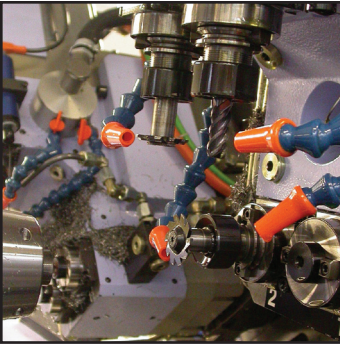


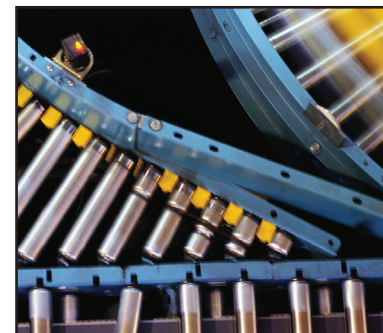


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AC10 Variable Speed Drive

For Simple, Reliable, Economical Motor Control in
General Purpose Applications
0.25 - 250 HP



ENGINEERING YOUR SUCCESS.

AC10 Variable Speed Micro Drive

0.25 – 250 HP

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 0.25 to 250 HP. Having features normally only associated with higher specification drives, including, sensorless vector mode, output frequency up to

590 Hz, 3 phase 480 volt supplies in all 11 frame sizes and a full 150% overload for 1 minute, AC10 provides an optimized solution for OEM machine builders looking for a compact, cost-effective drive without compromising on performance. The AC10 is suitable for AC induction or permanent magnet AC motor designs.

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.

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 drive's 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.

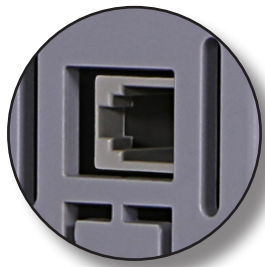
Thanks to its conformally coated PC boards, AC10 is able to withstand even the most severe class 3C3 environment which many other drives in this class would struggle with, allowing you to operate AC10 with the utmost confidence in more applications.

AC10 Drives Range

One of the smallest micro drives available and with 11 different frame sizes covering a power range of 0.25 to 250 HP, AC10 is a low-cost,

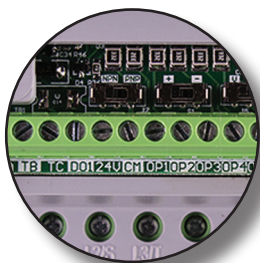
compact solution for simple AC induction and PMAC motor control in a wide range of applications across a host of different industries.





Modbus/RS485 communication

- Connection to Parker PDB drive setup and monitoring software tool and AC10 Cloning Module
- Connection to PLC or other Modbus RTU / RS485 network



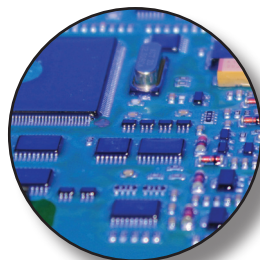
Flexible I/O

- Flexible digital inputs and outputs, and relay output to suit your application needs
- 1 analog output (2 on units 40HP and higher) and 2 analog inputs for connection to speed potentiometers and panel meters
- Internal dynamic brake switch as standard



Extra power when you need it

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



Suited to harsh environments

- Optional Internal EMC filter allows use in C3 industrial environments
- Conformal coating provides protection in arduous class 3C3 environments
- Up to 50°C operating temperature (Derate over 40°C)
- Fan-cooled heatsink, convection cooled electronics
- IP66 units also available (See brochure HA474260)



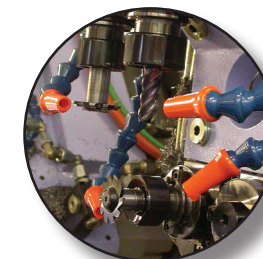
Simple or enhanced performance

- 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



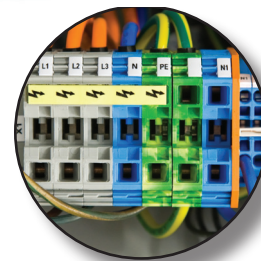
All at the touch of a button

- 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
- Simple out of the box operation thanks to integrated macros and quick start guide



