

Technical Specifications

Power Supply

- 1 phase 220...240 VAC ±15 %
- 3 phase 220...240 VAC ±15 %
- 3 phase 380...480 VAC +10 % -15 %
- Input frequency 50/60 Hz

Overloads

- Starting torque 150 % for 60 s

Output Frequency

- 0.5...590 Hz
- Digital resolution 0.01 Hz

Inputs/Outputs

- Analogue Inputs 2: (0-5 V, 0-10 V, 0-20 mA)
- Analogue Output 1: (0-5 V, 0-10 V, 0-20 mA, 4-20 mA)
- Digital Inputs 5: Nominal 24 VDC
- Digital Output 1: Nominal 24 VDC
- Relay Output 1: Volt free contact, 5 A @230 VAC max.

Standards

AC10 meets the following standards when installed in accordance with the information provided in the relevant product manual

- CE marked to EN50178 (Safety, Low-Voltage Directive)
- CE marked to EN61800-3 (EMC Directive)
- Complies with UL508C and CSA 22.2 #14

Operating Range

- Ambient operating temperature 0...50 °C
- Altitude 1000 m ASL
- Humidity 0...90 %, non-condensing, non-corrosive
- Protection degree IP20

Environment

- Conformally coated PCBs as standard achieving 3C3 environmental conformance
- Optional internal C3 EMC filter meets the requirements of EN61800-3 (industrial environment)

Switching Frequency

- Output switching frequencies 2...10 kHz, 4 kHz nominal

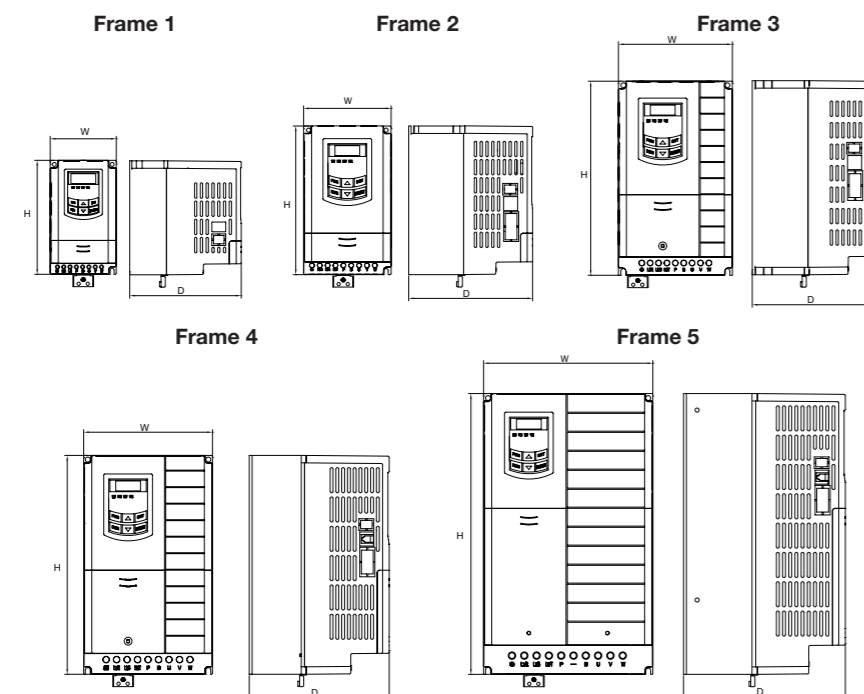
Ratings

220 V Single Phase Input / 220 V Three phase Input		
Nominal Power [kW]	Output Current [A]	Frame Size
0.2	1.5	1
0.4	2.5	1
0.55	3.5	1
0.75	4.5	1
1.1	5	2
1.5	7	2
2.2	10	2

400 V Three phase Input		
Nominal Power [kW]	Output Current [A]	Frame Size
0.2	0.6	1
0.4	1	1
0.55	1.5	1
0.75	2	1
1.1	3	2
1.5	4	2
2.2	6.5	2
3	7	3
4	9	3
5.5	12	3
7.5	17	4
11	23	4
15	32	5
18.5	38	5
22	44	5

