

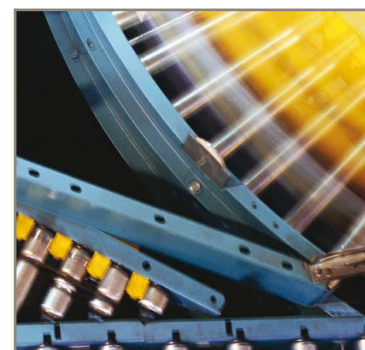


aerospace
climate control
electromechanical
filtration
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pneumatics
process control
sealing & shielding



AC650 Series

General Purpose Inverter
AC Inverters 0.25kW–110kW



ENGINEERING YOUR SUCCESS.

AC650 Series

AC Inverters 0.25kW–110kW

Product Overview

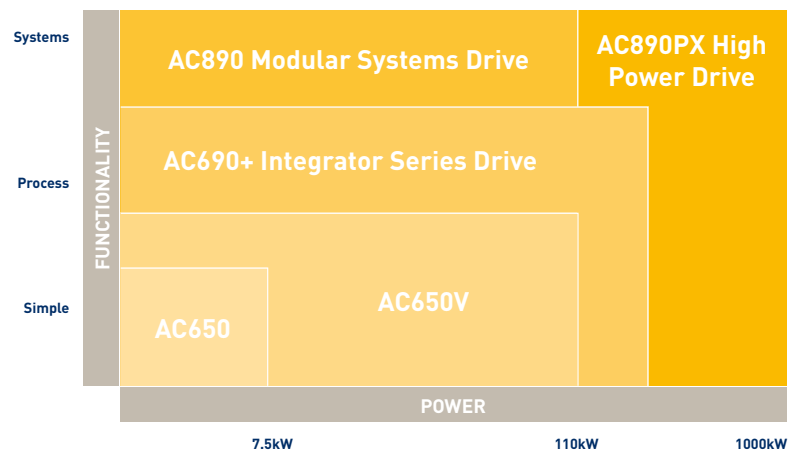
The AC650 series, comprising of AC650 General Purpose and AC650V General Purpose High Performance, have been specifically designed to provide simple, no-fuss speed control of standard three phase AC induction motors from 0.25kW to 110kW.

Designed with a full range of useful features including pre-programmed applications, integrated EMC filter and options for local or remote mountable operator controls – the drives are simple to set-up, install and operate.

With the AC650 series you are in control of your application immediately – no complicated set-up procedures, no confusing menu navigation; just quick and easy operation straight from the box.



AC Drives Product Overview



Easy-to-use Operator/ Programming Controls

- | | | |
|--|-------|------------------------|
| Bright Backlit LCD Display | | 4 Digit Readout |
| Diagnostic or Parameter Indicator | | Parameter Units |
| Motor Rotating and Direction Indicator | | Local/Remote Indicator |
| Local Start | | Local Stop |
| Raise/Lower Speed | | Programme Menu |



AC650 General Purpose

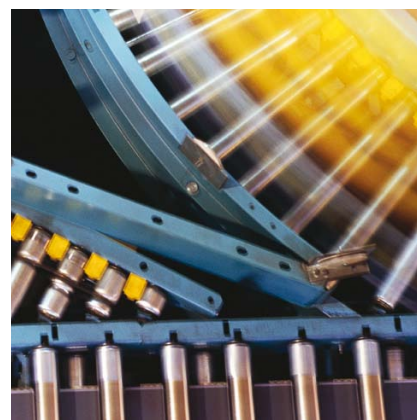
Ratings 0.25kW–7.5kW

Whether you need to control a conveyor belt, automatic barrier, machine spindle, or other general purpose application, the AC650 delivers reliable, cost-effective voltage/frequency speed control of your motor.

Designed with simplicity in mind the AC650 comes in a compact format with DIN rail mounting as standard allowing easy integration into any

electrical control panel. The operator/programming keypad can be removed to prevent unauthorised changes to inverter configuration.

For simple motor speed control up to 7.5kW, the AC650 is an easy to use, out of the box solution that will have your system up and running in no time.