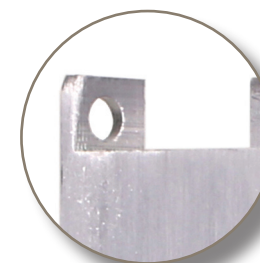
High Speed Operation

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



Choice of operating voltages

- 230 V single and three phase input up to 3 HP
- 480 V three phase input from 0.25 HP through 250 HP



Compact Dimensions

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

Application Macros

All included with the AC10



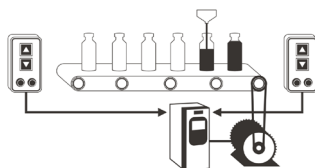
BASIC SPEED CONTROL

Set speed and voltage or current with start/stop direction control



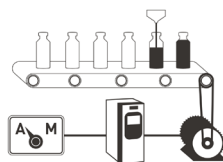
PRESET SPEED CONTROL

Select up to 8 pre-programmed speeds using digital inputs



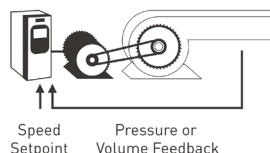
RAISE/LOWER

Increase or reduce speed using digital inputs



AUTOMATIC/MANUAL CONTROL

Set to run with local speed setting or external reference



PID CONTROL

Control the pressure, flow, temperature or any process variable

Making use of pre-defined control logic, Application Macros enable users to quickly configure the AC10 for control of one of a number of predefined functions. Information is presented to the user in a template format which can then be simply and easily populated with the specific details of the application.

Applications

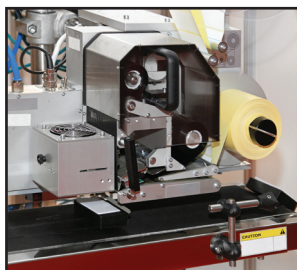
AC10 provides a simple approach to general purpose industrial motor control applications across a wide range of industries, giving users the benefits of the inherent energy-saving properties of using a variable frequency drive, as well as the improved reliability and extended service life benefits associated with smoother starting and stopping of regularly cycling loads.

Typical applications...

- Pumps
- Mixers
- Packaging Machines
- Textile Machines
- Conveyor
- Centrifuge
- Fans
- Spindles



Mixers



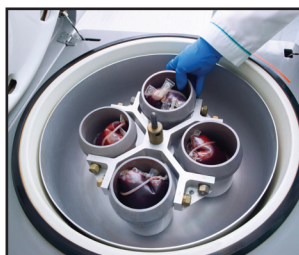
Packaging Machines



Textile Machines



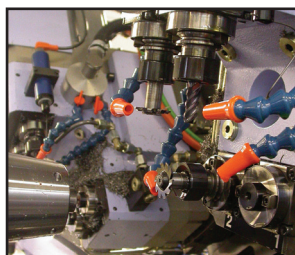
Conveyors



Centrifuges



Fans



Spindles



Pumps

Technical Specifications

Power Supply

- 1 phase 220-240 VAC $\pm 15\%$
- 3 phase 220-240 VAC $\pm 15\%$
- 3 phase 380-480 VAC $+10\%/-15\%$
- Input frequency 50/60 Hz

Motor Type

- Induction or PMAC, 3-phase

Overloads

- Starting torque 150% for 60 seconds

Output Frequency

- 0.5-590 Hz
- Frequency resolution 0.01 Hz

Inputs/Outputs

- Analog Inputs: 0-10 V, 0-20 mA (x2)
- Analog Output: 0-10 V, 0-20 mA (x1 0.25 - 30 HP, x2 on 40 HP and higher)
- Digital I/O: Nominal 24 VDC
- Relay Output 1: 5 A @230 VAC max

Standards

- UL Listed
 - CE marked to EN50178 (Safety, Low-Voltage Directive)
 - CE marked to EN61800-3 (EMC Directive)
- (When installed in accordance with the information provided in the product manual)

Operating Range

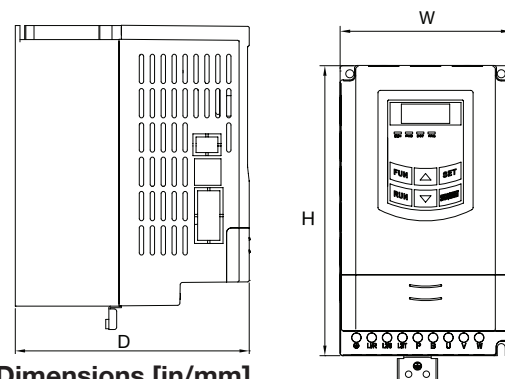
- 0-40°C (50°C with derating)
- Altitude 1000m ASL
- Humidity 0-90%, non-condensing, non-corrosive
- Protection degree IP20

