

ABB industrial drives
ACS880-01, wall-mounted single drives
0.75 to 350 Hp/0.55 to 250 kW



The ACS880-01 is part of ABB's new all-compatible drives portfolio. The drives are compatible with virtually all types of AC motors, automation systems, users and business requirements.



Power and productivity
for a better world™



The innovation behind all-compatible is ABB's new common architecture, designed to simplify operation, optimize energy efficiency and maximize output.

Simplifying your world without limiting your possibilities

The ACS880-01 is a wall-mounted single drive compatible with a wide range of applications in a broad range of industries such as oil and gas, mining, metals, chemicals, cement, power plants, material handling, pulp and paper, sawmills and marine. At the heart of the drive is direct torque control (DTC), ABB's premier motor control technology. The extensive range of options include EMC filters, encoders, resolvers and brake resistors, remote monitoring tool, as well as application-specific software. Built-in safety features reduce the need for external safety components. Programming capability based on IEC 61131-3 is embedded inside the drive for making the application run more efficiently, without a separate programmable controller. Multiple drives can be daisy-chained for synchronized drive-to-drive communication. The drive

offering includes two enclosure ratings, UL Type 1 (IP21) and UL Type 12 (IP55), for dusty environments.

Learn it once, use it everywhere

The common drives architecture features the same control panel, parameter menu structure, universal accessories and engineering tools. The control panel is equipped with an intuitive and high-resolution control display that enables easy navigation. Many flexible data visualizations including bar charts, histograms and trend graphs help users to analyze processes. The menus and messages are customizable for the specific terminology of different applications. An integrated USB port allows easy connection to the Drive composer PC tool, which offers fast and harmonized startup, commissioning and monitoring. The built-in energy calculators, including used and saved kWh, CO₂ reduction and money saved, help the user fine-tune processes to ensure optimal energy use. The energy optimizer control mode ensures the maximum torque per ampere, reducing energy drawn from the supply. The drive also offers built-in service features.



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Technical data

Voltage and power range	3-phase, $U_{N2} = 240 \text{ V}$, +10/-15% 3-phase, $U_{N3} = 380 \text{ to } 415 \text{ V}$, +10/-15% 3-phase, $U_{N5} = 380 \text{ to } 500 \text{ V}$, +10/-15% 3-phase, $U_{N7} = 525 \text{ to } 690 \text{ V}$, +10/-15% 0.75 to 350 Hp/0.55 to 250 kW
Frequency	50/60 Hz $\pm 5\%$
Mains choke	Standard (built-in)
Degree of protection	UL open type (IP20), UL type 1 (IP21) and UL type 12 (IP55)
Ambient temperature	5 to 131 °F (-15 to +55 °C), >104 °F with derating (>40 °C with derating)
Compliance	UL, cUL, CE, TÜV Nord (safety functions), GOST R, CSA, C-Tick; pending: marine type approvals
Safety functions (TÜV Nord certified)	Safe torque off (STO), safe stop 1 (SS1), safely-limited speed (SLS), safe brake control (SBC) and safe maximum speed (SMS), safe stop emergency (SSE), prevention of unexpected startup (POUS)
EMC	According to IEC 61800-3, class C3 and C2 as internal option
Harmonic mitigation	According to IEC 61000-3-12
Control connections	Two analog inputs, two analog outputs, six digital inputs including thermistor input, two digital inputs/outputs, three relay outputs, digital input interlock, drive-to-drive link (or Modbus RTU), safe torque off (STO), external 24 V DC supply input, memory unit connection, USB via control panel

Control and communication options

Fieldbus adapter modules	PROFIBUS DP, DeviceNet™, CANopen®, EtherNet/IP™, Modbus TCP, PROFINET IO, EtherCAT®, Modbus RTU, PowerLink, ControlNet
Optional I/O extension modules	FIO-01: four digital inputs/outputs, two relay outputs FIO-11: three analog inputs, one analog output, two digital inputs/outputs FDIO: three digital inputs, two relay outputs FAIO: two analog inputs, two analog outputs FDCO-01, FDCO-02: DDCS communication options
Feedback modules	HTL pulse encoder, TTL pulse encoder, absolute encoder, resolver
PC tools	Drive composer entry Drive composer pro

For more information contact your local ABB representative or visit:

www.abb.com/drives



ACS880 single drives web page

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