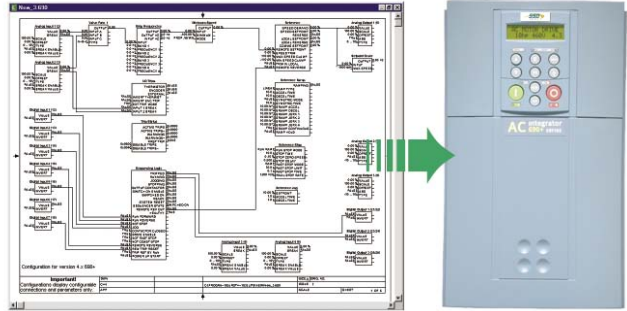


FUNCTION BLOCK PROGRAMMING

Function Block Programming is a tremendously flexible control structure that allows an almost infinite combination of user functions to be realized with ease. Each control function (an input, output, process PID for example) is represented as a software block that can be freely interconnected to all other blocks to provide any desired action.

The drive is dispatched with the function blocks pre-configured as a standard AC drive so you can operate it straight from the box without further adjustments. Alternatively you can pick pre-defined Macros or even create your own control strategy, often alleviating the need for an external PLC.



FUNCTION BLOCKS INCLUDE:

- Inputs
- Outputs
- Ramps
- Encoder
- Raise/Lower
- Skip Frequencies
- Process PID
- Local/Remote
- Brake Control
- Auto Restart
- Spinning Load Start
- Custom Screens
- Trip History
- Password
- Value Functions
- Logic Functions

STANDARD MACROS:

- Basic Speed Control
- Forward/Reverse
- Raise/Lower
- Process PID
- Preset Speeds
- Winder Control

6901KEYPAD

The 6901keypad is designed for programming and controlling the inverter quickly and easily. Its back-lit, 32-digit alphanumeric display with ergonomic keys provides access to all functions in a logical menu.

Features:

- Mounting on the 690+ or remote panel mounting
- Local control of running, speed and direction
- Customized menu and parameters
- Password and function lockout
- Quick setup menu



Multilingual

English · French · German · Spanish · Italian · Polish · Portuguese · Swedish

Quick Setup

Preloaded application macros to avoid complex configurations for simple applications

Autotune

Automatic survey of motor data necessary to obtain the maximum performance

Customized Display

Customized screens with engineering units for specific applications

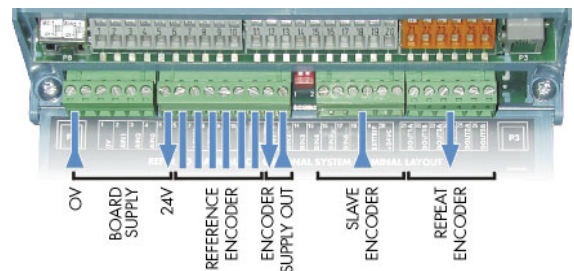
Internal Links

Interconnecting function blocks

Systems Board Expansion

This expansion module includes functions for phase control and register control. Installed inside the 690+ behind the control board, it adds to the inverter:

- 5 Additional configurable digital inputs/outputs
- 2 Additional encoder Inputs
- 2 High-speed register inputs
- Upgrade of analog input resolution (from 10 to 12 bit + sign)



