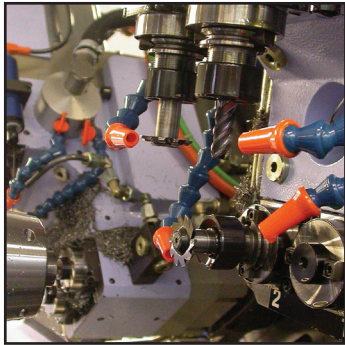




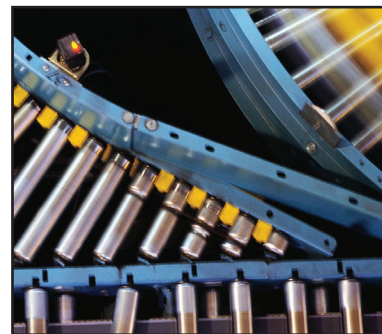
aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



NEMA 4X/IP66 Rated

AC10 Variable Speed Drive

For Simple, Reliable Motor Control in
Harsh Environment Conditions
0.25 - 20 HP NEMA 4X/IP66 Micro Drive



ENGINEERING YOUR SUCCESS.

AC10 Variable Speed Drive - NEMA 4X/IP66

0.25 – 20 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 20 HP. Having compact dimensions and 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 5 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 for severe environments 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, 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

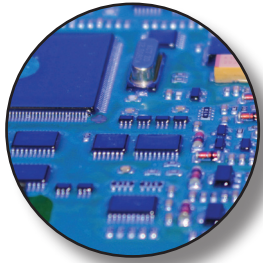
Proven technology and manufacturing techniques ensure AC10 has been engineered and built to deliver consistently outstanding levels of performance day in, day out ensuring maximum uptime and productivity.

Thanks to its conformally coated PCBs, AC10 is able to withstand even the most 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.

Protection

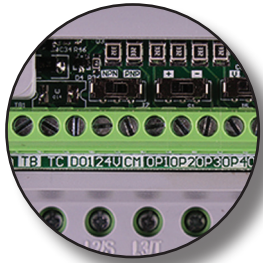
IP66/NEMA 4x (indoor) apply to IEC standard 60529-2004 and NEMA standards, and assess the capability of an enclosure to resist specific environmental conditions. IP66/NEMA 4X protection represents dust tight performance as well as the ability to withstand powerful water jets from all directions. Parker's AC10 IP66/NEMA 4X series offers all the great benefits of the AC10 series drives but with added environmental protection.





Suited to all environments

- Robust NEMA 4X indoor/IP66 rated enclosure for environmental protection
- Optional Internal EMC filter allows use in C3 industrial environments
- Conformal coating provides protection in arduous class 3C3 environments
- 50°C operating temperature



Flexible Connections

- Flexible digital inputs and outputs, and relay output to suit your application needs
- Internal dynamic brake switch as standard
- Clone module connection



Modbus/RS485 communication

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



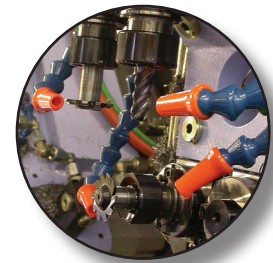
Extra power when it's needed

- 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



All at the touch of a button

- Standard ergonomic keypad providing full access to all drive functions
- Simple out of the box operation thanks to integrated macros and quick start guide



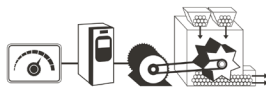
High Speed Operation

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



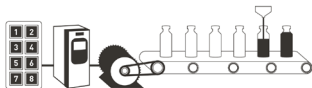
Application Macros

All included with the AC10



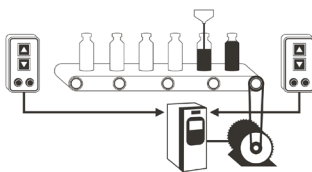
BASIC SPEED CONTROL

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



PRESET SPEED CONTROL

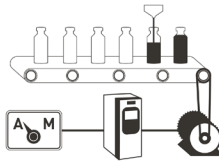
Select up to 8 pre-programmed speeds using digital inputs



RAISE/LOWER

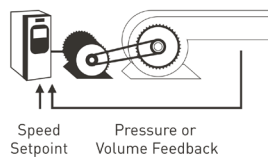
Increase or reduce speed using digital inputs

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.



AUTOMATIC/MANUAL CONTROL

Set to run with local speed setting or external reference



PID CONTROL

Control the pressure, flow, temperature or any process variable

Applications

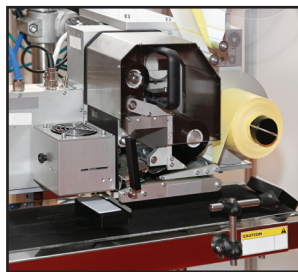
AC10 provides a no-fuss approach to general purpose industrial motor control applications across a wide range of industries, giving users the benefits of the inherent energy-saving properties of using a variable frequency drive, as well as the improved reliability and extended service life benefits associated with smoother starting and stopping of regularly cycling loads. The IP66/NEMA 4X indoor rated enclosure adds the flexibility of on-machine mounting.

Typical applications...

