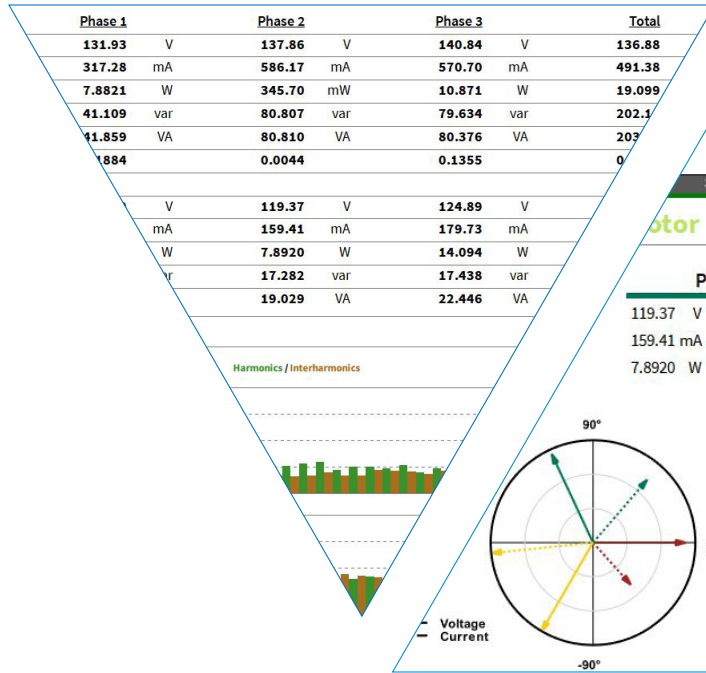




DEWETRON



# HIGH-PRECISION POWER ANALYZERS



# FULL RANGE OF DEWETRON POWER ANALYZERS

DEWETRON offers a full range of power analyzers, which are divided into two groups: Traditional **Standard Power Analyzers** and **Advanced Power Analyzers**.



Regardless of the model, all our power analyzers have these key facts in common:

- > 0.04% wideband power accuracy
- > Very intuitive user interface
- > Many advanced analyses, such as D/Q transformation, etc.
- > Various interfaces and easy integration into host systems
- > License-free analysis and reporting software for an unlimited number of PCs



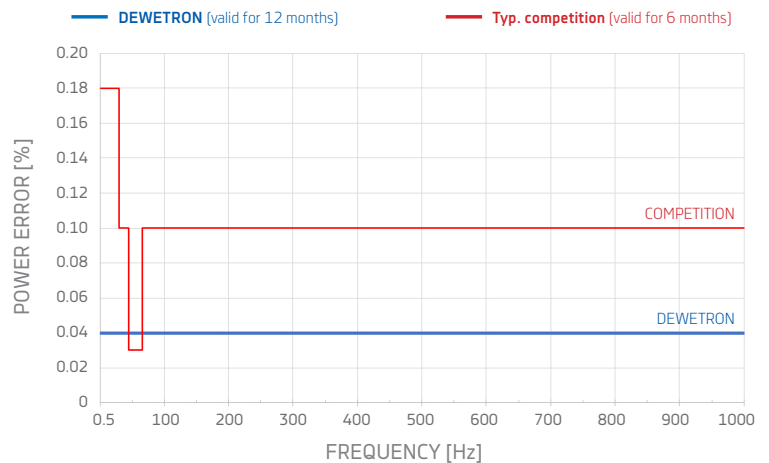
## HIGH WIDEBAND POWER ACCURACY

The power accuracy of DEWETRON's power analyzers is stunning. Compared to other power analyzers available on the market, they offer a **constant power accuracy of ±0.04 %** from 0.5 Hz to 1000 Hz fundamental frequency. High-precision measurements over a wide frequency range are a central requirement for today's typical applications.

In addition, users can always measure worry-free without having to care about the level of the input signals, because the DEWETRON power analyzer **accuracy specification applies from 1 % to 100 % of the measuring range**.

Finally, the system is delivered with a factory calibration certificate. An accredited calibration, traceable according to **ISO 17025**, can be done on request.

POWER ERROR OVER FREQUENCY



## STANDARD POWER ANALYZERS

Our standard power analyzers offer inputs for **4 or 8 phases** (U and I) as well as speed and torque measurements. The DEWETRON extra value for standard power analyzers is that our XR-series modules can be connected for low-speed inputs (thermocouple, RTD, 0-20 mA, V) up to 200 S/s. The system offers a variety of interfaces, such as CAN, Ethernet and USB.

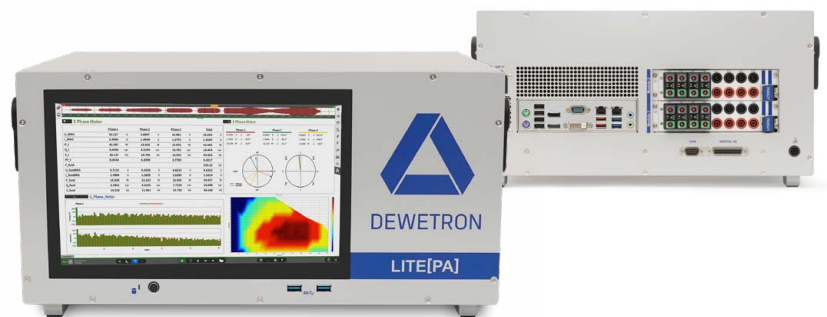
STANDARD

### LITE[PA]

- > Easiest integration into test stands
- > 4 or 8 phases, 2 MS/s
- > Integrated touch-screen display
- > 19" rack-mountable

#### Typical applications:

- > Industrial motor test bench
- > Component test bench
- > End of line test
- > White goods test



LITE[PA]



# ADVANCED POWER ANALYZERS

Advanced power analyzers offer inputs for up to 16 phases (U and I), speed and torque measurements and opt. additional mixed signal high-speed inputs for any kind of sensors, e.g. accelerometer, strain gauge, microphone, etc. Furthermore, advanced power analyzers allow raw data waveform recording, offer many SYNC options, and some can offer even more interfaces such as EtherCAT and an integrated current transducer power supply. Different chassis are available for stationary and mobile advanced power analyzers that are perfectly tailored to demanding applications.