690+ Series

Part Number	Heavy Duty		Standard Duty		Frame	Built-in Reactor	Built-in Brake Switch
	HP	Output Current (A)	HP	Output Current (A)			
220-240 (±10%) Vac Supplies– Single Phase and Three Phase							
690+0001/230/...*	1	4	–	–	B	–	YES
690+0002/230/...*	2	7	–	–		–	YES
690+0003/230/...*	3	10.5	–	–		–	YES
690+0005/230/...	5	16.5	–	–		–	YES
690+0007/230/...	7.5	22	10	28	C	DC	YES
690+0010C/230/...	10	28	15	42		DC	YES
690+0015/230/...	15	42	20	54	D	DC	Optional
690+0020/230/...	20	54	25	68		DC	Optional
690+0025/230/...	25	68	–	–		DC	Optional
690+0030/230/...	30	80	40	104	E	AC	Optional
690+0040/230/...	40	104	50	130	F	AC	Optional
690+0050/230/...	50	130	60	154		AC	Optional
690+0060/230/...	60	154	75	192		AC	Optional
690+0060/230/...	60	154	75	192		AC	Optional
380-460 (±10%) Vac Supplies– Three Phase							
690+0001/460/...	1	2.5	–	–	B	–	YES
690+0002/460/...	2	4.5	–	–		–	YES
690+0003/460/...	3	5.5	–	–		–	YES
690+0005/460/...	5	9.5	–	–		–	YES
690+0007/460/...	7.5	11	–	–		–	YES
690+0010B/460/...	10	14	–	–		–	YES
690+0015/460/...	15	21	20	27	C	DC	YES
690+0020C/460/...	20	27	25	34		DC	YES
690+0025/460/...	25	38	30	45	D	DC	Optional
690+0030/460/...	30	45	40	52		DC	Optional
690+0040D/460/...	40	52	50	65		DC	Optional
690+0050/460/...	50	73	60	87	E	AC	Optional
690+0060/460/...	60	87	75	105		AC	Optional
690+0075/460/...	75	100	100	125	F	AC	Optional
690+0100/460/...	100	130	125	156		AC	Optional
690+0125/460/...	125	156	150	180		AC	Optional
690+0150/460/...	150	180	–	–		AC	Optional
690+0175/460/...	175	216	200	260	G	External	Optional
690+0200/460/...	200	250	250	302		External	Optional
690+0250/460/...	250	316	300	361		External	Optional
690+0300/460/...	300	361	350	420		External	Optional
690+0400/460/...	400	480	450	545	H	External	Optional
690+0450/460/...	450	520	500	590		External	Optional

Table continued on page 29

Part Number	Heavy Duty		Standard Duty		Frame	Built-in Reactor	Built-in Brake Switch
	HP	Output Current (A)	HP	Output Current (A)			
380-460 (±10%) Vac Supplies– Three Phase <i>(continued from page 28)</i>							
690+0500/460/...	500	590	550	650	J	External	Optional
690K0600/460/2G... **	600	685	700	798	K	AC	Optional
690K0700/460/2H... **	700	798	800	912		AC	Optional
690K0800/460/2H... **	800	988	900	1120		AC	Optional
690K0900/460/3G... ***	900	1028	1000	1197		AC	Optional
690K1000/460/2J... **	1000	1120	1100	1235		AC	Optional
690K1000/460/3H... ***	1000	1197	1200	1368		AC	Optional
690K1300/460/3H... ***	1300	1482	1500	1681		AC	Optional
690K1500/460/3J... ***	1500	1681	1600	1852		AC	Optional

*Add a '-1' suffix for controllers using a single-phase supply

**Two parallel stacks

***Three parallel stacks

Note: Overload values: 150% Heavy Duty for 1 minute
110% Standard Duty for 1 minute

Frame	Overall Dimensions		
	H	W	D
B	9.17 (233)	6.95 (176.5)	7.15 (181)
C	13.70 (348)	7.91 (201)	8.19 (208)
D	17.80 (453)	9.92 (252)	9.65 (245)
E	26.30 (668)	10.10 (257)	12.30 (312)
F	28.30 (720)	10.10 (257)	14.0 (355)
G	41.00 (1042)	17.90 (456)	18.30 (465)
H	46.30 (1177)	22.50 (572)	18.30 (465)
J	50.70 (1288)	26.60 (677)	18.30 (465)
K*	79.00 (2007)	128.00 (3251)	24.00 (610)
K**	79.00 (2007)	144.00 (3658)	24.00 (610)

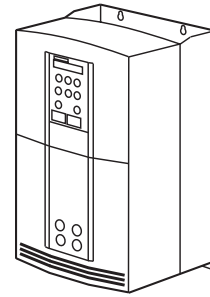
Dimensions are in inches (mm)

* 6-Pulse input (12-pulse optional)

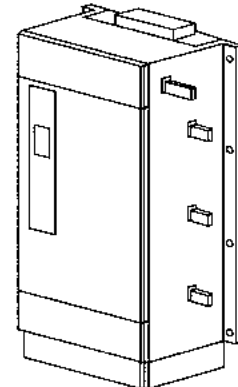
** 6-Pulse input (18-pulse optional)

K-frame dimensions include modified NEMA 12 ventilated enclosures with flange disconnect

Frames B/C/D/E/F



Frames G/H/J



690+ Braking Resistor Kits

NEMA ICS 3-301.62 Dynamic braking stop option. Min. 100% fit from base speed with 6X motor inertia and 4 stops per hour. Includes the overload, protective cage and enclosure top or panel mounting.

