Thanks to its reliable performance and ease of integration, the ACS380 is an all-compatible machinery drive ideal for machine building.

Reliable performance for your application
The ACS380 machinery drive is ideal for machine building thanks to its excellent motor control, long-lasting design and connectivity with all major industrial automation networks. Examples of typical ACS380 applications are mixers, conveyors, extruders, cranes and textile machinery.

Ease of integration
The ACS380 drive has many advanced features built-in as standard. A selection of variants and options allow the drive to be optimized for various fieldbus communication, I/O and EMC requirements. With the integrated functional safety features, the ACS380 drive can be part of the machine’s safety system. The drive is easy to adapt for various machines thanks to its good programmability.

Designed to last 10 years or more
Design features including coated circuit boards, minimized airflow through the electronics, and up to 50 °C operating temperature without derating make the ACS380 a safe choice for customers expecting high reliability. This is further enhanced by a full load test that is carried out on every single drive during production.
Technical data

Mains connection

| Voltage and power range | 1-phase, 200 to 240 V, +10%/-15%
| 0.25 to 2.2 kW (1/3 to 3 HP)
| 3-phase, 380 to 480 V, +10%/-15%
| 0.25 to 22 kW (1/2 to 30 HP)
| Built-in brake chopper and common DC connection with internal charging circuit

Frequency

50/60 Hz ±5%

Degree of protection

IP20 as standard (Optional UL type 1 kit)

Operating temperature

-10 to +50 °C (14 to 122 °F) up to +60 °C (140 °F)

Altitude

All variants 0 to 2000 m, derating above 1000 m (3300 ft)

Compliance

CE, RoHS, UL, cUL, EAC, KC, RCM, TÜV certification (safety functions)

Safety


EMC

EMC category C1 with an external filter, and EMC categories C2 and C3 with an internal filter, according to EMC Directive 2014/30/EU, EN 61800-3:2004 + A1 2012

User interface

Integrated, icon-based control panel

Drive programming

Adaptive programming

Connectivity variants

Standard variant connections

Four digital inputs, two digital input/outputs, two analog inputs, one analog output, one relay outputs, STO (SIL 3), tool connection (RJ-45), Modbus RTU

Configured variant connections

Two digital inputs, one relay output, STO (SIL 3), tool connection (RJ-45), one selected fieldbus

Control options

Fieldbus options

FDNA-01 DeviceNet™
FPBA-01 PROFIBUS DP
FCAN-01 CANopen®
FECA-01 EtherCAT®
FEPL-02 Ethernet POWERLINK
FEIP-21 Ethernet/IP™
FMST-21 Modbus/TCP
FPNO-21 PROFINET IO
BCAN-11 CANopen®

Safety functions module

FSPS-21 PROFIsafe with PROFINET IO

I/O option modules

BTAC-02 Encoder Interface with External +24 V DC support
BREL-01 External relay option (four relay outputs)
BAPO-01 External +24 V DC support
BIO-01 I/O Extension module (front option, can be used together with fieldbus)
BMIO-01 I/O & Modbus extension (front option)

PC tools and accessories

BCBL-01 USB to RJ-45 data cable
Drive composer entry, free download from ABB website
Drive composer pro

Control panel options

ACS-AP-S assistant control panel
ACS-AP-I assistant control panel
ACS-AP-W assistant control panel with Bluetooth interface
ACS-BP-S basic control panel

Learn more from the ACS380 website.

Key features

Excellent motor control

• Support for asynchronous, permanent magnet and synchronous reluctance motors
• Excellent speed and torque control
• Support for encoder feedback (option)

Ease of integration

• Connectivity with all major industrial automation networks
• Safe torque off (STO) is built-in as a standard, and can be controlled via PROFIsafe with an optional module
• Adaptive programming for customizing the drive for a wide range of applications
• Part of ABB all-compatible drives portfolio, all with a similar user interface and PC tools

Designed to last 10 years or more

• Coated circuit boards as standard
• Minimized airflow through the electronics
• Design for up to 50 °C without derating
• All drives tested during production at maximum temperatures with full nominal loads

For more information please contact your local ABB representative or visit:
new.abb.com/drives
new.abb.com/drives/drivespartners
new.abb.com/motors-generators

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