STATIONARY ADVANCED

## STATIONARY ADVANCED POWER ANALYZERS

### DEWE3-PA8

- > Up to 16 phases (8 slots for exchangeable modules), 10 MS/s
- > Integrated touch-screen display
- > Integrated current transducer power supply
- > 19" rack-mountable

#### Typical stationary advanced applications:

- > Advanced motor test bench (with sound, vibration...)
- > Smart grid evaluation
- > Radar station test (power and control system)
- > Transformer coil losses



DEWE3-PA8 


### DEWE3-PA8-RM

- > Up to 16 phases (8 slots for exchangeable modules), 10 MS/s
- > HDMI and display port interfaces for external monitors
- > Integrated current transducer power supply
- > 19" rack-mountable

#### Typical stationary advanced applications:

- > Wind power generator
- > Energy storage incl. inverter test
- > Power plant monitoring
- > Component test, e.g. onboard charging unit



DEWE3-PA8-RM 

MOBILE ADVANCED

## MOBILE ADVANCED POWER ANALYZERS

### DEWE3-A4

- > Compact mobile system, DC power supply
- > Up to 8 phases (4 slots for exchangeable modules), 10 MS/s
- > Integrated touch-screen display
- > Opt. layers for off-grid battery operation and current transducer supply

#### Typical mobile advanced applications:

- > In-vehicle energy flow test
- > Aircraft onboard power system
- > Field test, e.g. charging pile, PV troubleshooting, transformer...
- > Electric locomotive test (power and traction)



DEWE3-A4 


### PA-TRIONet3

- > Front-end system with USB3 or Ethernet connection to PC
- > Up to 4 phases (2 slots for exchangeable modules), 1 MS/s
- > DC power supply
- > Smallest power analyzer
- > Opt. layers for off-grid battery operation and current transducer supply

#### Typical mobile advanced applications:

- > Railcar power supply test (distributed)
- > Grid substation inspection
- > Subway monitoring and troubleshooting
- > PV inverter testing



PA-TRIONet3 

## STANDARD POWER ANALYZER

The LITE[PA] is a high-precision power analyzer with 4 or 8 phases. The proven input modules guarantee highly precise measurement results and offer the user enough flexibility to use all common current sensors.

- > Most intuitive user interface for direct device operation, e.g. in laboratory use
- > Effortless data connection to host systems for remote controlled test stand or end-of-line applications



## INTERFACES

For easy data exchange, a variety of interfaces are offered. Inputs for speed and torque are available as standard and make the LITE[PA] suitable for testing electric motors.

- > 4 or 8 high-voltage inputs up to  $\pm 2000 V_{PEAK}$
- > Sub-modules for all current sensors
- > Direct current up to  $20 A_{RMS}$  ( $\pm 40 A_{PEAK}$ )
- > Ethernet for remote control & data exchange
  - > SCPI
  - > XCP
  - > UDP
- > CAN
  - > XR-TH8-S for temperatures
  - > Data transfer to host system
- > Digital I/O
  - > Speed
  - > Torque
  - > Frequency

LITE[PA] SPECIFICATIONS	
Instrument type	All-in-one, standard power analyzer
POWER accuracy 0.5 Hz to 1000 Hz (1 year)	0.04 %
Number of phases	4 / 8
Sampling rate max.	2 MS/s
Bandwidth max.	5 MHz
Current transducer power supply	External, e.g. DW2-CLAMP-DC-POWER-8
Motor evaluation: speed, torque, angle, efficiency map	2 motor inputs
Host system data connection	CAN, Ethernet (SCPI, XCP, UDP)
Additional low-speed inputs (200 S/s) Thermocouple, RTD, 0-20mA, low-voltage	Via XR-series modules, connected to CAN port
Additional high-speed inputs (up to 5 MS/s) Vibration, sound, strain, voltage, etc.	-
Internal storage capacity	256 GB
Raw data waveform recording	-
Display	11,6" multi-touch wide-screen, full HD
Power supply	90 .. 264 V <sub>AC</sub>
Dimensions (W x D x H) without feet and handle	442 x 281 x 222 mm (17.4 x 11.1 x 8.7 in.); 5 u
Weight	4 ch: 9 kg (19.8 lb.); 8 ch: 9.5 kg (21 lb.)

