

Databank - Product Bulletin

E500 Product Range - New Generation of Compact Inverters from Mitsubishi Electric



Mitsubishi Electric are proud to announce a new concept in drives technology which will set a new benchmark for the compact inverter market.

The new drives have been developed specifically with Europe in mind and with the intention of establishing a clear technical lead over competitor products. The level of technology now available with "micro-inverters" now equals the capabilities of some of the most advanced VSD's in the world.

(shown: E520 S inverter with integral RFI filter fitted)

Summary of Benefits

- Dual Rating - drives will be rated for both constant and variable torque loads by current.
- Profibus and CC-Link fieldbus cards available
- Inrush current suppression circuit
- 'Cassette' type EMC filter builds into drive heat sink (240V version)
- 0-10V true analogue output capability
- Sink / Source logic selectable
- Auto-tuning sensorless vector capability (open loop) = class - leading low speed torque (manual setting also possible).
- Integral RS485 serial comms capability (via std RJ45 socket)
- Supported by programming software package
- Fully compatible with A500 inverters
- Smart cassette fans for longer life
- Soft PWM capability - enables lower carrier frequencies to be used
- Can be used with d.c. link chokes
- Global standards approval - CE, UL, cUL...
- 400V series extended up to 7.5 kW
- Inbuilt / detachable programming panel - can be remote mounted
- Compatible with FR-PU04 parameter unit from A500/L inverters .
- Digital Potentiometer function
- Coasting motor restart capability
- Integral PID control
- Current Level Detection / Zero Current Detection
- Multiple User Group selection
- Intelligent Accel / Decel function (As Pr 60 = 1, 2 on FR-A240E, FR-A540E)
- Fully programmable I/O
- Run -Time Display
- Can operate from common d.c. supplies (or from Mitsubishi's 'HC' zero harmonic system)

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Specification and Dimension Details

Single Phase 200V Input (FR-E520S-_K-EC)

Specifications:

Applicable Motor Capacity (kW)		0.4	0.75	1.5	2.2
Output	Continuous Current (A)	2.5	4	7	10
	Overload Capacity	150% 60sec, 200% 0.5sec			
	Voltage	3-Phase 200~240V			
Power Supply	Rated input AC voltage, frequency	1-phase 200~240v 50/60Hz			
	Permissible AC voltage fluctuation	170~264V 50/60Hz			

Outline Dimensions (mm)

	0.4K			0.75K			1.5K			2.2K		
	W	H	D	W	H	D	W	H	D	W	H	D
E520EC,	140	150	146	140	150	146	140	150	166	140	150	166
A024S-EC (with PU)	140	150	128	140	150	128	200	150	138	200	150	138

3-Phase 400V Input (FR-E540-_K-EC)

Specifications:

Applicable motor capacity (kW)		0.4	0.75	1.5	2.2	3.7	5.5	7.5
Output	continuous current(A)	1.6 (1.4)	2.6 (2.2)	4 (3.8)	6 (5.4)	9.5 (8.7)	12	17
	overload capacity	150% 60sec., 200% 0.5sec.						
	voltage	3-phase 380~480V						
Power Supply	rated input AC voltage , frequency	3-Phase 380~480V 50/60Hz						
	permissible AC voltage fluctuation	325~528 50/60Hz						

Rated output current in () is for low-noise operation by setting 2 kHz or higher carrier frequency for Pr.72 when ambient temperature is greater than 40° C (104° F)

Outline dimensions (mm)

	0.4K			0.75K			1.5K			2.2K		
	W	H	D	W	H	D	W	H	D	W	H	D
E540-EC	140	150	116	140	150	116	140	150	136	140	150	136
A044 (with PU)	140	150	128	140	150	128	200	150	148	200	150	148
	3.7K			5.5K			7.5K					
	W	H	D	W	H	D	W	H	D	W	H	D
E540-EC	140	150	136	220	150	148	220	150	148			
A044 (with PU)	200	150	148	-	-	-	-	-	-			