

# 650/650V

## 0.25 to 110kW



### DESCRIPTION

The 650 and 650V series is a family of ac drives that provide a no-fuss, cost effective solution for the simplest to most complex open-loop ac motor control applications.

The 650 has single key selectable preprogrammed applications so set-up is quick and easy without unnecessary complications.

In addition the 650V has the added benefit of an ultra-high torque sensorless vector algorithm and the control flexibility of fully configurable Function Block Programming.

Powers are available up to 110kW on 400V three phase supplies and 45kW on 230V supplies and all units are available with integral EMC compliant filters.

**EXTREMELY SIMPLE SET-UP AND OPERATION**  
**INTEGRAL OPERATOR CONTROLS WITH OPTIONAL REMOTE MOUNTING**  
**EXCEPTIONALLY COMPACT DESIGN**  
**150% OVERLOAD FOR 30 SECONDS**  
**MOTOR THERMISTOR INPUT**  
**PROFIBUS-DP AND MODBUS RTU (650V OPTIONS)**

### TECHNICAL SPECIFICATIONS

**Power supply** - Single phase units; 220-240Vac  $\pm 10\%$ ; 50-60Hz  $\pm 5\%$

three phase units; 380-460Vac  $\pm 10\%$ ; 50-60Hz  $\pm 5\%$

**Ambient** - 0-40°C

**Overload** - 150% for 30 seconds

**Output frequency** - 0-240Hz

**Environmental Protection** - IP20

### Inputs/Outputs

**Analogue Inputs** - 2; Speed control (0-10V, 4-20mA)

**Analogue Outputs** - 1; User configurable output frequency/load (0-10V)

**Digital Inputs** - 3 (650V 6); User configurable; Start/stop/direction/pre-set speeds (8)

**Digital Input/Outputs** - 1 (650V 2); User configurable as inputs or outputs

**Digital Relay Outputs** - 1; User configurable relay output (1A @ 240V)

All outputs configurable for; at (not at ) speed / at (above) min speed / running (stopped) / healthy (tripped) / above (below) preset load.

### Motor Thermistor Input

### Integral Programming/Control Module

**Button password protectable keypad giving control of**

- start/stop
- direction
- raise/lower speed
- menu navigation
- parameter setting

### Back lit LCD giving 4 digit readout of

- output current
- setpoint frequency
- output frequency
- drive rotating warning
- status alarms
- drive ready
- overcurrent trip
- overvoltage trip
- heatsink overtemperature
- motor overtemperature
- l x t overload
- undervoltage
- 4-20mA signal loss
- stall trip
- external trip
- dynamic brake trip

### Options

6513/PROF/00 - PROFIBUS-DP option for 650V Frames 1-3

6523/PROF/00 - PROFIBUS-DP option for 650V Frames C-F

6513/00- Modbus RTU communication Interface (650V)

6514/00- Cloning module for 10 drives

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# AC DRIVES

### Single Phase Controllers (230V Nominal)

Type	Nominal Power (kW)	Output Current (A)	Package Size
650(V)-002-230-F	0.25	1.5	1
650(V)-003-230-F	0.37	2.2	1
650(V)-005-230-F	0.55	3.0	1
650(V)-007-230-F	0.75	4.0	1
650(V)-011-230-F	1.1	5.5	2
650(V)-015-230-F	1.5	7.0	2

### Three Phase Controllers (400V Nominal)

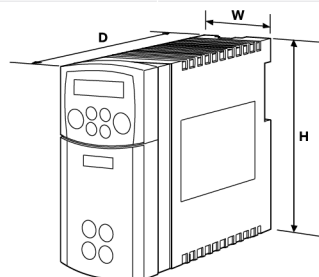
Type	Nominal Power (kW)	Output Current (A)	Package Size
650(V)-003-400-F	0.37	1.5	2
650(V)-005-400-F	0.55	2.0	2
650(V)-007-400-F	0.75	2.5	2
650(V)-011-400-F	1.1	3.5	2
650(V)-015-400-F	1.5	4.5	2
650(V)-022-400-F	2.2	5.5	3
650(V)-030-400-F	3.0	6.8	3
650(V)-040-400-F	4.0	9.0	3
650(V)-055-400-F	5.5	12	3
650(V)-075-400-F	7.5	16	3
650VC-110-4-xx	11 (15)	23 (31)	C
650VC-150-4-xx	15 (18)	30 (37)	C
650VD-180-4-xx	18 (22)	38 (45)	D
650VD-220-4-xx	22 (30)	45 (59)	D
650VD-300-4-xx	30 (37)	59 (73)	D
650VE-370-4-xx	37 (45)	73 (87)	E
650VE-450-4-xx	45 (55)	87 (105)	E
650VF-550-4-xx	55 (75)	105 (145)	F
650VF-750-4-xx	75 (90)	145 (165)	F
650VF-900-4-xx	90 (110)	180 (205)	F

All above drives feature with an operator station

All above 650V drives feature a removable operator station suitable for remote-mounting

### Dimensions

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

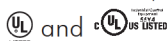


### STANDARDS

The 650V series meets the following standards when installed in accordance with relevant product manual.

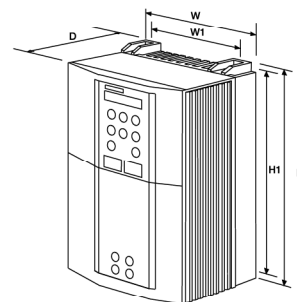
CE marked to EN50178 (Safety, Low Voltage Directive)

EN61800-3 (EMC) with integral filters



### Dimensions

Model	Overall Dimensions			Fixing Centre		Weight (kg)
	H	W	D	H1	W1	
Taille B	233	177	181	223	130	4.3
Taille C	348	201	208	335	150	9.3
Taille D	453	252	245	440	150	17.4
Taille E	669	257	312	630	150	32.5
Taille F	720	257	349	700	150	41.0



Frame B,C,D,E,F