



AEC Regenerative Inverter Series

The innovation that regenerates energy

AEC regenerative inverters are capable of recovering braking energy and feeding it back into the supply system. The AEC regenerative power supply units act as centralized supply and regenerative power supply units for the connected inverters.

Key benefits



Energy saving: conventional systems based on braking resistors simply waste braking energy as heat. With regenerative functionalities, recovered energy is fed back to the supply network and redistributed to other equipment.



Optimized and space saving solution: everything needed for regenerative operation, such as an active front-end AC/DC converter and a special impedance adaptor stage, is included in AEC inverters. As no external braking devices are needed, the installation space is reduced, as well as the time needed for engineering and assembly.



Minimized downtime and high level operational safety: the AEC inverters provide a continuous feed in parallel with the mains power supply, ensuring reliable operation in unstable supply network conditions, and act either as the system's main bidirectional sine wave inverter or as a square wave unidirectional regenerating inverter. In the event of a power failure and disconnection, AEC regenerating inverters carry on controlling braking energy, enabling the drive to complete all the operations needed to stop the machine safely before shutting down.



Flexibility: special set-up software allows users to select sine or square wave forms as required. The system adapts automatically to grid conditions, ensuring perfectly synchronized feed. Power exchange, mains phase angle, DC link voltage and I/Os can all be configured by the user.



Real time application monitoring: performance and load curves can be viewed and monitored using the most common industrial networks.

Main applications

The AEC series is suitable for applications with cyclic or continuous braking such as cranes, big conveyors, winders and rewinders, flywheels, presses, turntables and centrifuges. The potential energy from lowering and braking movements of these machines are usually dissipated into heat. In a regenerative process, this energy is properly managed and returned back to the grid, allowing a reduction in energy consumption and operation costs.



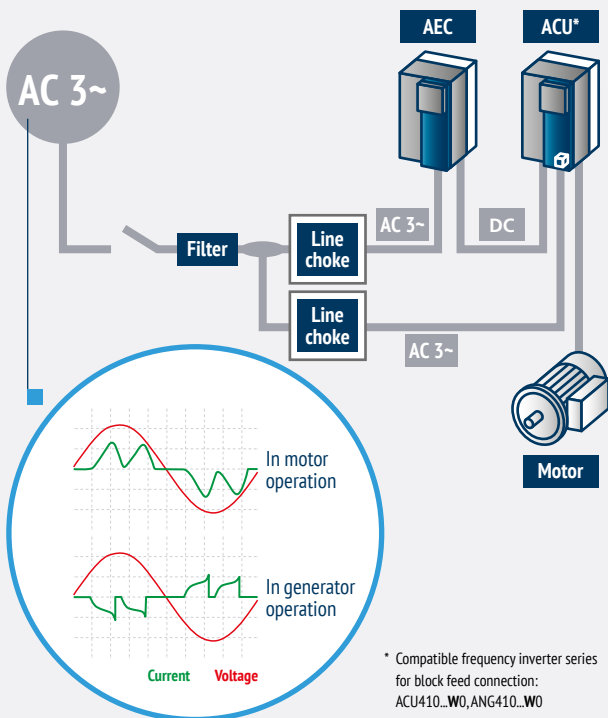
Main features

- Power range 9.7 kVA ... 509.4 kVA at 400VAC
- 6 Frame sizes (sizes 3 to 8)
- Full compatibility with Active Cube and ANG frequency inverter series
- Multiple communication options
 - CANopen
 - Serial (Modbus RTU, Modbus ASCII & VABus) via RS232 or RS485
 - Profibus
 - Systembus
- Sinusoidal or block feed back current configurable
- Optional Liquid cooling (sizes 5 to 8)
- Optional ColdPlate cooling (sizes 3 to 5)

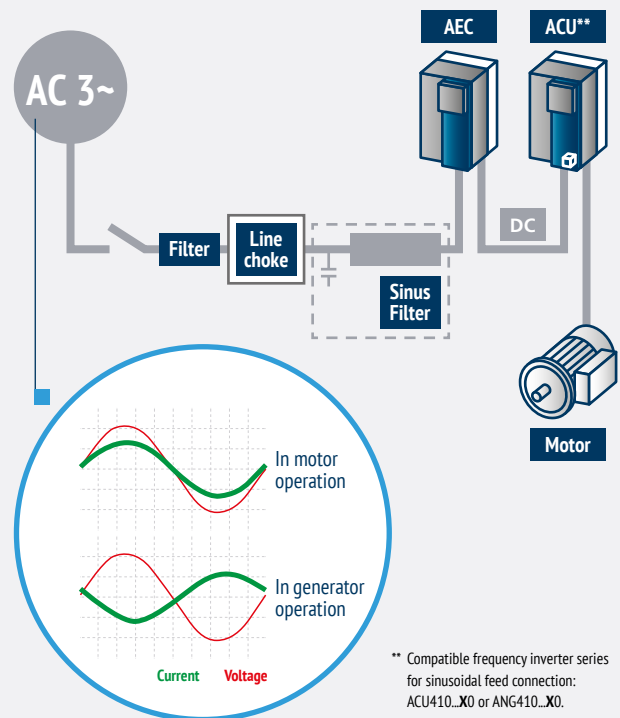
Power Range (kVA)

	AEC401-19	9.7
3	AEC401-21	12.5
	AEC401-22	15.2
	AEC401-23	17.3
4	AEC401-25	22.2
	AEC401-27	27.7
	AEC401-29	31.2
5	AEC401-31	41.6
	AEC401-33	52.0
	AEC401-35	62.3
6	AEC401-37	76.2
	AEC401-39	86.6
	AEC401-43	103.9
7	AEC401-45	124.7
	AEC401-47	145.5
	AEC401-49	173.2
8	AEC401-51	211.4
	AEC401-53	63.3
	AEC401-55	329.1
	AEC401-57	412.3
	AEC401-59	447.0
	AEC401-61	509.4

Hardware configurations for block feed current



Hardware configurations for sinusoidal feed current



HEADQUARTERS

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