

The SIRIUSi-XHS-PWR is a perfect power measurement system for e-mobility applications. It features the patented integrated DC-CT[®] current sensing technology that allows exact current measurements even in the most demanding applications.



HIGHLY INTEGRATED POWER ANALYZER FOR SECURE IN-VEHICLE TESTING

SOFTWARE

All Dewesoft data acquisition systems are bundled with award-winning DewesoftX Professional DAQ software - advanced and easy-to-use data acquisition and analysis software. The software flexibility will help you unleash the DAQ system to its full potential and give you many advantages compared to other DAQ systems. Functionalities like plug-and-play, hardware auto-detection, smart TEDS sensors, advanced storing, and data analysis features will take your measurement and analysis to a whole new level. Each parameter can be shown visually in a time recorder, vector scope, histogram, digital or analog display.

In today's world of open toolchain and intercommunication, any device should be compliant with standard protocols - All these protocols can be used simultaneously with XHS-PWR:

OPC UA

... is the industry standard. Actually, it is more than just a standard, it is a perfect framework where the SIRIUSi XHS-PWR can be described and set up in any system, including SCADA, MES, ERP, mobile devices, and others.

XCP on Ethernet (TCP/IP)

Starting with version 1.4, XCP became a very powerful interface protocol for data exchange in the automotive industry. In this age of e-mobility, the required sampling rates are higher than ever - the 1 Gbit XCP interface allows data transfers with a rate as high as 1 MS/s.

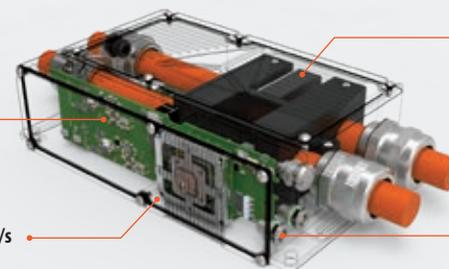
CAN monitoring

Measured data from the SIRIUSi XHS-PWR can be transmitted over CAN to any third party CAN interface.



High Bandwidth for Voltage Measurement >5 MHz

High Sampling Rate 15 MS/s



DC-CT® Technology for Current Measurement Bandwidth > 500 kHz

DOT®
DC-CT Innovation

Direct XCP Communication

DC-CT® TECHNOLOGY

This technology makes it possible to accurately measure power during real drive tests without the influence of the cable shield. While voltage is measured directly, the current is measured via our patented DC-CT® zero-flux technology current transducer. This patented, innovative, high-sensitivity sensor measures residual current in the core maintaining the zero-balance condition by regulating the secondary current.

The DC-CT® zeroflux transducer represents the latest current sensing technology offering a wide bandwidth and ultimate performance. Excellent linearity, precision, accuracy, and extremely low-temperature drift are all achieved at low power operation in the smallest form factor.

The SIRIUSi XHS-PWR comes standard with Hybrid ADC technology capable of a high bandwidth recording or high dynamic data acquisition up to 2000 V and 1000 A.

ALL IN ONE

With the SIRIUSi XHS-PWR two record modes can be selected depending on the application:

High bandwidth mode: With more than 5 MHz bandwidth and up to 15 MS/s sampling rate, XHS-PWR can perfectly acquire impulse, step, and square signals without any ringing or overshoot. This mode is perfect for transient recording and power analysis and uses low-latency SAR ADC technology.

High dynamic mode: A sample rate up to 1 MS/s can be acquired, similar to our 24-bit SIRIUSi dual-core, meaning all higher frequencies are fully rejected. In this mode, XHS-PWR operates with Sigma-Delta ADC technology.

As on any Dewesoft device, data can also be synchronized to other data sources, such as vehicle bus interface, GPS, IMU, video, among others. Devices can be synchronized using a PTPv2 mechanism.

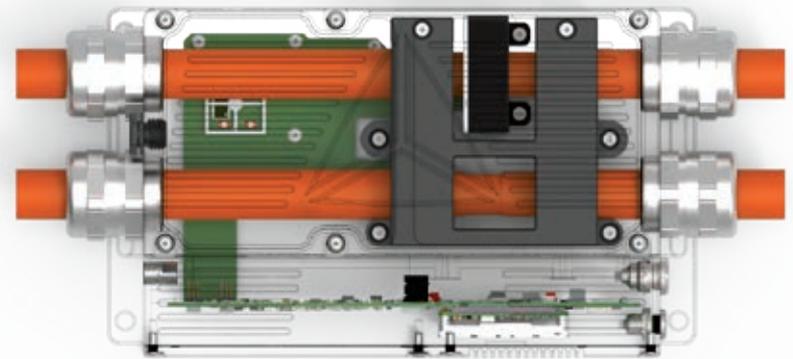
SPECIFICATIONS

Voltage measurement

ADC Type	HybridADC - 24 bit alias free up to 1 MS/sec, 16 bit up to 15 MS/sec
Sampling Rate	Simultaneous 15 MS/sec
Filtering	AAF 1 MHz (6th order)
Analogue bandwidth (-3 dB)	5 MHz
Voltage ranges	±2000 V, ±1000 V, ±400 V, ±200 V
Gain Drift	typ. 40ppm/K (max. 65 ppm/K)
Offset Drift	typ. 0.5 mV/K + 1 ppm of range/K
Gain Linearity	< 0.01 %

