HBK
HOTTINGER BRÜEL & KJÆR

Electric Power Testing

BEST IN CLASS ACCURACY FOR ANALYZING ELECTRICAL DRIVE SYSTEMS

HBM

Brüel & Kjær

Your solution for the entire measurement chain ...

SENSORS

Current

HBM offers world class zero flux current transducers with highest accuracy and bandwidth. The full aluminium body ensures highest EMC immunity critical in inverter based drive environments. They are perfectly fitted for eDrive applications and are offered with all needed connection cables and a separate power supply. They range from 50 A to 1200 A and bandwidths from 400 kHz to 1 MHz.

Voltage

For different voltage levels, HBM offers different solutions. Simple connection cables with high CAT rating, or HV probes with a unique safety concept to allow high accuracy voltage measurements up to 5 kV rms. And for even higher voltages, the unique isolated digitzers allow safe and isolated measurements to virtually any voltage level, be it 10 kV or 10 MV.

Torque and Speed

HBM is the known market leader for torque measurement. Not only outstanding accuracy, also the unique Flexrange capabilities, the optional speed measurement systems and the high bandwidth to observe torque ripple makes HBM torque transducers the standard in the market. Seamlessly integrated in the eDrive solution, unmatched accuracy in both, electrical and mechanical measurements is achieved.

POWER ANALYZER

Power Analyzer Card

The GN310B power analyzer card offers the best accuracy, the highest input range and the best safety class on the market. Combine as many cards as you need as the computing power is fully scalable using on-board DSPs. Digital cycle detection allows true dynamic power testing like in WLTP drive cycles.

Mainframe

Select a mainframe with the appropriate number of slots, with or without integrated PC. Combine mainframes to increase your system size. PC integrated systems are best for bench top and portable use, tethered system optimized for test rig integration.

Perception ePower Software

Dedicated Windows® software allows basic power measurements out of the box without any programming or in-depth setup. Scope and FFT features are available to gain more insights. And user programmable formulas in real time or post process analysis reach out for drive calibration or reverse engineering.

OPTIONS

NVH, Temperature, CAN

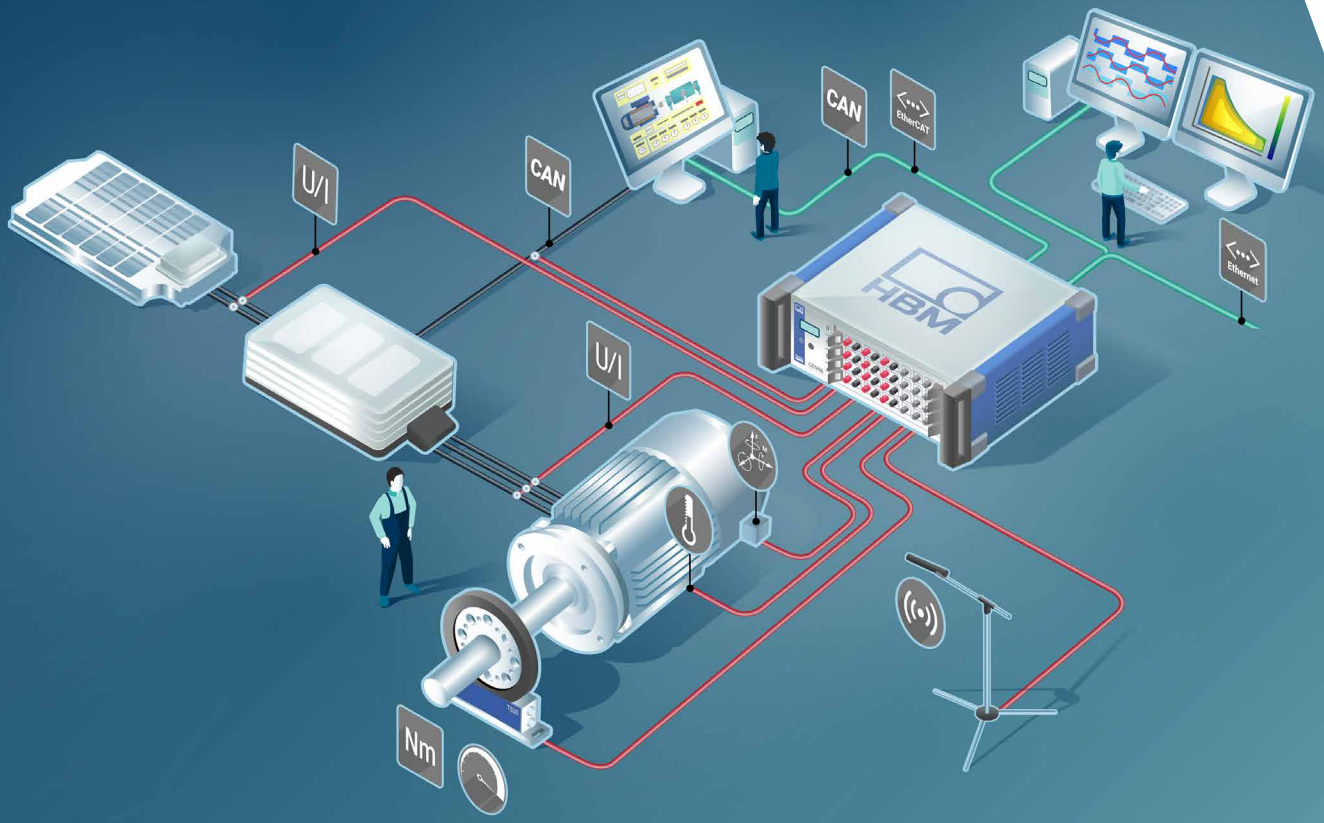
Expandability is a key feature of your HBM solution. Want to add accelerometers or temp channels to correlate with other measurements? – no problem, just select the proper card. Or add a scope card with 250 MS/s into your power analyser. CAN input and output and EtherCAT are all available as well.

KNOW HOW

Training, Engineering Services and Consultancy

Be it product training, classroom style introduction to electrical testing or advanced analysis, or having an HBM expert on site to help improving measurement uncertainty or NVH behaviour: be assured HBM offers you all these services from its world class staff of electrical drive experts.
We not only sell products; we can help you to maximize the return of investment by guiding you through all stages of electric motor testing.

… adressing all your test requirements



- Highest power accuracy on the market 0.015% reading + 0.02% range
- Programmable input ranges and AUTO-Range to minimize measurement uncertainty
- Packages from 3 to 9 power channels, expandable to 51
- Up to 6 torque / speed frequency-inputs with exceptional accuracy of 0.004%
- Real time power computation with transparent formulas, and unlimited user defined computations
- Digital cycle detection for accurate power measurements in dynamic load changes like WLTP drive cycles
- Optional inputs for temperatures, accelerometers, microphones and more
- Continuous raw data storage at full sample rate for analysis and review
- Flexible recording modes with triggers to store results only, raw data or both
- Powerful analysis like fundamentals, space vectors, dq0 transformation, torque ripple, harmonics, back EMF and much more
- Easy test rig integration using TTL, CAN, EtherCAT, or software API

The eDrive solution from HBM covers the entire measurement chain: high-precision sensors, powerful instruments and intuitive software. Mechanical signals (e.g. torque) and electrical signals (current and voltage) are acquired simultaneously and help engineers to better understand the electrical drive and its losses faster and more accurately than ever before.

HBK – Hottinger, Brüel & Kjær
www.hbkworld.com
www.hbm.com
www.bksv.com
info@hbkworld.com

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Power Analyzers – Product Overview:
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Knowledge Base – Power Analysis:
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