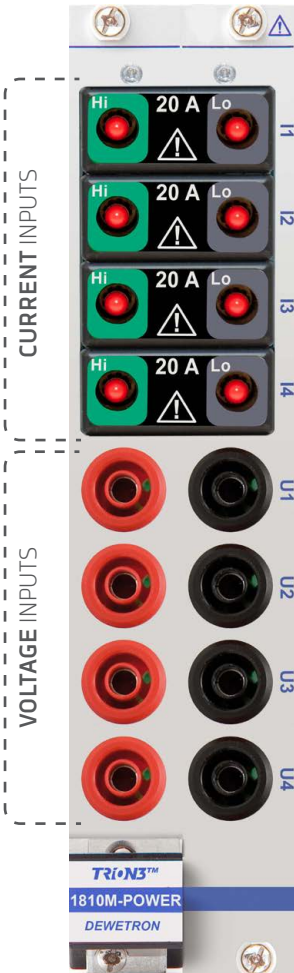
## DATA CONNECTION TO HOST SYSTEMS

The LITE[PA] can easily be integrated into a wide variety of host systems. In addition to the CAN-bus, the data can also be transmitted via Ethernet, with various protocols such as SCPI or XCP. The remote control is usually done via SCPI; extensive commands are available to e.g. load predefined setups, make trigger settings, etc.



# CURRENT MEASUREMENT

We offer several solutions for current measurement from simple shunts to current clamps and high-precision zero flux transducers. There are versions for pure AC current which do not need any power supply and versions for DC and AC current which can be supplied from the DEWETRON instrument.



	RANGE [A <sub>RMS</sub> ]	DIAMETER [mm]	DC	AC	ACCURACY AREA
<b>DIRECT INPUT TRION-POWER-SUB-CUR-XXA</b>					
	0.1 / 0.25 / 0.5 / 1	-	✓	✓	<<0.05 %
	0.2	-	✓	✓	
	1	-	✓	✓	
	2	-	✓	✓	
	20	-	✓	✓	
<b>THROUGH HOLE</b>					
	100	28	✓	✓	<<0.05 %
	200	28	✓	✓	
	400	28	✓	✓	
	500	38	✓	✓	
	1000	38	✓	✓	
	2000	70	✓	✓	
<b>CLAMPS</b>					
	20	20	✓	✓	<0.5 %
	200	20	✓	✓	
	500	50	✓	✓	
	1000	50	✓	✓	
<b>FLEXIBLE</b>					
	4200	85	-	✓	<2.0 %
	42000	210	-	✓	
	Others on demand		-	✓	

## INTEGRATED REDUNDANT TRANSDUCER POWER SUPPLY

Some of the advanced power analyzer models have a built-in redundant power supply for current transformers. Sensors that require a supply voltage of ±15 V or +9 V can be supplied directly, and thus e.g. zero-flux transducers do not require an additional power supply unit.



## EXTERNAL TRANSDUCER POWER SUPPLY

Our general solution for powering up to 8 current transformers is the compact box DW2-CLAMP-DC-POWER-8. This has the same footprint as the DEWE3-A4 and for mobile applications it can be mounted as a stacking layer under the DEWE3-A4.