220 – 240Vac (+10%) 50Hz (+5%) 1 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650-21115010-0F1P00-A2	0.25	1.5	1
650-21122010-0F1P00-A2	0.37	2.2	1
650-21130010-0F1P00-A2	0.55	3.0	1
650-21140010-0F1P00-A2	0.75	4.0	1
650-21155010-0F1P00-A2	1.1	5.5	2
650-21170020-0F1P00-A2	1.5	7.0	2

220 – 240Vac (+10%) 50Hz (+5%) 1/3 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650-22196030-BF1P00-A2	2.2	9.6	3

380 – 460Vac (+10%) 50Hz (+5%) 3 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650-43115020-BF1P00-A2	0.37	1.5	2
650-43120020-BF1P00-A2	0.55	2.0	2
650-43125020-BF1P00-A2	0.75	2.5	2
650-43135020-BF1P00-A2	1.1	3.5	2
650-43145020-BF1P00-A2	1.5	4.5	2
650-43155020-BF1P00-A2	2.2	5.5	2
650-43168030-BF1P00-A2	3.0	6.8	3
650-43190030-BF1P00-A2	4.0	9.0	3
650-43212030-BF1P00-A2	5.5	12	3
650-43216030-BF1P00-A2	7.5	16	3

Standard part reference includes EMC filter and operator keypad

Remote mounting of operator keypad requires additional cable.

Part No. CM057375U300 (3m length)

Contact your local Parker Sales Office for other product configurations and additional options.

Features

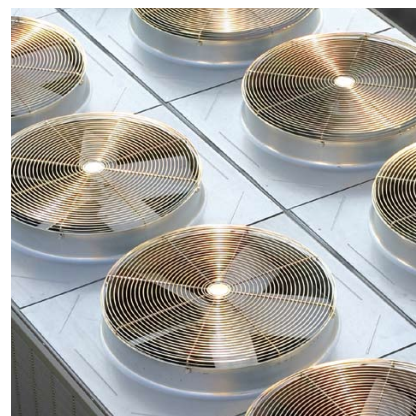
- Pre-programmed application macros allowing quick and simple setup
- Optional integrated EMC filter allows compliance with regulations while maintaining compact footprint
- Flexible I/O including analogue and relay output and motor thermistor input allows greater control options
- Integrated operator/programming controls with option for remote mounting
- DIN rail mount on all AC650 inverters up to 7.5kW reduces installation time
- 6514 cloning module allows easy back-up and transfer of parameters between different inverters
- RS485/RS232 communications giving additional control capabilities

AC650V General Purpose – High Performance

Ratings 0.25kW–110kW

The AC650V expands upon the simple, no-fuss philosophy of the AC650 and provides reliable, robust motor control from 0.25kW through to 110kW. With the addition of sensorless flux vector technology, the AC650V allows improved control at lower

speeds, better speed regulation of variable loads and higher starting torques for high inertia systems. The variable torque configuration option above 5.5kW makes the AC650V ideally suited to energy saving in pump and fan applications.



220 – 240Vac (+10%) 50Hz (+5%) 1 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650V-21115010-0F1P00-A2	0.25	1.5	1
650V-21122010-0F1P00-A2	0.37	2.2	1
650V-21130010-0F1P00-A2	0.55	3.0	1
650V-21140010-0F1P00-A2	0.75	4.0	1
650V-21155020-0F1P00-A2	1.1	5.5	2
650V-21170020-0F1P00-A2	1.5	7.0	2

220 – 240Vac (+10%) 50Hz (+5%) 1/3 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650V-22196030-BF1P00-A2	2.2	9.6	3

380 – 460Vac (+10%) 50Hz (+5%) 3 ph

Order Reference	Nominal Power (kW)	Output Current (A)	Frame
650V-43115020-BF1P00-A2	0.37	1.5	2
650V-43120020-BF1P00-A2	0.55	2.0	2
650V-43125020-BF1P00-A2	0.75	2.5	2
650V-43135020-BF1P00-A2	1.1	3.5	2
650V-43145020-BF1P00-A2	1.5	4.5	2
650V-43155020-BF1P00-A2	2.2	5.5	2
650V-43168030-BF1P00-A2	3.0	6.8	3
650V-43190030-BF1P00-A2	4.0	9.0	3
650V-43212030-BF1P00-A2	5.5	12	3
650V-43216030-BF1P00-A2	7.5	16	3
650V-432160C0-B01P00-A3	7.5(*11)	16(23)	C
650V-432230C0-B01P00-A3	11(*15)	23(30)	C
650V-432200C0-B01P00-A3	15(*18)	30(38)	C
650V-432380D0-001P00-A3	18(*22)	38(45)	D
650V-432450D0-001P00-A3	22(*30)	45(59)	D
650V-432590D0-001P00-A3	30(*37)	59(73)	D
650V-432730E0-001P00-A3	37(*45)	73(87)	E
650V-432870E0-001P00-A3	45(*55)	87(105)	E
650V-433105F1-001P00-A3	55(*75)	105(145)	F
650V-433145F1-001P00-A3	75(*90)	145(165)	F
650V-433180F1-001P00-A3	90(*110)	180(205)	F

*Variable torque rating for centrifugal pump and fan applications

Standard part reference includes operator keypad and integrated EMC filter up to 7.5kW. Footprint filters available above 7.5kW

Contact your local Parker Sales Office for other product configurations and additional options.