Dimensions [mm]

Frame	Height (H)	Width (W)	Depth (D)	Weight [kg]
1	138	80	135	1.25
2	180	106	150	1.76
3	235	138	152	2.96
4	265	156	170	4.9
5	340	205	196	7.5



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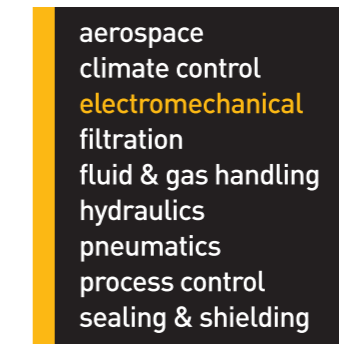
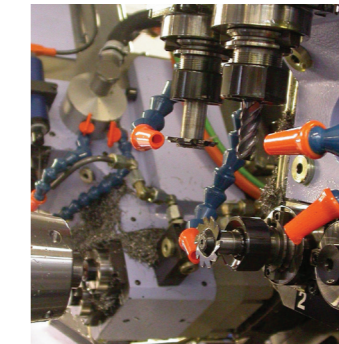
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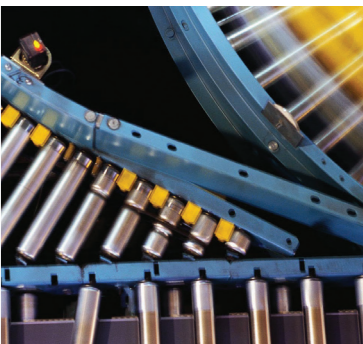
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AC10 Variable Speed Drive

For Simple, Reliable Motor Control in General Purpose Applications
0.2 - 22 kW Compact Drive



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AC10 Variable Speed Micro Drive

0.2 – 22 kW

Overview

AC10 Micro drive is a simple, reliable and economical solution to every-day motor control applications requiring speed or torque control within the power range of 0.2 kW to 22 kW. Having compact dimensions and features normally only associated with higher specification drives, including, sensorless vector mode,

output frequency up to 590 Hz, 3 phase 400 volt supplies in all 5 frame sizes and a full 150 % overload for 1 minute, AC10 provides an optimised solution for OEM machine builders looking for a compact, cost-effective drive without compromising on performance.

Simplicity

AC10 is designed to reduce the time and effort required to install, setup and commission through its easy to use integrated keypad. Minimal wiring requirements and two easily accessed terminal rails make AC10 fast and simple to install, having you up and running in no time at all. Auto-tuning sensorless vector mode takes AC10 beyond simple V/Hz control allowing users requiring greater dynamic speed or torque control for their application to benefit from the drives enhanced 0.5 % speed and 5 % torque accuracy.

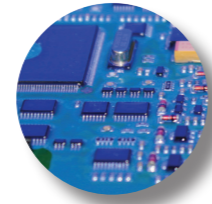
Reliability

Proven technology and manufacturing techniques ensure AC10 has been engineered and built to deliver consistently outstanding levels of performance day in, day out ensuring maximum uptime and productivity. Thanks to its conformally coated PCBs, AC10 is able to withstand even the most arduous class 3C3 environment which many other drives in this class would struggle with, allowing you to operate AC10 with the utmost confidence in more applications.

AC10 Drives Range

One of the smallest micro drives available and with five different frame sizes covering a power range of 0.2 kW through to 22 kW, AC10 is a low-cost, compact solution for simple

AC induction motor control in a wide range of applications across a host of different industries.



Suited to all environments

- Optional Internal EMC filter allows use in C3 industrial environments
- Conformal coating provides protection in arduous class 3C3 environments
- IP66 / Type 4x versions available
- 50 °C operating temperature
- Fan-cooled heatsink, convection cooled electronics



Flexible I/O

- Freely assignable digital inputs and outputs, and relay output to suit your application needs
- 1 analogue output and 2 analogue inputs for connection to speed potentiometers and panel meters
- Internal dynamic brake switch as standard



Modbus/RS485 communication

- Connection to Parker PDB drive setup and monitoring tool
- Connection to PLC or other Modbus RTU / RS485 network