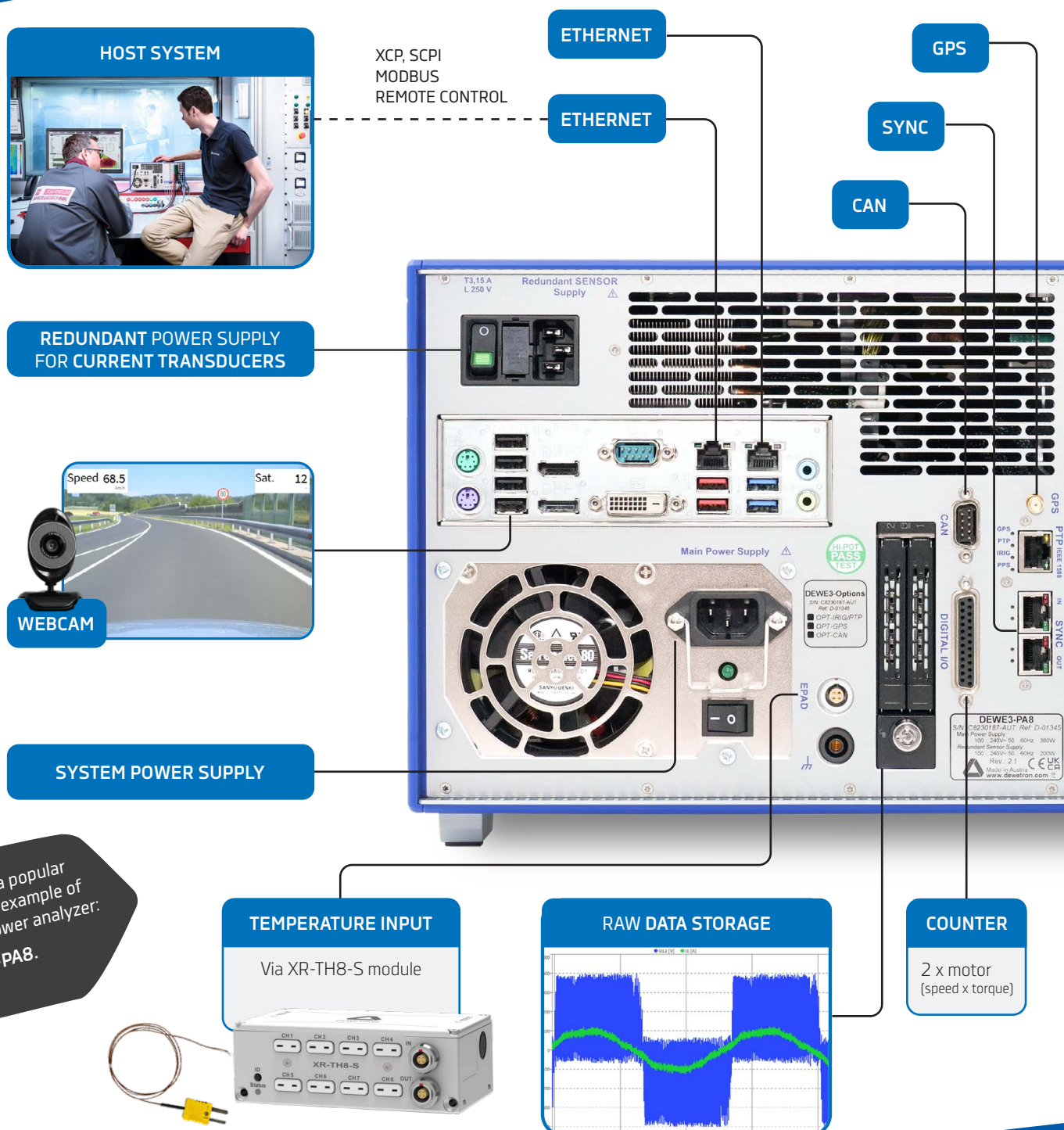
# ADVANCED POWER ANALYZERS

## ULTIMATE PERFORMANCE & FREELY CONFIGURABLE

ADVANCED

Besides industry leading performance in electrical and mechanical power analysis, DEWETRON's advanced power analyzer can become the user's "One-for-All instrument". Hardware and software options for advanced analyses such as NVH or in-depth investigations, e.g. modal testing, can be added at any time.

- > High-precision, high-speed analysis of electrical and mechanical power
- > Optionally add modules to measure any physical parameters to gain deep insights in your device under test
- > Raw data waveform recording at up to 10 MS/s continuously
- > Multiple interfaces for remote control, data exchange and synchronization



Here you see a popular configuration example of one typical power analyzer: The DEWE3-PA8.

DEWE3-PA8



DEWE3-A4



DEWE3-PA8-RM



PA-TRIONet3



### SELECTABLE INPUT MODULES



- > Power
- > Noise & vibration
- > Strain gauge
- > Position, GPS, IMU
- > CAN, FlexRay
- > And many more...



### SELECTABLE CURRENT INPUTS

Selectable sub-modules for compatibility to all current sensors and direct current measurement.



### FIXED HIGH-VOLTAGE INPUTS

$\pm 2000 V_{PEAK}$  Sampling rate: 10 MS/s  
 Bandwidth: 5 MHz Safety: CAT III 1000 V

### POWER SUPPLY FOR CURRENT TRANSDUCERS

8 x current transducer supply

### ANALOG INPUTS

8 x for voltage, microphone, strain gauge, accelerometer...



### EtherCAT FOR TEST STAND CONNECTION



# DEWE3-PA8 & DEWE3-PA8-RM

## STATIONARY ADVANCED POWER ANALYZERS



These are our true powerhouses for demanding applications. Their unmatched data processing performance enables the online analysis of up to 16 phases.

They are preferably used in laboratory or test bench environments.



	DEWE3-PA8	DEWE3-PA8-RM
<b>Instrument type</b>	All-in-one, stationary advanced power analyzer	Mainframe, stationary advanced power analyzer
<b>POWER accuracy 0.5 Hz to 1000 Hz (1 year)</b>		0.04 %
<b>Number of phases</b>		4 / 8 / 12 / 16
<b>Sampling rate max.</b>		10 MS/s
<b>Bandwidth max.</b>		5 MHz
<b>Current transducer power supply</b>	8 x integrated, with redundant supply	8 x integrated, optional upgrade to 16
<b>Motor evaluation:</b> speed, torque, angle, efficiency map	2 motor inputs, opt. 5 motor inputs	
<b>Host system data connection</b>	CAN, Ethernet (SCPI, XCP, UDP), for EtherCAT add TRION-ETHERCAT-1-SLAVE module	
<b>Additional low-speed inputs (200 S/s)</b> Thermocouple, RTD, 0-20mA, low-voltage	Via XR-series modules	
<b>Additional high-speed inputs (up to 5 MS/s)</b> Vibration, sound, strain, voltage, etc.	Plug any TRION or TRION3 series modules into free slots. All modules are user exchangeable.	
<b>Internal storage capacity</b>	1 TB	
<b>Raw data waveform recording</b>	Yes, gapless continuous storing rate of up to 1 GB/s	
<b>Display</b>	11,6" multi-touch wide-screen, Full HD	External monitors via HDMI and display port interfaces
<b>Power supply</b>	90 .. 264 V <sub>AC</sub>	
<b>Dimensions (W x D x H) without feet and handle</b>	442 x 435 x 222 mm (17.4 x 17.1 x 8.7 in.), 5 u	
<b>Weight without modules</b>	Typ. 14 kg (30.9 lb.)	Typ. 15.8 kg (34.8 lb.)





# DEWE3-A4

## MOBILE ADVANCED POWER ANALYZER



The DEWE3-A4 is the ultimate solution for in-vehicle and field power analysis applications. Its mobile and robust design, including stackable layers for battery power (3 hot-swappable batteries) and current transducer supply, ensures safe and reliable operation anywhere.

Important parameters for the practical testing of electric vehicles, such as GPS position, gradient, speed, noise, etc. can be measured perfectly synchronously with the electrical and mechanical performance.



