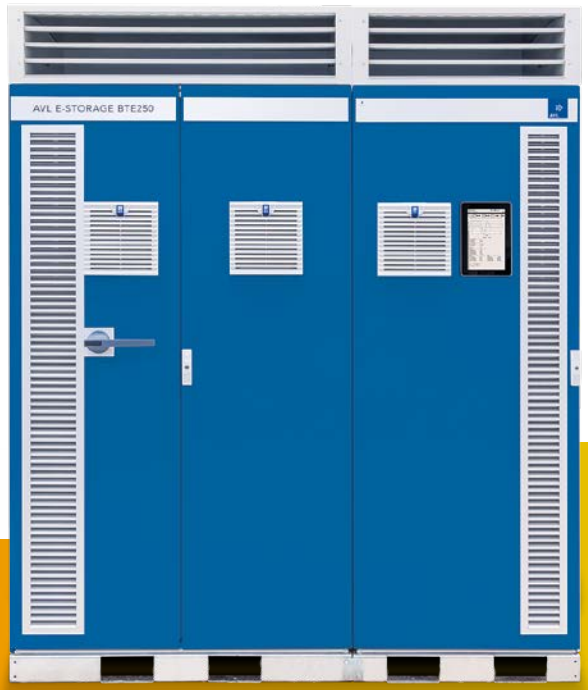


AVL E-STORAGE BTE™ 800 V

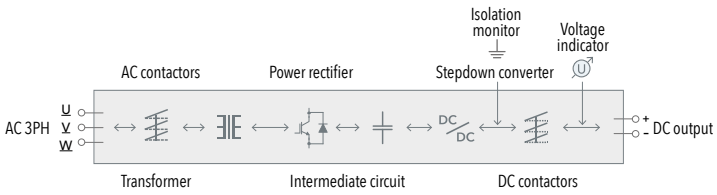
Join us in exploring new e-horizons

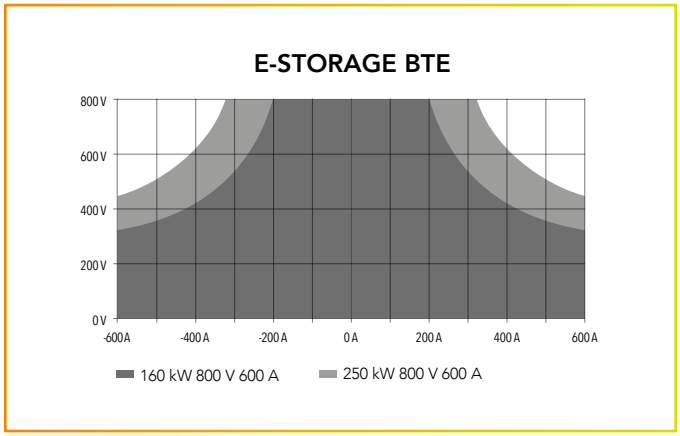
The AVL E-STORAGE BTE™ offers high dynamic and accurate solutions for versatile applications: from battery tests to battery emulation and from single components up to complete electrified powertrain testing.

Thanks to its unique control strategy for outstanding control accuracy and stability, the E-STORAGE BTE enables the most realistic emulation of a battery, or it can be used to reproduce high dynamic charge and discharge load profiles for battery testing. The minimal influence on the test results by the system performance ensures system and time accuracy for exact replays of driving profiles. These valid test results end up in a highly efficient testing process and time savings. Additionally, the system can be used as a highly stable voltage source.

By optimizing the control strategy, realistic battery modeling can be realized via AVL's standalone RT solution or integrated into AVL's automation platform. AVL's battery models (Mobat) enable the E-STORAGE system to behave like a real battery (based on calculation at cell, module and pack level). Due to different models, test runs for multiple testing scenarios can be replicated.

Another highlight of the E-STORAGE BTE is its outstanding versatility. Automated configuration changes in the Power Distribution Switch Box (PDSB) reduce the testbed downtime and result in a higher testbed utilization. The PDSB allows for the fully automated switching between testbeds and/or the parallelization of systems without any manual modifications. The remote control via CAN bus allows for integration into the automation system. The integrated web-GUI interface provides remote system parametrization and online diagnostics.





E-STORAGE BTE offers variants for single or dual channel operation. This feature allows to run two different units under test at the same time with one system and up to 800 V and 600 A per channel.

To be compliant with latest test runs, AVL's automation software (AVL PUMA 2™ and AVL LYNX 2™) facilitate the recording of reproducible measurement data across the entire development process. The automation platforms provide the possibility to integrate any subsystems on the testbed. The complete test equipment and the unit under test can be controlled and monitored in fully automatic and manual operation.

BENEFITS AT A GLANCE

- Unique control strategy for realistic battery testing and emulation enables outstanding control accuracy and stability
- High system versatility with automated configuration changes reduces testbed downtime
- Flexible dual channel solution enables the validation of two separate units under test with one system
- Simple to operate due to integration in AVL testbed automation software

SPECIFICATION

Power rating	160, 250 kW
AC input voltage	3 × 380–480 VAC
AC input frequency	47–63 Hz
DC output voltage	8–800 V
DC output current	± 600 A per channel
Current rise time (+ 10 % .... + 90 %)	2 ms[1] 0.4 ms[1], optional
Interface	1 Mbps CAN bus (1 kHz cycle time; others on request)
Measurement accuracy	
Voltage	± 100 ppm RMS FS[2] (800 V)
Current	± 100 ppm RMS FS[2] (± 600 A)
Ambient conditions	
Operating temperature	5 … 40 °C
Installation altitude	0 … 1,000 m ASL
Maximum relative air humidity (non-condensing)	85 %
Protection class	IP43
Dimensions	
Dimensions (incl. 200 mm plinth)	160 / 250 kW, 800 V air-cooled: 2,007x610x2,478 mm
Conformity (CE)	
EMC	2014/30/EU Electromagnetic compatibility
Standards	EN 61439-1/2; EN 60146-1-1; EN 55011; EN 61000-2-4; EN 61000-4-2; EN 61000-4-4; EN 61000-4-5; EN ISO 12100; EN ISO 13849-1; EN 60204-1
Directives	2014/35/EU (Low voltage directive)

[1] At nominal conditions of 400 VDC. Single operation.
[2] FS = Full Scale

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FIND OUT MORE

AVL List GmbH
Hans-List-Platz 1, 8020 Graz
Austria

Phone +43 316 787-0
Fax +43 316 787-400
E-mail info@avl.com

www.avl.com