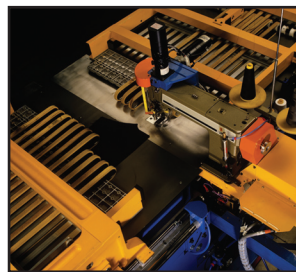
- Mixers
- Packaging Machines
- Textile Machines
- Conveyor
- Centrifuge
- Fans
- Bottling/Canning
- Food and Beverage



Mixers



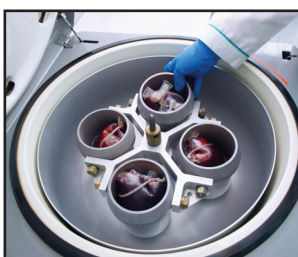
Packaging Machines



Textile Machines



Conveyors



Centrifuges



Fans



Food and Beverage



Bottling

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

- 150% at 0.5Hz for 60 seconds

Output Frequency

- 0.5-590 Hz

Inputs/Outputs

- Analog Inputs:
1x(0-10V)
1x(0-5 V, 0-10 V, 0-20mA, 4-20mA)
- Analog Output:
(0-10 V or 0-20mA)
- Digital Inputs 6: Nominal 24 VDC
- Digital Output 1: Nominal 24 VDC
- Relay Output: 5 Amps @230 VAC max

Standards

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

- UL/CUL Listed 
- CE marked to EN50178 (Safety, Low-Voltage Directive)
- EN61800-3 (EMC Directive)

Operating Range

- Ambient operating temperature 0-50°C (32-122°F)
- Altitude 1000m ASL
- Humidity 0-90%, non-condensing
- Protection degree IP66/NEMA 4X indoor

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, without derating

230V Single Phase Input

Part Number	Nominal Power HP kW		Output Current [A]	Frame Size
16G-11-0025-BN	0.5	0.4	2.4	1
16G-11-0045-BN	1	0.75	4.3	1
16G-11-0070-BN	2	1.5	6.7	1
16G-11-0100-BN	3	2.2	9.6	1

230V Three Phase Input

Part Number	Nominal Power HP kW		Output Current [A]	Frame Size
16G-31-0025-BN	0.5	0.4	2.4	1
16G-31-0045-BN	1	0.75	4.3	1
16G-31-0070-BN	2	1.5	6.7	1
16G-31-0100-BN	3	2.2	9.6	1

480V Three Phase Input

Part Number	Nominal Power HP kW		Output Current [A]	Frame Size
16G-41-0020-BN	1	0.75	1.7	1
16G-41-0040-BN	2	1.5	3.5	1
16G-41-0065-BN	3	2.2	5.7	1
16G-41-0090-BN	5	4	7.8	1
16G-42-0120-BN	7.5	5.5	10.0	2
16G-42-0170-BN	10	7.5	15.0	2
16G-43-0230-BN	15	11	20.0	3
16G-43-0320-BN	20	15	28.0	3

Download a product catalog and operator manual at www.parker.com/ssdusa/ac10

Part Number/Ordering Code

	1	2		3	4		5		6	7
Part # Example	16	G	-	1	1	-	0025	-	B	N

1 Product Family

16 AC10 VFD - IP66

2 Industry

G General Purpose

3 Voltage

1 230V Single Phase

3 230V Three Phase

4 480V Three Phase

4,5 Frame Size, Rated Current

230V Supply

1-0025 0.5 HP/0.4 kW

1-0045 1 HP/0.75 kW

2-0070 2 HP/1.5 kW

2-0100 3 HP/2.2 kW

4,5 Frame Size, Rated Current

480V Supply

1-0020 1 HP/0.75 kW

1-0040 2 HP/1.5 kW

1-0065 3 HP/2.2 kW

1-0090 5 HP/4.0 kW

2-0120 7.5 HP/5.5 kW

2-0170 10 HP/7.5 kW

3-0230 15 HP/11 kW

3-0320 20 HP/15 kW

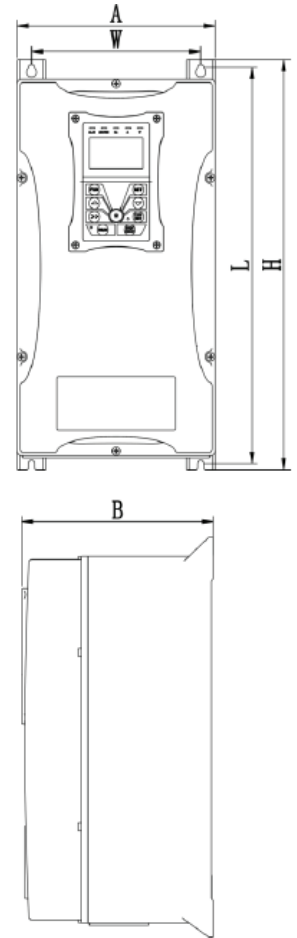
6 Braking Module

B Braking Module Installed

7 EMC Filter

N No Filter Installed

F C3 EMC Filter Installed



Dimensions [in/mm]

Frm Size	Height (H)	Width (A)	Depth (B)	Weight [lb/kg]
1	16.22/412	7.87/200	7.80/198	15/6.8
2	16.46/418	9.53/242	7.80/198	20.3/9.2
3	18.54/471	9.53/242	8.98/228	27/12.2

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