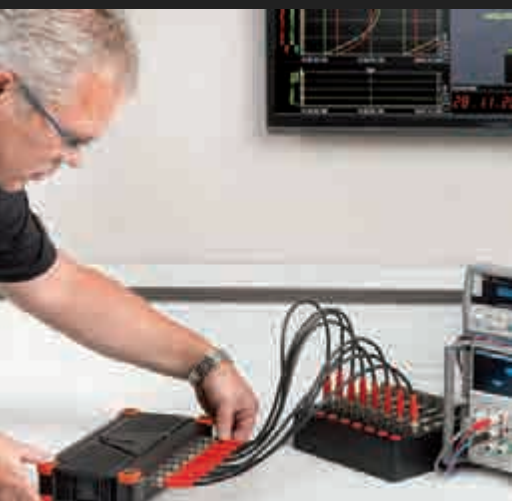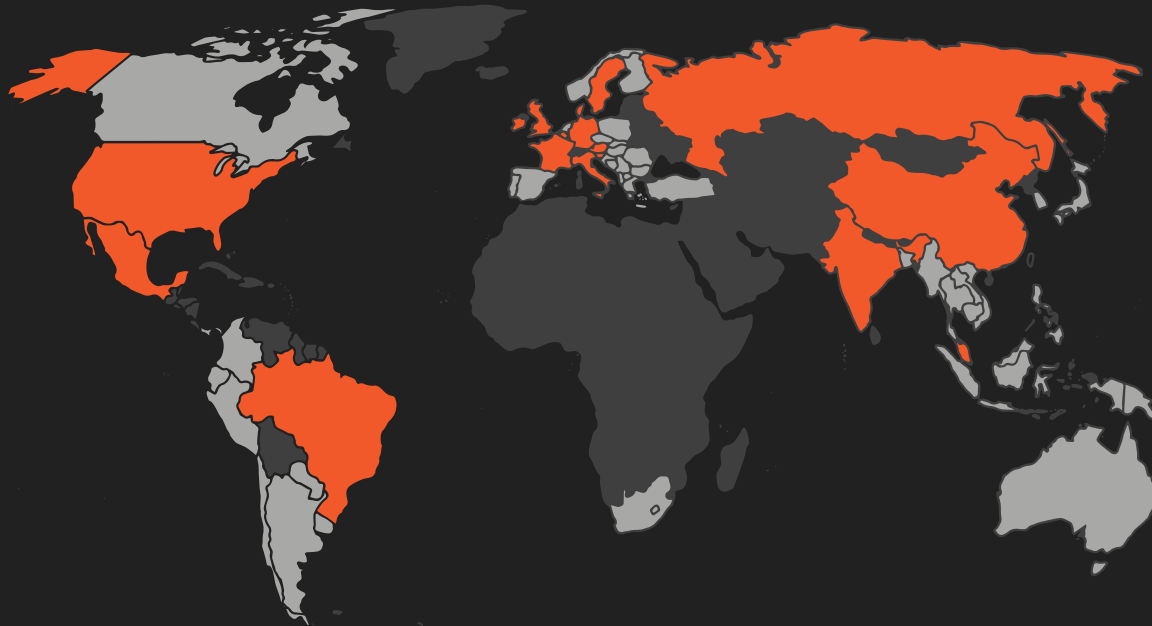
DEWESOFT® WORLDWIDE: SLOVENIA, Austria, Belgium, Brazil, China, Denmark, France, Germany, Hong Kong, India, Italy, Mexico, Russia, Singapore, Sweden, UK, USA and PARTNERS IN MORE THAN 50 COUNTRIES

DEWESoft LLC
10730 Logan Street
Whitehouse, Ohio 43571

+1-855-339-3669
www.dewesoft.com
support.us@dewesoft.com
sales.us@dewesoft.com