

LOW VOLTAGE AC DRIVES

ABB general purpose drives

ACS580, 0.75 to 500 kW



Designed to simplify drive selection, set up, operation and maintenance, the ACS580 general purpose drives conquer more applications in more industries without the head scratching complexities.

One product, many applications

The drive includes all the essential components for typical light industry applications. The ACS580 is ready to control compressors, conveyors, mixers, chippers, extruders, as well as many other variable and constant torque applications.

Reliability and constant high quality

ACS580 drives are designed for customers who value high quality and robustness in their applications. Coated control boards, high enclosure classes, and motor temperature monitoring along with supervision and other protection functions ensure your processes will run smoothly – even in harsh conditions. In addition, all the drives are tested during production at maximum temperature and with nominal loads. We make sure the drives perform as they should so you do not need to worry about it.

Easier than ever before

ACS580 drives have all the essential features built-in, reducing commissioning and setup time. The assistant control panel with a broad set of languages is standard for ACS580 drives. It can be also upgraded to an optional Bluetooth® control panel for wireless commissioning and monitoring. Primary settings and control macros ensure quick setup and the help button on the control panel offers instant advice in unclear situations.

Instant availability

ACS580 products are available from central stocks around the world for immediate delivery up to 500 kW. The product is also widely available from ABB distributors globally.



Technical data

| | |
|-------------------------|---|
| Voltage and power range | 3-phase, 380 to 480 V, +10%/-15% ACS580-01 : from 0.75 to 250 kW ACS580-04 : from 250 to 500 kW ACS580-07 : from 75 to 500 kW |
| Frequency | 50/60 Hz ±5% |
| Mains choke | As standard, built-in second generation swinging choke |
| Degree of protection | ACS580-01 : IP21 as standard, IP55 as option ACS580-04 : IP00 as standard, IP20 as option ACS580-07 : IP21 as standard, IP42 and IP54 as option |
| Ambient conditions | ACS580-01 : -15 to +50 °C • No frost allowed • From +40 to +50 °C with derating 1% per 1 °C ACS580-04 : -15 to +55 °C • No frost allowed • From +40 to +55 °C with derating 1% per 1 °C ACS580-07 : 0 to +50 °C • No frost allowed • From +40 °C to +50 °C with derating 1% per 1 °C |
| Compliance | ACS580-01 : • CE, TÜV Nord (safety functions), UL, EAC, RCM, UL, cUL ACS580-04 : • CE, TÜV Nord (safety functions), EAC ACS580-07 : • CE, cUL, EAC, RCM |
| Safety functions | Safe torque off (STO) according to EN/IEC 61800-5-2, SIL 3, PL e (TÜV Nord certified) |
| EMC | According to EMC Directive 2014/30/EU, EN 61800-3:2004 + A1 2012. ACS580-01 : Class C2 as standard ACS580-04 : Class C3 as standard ACS580-07 : Class C2 or C3 as standard (depends on the frame size) |
| Harmonic mitigation | According to EN 61000-3-12: 2011 |
| Control connections | Two analog inputs, two analog outputs, six digital inputs, three relay outputs, EIA-485 Modbus RTU, safe torque off (STO), USB via control panel |

Control and communication options

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|--------------------------------|---|
| Fieldbus adapters | PROFIBUS DP, CANopen®, DeviceNet™, EtherNet/IP™, Modbus TCP, PROFINET IO, EtherCAT®, POWERLINK, ControlNet |
| Optional I/O extension modules | CMOD-01 : External +24 V AC/DC • Two relay outputs • One digital output CMOD-02 : External +24 V AC/DC and isolated PTC input CHDI-01 : 115/230 V AC digital input • Six digital inputs • Two relays CPTC-02 : ATEX-certified PTC interface and external +24 V CBAI-01 : Bipolar I/O extension • Two bipolar analog inputs and two unipolar outputs |
| PC tools | Drive composer tool entry, available for free via ABB website Drive composer tool pro |
| Control panel options | ACS-AP-I, assistant control panel ACS-AP-W, control panel with Bluetooth interface ACS-BP-S, basic control panel |



Video playlist:
ACS580 how-to
videos



Online manuals
for the ACS580
drives

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

abb.com/ACS580
abb.com/drives
abb.com/drivespartners
abb.com/motors&generators

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Simple. Connected. All-compatible.

Essential features inside

- Integrated safe torque off (STO)
- Removable Modbus RTU terminal
- Two option slots, one for a fieldbus adapter and one for an I/O extension
- External +24 V AC/DC
- USB interface for PC tool connection
- Optimized DC choke
- Integrated EMC filter

Get started, without the hassle

- Optional Bluetooth assistant control panel for controlling the drive up to 75 meters and out of the arc flash boundary
- Connection to all major industrial automation systems via plug-in fieldbus and Ethernet adapters
- USB port for transferring information between PC and drive
- Optional remote monitoring module for configuring the drive parameters, and monitoring various data such as load levels, runtime, energy consumption, I/O data, and bearing temperatures of the motor
- Free DriveComposer software to program and monitor drive performance

Learn it once, use it everywhere

- Common drives architecture enables a smooth transition to other all-compatible drives in the ABB portfolio, such as the ACS480 or ACS880
- The drives share the same user interfaces and options, enabling users to use the knowledge gained with the ACS580 drives

There is more to this drive

A wide power range includes drives for wallmounting, drive modules, and cabinet-built drives.

Adaptive programming for customizing the drive for the application, without any previous programming knowledge.

Motor control capabilities include asynchronous motors, permanent magnet motors and synchronous reluctance motors.