230V

Frame	Heavy Duty HP	Standard Duty HP	Part Number	Ohms	Amps	Watts	L x W x H
B	1	-	LA471358	56	1.9	202	6.5x1.2x2.4
B	2	-	LA471358	56	1.9	202	6.5x1.2x2.4
B	3	-	LA471358	56	1.9	202	6.5x1.2x2.4
B	5	-	LA471358	56	1.9	202	6.5x1.2x2.4
C	7.5	10	LA471406	30	3.5	368	13.5x4x5
C	10	15	LA471406	30	3.5	368	13.5x4x5
D	15	20	LA471386	15	5.0	375	13.5x4x5
D	20	25	LA471378	10.0	8.7	757	13.5x7x5
D	25	x	LA471378	10.0	8.7	757	13.5x7x5
E	30	40	LA471407	7.0	10.40	757	13.5x7x5
F	40	50	LA471379	6	13.7	1126	13.5x10x5
F	50	60	LA471380	4.0	19.4	1505	13.5x13x5
F	60	75	LA471380	4.0	19.4	1505	13.5x13x5

460V

Frame	Heavy Duty HP	Standard Duty HP	Part Number	Ohms	Amps	Watts	L x W x H
B	1	1	LA471356	100	1	100	6.5 x 1 x 1.6
B	2	2	LA471356	100	1	100	6.5 x 1 x 1.6
B	3	3	LA471356	100	1	100	6.5 x 1 x 1.6
B	5	5	LA471404	100	1.9	361	13.5x4x5
B	7.5	7.5	LA471404	100	1.9	361	13.5x4x5
B	10	10	LA471404	100	1.9	361	13.5x4x5
C	15	20	LA471359	56	3.0	500	13.2x1.2x2.4
C	20	25	LA471405	60	3.5	735	13.5x7x5
D	25	30	LA471361	30	5	750	13.5x7x5
D	30	40	LA471361	30	5	750	13.5x7x5
D	40	50	LA471350	22.5	7.1	1134	13.5x10x5
E	50	60	LA471364	18	7.9	1123	13.5x10x5
E	60	75	LA471365	15	8.7	1135	13.5x10x5
F	75	100	LA471367	8	13.7	1502	13.5x13x5
F	100	125	LA471367	8	13.7	1502	13.5x13x5
F	125	150	LA471369	6	19.4	2258	13.5x10x5
F	150	-	LA471369	6	19.4	2258	13.5x10x5
G	200	250	LA471370	3	39	4563	20x18x10
G	250	300	LA471372	2.25	45	4556	20x18x10
G	300	350	LA471372	2.25	45	4556	20x18x10
H	350	400	LA471375	1.50	55	4538	20x18x10
H	400	450	LA471375	1.50	55	4538	20x18x10
H	450	500	LA471375	1.50	55	4538	20x18x10
J	500	550	LA471376	1.20	61	4465	20x18x10

COMMUNICATION OPTIONS

The Technology Box allows 690+ to integrate with different Fieldbus protocols.

- LINK
- DeviceNet
- ControlNet
- ProfiBus
- ModBus RTU
- Ethernet
- CANopen
- LonWorks
- EI Bisynch/RS422/RS485



Part Number		Description
6901/00		Keypad 6901
6052/00		Remote mounting Kit for operator panel 6901 (3m cable included)
690+ - Size B	690+ - Other sizes	Communication Technology Box
6053/PROF/00	6055/PROF/00	Profibus
6053/EI00/00	6055/EI00/00	Modbus/RS422/RS485/EI Bisynch
6053/LINK/00	6055/LINK/00	Link
6053/DEV/00	6055/DEV/00	DeviceNet
6053/CNET/00	6055/CNET/00	ControlNet
6053/CAN/00	6055/CAN/00	CanOpen
6053/LON/00	6055/LON/00	LonWorks
6053/ENET/00	6055/ENET/00	Ethernet
AH467489U001	Standard	P3 port for 5703/1
690+ - Size B	690+ - Other sizes	Feedback Technology Box
LA467461	6054/HTTL/00	Encoder HTL

INTERNATIONAL STANDARDS

Conforms to EC Directive 89/336/EEC in compliance with standard:

- EN61800-3

Conforms to EC Directive 73/23/EEC in compliance with standard:

- EN50178 (Low Voltage)

Complies with UL508C safety standards



EMC Filters	P. 32
Line Reactors	P. 33
Braking Resistors	P. 30
Programming Software	P. 52