

AC690+ Integrator 0.75 to 1,000kW

The AC690+ series is a single range of AC drives designed to meet the requirements of all variable speed applications from simple single motor speed control through to the most sophisticated integrated multi drive systems. At the heart of the AC690+ is a highly advanced, 32-bit microprocessor based, motor control algorithm, to which can be added a host of control options that allow you to tailor the drive to meet your exact requirements.

Three phase (380-500V) ratings are available from 0.75 to 1,000kW and single phase ratings (220-240V) from 0.75 to 2.2kW.



OPEN-LOOP (V/F), SENSORLESS VECTOR AND CLOSED-LOOP VECTOR IN A SINGLE DRIVE

POWERS UP TO 1,000kW

FUNCTION BLOCK PROGRAMMING

COMMON PROGRAMMING, FIELD BUS AND SOFTWARE TOOLS WITH THE 590+ INTEGRATOR DC SERIES

DUAL RATED FOR CONSTANT OR QUADRATIC "FAN" TORQUE

INTEGRAL EMC COMPLIANT FILTERS

TECHNICAL SPECIFICATION

Power Supply – 220-240Vac ($\pm 10\%$) single or three phase; 380-460Vac ($\pm 10\%$) three phase; (500V option available)

Ambient – Constant torque ratings – 0-45°C (40°C with IP40 cover); Quadratic torque ratings – 0-40°C (35°C with IP40 cover)

Derate from above temperatures to 50°C max

Altitude up to 1000m ASL, derate 1% per 100m above 1000m

Overload – Constant torque ratings – 150% for 60 seconds, 180% for 1 second; Quadratic torque ratings – 115% for 10 seconds

Output Frequency – 0-480Hz

Switching Frequency – Frame B 3,6 or 9kHz; Frame C, D, E and F 3 or 6kHz (all with audibly silent switching pattern)

Dynamic Braking – Frame B and C standard; Frame D,E and F optional

Inputs/Outputs

Analogue Inputs – 4 User configurable, 10bit (12 bit with systems expansion module). 0-10V, 0- ± 10 V, 0-20mA, 4-20mA

Analogue Outputs – 3 User configurable, 10 bit. 0-10V, 0- ± 10 V, 0-20mA, 4-20mA

Digital Inputs – 8 User configurable, nominal 24V DC (30V DC max).

Digital Outputs – 3 User configurable, volt free contact 3A at 230 Vac

Reference Supplies – +10V DC, -10V DC, +24V DC.

Function Block Programming

Function Block Programming allows almost limitless combinations of user functions to be realised with ease. Out of the box the Function Blocks are pre-configured to perform as a standard inverter for immediate use. However by using the programming module or Configured Lite+ software package (see page 64) each function of the drive can be interconnected to any other to perform the required control action.

Function Blocks include;

Value Functions: If, Addition, Difference, Multiplication, Division, Greater than, Less than, Counter, Timer

Logic Functions: Not, And, Nand, Or, Nor, Xor, Trigger, Flip-Flop

Standard Macro's: Basic Speed Control, Forward/Reverse, Raise/Lower, Process PID, Preset Speeds, Closed Loop Speed Feedback, Winder Control

6901 and 6911 Human Machine Interfaces

The 6901 and advanced 6911 Human Machine Interfaces are used for configuring, parameterising and controlling the drive. They have been designed to provide intuitive access to all functions in a logical, menu-driven format.

Key features include:

Detachable for 690+ or control panel mounting

Local control of speed, start/stop, jog and direction

Customised displays and legend

Password and function lockout

Quick setup menu

Backlit, multilingual layout 32 character alphanumeric readout (6901)

Five line alphanumeric display (four line bold) (6911 only)

Rotary select and scrolling (6911 only)

Data logging through compact flash card (6911 only)

Systems Expansion Module

An optional add-on systems expansion module is available for more advanced applications including phase locking between drives and register control. Key features include:

5 Extra configurable digital inputs/outputs

4 High resolution (12 bit plus sign) analogue inputs

2 Extra encoder inputs

2 High speed register mark inputs

STANDARDS

The 690+ series meets the following standards when installed in accordance with the relevant product manuals.

