## HIOKI



Pass-through sensors

Battery impedance meters





Power meters



Current clamps



Data loggers



HIOKI products are available from



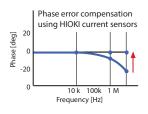
Impedance meters LCR meters

## Effective power analysis

Power meters & current sensors from a single source

#### Power meters

- ➤ High precision power measurement up to 6 channels \_ PW6001
  - > DC up to 2 MHz
  - ➤ Basic accuracy ±0.02%
  - > 5 MS/s sampling rate
  - ➤ 18-bit A/D resolution, 10 ms data update rate





- Precise power measurement up to 4 channels \_ PW3390
  - > DC up to 200 kHz
  - ➤ Basic accuracy ±0.04%
  - > 500 kS/s sampling rate
  - Motor analysis, efficiency measurement, FFT analysis



PW3390

#### Pass-through sensors

- High precision AC/DC pass-through sensors up to 2000 A \_ CT687x series, CT6904
  - Broad bandwidth up to 4 MHz
  - > Current up to 2000 A
  - ➤ Basic accuracy ±0.04%



#### **Current clamps**

- AC/DC current sensors for high precision power measurement \_ CT684x series
  - > Broad bandwidth up to 200 kHz
  - Current from 20 A to 1000 A
  - Basic accuracy ±0.04%
- Inrush currents & high frequencies with one sensor \_ CT6710, CT6711
  - > DC up to 200 MHz
  - > Up to 30 Arms, 3 ranges





## Battery measurement

Material procurement - Development - Production

#### Determination of internal resistance and impedance

- Extremely reliable low frequency battery measurement \_BT4560
  - Measurement frequencies from 0.1 Hz to 1 kHz
  - > Fast measurement using the AC/IR measurement method
  - Cole-Cole-Plots using supplied software



#### Monitoring of high-voltage battery packs and modules

- **>** Fast battery diagnosis BT3564
  - > For battery voltages up to 1000 V DC
  - Analogue data output (dir. data readout via logger)
  - > Ideal for testing battery packs for EV or PHEV on production lines
  - Spark discharge reduction



#### Determination of contact resistances

- Analysis of cell materialresistances \_ RM2610
  - Isolation and calculation of the compound resistivity
  - Calculation of the boundary surface resistance





### Impedance meters

#### High frequency impedance measurements up to 3GHz

- **▶** Components/PCB testing \_ IM758x series
  - Test speed up to 0.5 ms (analogue measurement time)
  - > Only 0.07% deviation when measuring a 1 nH coil at 3 GHz
  - LCR Mode, Analysis Mode, Continuous Measurement Mode







## **Data loggers**

Highest speed. Highest precision.

#### 200 MS/s high-speed measurement

- Memory HiCorder for up to 32 channels \_ MR6000
  - Long-term measurements in real-time
  - Up to 32 electrically isolated measuring channels
  - Recording of various parameters (e.g. voltage up to 1000 V, current up to 2000 A, temperature, frequency, speed)

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MR6000

#### Non-contact CAN bus & AC voltage measurement

- > Signal measurement in wiring harness \_ SP7000, SP3000
  - Measure CAN bus or AC voltage signals on the insulated conductor
  - > Precise CAN FD & CAN signal sensing over the cable insulation (SP7000)
  - Visualizes waveforms on recorders and oscilloscopes (SP3000)
  - > Highly functional design for measurements even in difficult to access areas



#### HIOKI - Japanese precision since 1935

HIOKI was founded in Japan in 1935 and is today the market leader for electrical current sensors. HIOKI is also renowned for superior cutting-edge innovations in power analysis and battery measurement technology. This has been achieved this by offering uncompromised high precision at all times. Precision is at the heart of Japanese engineering tradition and distinguishes each of the more than 200 main products. HIOKI are also highly innovative, constantly finding genuine solutions and bringing better products to the global market.

In 2017 HIOKI made the move to Europe and established HIOKI EUROPE GmbH giving their sales partners a direct contact. HIOKI customers now have even faster product availability, direct advice and the best service. Together with our highly trained and experienced partners we offer both premium technology and premium service. Take advantage of the competence and expertise that our partner companies offer and learn more about Japanese precision technology from HIOKI.





4Test AS Fjordveien 3 N-1363 Hoevik Norway



+47 67 10 10 80



