

AC30 Variable Speed Drive

For Open and Closed-Loop Motor Control Applications - 0.75 - 450 kW

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

Parker

ENGINEERING YOUR SUCCESS.

AC30 Series

A drive designed with you in mind

The AC30 variable speed drive has been designed to provide users with exceptional levels of motor control, from simple open-loop pumps and fans through to closed-loop process line applications.

The AC30 combines advanced performance with exceptional ease of use, making even the most complex applications simple to achieve.

Benefits for every business

Working with the five principles of Flexibility, Simplicity, Reliability, Connectivity and Capability our engineers have created a product focussed on making the benefits of quality motor control available to every business.

Parker provides easy to use software tools for all levels of experience; enabling users to address any application. Simple applications can be setup in seconds and more complex applications can be configured in the simplest and most logical way.

The AC30 provides users with access to a large library of application macros and worked examples.

System Integration

To enable connectivity into a wide range of automation systems the AC30 features Profinet and Ethernet IP through dual Ethernet ports, as well as Modbus TCP IP with client and server functionality.

The Ethernet protocols also provide potential for intelligent data analytics and connection to external servers – opening up links to the cloud or big data functionality.

So whether for standalone use or for integration into a complex automation system, the AC30 offers an easy to use solution for both simple and advanced motor control applications.

"It looks the same and feels the same, but now it offers so much more"



AC30V

The AC30V is the base drive for standalone applications. Much more than a basic pump and fan drive its program can be modified with our easy to use “Parker Drive Quicktool” (PDQ) to match your exact requirements. The completed application program can then be downloaded multiple times using a simple SD card. With full access from any network via its own IP address the drive can be fully integrated into any automation system via the single, top-mounted ethernet port.





AC30P

Supporting latest developments in the “Internet of things” and employing principles discussed in Industry 4.0 the AC30P is fully equipped with Profinet, Ethernet IP and Modbus TCP/IP via dual Ethernet ports. Using the full range of our software tools this allows more advanced applications including multiple drive configurations. Plug in via one port and access multiple drives supported by 1588 time synchronised peer to peer communication.

AC30D

The AC30D module gives you the great features of the AC30P as well as additional built in terminals to allow dual encoder inputs and an encoder output. This gives “system Board” functionality to the AC30 allowing “electronic line shaft” capability so with this control module we can offer phase locking between drives and register control. This also frees up the I/O plug in slot to allow for even more I/O to be added if needed.