Features and Benefits

As AC650 plus...

- High torque sensorless vector control mode for advanced motor control
- Selectable constant torque or (higher) variable torque rating for centrifugal pump and fan applications allowing optimum inverter sizing to suit the application
- Fully configurable with graphical software tools such as DSE Lite
- Additional user configurable I/O points giving increased control capabilities
- Additional PROFIBUS communications options for integration into PLC systems
- Wall and through panel mounting options above 7.5kW
- Extended power range to 110kW makes the AC650V suited to a wide range of uses

Specifications

Power Supply

Single phase units;

220-240Vac ± 10%, 50-60Hz ± 5%

Three phase units;

380-460Vac ± 10%, 50-60Hz ± 5%

Ambient

0-40°C (derate to 50°C)

Up to 1000m ASL (derate > 1000m)

IP20 protected

Overload

150% Constant torque ratings

110% Variable torque rating (pump and fan)

Output Frequency

0-240Hz

Standards

The AC650 series meets the following standards when installed in accordance with the relevant product manual.

- CE Marked to EN50178 (Safety, Low Voltage Directive).
- CE Marked to EN61800-3 (EMC Directive).
- UL listed to US standard UL508C.
- cUL listed to Canadian standard C22.2 #14.

Inputs/Outputs

Analogue Inputs

2; Speed Control.

0-10V, 0-10V/4-20mA (summing)

Analogue Outputs

1; User configurable output frequency/load
0-10V

Digital Inputs

3-AC650, 5-AC650V; User configurable start/stop/direction/ pre-set speeds (8)

Digital Input/Outputs

1-AC650, 2-AC650V; User configurable as inputs or outputs

Digital Relay Outputs

1; Relay output 4A @ 240V

All digital outputs configurable for; at (not at) speed/at (above) min speed/running (stopped)/healthy (tripped)/above (below) pre-set load

Motor Thermistor Input

Power Supply Outputs

24V dc (50mA) – Digital I/O supply

10V dc (10mA) – Analogue reference supply

Communications Options

RS485/RS232 – AC650V and 650

PROFIBUS – AC650V only

User Selectable

Pre-programmed

Application Macros

Simply select your relevant application and the drives inputs/outputs and parameter list is automatically configured for you.

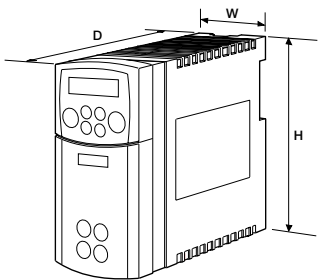
- **Basic Speed Control** – voltage or current source speed demand with digital start/stop and direction.
- **Manual/Auto Control** – switch between a local or remote speed demand signal.
- **Preset Speeds** – select up to 8 preprogrammed speeds selected by digital inputs.
- **Raise/Lower** – increase and decrease speed from raise/lower digital inputs.
- **PID Control** – control pressure, flow, temperature or other variable by monitoring transducer feedback.



Correct at time of going to press.

Dimensions

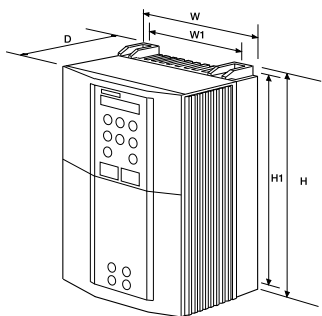
Frame Size	H	W	D
1	137	73	142
2	192	73	173
3	257	96	195



Frame 1,2,3

Dimensions

Model	Overall Dimensions			Fixing Centre		Weight
	H	W	D	H1	W1	(kg)
Frame C	348	201	208	335	150	9.3
Frame D	453	252	245	440	150	17.4
Frame E	669	257	312	630	150	32.5
Frame F	720	257	349	700	150	41.0



Frame C, D, E, F

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