

PRODUCT INFO SHEET

Single-Channel Automatic Tuning & Matching (ATM) Equipment for Single-Resonance (X) Static *In-Situ/Operando* NMR Probes

Description

Stand-alone hardware and software solution for manual and automated tuning and matching of all ePROBE Single-Resonance *in-situ/operando* NMR probes. At its core is the Smart Probe Controller (SPC)-C1, which can be operated via the integrated touchscreen or remotely, for example from the spectrometer computer. In addition, the system includes all required accessories for seamless integration with Bruker NMR consoles, allowing experiment synchronization through TopSpin.

Automated tuning and matching are essential for *in-situ/operando* NMR studies of battery materials, as changes of the materials inside the battery during electrochemical cycling can alter the tuning and matching of the probe. Therefore, performing automatic tuning and matching before each acquisition ensures optimal measurement conditions throughout an experiment. In addition, the system supports automated frequency sweep (variable offset) and variable-temperature NMR experiments, as well as multi-nuclear NMR measurements, streamlining experimental workflows.