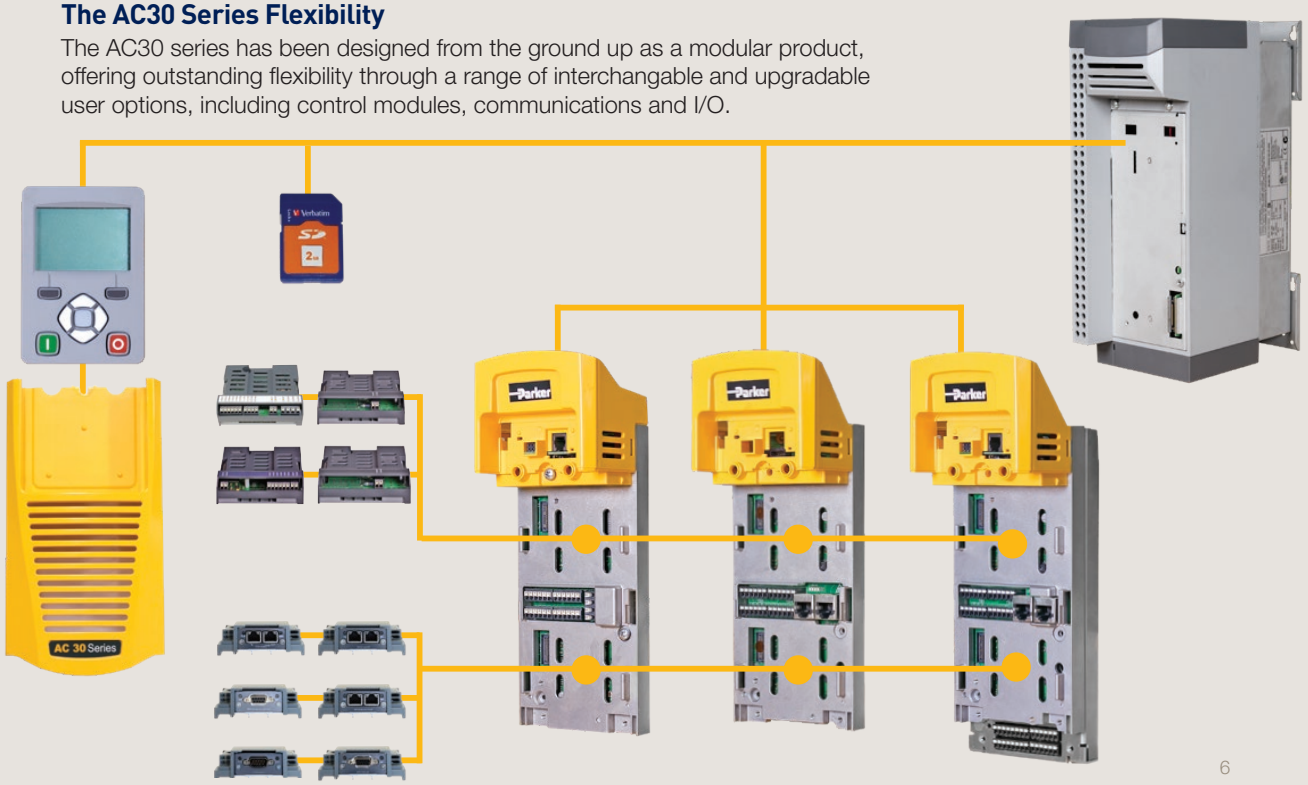
AC30 Series Capability & Connectivity

The AC30 is a modular product allowing users to select power stack, control module, IO and communications modules and accessories to perfectly match the requirements of the application, making it a highly customisable yet cost effective solution. The three interchangeable control modules provide the basis for the series: the standard AC30V control module, the AC30P module with a host of advanced connectivity options and the AC30D module which adds dual encoder system capability.

Feature	AC30V	AC30P	AC30D
Application Macros	Basic	System	System
Safety Torque Off (STO)	√	√	√
Modbus Server	√	√	√
Basic web server	√	√	√
Parker Drive Quick (PDQ) tool programming	√	√	√
DSE Developer software for legacy drive replacements	√	√	√
Ethernet IP	Option	√	√
Profinet	Option	√	√
Modbus client		√	√
System applications libraries		√	√
1588 time synchronised peer to peer comms		√	√
SMART diagnostics		√	√
User customisable web server		√	√
Parker Drive Developer (PDD) software (Codesys IEC61131)		√	√
Virtual master synchronisation (same as AC890)		√	√
Multi-axis phase locking (same as AC690/890)		√	√
Resolver feedback		Option	Option
Dual encoder inputs			√
Programmable encoder output			√

The AC30 Series Flexibility

The AC30 series has been designed from the ground up as a modular product, offering outstanding flexibility through a range of interchangable and upgradable user options, including control modules, communications and I/O.



AC30 Series

Technical Specifications

Overloads

- Heavy Duty Ratings; 150 % for 60 s, 180 % for 3 s (frame D to K)
- Normal Duty Ratings; 110 % for 60 s, 180 % of heavy duty FLC for 3 s (frame D to K)

Output Frequency

- 0.5 - 1500 Hz dependant upon switching frequency - export license required for applications above 590 hz

Operating Range

- Heavy Duty Ratings; 0 - 45 °C
- Normal Duty Ratings; 0 - 40 °C
  Derate from 40°C to 50 °C max.
- Altitude up to 2000 m ASL
  Derate above 1000 m

Environment

- IP20 Protection Rating
- Conformally coated to 3C3 and 3C4 for Hydrogen Sulphide (H_2S) as standard
- Optional Internal EMC filter meets requirements of EN61800-3 C2 1st environment
- Integral DC choke above 2.2 kW
  reduces harmonics to within limits set by EN61000-3-12

Switching Frequency

- Output switching frequencies up to 12 kHz

Dynamic Braking

- Each drive is fitted with an internal dynamic brake switch 100 % continuously rated (frame D to K)