DEWE3-A4 stacked on current transducer supply and battery power boxes

	DEWE3-A4
<b>Instrument type</b>	All-in-one, mobile advanced power analyzer
<b>POWER accuracy 0.5 Hz to 1000 Hz (1 year)</b>	0.04 %
<b>Number of phases</b>	4 / 8
<b>Sampling rate max.</b>	10 MS/s
<b>Bandwidth max.</b>	5 MHz
<b>Current transducer power supply</b>	Optional stackable layer DW2-CLAMP-DC-POWER-8
<b>Motor evaluation:</b> speed, torque, angle, efficiency map	2 motor inputs
<b>Host system data connection</b>	CAN, Ethernet (SCPI, XCP, UDP), for EtherCAT add TRION-ETHERCAT-1-SLAVE module
<b>Additional low-speed inputs (200 S/s)</b> Thermocouple, RTD, 0-20mA, low-voltage	Via XR-series modules
<b>Additional high-speed inputs (up to 5 MS/s)</b> Vibration, sound, strain, voltage, etc.	Plug any TRION or TRION3 series modules into free slots. All modules are user exchangeable.
<b>Internal storage capacity</b>	1 TB
<b>Raw data waveform recording</b>	Yes, gapless continuous storing rate of up to 400 MB/s
<b>Display</b>	13" multi-touch, Full HD
<b>Power supply</b>	10 .. 36 V <sub>DC</sub> , incl. AC adaptor optional internal buffer battery and/or stackable battery pack
<b>Dimensions (W x D x H) without feet and handle</b>	318 x 253 x 128 mm (12.5 x 10 x 5 in.)
<b>Weight without modules</b>	Typ. 5.9 kg (13 lb.)



# PA-TRIONet3



## MOBILE ADVANCED POWER ANALYZER

The PA-TRIONet3 is our front-end power analyzer that connects to a PC via USB3 or Ethernet.

On the one hand, its super-small size makes it the ideal companion for mobile use, e.g. for maintenance and troubleshooting tasks or testing small electric vehicles, and on the other hand, thanks to the Ethernet data connection, it is perfect for distributed power measurements, e.g. microgrid simulations, rail vehicle tests or wind turbine monitoring.



	PA-TRIONet3
<b>Instrument type</b>	Front-end, mobile advanced power analyzer
<b>POWER accuracy 0.5 Hz to 1000 Hz (1 year)</b>	0.04 %
<b>Number of phases</b>	4
<b>Sampling rate max.</b>	1 MS/s
<b>Bandwidth max.</b>	5 MHz
<b>Current transducer power supply</b>	External, e.g. DW2-CLAMP-DC-POWER-8
<b>Motor evaluation:</b> speed, torque, angle, efficiency map	-
<b>Host system data connection</b>	Ethernet (SCPI, XCP, UDP) of used PC
<b>Additional low-speed inputs (200 S/s)</b> Thermocouple, RTD, 0-20mA, low-voltage	-
<b>Additional high-speed inputs (up to 5 MS/s)</b> Vibration, sound, strain, voltage, etc.	-
<b>Internal storage capacity</b>	-
<b>Raw data waveform recording</b>	On connected PC, data transfer rate max. 90 MB/s
<b>Display</b>	Display of connected PC
<b>Power supply</b>	10 to 32 V <sub>DC</sub> incl. AC adaptor optional external battery pack
<b>Dimensions (W x D x H) without feet and handle</b>	320 x 205 x 55 mm (12.6 x 8 x 2.2 in.)
<b>Weight without modules</b>	Typ. 1.9 kg (4.2 lb.)



# EXPANSIONS & BATTERY

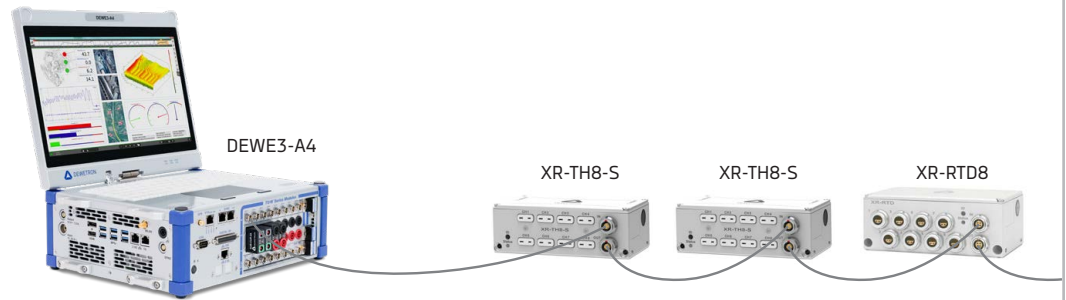
## LOW-SPEED CHANNEL EXPANSIONS









The DEWETRON extra value for all power analyzers is that they can be expanded with XR-modules, our low-speed inputs for thermocouple, voltage, current or RTD measurements. The XR series modules are very robust external units with a sampling rate of up to 200 S/s. The connection to the power analyzers is made via RS-485 or CAN bus interfaces.

- > Very rugged, high precision measurement modules
- > Fully isolated: channel to channel and channel to bus, power and chassis
- > Operating temperature range: -40 to +85 °C
- > User configurable interface: RS-485 or CAN
- > Sampling rate max.: 200 S/s for CAN and 10 S/s for RS-485

### GAIN DEEPER INSIGHTS

Multiple XR series modules can be daisy chained to record additional signals to gain deeper insight into the DUT or document environmental conditions.



