

MEDIUM VOLTAGE AC DRIVES

ABB industrial drives

ACS6080, 5 to 36 MW



ACS6080 medium voltage drives offer high dynamic performance, reliability and safety for demanding applications. On top of ABB's new MP³C control technology, the drive provides easy-to-use interfaces to simplify operation and ABB Ability™ remote condition monitoring.

The right choice for high-performance applications

ACS6080 drives offer unlimited possibilities of configurations to drive both single- and multimotor applications. Industry-specific functions and unique features ensure reliable control of high power, low speed or special performance applications such as test stands, marine propulsion and thrusters, rolling mills, mine hoists, conveyors, SAG and ball mills.



Increased productivity due to new MP³C control technology

The ACS6080 drive includes ABB's breakthrough control capability, known as Model Predictive Pulse Pattern Control (MP³C). The new advanced MP³C technology offers the highest level of dynamic performance provided by ABB's direct torque control (DTC) together with the robustness and power quality of predictive control. At every point in time this control can anticipate the best motor operation point by finding the perfect compromise between dynamics, efficiency and harmonic distortion.



The advanced control enables system integrators and plant operators to maintain stability, while reducing investment and operational costs by using a smaller drive or a smaller motor in most cases. The increased power capability of the ACS6080's single power module reduces the footprint of the drive by up to 20 percent. The new control helps to reduce operational cost in two ways: it is more energy efficient than other control solutions, and maintenance costs are reduced as there is less mechanical and thermal stress on the equipment leading to longer lifetime of the components.



Technical data

Input	
Input configuration	6-, 12- or 24-pulse diode rectifier 6-, 12- or 18-pulse active rectifier
Input voltage	6-pulse diode rectifier: 3300V 12- and 24-pulse diode rectifier: 1725V 6-, 12- and 18-pulse active rectifier: 3160V
Input voltage variation	±10% without derating +15/–30% with derating
Input frequency	50/60 Hz
Input frequency variation	±5%
Input power factor	Diode rectifier: >0.95 Active rectifier: standard 1.0, optionally controllable
Input harmonics	Compliance with IEC61000-2-4 and IEEE 519
Auxiliary voltage	Control (optional): 110, 220VDC or 110–240VAC 50/60 Hz Auxiliary: 380–690 VAC 50/60Hz, 3-phase
Output	
Output power	5000–36000 kW
Output voltage	2.3–3.3 kV
Output frequency	0–100 Hz (higher on request)
Motor type	Induction, synchronous and permanent magnet
Efficiency of converter	>99%
Mechanical	
Enclosure	Standard: IP32 Optional: IP42, IP54
Cable entry	Top/bottom
Environmental	
Altitude	2000 m.a.s.l. (higher with derating)
Ambient air temperature	+0–+40 °C (lower and higher with derating)
External cooling water temperature	+5–+32 °C (lower and higher with derating)
Noise	<75 dB (A)
Cooling type	Water
Standards	EN, IEC, CE, (optional CSA and all common marine standards)

Learn it once, use it everywhere

- The ACS6080 drive comes with the all-compatible user experience that is already familiar to users from ABB low voltage drives, ensuring easy operation throughout the entire installation.
- The common drives architecture lets users apply the knowledge gained with one ABB drive to others, enabling a smooth transition between drives from the ABB all-compatible portfolio.

For more information please contact your local ABB representative or visit:

www.abb.com/drives

www.abb.com/drivespartners

www.abb.com/motors&generators

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Dynamic performance. Reliability. Safety.

Highest level of personnel safety

The arc resistant design with fast arc elimination together with a wide range of functional safety features provide safety both for your personnel and processes.

High reliability through proven design

Reliability is ensured thanks to the simple and fuseless design of the ACS6080. A low parts count and proven components result in high uptime and a long lifetime of the drive. Availability is further increased with the drive's power loss ride-through function.

Flexibility for smooth integration

Thanks to the compact and modular design, the ACS6080 can be easily integrated into existing systems. The drive can be used with one or several supply transformers and for applications with or without regeneration capability. A wide range of options can be integrated into the drive.

ABB Ability™ Condition Monitoring

ABB's Ability™ Remote Condition Monitoring (RCM) service provides accurate, real-time information on the condition of the drive, even when it is installed in remote locations.

Drive robustness for high availability

The ACS6080 effortlessly drives high power applications and controls operations even in harsh environments using the IP54 protection class. Special features such as automatic restart ensure high availability of processes.