Inputs/Outputs

- Analogue Inputs 2;
  (1 - ±10 V), (1 - ±10 V) or (0-20 mA)
- Analogue Outputs 2;
  (1 - 0-10 V or 0-20 mA), (1 - ±10 V)
- Digital Inputs 3; Nominal 24 VDC
- Digital Inputs/Outputs 4; Nominal 24 VDC
- Relay Outputs 2; Volt free relay contacts, 3 A at 230 VAC max. (AC30V only)
- Reference Supplies
  +10 VDC (10 mA max)
  –10 VDC (10 mA max)
  +24 VDC (140 mA max)

Safe Torque Off (STO)

- STO connection in accordance with EN13849 to PLe Cat 3 and SIL3 to EN61800-5-2

Optional Equipment

- Communications Modules
  - CANopen
  - Ethernet/IP
  - RS485
  - PROFIBUS
  - PROFINET
  - EtherCAT
- I/O Expansion Module providing;
  - 6 Digital I/O; user configurable
  - 2 Relay outputs 3 A at 230 VAC
  - 3 Analogue inputs ±10 V
  - Real time clock
  - Thermistor Input
  - Pulse encoder feedback

Standards

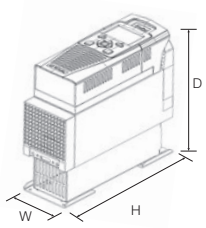
- AC30 Series meets the following standards when installed in accordance with the relevant product manual.
- CE marked to EN61800-5-1 (Safety, Low Voltage)
- CE marked to EN61800-3 (EMC)
- NRTL listed to US safety standard UL508C
- NRTL listed to Canadian standard C22.2#14

Ratings
380-480 (±10 %) VAC Supplies Three Phase

Normal Duty				Heavy Duty				
kW	hp	Output Current [A_{rms}]		kW	hp	Output Current [A_{rms}]		Frame
		400 V	460 V			400 V	460 V	
1.1	1.5	3.5	3.0	0.75	1	2.5	2.1	D
2.2	3	5.5	4.8	1.5	2	4.5	3.4	D
4	5	10	7.6	3	4	7.5	5.8	D
5.5	7.5	12	11	4	5	10	7.6	D
7.5	10	16	14	5.5	7.5	12	11	E
11	15	23	21	7.5	10	16	14	E
15	20	32	27	11	15	23	21	F
18.5	25	38	36	15	20	32	27	F
22	30	45	40	18.5	25	38	36	G
30	40	60	52	22	30	45	40	G
37	50	73	65	30	40	60	52	G
45	60	87	77	37	50	73	65	H
55	75	105	96	45	60	87	77	H
75	100	145	124	55	75	105	96	H
90	125	180	156	75	100	145	124	J
110	150	205	180	90	125	180	156	J
132	200	260	240	110	150	205	180	J
160	250	315	302	132	200	260	240	K
200	300	380	361	160	250	315	302	K
250	350	440	414	200	300	380	361	K
280	450	530	520	250	400	480	480	L
315	500	590	590	280	450	530	520	L
355	550	650	650	315	500	590	590	M
400	600	700	680	355	550	650	640	M
450	650	790	770	400	600	700	700	N

Dimensions
(dimensions in millimeters)

Frame	H	W	D
D	286	100	255
E	333	125	255
F	383	150	255
G	480	220	287
H	670	260	331
J	800	330	374
K	1300	400	385
L	1340	535	378
M	1463	604	378
N	1593	604	378



We reserve the right to change the product specification without prior notice

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates, Dubai
Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BG – Bulgaria, Sofia
Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budaörs
Tel: +36 23 885 470
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IL – Israel
Tel: +39 02 45 19 21
parker.israel@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7273 561 000
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

CN – China, Shanghai
Tel: +86 21 2899 5000

HK – Hong Kong
Tel: +852 2428 8008

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

SG – Singapore
Tel: +65 6887 6300

TH – Thailand, Bangkok
Tel: +662 186 7000

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos
Tel: +55 800 727 5374

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Toluca
Tel: +52 72 2275 4200

We reserve the right to make technical changes. The data correspond to the technical state at the time of printing.
© 2018 Parker Hannifin Corporation. All rights reserved.

192-300020N8 01/2018

EMEA Product Information Centre
Free phone: 00 800 27 27 5374
(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)
US Product Information Centre
Toll-free number: 1-800-27 27 537
www.parker.com

Your local authorized Parker distributor