LOW VOLTAGE AC DRIVES

ABB general purpose drives
ACS580, 1 to 700 HP

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. The ACS580 drive is offered in a variety of options including wall-mounted, cabinet-built and packaged with disconnect means.

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, pumps, fans, 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. You can also upgrade 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 700 HP. The product is also widely available from ABB distributors globally.
ACS580-PHPB01U-EN REV E

50/60 Hz ±5%

DC choke in frames up to R9.

115/230 V AC digital input

from 1 to 350 HP

rd), UL Type 12 and

Drive composer tool entry, available for free via ABB website

Bipolar I/O extension

includes drives for wall-mounting and

UL Type 1 (standa

According to EMC Directive 2014/30/EU,

External +24 V AC/DC

(from 200 to 700 HP

ACS580-07: from 200 to 700 HP

ACS580-0P: from 1 to 350 HP*

ACS580-01: from 1 to 350 HP

ACS580-07: from 1 to 350 HP

ACS580-0P: from 1 to 350 HP

Frequency

50/60 Hz ±5%

Mains choke

DC choke in frames up to R9.
AC choke in R10-R11

Degree of protection

ACS580-01: UL Type 1 (standard), UL Type 12 (option)
ACS580-07: UL Type 12 (standard)
ACS580-0P: UL Type 1 (standard), UL Type 12 and 3R** (option)

Ambient conditions

ACS580: -15 to 40 °C. No frost allowed
ACS580-01: R1 to R9 from 40 to 50 °C with derating
ACS580-07: R6 to R11 from 40 to 50 °C with derating
ACS580-0P: R1 to R8 from 40 to 50 °C with derating
ACS580-0P (bypass): R1 to R9 from 40 to 50 °C by special order

Compliance

ACS580-01: • CE, TÜV Nord (safety functions), UL, EAC, RCM, UL, cUL
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

ACS580-01: Class C2 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

Fieldbus Protocol

PROFINET, DeviceNet, CANopen, Modbus TCP, PROFINET IO, EtherCAT, POWERLINK, ControlNet

Optional I/O expansion 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
• Six digital inputs
• Two relays

CPTC-02: ATEX-certified PTC interface and external +24 V
• 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

* 3-phase, 208/230V, 460V, 575V Wye, 60Hz

**UL Type 3R enclosure only available for packaged drives at select horsepowers

Technical data

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Video playlist:

ACS580 how-to videos

Online manuals

for the ACS580 drives

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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

(standard in R6-R9, with CMOD-01 option on R1-R5)
• 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 250 ft (75 m) 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 temperature of the motor bearings
• Free Drive composer software to program and monitor drive

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 re-apply the knowledge gained with the ACS580 drives

There is more to this drive

A wide power range includes drives for wall-mounting 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.