Environment

- Conformally coated PC boards as standard achieve 3C3 conformance
- Optional internal C3 EMC filter meets the requirements of EN61800-3

Switching Frequency

- 2-10 kHz, 4 kHz nominal



Dimensions [in/mm]

Frame	Height (H)	Width (W)	Depth (D)	Wt [lb/kg]
1	5.43/138	3.15/80	5.31/135	2.76/1.25
2	7.09/180	4.17/106	5.91/150	3.88/1.76
3	9.25/235	5.43/138	5.98/152	6.53/2.96
4	10.43/265	6.14/156	6.69/170	10.80/4.9
5	13.39/340	8.07/205	7.71/196	16.53/7.5
6	17.13/435	10.43/265	9.25/235	37.48/17
7	18.90/480	12.40/315	9.21/234	55.12/25
8	21.85/555	14.17/360	10.43/265	88.18/40
9	24.80/630	16.14/410	11.81/300	121.25/55
10	30.12/765	20.32/516	12.83/326	207.24/94
11	35.83/910	22.05/560	13.46/342	264.56/120

Ratings

220V Single Phase & 3 phase Input

Nominal Power [HP]	Nominal Power [kW]	Output Current [A]	Frame Size
0.25	0.2	1.4	1
0.5	0.4	2.4	1
0.75	0.55	3.3	1
1	0.75	4.3	1
1.5	1.1	4.8	2
2	1.5	6.7	2
3	2.2	9.6	2

480 V Three phase Input

Nominal Power [HP]	Nominal Power [kW]	Output Current [A]	Frame Size
0.25	0.2	0.5	1
0.5	0.4	0.9	1
0.75	0.55	1.3	1
1	0.75	1.7	2
1.5	1.1	2.6	2
2	1.5	3.5	2
3	2.2	5.7	2
5	4	7.8	3
7.5	5.5	10	3
10	7.5	15	4
15	11	20	4
20	15	28	5
25	18.5	33	5
30	22	38	5
40	30	52	6
50	37	65	7
60	45	78	7
75	55	96	8
100	75	130	8
125	90	157	9
150	110	191	9
200	132	230	10
225	160	278	11
250	180	313	11

Part Number/Ordering Code

	1	2		3	4		5		6	7
Part # Example	10	G	-	1	1	-	0015	-	B	N

1&2	Device Family	
	10G	AC10 Drive, General Purpose, IP20
3	Voltage	
	1	230 V Single Phase
	3	230 V Three Phase
	4	460 V Three Phase
4&5	Frame Size Rating	
	230 V Supply	
	1	0015 0.25 HP/0.2 kW
	1	0025 0.5 HP/0.4 kW
	1	0035 0.75 HP/0.55 kW
	1	0045 1 HP/0.75 kW
	2	0050 1.5 HP/1.1 kW
	2	0070 2 HP/1.5 kW
	2	0100 3 HP/2.2 kW
	460 V Supply	
	1	0006 0.25 HP/0.2 kW
	1	0010 0.5 HP/0.4 kW
	1	0015 0.75 HP/0.55 kW
	2	0020 1 HP/0.75 kW
	2	0030 1.5 HP/1.1 kW
	2	0040 2 HP/1.5 kW
	2	0065 3 HP/2.2 kW
	3	0090 5 HP/4.0 kW
	3	0120 7.5 HP/5.5 kW
	4	0170 10 HP/7.5 kW
	4	0230 15 HP/11 kW

460 V Supply		
5	0320	20 HP/15 kW
5	0380	25 HP/18.5 kW
5	0440	30 HP/22 kW
6	0600	40 HP/30 kW
7	0750	50 HP/37 kW
7	0900	60 HP/45 kW
8	1100	75 HP/55 kW
8	1500	100 HP/75 kW
9	1800	125 HP/90 kW
9	2200	150 HP/110 kW
10	2650	200 HP/132 kW
11	3200	225 HP/160 kW
11	3600	250 HP/180 kW

6	Braking Module	
	B	Module Installed
7	EMC Filter	
	N	No Filter
	F	C3 EMC Filter

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