ABB all-compatible drives
ACS380, ACS580, ACS880
ABB all-compatible drives

Overview

All-compatible drives – ACSx80 family

Key features

All-compatible user interface saves commissioning and learning time
The ACS880 is part of ABB’s all-compatible drives portfolio. Other drives in this portfolio are the ACS380 and ACS580. These drives share the same easy-to-use PC tools and multilingual control panels. To further enhance the user experience, they also have the same parameter structure, which saves time on commissioning and learning. The drives also share the same communication options, simplifying the use of drives and spare parts handling.

Simplicity at your fingertips as standard
The control panel’s assistants and preprogrammed application macros help you set up the drive quickly and effectively. The intuitive, high-contrast, high-resolution display offers easy navigation in multiple languages. The PC tool for commissioning and configuration provides extensive drive monitoring capabilities and quick access to drive settings, as well as features such as a graphical interface for configuring safety functions, visual control diagrams, and direct links to user manuals.

Common PC tools
Drive Composer is a start-up and maintenance tool for ABB’s common architecture drives. The tool is used to view and set drive parameters, and to monitor and tune process performance. The entry version is available for free and can be downloaded online.
Machinery drive – ACS380-01

**Key features**
- Factory configured fieldbus communications for OEMs
- Built-in brake chopper as standard
- Integrated STO (Safe Torque Off - Sil3, PLe)
- Cold Configurator Adapter
- UL, cUL certification (UL61800-5-1)

**Main benefits**
- Optimized machine control
- Ease of integration
- Adaptable to your needs
- Decreased installation volume

General purpose drive – ACS580-01

**Key features**
- Base drive for the 580 portfolio
- UL(NEMA) Type 1, 12
- NEMA 12 footprint same as NEMA 1
- SCCR rating: 100kA with fuses
- DC Swinging Choke technology to mitigate harmonics
- EMC C2 filters for 1st environment installations
- Integrated STO (Safe Torque Off - Sil3, PLe)
- UL508C/CSA C22.2 NO.274 (cUL/CSA listing)

**Main benefits**
- Energy savings
- Faster start-up/commissioning
- Easy monitoring and maintenance

Packaged drive – ACS580-0P

**Key features**
- Input disconnect switch and fast acting fuses
- Optional input circuit breaker (+F255)
- UL(NEMA) Type 1, 12 and 3R
- Door-mounted input disconnect (padlockable in the OFF position).

**Main benefits**
- Compact design for easy installation, commissioning and maintenance

Industrial drive – ACS880-01

**Key features**
- Enclosure classes: IP20 for cabinet mounting, IP21 (NEMA 1) for wall-mounting and IP55 (NEMA 12) for dusty and wet environments
- Integrated STO (Safe Torque Off - Sil3, PLe)
- UL508C/CSA C22.2 NO.274 (cUL/CSA listing)
- Removable memory unit
- Functional safety modules for machinery safety
- Fieldbus adapter modules
- IEC-PLC-like programming
- Application-specific software
- Low harmonic variant

**Main benefits**
- Drive/communication flexibility, compatible with most major connectivity solutions
- Ensures machine and personnel safety
- Access drive status from anywhere
- Provides historical information on your system
- Global availability and support
## Drive electrical ratings

### Light duty

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*Ratings are according to the standard UL (NEC) table, please check with local ABB representative for specific sizing requirements. **cULus certification only.

1) Continuous operation allowing 110% overload for 1 minute every 10 minutes.
ACSx80 product family is designed for variable torque and basic constant torque applications in light industry.

Variable torque applications, such as centrifugal pumps: booster, irrigation, circulating and vacuum pumps. Centrifugal fans: process cooling and ventilation. Centrifugal compressors: refrigerated compressors.

Basic constant torque applications, such as conveyors, mixers, extruders, positive displacement pumps and fans.

Reliability and consistent high quality
ACSx80 drives are designed for customers who value high quality and robustness in their applications. The product features, such as coated boards and compact IP55 enclosure make the ACSx80 suitable for harsh conditions. Additionally, all ACSx80 drives are tested at maximum temperature and with nominal loads. The tests include performance and all protective functions.

Easier than ever
ACSx80 drives have all the essential features built-in to reduce commissioning and setup time. The assistant control panel with multiple language choices is standard in ACS580 drives. Users can also upgrade to an optional Bluetooth-enabled control panel for wireless commissioning and monitoring. Primary settings and application control macros ensure quick product setup.

Instant availability
The entire ACSx80 line-up for products up to 600 HP are available from central stocks around the world for immediate delivery.

Shared features of the ABB all-compatible drives portfolio

Drivetune smartphone app
- The Drivetune smartphone app together with the Bluetooth-enabled control panel allow you to set up and commission the drive remotely from a safe and comfortable location, using the same primary settings menu that is available on the drive’s control panel.
ACSx80 drive family
Effortless process automation

Control panel with primary settings
- Primary settings make commissioning the drive easier than ever
- The optional Bluetooth-enabled control panel allows easy smartphone connection and remote support capability
- Easily available USB interface for PC and tool connection
- Help button for problem solving

Reliable communication protocols
- Embedded RTU Modbus and optional fieldbus adapters enable connectivity with all major automation networks and control systems

Reliability and quality
- All units are tested under full load at maximum allowed ambient temperature to verify quality
- Printed circuit boards have an extra coating to protect against humid and harsh environments

Scalar, vector and direct torque control for process control
- Scalar control for effortless process control
- Vector control for accurate speed and torque control in demanding applications
- Direct Torque Control (DTC) greatly increases motor torque response
- Support for induction, permanent magnet and synchronous reluctance motors (SynRM)

Brake chopper
- The brake chopper is built-in as standard for ACS380, ACS580 frames up to R3 and ACS880 frames up to R3
- Optional brake chopper can be added to ACS880 frames R4-R9

Water handling
- Compressors
- Pump stations

Food and beverage
- Blowes
- Centrifuges
- Compressors
- Conveyors
- Fans

Mining
- Conveyors
- Crushers
- Mills

Printing
- Compressors
- Presses
- Winders

Rubber and plastic
- Extruders
- Injection moulding
- Pumps

Sawmill
- Chippers
- Conveyors
- Feeders
- Dryers
- Pickers
- Drying kilns

Agriculture
- Fans
- Irrigators
- Pumps
- Sorters

Textile
- Bleaching machines
- Compressors
- Conveyors
- Drum washers
- Extruders
- Fans
- Jet dyeing machines
- Pumps

Sawmill
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