

Connect any Sensor and Pump for Integrated Measuring and Dosing



Capture and Store Sensor Data

Data from any analog sensor, such as distillation temperature or pressure, is captured and stored in the experiment file together with other key process parameters, such as reactor temperature. Additional sensor data leads to more knowledge about the reaction and better decisions on next steps.



Controlled Dosing

Connect commercially available pumps and balances to the ECB for automated pre-programmed gravimetric dosing. Linking temperature with dosing control enables reagent addition to stop in dangerous exothermic situations. Experiments can run truly unattended, which leads to more experiments performed under safer conditions.



Plug-and-Play with SmartConnect

SmartConnect™ stores sensor calibration and configuration data on a chip in the cable. It provides plug-and-play connections to any existing analog sensors in your lab. High data quality is ensured as measurements are always performed with the correct sensor calibration.



Applications with pH

Measuring and controlling pH opens opportunities for more applications. Precise and automated pH control enables:

- Catalytic reactions
- Bio-reactions
- Enzymatic reactions
- Measurement of kinetics and conversion



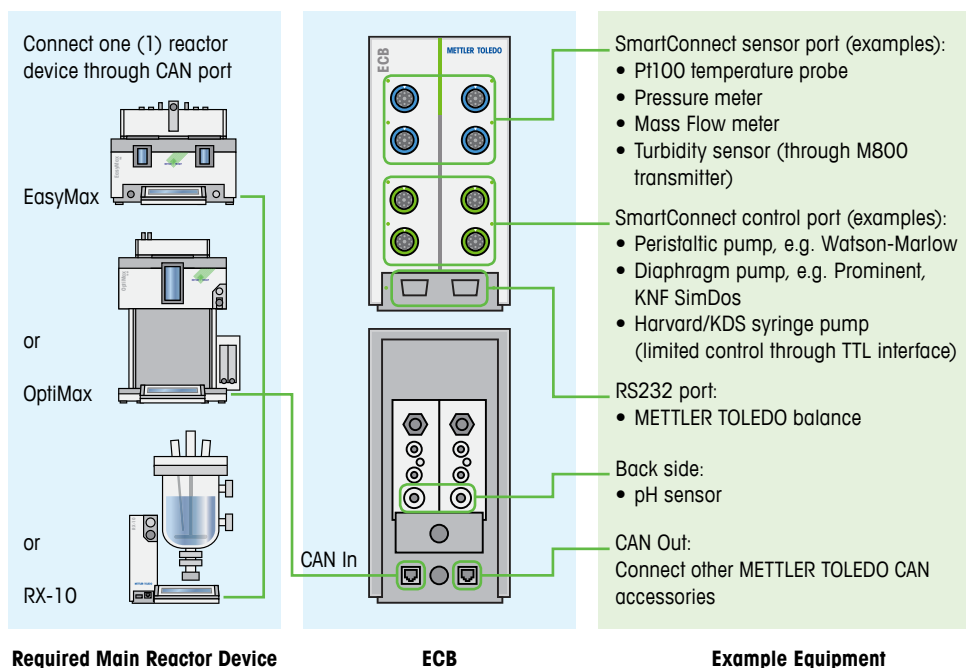
ECB: Easy Control Box

The ECB™ is a sensor and control box that can be connected to EasyMax™, OptiMax™, and RX-10™ touchscreen-based reactor systems. The ECB connects to lab sensors and pumps to make real-time measurements and controlled dosing available to non-expert researchers. Combining data from all sensors in a single experiment allows researchers to quickly evaluate and compare experiment results and make decisions to speed process development. Plug-and-play capabilities allow researchers to move sensors or pumps from one reactor to another within minutes without the need for expert knowledge.

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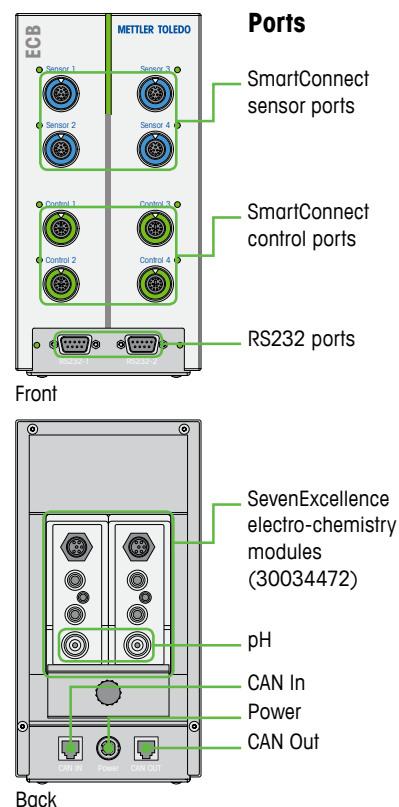
Extending Reactor Capabilities

Through the plug-and-play connections, the ECB unit may be integrated to a METTLER TOLEDO EasyMax, OptiMax or RX-10 reactor system. Cables are available to connect the ECB with any other laboratory device, sensor, or pump with analog output or analog control port. The captured data is stored on the main reactor device and can be reviewed on the local touchscreen or the iControl PC software in real time or after experiment completion.



Technical Specifications

Required main reactor device to operate the ECB	EasyMax, OptiMax or RX-10 through local touchscreen or iControl PC software
SmartConnect sensor port (4x)	Support for any third-party analog sensor that outputs one of the following signals: <ul style="list-style-type: none"> • Current 0 mA to 20 mA • Voltage -10 V to +10 V • Pt100 2 or 4 wires
SmartConnect control port for gravimetric dosing (2x)	Support for any third-party dosing pump with analog control interface for: <ul style="list-style-type: none"> • Current 0 mA to 20 mA • Voltage -10 V to +10 V • Frequency 0 Hz to 3 Hz • Pulse-Width Modulation 24 V Compatible cables available for: Prominent, Watson-Marlow and KNF SimDos pumps. METTLER TOLEDO balance required.
SmartConnect control port for volumetric dosing (4x)	Support for recent Harvard and KDScientific models through TTL interface. Compatible cables available for Harvard 11 Elife/PHD Ultra and KDScientific Legato.
SevenExcellence electro-chemistry modules (2x)	Supports pH/mV module (30034472) pH accuracy: ± 0.002
Dimensions, WxDxH	210 mm x 152 mm x 297 mm (8.27" x 5.98" x 11.69")
Weight	3.4 kg



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