Simple or enhanced performance

- Simple V/Hz control for general energy saving applications
- Enhanced auto-tuning sensorless vector control providing higher dynamic performance for applications requiring greater speed or torque accuracy
- Sensorless PMAC & AC Induction Motor control



All at the touch of a button

- Standard ergonomic keypad providing full access to all drive functions
- 4 LEDs provide instant indication of drive status
- Remote mountable keypad option for ease of setup and operation



Simplified Setup

- Simple out of the box operation thanks to integrated macros and quick start guide
- Basic speed control
- Speed preset
- Raise / Lower
- Auto / Man
- PID control
- Essential services (Fire Mode)
- Catch a spinning load (Fly-Catching)



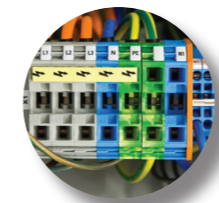
High Speed Operation

- Up to 590 Hz output for high speed operations such as spindles, centrifuges, mixers etc.



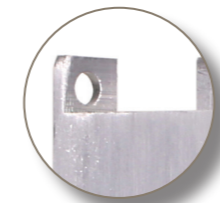
Extra power when it's needed

- 150 % overload for 60 seconds at 0.5 Hz to provide extra starting torque for shifting high inertia loads
- Output power can be uprated for operation in lower ambient temperatures



Choice of operating voltages

- 230 V single and three phase input up to 2.2 kW
- 400 V three phase input from 0.2 kW through to 22 kW



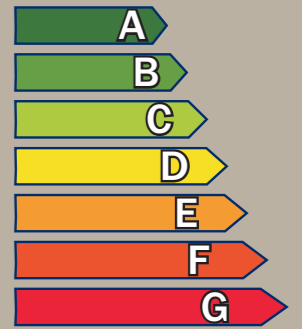
Compact Dimensions

- When compared to other compact drives of similar functionality, AC10 is noticeably more compact reducing cabinet space and freeing up valuable floor space.

Energy savings made simple

For applications such as fan control, energy savings of up to 50% can be achieved by using the AC10 to match the motor speed to process requirements. In addition to saving energy, power factor can be improved, system noise reduced, maintenance periods extended and overall service life increased. AC10 can be quickly and easily retrofitted into existing applications or installed in conjunction with new equipment. Dependent upon the application, payback time can be as little as a few months.

More efficient



Less efficient

Applications

AC10 provides a no-fuss approach to general purpose industrial motor control applications across a wide range of industries, giving users the benefits of the inherent energy-saving properties of using a variable frequency drive, as well as the improved reliability and extended service life benefits associated with smoother starting and stopping of regularly cycling loads.

Typical applications for AC10 include...

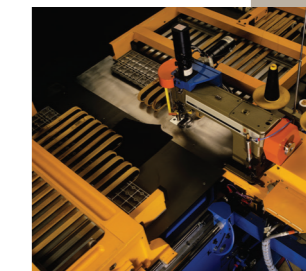
- Mixers
- Packaging Machines
- Textile Machines
- Conveyor
- Centrifuge
- Fans
- Spindles
- Automatic Barriers



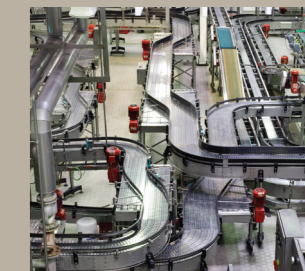
Mixers



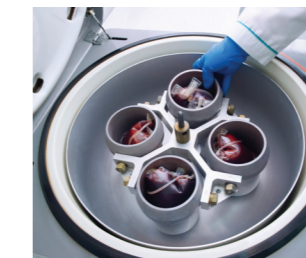
Packaging Machines



Textile Machines



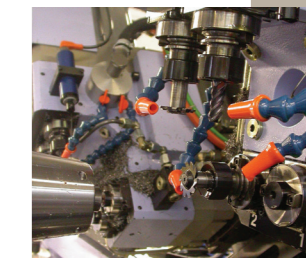
Conveyors



Centrifuges



Fans



Spindles



Automatic Barriers