BROCHURE

ACS880-M04 machinery drive

0.5 to 60 Hp / 0.37 to 45 kW

The ACS880 machinery drive is part of ABB's all-compatible drives portfolio. This flexible and high performance drive is designed for machine builders requiring adaptable performance for their machine.

The innovation behind all-compatible is ABB's new common drives architecture, designed to simplify access and operation, optimize energy efficiency and maximize output with performance.

Adaptable performance
ABB's ACS880 machinery drive is designed for machine builders focusing on converting machinery and materialhandling.

ACS880 machinery drives can control almost any kind of motor in a closed or open loop for torque, speed or position control. Control references can be set via analog and digital inputs or via synchronous real time Ethernet.

General motion control features can be adjusted on a small scale with the embedded adaptive programming. More advanced programming can be done with optional IEC 61131-3 programming.

The standard safe torque off (STO) feature can be utilized with option modules (FSO-12/21) for more advanced functional safety features, including also PROFIsafe.

Easy commissioning and diagnostics
The drive composer PC tool offers an easy way to commission the drive and includes configuration, tuning and monitoring capabilities. Optional intuitive assistant control panels offer service and maintenance people easy access to drive status and settings.

Learn it once, use it everywhere
If an application requires more than a machinery drive, the common drives architecture enables scalability to other all-compatible drives in the ABB portfolio, such as the ACS380 machinery drives and ACS880 industrial drives. The drives share the same user interfaces and options, enabling operators to apply the same knowledge gained with the ACS880 machinery drives.

Technical data

Mains connection	
Voltage and power range	3-phase, 200 to 240 V, +/-10%, 0.5 to 30 HP (0.37 to 22 kW), I_{2N} 3 to 94 A 3-phase, 380 to 500 V, +10%/-15%, 1.5 to 60 HP (1.1 to 45 kW), I_{2N} 3 to 94 A Built-in braking chopper and common DC connection with internal charging circuit
Frequency	50/60 Hz ±5%
Degree of protection	UL open type (IP20), as standard
Ambient conditions	-10 to +40 °C (14 to 104 °F), up to +55 °C (131 °F) with derating 0 to 4000 m, (0 to 13000 ft), derating above 1000 m (3300 ft)
Compliance	CE, RoHS, UL, cUL, EAC
Safety	Safe torque off (STO) acc. to EN/IEC61800-5-2: IEC61508 ed2: SIL 3, IEC 61511: SIL 3, IEC 62061: SIL CL 3, EN ISO 13849-1: PL e
Optional safety features	Safe stop 1 (SS1), safely-limited speed (SLS), safe stop emergency (SSE), safe brake control (SBC), safe maximum speed (SMS), prevention of unexpected startup (POUS), safe direction (SD) and safe speed monitor (SSM) acc. To EN/IEC 61800-5-2: SIL 3, IEC 61508 ed2: SIL 3, IEC 61511: SIL 3, IEC 62061: SIL CL 3, EN ISO 13849-1: PL e
Optional safety fieldbus	PROFIsafe over PROFINET, certified
EMC	Optional EMC category C2 or EMC category C3, according to EMC Directive 2014/30/EU, EN 61800-3:2004 + A1 2012
Drive programming	Adaptive programming, optional IEC 61131-3 application programming
Control connections	Six digital inputs including thermistor input, 2 digital inputs/outputs, one digital input interlock, two analog inputs, two analog outputs, three relay outputs, Modbus RTU (or drive-to-drive link), STO (SIL 3), External 24V DC support, memory unit connection
Control and connectivity options	
Fieldbus protocols	PROFIBUS DP, CANopen®, EtherCAT®, PROFINET IO, Ethernet/IP™, Modbus TCP, DeviceNET™, ControlNet, EtherNet POWERLINK
I/O extension modules	Digital extension FIO-01: Four digital inputs/outputs, two relay outputs Analog extension FIO-11: Three analog inputs, one analog output, two digital inputs/outputs
Feedback modules	HTL pulse encoder, TTL pulse encoder, absolute encoder, resolver
PC tools and accessories	BCBL-01 USB to RJ-45 data cable Drive composer tool entry, available for free via ABB website Drive composer tool pro Automation builder and Drive Manager for single point of commissioning through PROFIBUS and PROFINET networks
Control panel options	ACS-BP-S basic control panel ACS-AP-I assistant control panel ACS-AP-W assistant control panel with Bluetooth interface

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