Current measurement

ADC Type	HybridADC - 24-bit alias free up to 1 MS/s, 16-bit up to 15 MS/s			
Sampling Rate	Simultaneous 15 MS/sec			
Filtering	AAF 1 MHz (6th order)			
Analogue bandwidth (-3 dB)	>500 kHz			
Current ranges	±2000 A, ±1000 A, ±400 A, ±200 A			
Maximum withstand peak current	min. -1700 A, max. 2000 A			
Gain drift (current)	typ. 40ppm/K (max. 65 ppm/K)			
Offset drift	typ. 200 uA/K (max. 500 uA/K)			
Linearity error @ 1000 A range	typ. 50 ppm			
Hysteresis	typ. 40uA/A			
Cable size	95 mm²	70 mm²	50 mm²	35 mm²
Rated DC current	292 A	245 A	198 A	158 A
Rated AC rms current	206 A	173 A	140 A	111 A



System specifications

Power

Power supply	9 - 54 V DC PoE (RJ45/Lemo 1T 8-pin optional)
Power consumption	Typ. 15 W (Max. 30 W)

Environmental

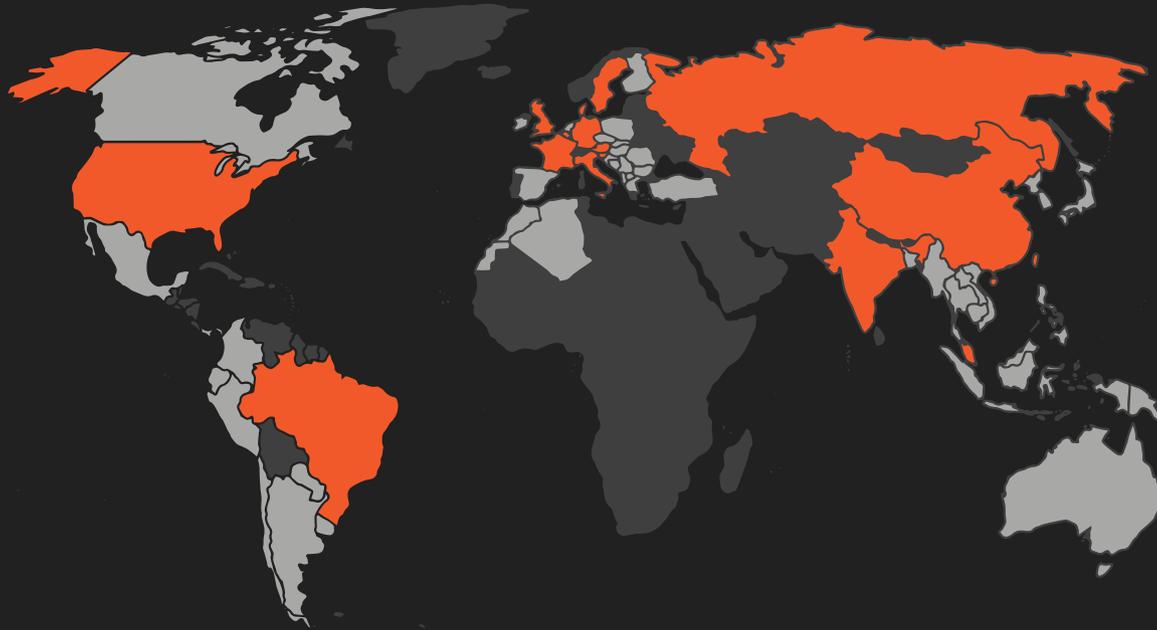
Operating Temperature	-40 to 70 °C
Storage Temperature	-40 to 85 °C
IP rating	IP67

Interfaces

Ethernet	GbE (XCP, OPC UA) incl. IEEE1588v2 synchronization (PTP) (RJ45/LEMO 1T 8-pin optional)
CAN	CAN 2.0 (DSUB9)
High-Voltage Interlock	YES (chassis covers + cables)

Additional Specifications

Dimensions	245 x 151 x 63 mm
Weight	4.4 kg (max. 7 kg)



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

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