XR MODULE	CHANNELS	INPUT RANGES	ISOLATION	SAMPLE RATE PER CHANNEL	IP RATING
 	8 isolated resistance temperature detector (RTD) inputs	Resistance: 0 to 5000 Ω RTD: Pt100, Pt200, Pt500, Pt1000, Pt2000	350 V <sub>DC</sub>	CAN: 200 S/s RS-485: 10 S/s	IP 68 immersion depth 3 m
 	8 isoated thermocouple inputs	Types K, J, T, R, S, N, E, L, C, U, B	1500 V <sub>AC</sub>	CAN: 200 S/s RS-485: 10 S/s	No IP rating
 	8 isolated current inputs	0 to 20 mA; ±20 mA; ±30 mA	350 V <sub>DC</sub>	CAN: 200 S/s RS-485: 10 S/s	tbd.
 	8 isolated voltage inputs	Physical in. range: ±50 V Software selectable: ±100 mV, ±500 mV, ±1 V, ±2.5 V, ±5 V, ±10 V	350 V <sub>DC</sub>	CAN: 200 S/s RS-485: 10 S/s	IP 68 immersion depth 3 m

## BATTERY POWER SUPPLY

For mobile applications, we offer the DEWE-UPS-250-DC, a 250 W system power supply with 3 hot-swappable batteries, which also functions as a battery charger.

This has the same footprint as the DEWE3-A4 and can be mounted as a stacking layer under the DEWE3-A4.

Another popular use case is the combination with the PA-TRIONet3.



# OXYGEN SOFTWARE


All power analyzers are using our easy-to-use OXYGEN measurement software. For offline analysis and reporting tasks, the software can be installed license-free on an unlimited number of analysis PCs.

Within a minute, the basic measurement setup is completed, a predefined screen view displays the relevant parameters and the measurement can begin. All typical power parameters are available to be displayed and stored. Users are free to design their own measurement screens by selecting from a wide range of instruments, displays and meters and assigning signals by using drag and drop. Additional data processing such as mathematics, special statistics, filtering, etc. is easily possible at any time, online or offline. Also, efficiency maps of a drive train can be calculated and displayed directly during the measurement.

**FREELY DEFINABLE MEASUREMENT SCREENS**

**STANDARD POWER VALUES LIKE U, I, P, S, POWER FACTOR...**

**VECTOR SCOPE FOR 3 PHASES INCL. AMPLITUDE**



**HARMONICS, INTERHARMONICS AND HIGHER FREQUENCIES**

**RAW DATA WAVE FORM ANALYSIS**

**ONLINE EFFICIENCY MAPS OF MOTOR, INVERTERS AND WHOLE POWERTRAIN**

METERS FOR MONITORING

I1_Motor	I2_Motor	I3_Motor	I1_Line
317.2	604.4	555.7	319.3
U12_Motor	U23_Motor	U31_Motor	U_Line
212.3	227.5	217.2	230.9

**RPM**

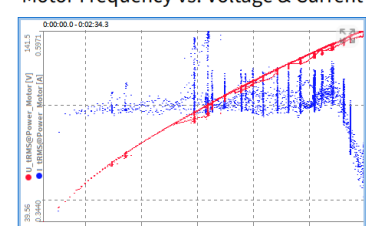
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**Motor Temp. [°C]**

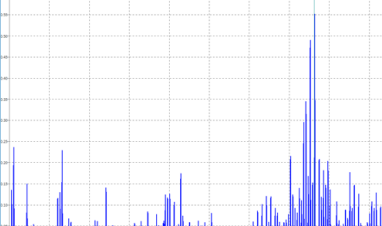
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X/Y-PLOT

Motor Frequency vs. Voltage & Current



FFT-PLOT FOR NVH MEASUREMENTS



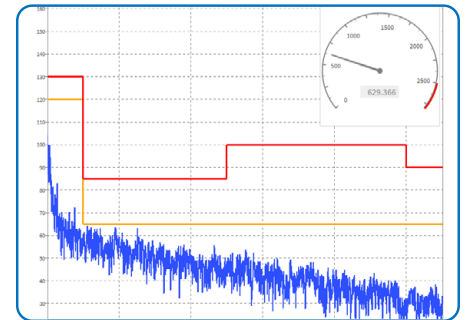
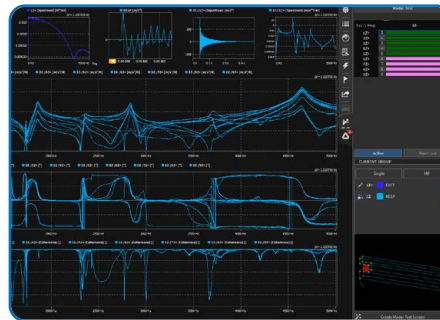
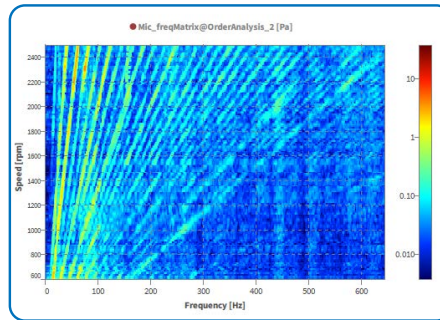
# ADVANCED ANALYSES

## NVH FOR STATIONARY AND MOBILE INVESTIGATION

- > FFT
- > Order analysis
- > CPB spectra
- > Sound analysis
- > Rotational vibration
- > Torsional vibration
- > Modal testing

When developing modern electric drives or systems, vibration, rotation and sound patterns must be taken into account. For this, order, octave and sound analyses are indispensable tools.

With our advanced power analyzers, all these functions can be performed directly during the measurement or after recording in post-processing. Even modal testing can be done to evaluate structural resonances.



## ADDITIONAL FOR MOBILE INVESTIGATION

- > GPS
- > Video
- > Inertial data
- > CAN, CAN-FD
- > FlexRay
- > Birds Eye

**Longitude:** 47.017565  
ACT

**Latitude:** 15.497186  
ACT

**Heading:** 293.3  
ACT

To test drives in real driving conditions, additional parameters such as road inclination are required.

