

LOW VOLTAGE AC DRIVES

# ABB industrial drives

## ACS880 multidrive modules, 1.5 to 3200 kW



Designed for cabinet installation, the compact ACS880 multidrive modules offer optimized cabinet layout as well as savings in cabling and installation costs. In addition, an extensive selection of module variants and options make the ACS880 suitable for various different requirements and applications.

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01 ACS880 has marine type approvals from various key classification bodies.

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02 ACS880 multidrive modules are used in industries such as metals, oil and gas, mining, marine, offshore, material handling machines, pulp and paper, automotive, food and beverage, cement, power, water and wastewater.

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03 ACS880 modules control a wide range of applications including conveyors, cranes, winches, test benches, processing lines, paper machines, pumps and fans.

### Optimized for cabinet installation

Modular design and side-by-side mounting enable optimized cabinet layout and fast installation. Bigger modules are equipped with wheels, so they can be easily moved in or out of the cabinet for maintenance purposes. This concept also allows pre-installation of the power cables inside the empty cabinet. High power density modules ensure extremely compact cabinet installation. To further simplify installation, ABB provides an extensive selection of support material and cabinet accessory kits.

### Minimized total cost

The multidrive concept with one supply unit and DC bus with multiple inverters offers significant benefits over other types of drive constructions, such as savings in cabling, installation and maintenance. As the energy circulates over the common DC bus, all energy is not taken from the supply network, resulting in reduced line power and currents. Energy circulation can be used for motor-to-motor braking without the need for a braking chopper or regenerative supply unit.

### Flexibility

The module selection includes inverter, diode supply, IGBT supply, regenerative rectifier, brake and DC-DC converter units. Everything required for a complete drive including EMC filters, du/dt filters, I/O and communication options is available.



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## Technical data

### ACS880 multidrive modules

#### ACS880-104 inverter units (INU):

Converts DC voltage to 3-phase AC voltage.

Power range 1.5 to 3200 kW

#### ACS880-304 diode supply units (DSU) for non-regenerative systems:

Uncontrolled 6-pulse diode supply or 6/12-pulse half-controlled diode supply with thyristor charging converts 3-phase AC voltage to DC voltage.

Power range 55 to 5445 kVA

#### ACS880-204 IGBT supply units (ISU) for regenerative systems:

Controlled IGBTs convert 3-phase AC voltage to DC voltage enabling operation both in motoring and generating modes. Line current is sinusoidal with low harmonic content. The control provides a near unity power factor.

Power range 5.5 to 3679 kVA

#### ACS880-904 regenerative rectifier units (RRU) for regenerative systems:

Converts 3-phase AC voltage to DC voltage. In motoring the supply works as a diode bridge, in regeneration it works as an IGBT bridge.

Power range 416 to 4135 kVA

#### ACS880-604 brake units

Power range,  $P_{cont}$  1-phase 70 to 714 kW, 3-phase 500 to 6500 kW

#### ACS880-1604 DC-DC converters (DDC)

Power range 305 to 1146 kW

Voltage range 3-phase, 380 to 690 V

Enclosure class IP00

Motors Squirrel cage, high-torque or servo-type permanent magnet, synchronous reluctance (SynRM), submersible and high-speed motors

## Key features

### Optimized design for easy cabinet installation

- Modular and compact design with built-in standard features and options, e.g. du/dt and AC filters
- Wheels for easy maneuvering
- Quick connectors
- Detailed documentation for cabinet installation
- Complete cabinet design for Rittal TS8 cabinet installation
- Cabinet accessory kits

### Flexible, cost-effective multidrive concept

- Reduced line power, cabinet size, investment costs
- Savings in cabling, installation, maintenance costs
- Reduced component count with increased reliability

### High power density

### Possibility for braking without the need for a braking chopper or regenerative supply unit

### Optimal control performance

Direct torque control (DTC) for precise speed and torque control with or without an encoder and support for virtually any type of motor.

### Application- and industry-specific solutions

Control programs and software features for specific applications and industries, e.g. PCP or ESP pump control.

### Programmability

Drive application programming based on IEC 61131 standard for full PLC programmability.

### Integrated safety to reduce the need for external safety components

### Marine type approvals from various key classification bodies

### Factory-tested solution for high reliability

All ACS880 drives are tested at maximum temperature with nominal loads.

### Nine-year maintenance interval



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

[abb.com/drives](http://abb.com/drives)

[abb.com/drivespartners](http://abb.com/drivespartners)

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