CE marked to EN50178 (Safety, Low Voltage Directive)

EN61800-3 (EMC Compliance) with integral filter



listed to US and cUL LISTED listed to Canadian safety standards

220-240V (±10%) AC Supply Single Phase

Type	Frame Size	Constant Torque Rating	
		Nominal Power (kW)	Output Current (A)
690PB-0007-230-1	B	0.75	4.0
690PB-0015-230-1	B	1.5	7.0
690PB-0022-230-1	B	2.2	10.5

380-460V (±10%) AC Supply Three Phase

Type	Frame Size	Constant Torque Rating		Quadratic (Fan) Torque Rating	
		Nominal Power (kW)	Output Current (A)	Nominal Power (kW)	Output Current (A)
690PB-0007-400-3	B	0.75	2.5	-	-
690PB-0015-400-3	B	1.5	4.5	-	-
690PB-0022-400-3	B	2.2	5.5	-	-
690PB-0040-400-3	B	4.0	9.5	-	-
690PB-0055-400-3	B	5.5	12	-	-
690PC-0075-400-3	C	7.5	16	11	23
690PC-0110-400-3	C	11	23	15	31 (UL=27)*
690PC-0150-400-3	C	15	31	18.5	38
690PD-0180-400-3	D	18.5	38	22	45
690PD-0220-400-3	D	22	45	30	59(UL=52)*
690PD-0300-400-3	D	30	59	37	73
690PE-0370-400-3	E	37	73	45	87
690PE-0450-400-3	E	45	87	55	105
690PF-0550-400-3	F	55	105	75	145
690PF-0750-400-3	F	75	145	90	165
690PF-0900-400-3	F	90	180	110	205
690PG-1100-400-3	G	110/110**	216	132/150**	260
690PG-1320-400-3	G	132/150	250	150/150	302
690PG-1600-400-3	G	160/185	316	200/225	377
690PG-1800-400-3	G	180/200	361	220/250	420
690PH-2000-400-3	H	200/220	375	250/280	480
690PH-2200-400-3	H	220/250	420	250/280	480
690PH-2500-400-3	H	250/280	480	300/315	545
690PH-2800-400-3	H	280/315	520	315/355	595
690PJ-3150-400-3	J	315/315	590	315/355	650

*Max current for UL listing. 3 Phase 230V and 500V 690+ are also available, please refer to your local Parker SSD Drives sales outlet for details.

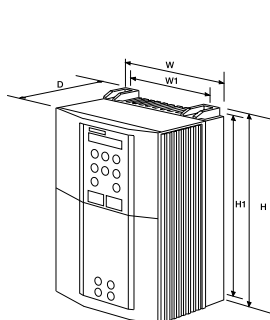
**kW Rating at 380/415V. Frames G, H, J require AC Input line choke listed below.

Options

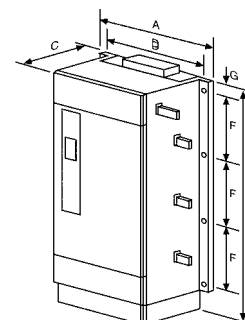
6901 Programming/Control Module		
6911 Advanced Programming/Control Module		
6052 Remote mounting bezel and 3m lead		
Internal Brake Switch	Frame B,C	
	Frame D	
	Frame E	
Communication Technology Boxes	690B	690C-J
Profibus	6053/PROF	6055/PROF
Modbus/RS422/RS485/EIBisynch	6053/EI00	6055/EI00
Link	6053/LINK	6055/LINK
Devicenet	6053/DNET	6055/DNET
Encoder feedback	AH467407U001 (Board)	6054/HTTL
Wall Mount IP40 Covers	LA467452 (Frame B)	
	LA465034U002 (Frame C)	
	LA465048U002 (Frame D)	
	LA465058U002 (Frame E)	
System Expansion Module		
ConfigEd Lite+ 'Windows' graphical configuration software		
AC Input Lin Chokes		
C0389936U401	690PG-1100/1320	
C0389936U402	690PG-1600/1800 and 690PH-2000/2200	
C0389936U403	690PH-2500/2800 and 690PJ	

Dimensions

Model Overall	Dimensions			Fixing Centre			Weight (kg)
	H	W	D	H1	W1	G	
Frame B	233	177	181	223	130		4.3
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 G	1042	456	465			16	100
Frame H	1177	572	465			16	125
Frame J	1288	1177	465			16	160



Frame B, C, D, E, F



Frame G, H, J

Optional external EMC filters and line chokes please refer to page 60/61.

Details on brake resistors please refer to page 59.