Our advanced power analyzers can be expanded with additional inputs such as inertial data (angular rate, angle, acceleration, altitude, etc.), video and vehicle bus systems to get the complete picture.

The add-on "Birds Eye" calculates and visualizes online relative data such as distance, direction, etc. between two or more objects, e.g. vehicles.

# DATA PRESENTATION

### INTEGRATED REPORT GENERATOR AND DATA EXPORT

With OXYGEN's integrated report generator, users can create reports of their measurements within seconds - not only in analysis mode, but even during measurement.

OXYGEN can also export the data into a variety of different file formats (e.g. XLS, CSV, MATLAB, ...) so that users can use their usual analysis environment.

### ONLINE AND OFFLINE MATH-TOOLBOX

Formula: ETA\_Converter

MATH FORMULA

`'P_t@Power_Motor'/'P_t@Power_Line'*100`

1 of 7 Standard

Calculator interface with various mathematical functions and a numeric keypad.

OXYGEN offers a wide variety of different mathematical functions and filter options that can be used both online and offline.

The calculated channels behave like conventional analog channels.

### FILTERING

## GOOD TO KNOW

Imagine something went wrong during your measurement and the measurement setup was not correct. In OXYGEN you can calculate all power values (P, Q, S...) even in post analysis. This is only possible since OXYGEN is storing the raw data of all the measurement channels.



# TEST STAND INTEGRATION

Leading test stand manufacturers rely on the measurement data from DEWETRON when it comes to reliable testing of important and critical components. Our various interfaces guarantee a simple integration into all common test stand systems.

## TEST STAND INTERFACES IN OXYGEN

Smart interface technology makes it easy to integrate DEWETRON power analyzers and measurement instruments into various test stand automation systems, such as PAtools® from Kratzer Automation. Depending on the system architecture of the test stand, DEWETRON systems are equipped with the right interface to ensure reliable data transmission, easy to use remote control and remote configuration, e.g. through TCP/IP-based protocols.

### EtherCAT INTERFACE

Typ. 100 ch  
Typ. 500 S/s per channel

Data transfer & remote control

### SCPI OVER ETHERNET

Typ. 100 ch  
Up to 10 kS/s per channel

Data transfer & advanced remote control

### XCP OVER ETHERNET

Typ. 20 ch  
Up to 10 kS/s per channel

Interface to CANape and INCA

### CAN CAN-FD

Typ. 20 ch  
Typ. 100 S/s per channel

### DATA STREAM OVER ETHERNET

Typ. >100 ch  
Up to 2 MS/s per channel

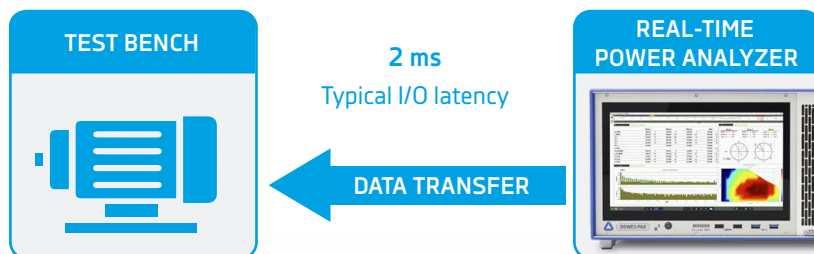
### DMD READER

Library to import recorded data  
into 3rd party software

## DEDICATED REAL-TIME POWER ANALYSIS SOLUTION

DEWETRON offers a dedicated solution for latency critical tests and applications to turn your DEWE3 system into a real-time power analyzer

- > Calculation of cycle-by-cycle power values
- > Data output interface: Ethernet UDP or EtherCAT Slave
- > Data output rate: 1 kHz
- > Typical I/O latency: 2 ms (max. 4 ms)

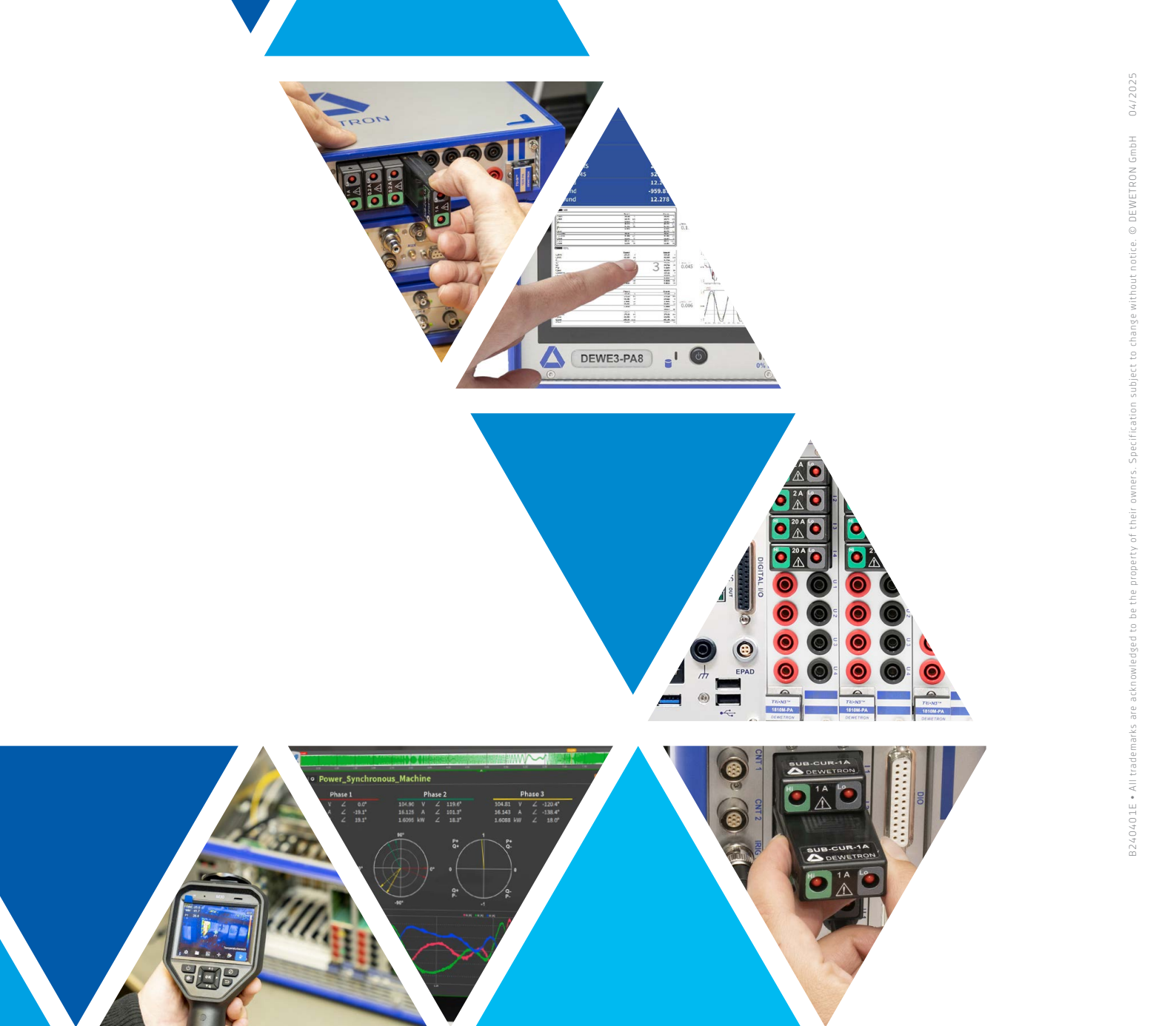


# POWER ANALYZERS IN COMPARISON

We are sure that you will find the right power analyzer at DEWETRON. The table below shows the main differences between the “Standard Power Analyzer” LITE[PA] and the “Advanced Power Analyzer” models.



	LITE[PA]	DEWE3 SERIES DEWE3-PA8, DEWE3-PA8-RM, DEWE3-A4	PA-TRIONet3
PA type	Standard <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Advanced <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	Advanced <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
Instrument category	All-in-one, turnkey	All-in-one, turnkey	Frontend, USB3 or LAN to PC
Number of phases	4 or 8	4 / 8 / 12 / 16	4
Sampling rate max.	2 MS/s	10 MS/s	1 MS/s
Internal storage capacity	256 GB	Up to 4 TB	According to used PC
POWER accuracy 0.5 Hz to 1000 Hz (1 year)	0.04 %	0.04 %	0.04 %
Harmonics analysis, flicker analysis, IEC conformity	✓	✓	✓
Advanced Math: formula, FFT, statistics, etc.	✓	✓	✓
Motor evaluation: speed, torque, angle, efficiency map	✓	✓	-
19" rack-mountable	✓	✓	-
Host system data connection CAN   Ethernet (UDP, SCPI, XCP)	✓   ✓	✓   ✓	-   ✓ (Ethernet of used PC)
Export to common file formats: .xlsx, .mat, .dat, .csv, etc.	✓	✓	✓
Additional low-speed inputs (max. 200 Hz) via XR-modules (thermocouple, RTD, 0-20 mA, V)	✓	✓	-
Add. Mixed signal high-speed inputs Vibration, sound, strain, etc.	-	✓	-
Host system data connection via EtherCAT	-	✓	-
Raw data waveform recording	-	✓	✓
User-exchangeable input modules	-	✓	✓
Built-in current transducer power supply	-	✓	-
SYNC IRIG   PTP   GPS   TRION-SYNC	-   -   -   -	✓   ✓   ✓   ✓	-   -   -   ✓
<b>DIMENSIONS</b>			
Dimensions (W x D x H) without feet and handle	442 x 281 x 222 mm (5 u) (17.4 x 11.1 x 8.7 in.)	442 x 435 x 222 mm (5 u) (17.4 x 17.1 x 8.7 in.)	320 x 205 x 55 mm (12.6 x 8 x 2.2 in.)
Weight	4 ch: 9 kg (19.8 lb.) 8 ch: 9.5 kg (21 lb.)	Depending on configuration Typ. 14 kg (30.9 lb.)	Typ. 1.9 kg (4.2 lb.)



## ABOUT DEWETRON

DEWETRON is a manufacturer of precision test & measurement systems designed to help our customers make the world more predictable, efficient and safe. Our strengths lie in customized solutions that are immediately ready for use while also being quickly adaptable to the changing needs of the test environment and sophisticated technology of the energy, automotive, transportation and aerospace industries.

More than 35 years of experience and innovation have awarded DEWETRON the trust and respect of the global market. There are more than 25,000 DEWETRON measurement systems and over 400,000 measurement channels in use in well-known companies worldwide.

DEWETRON employs over 120 people in 25 countries and is part of the TKH Group, a global corporation, that specializes in the development and supply of innovative solutions worldwide.

DEWETRON's quality is certified in compliance with ISO 9001 and ISO 14001. The high integrity of the measurement data is guaranteed by our own accredited calibration lab according to ISO 17025.

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**THE MEASURABLE DIFFERENCE.**



**DEWETRON**

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