Fuji Electric

Innovating Energy Technology

High Performance Multifunctional Inverters

FRENIC-MEGA Series

New Standard FRENIC-MEGA G2

With the flexibility and functionality to support a wide range of applications on all types of mechanical equipment, the FRENIC-MEGA takes core capability, responsiveness, environmental awareness, and easy maintenance to the next level.

UK CA CE c UL us LISTED

LEN-G2EN25.05

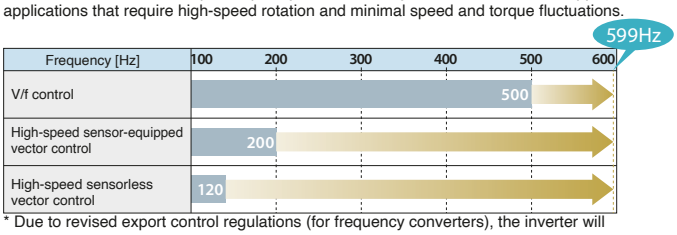
High basic performance

Supports vector control, sensorless vector control, dynamic torque vector control, and V/f control.

Faster operating speeds

Expanded range

Increases the maximum output frequency of all control systems to 599 Hz and supports applications that require high-speed rotation and minimal speed and torque fluctuations.

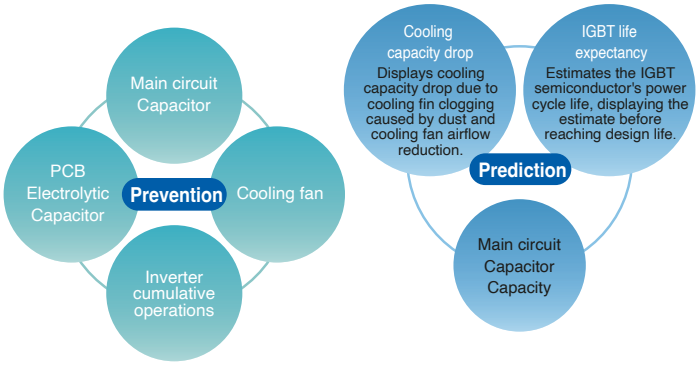


* Due to revised export control regulations (for frequency converters), the inverter will trip when the output frequency exceeds the upper limit of 599 Hz.

Example	Machine tools, compressors, automotive testing equipment, etc.

Life expectancy diagnosis

The keypad and PC loader make it easy to check the status of equipment and detect problems before they occur, helping to reduce production equipment maintenance time and downtime.

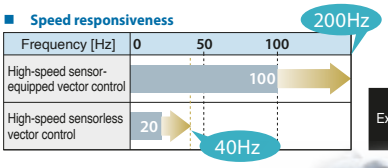


Enhanced response

Improved speed and current

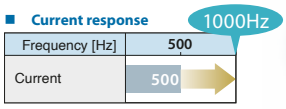
Improves speed and current responsiveness and stabilizes product quality by substantially reducing torque ripple and rotation irregularities.

■ **Speed responsiveness**



Example	Wire drawing machines, metal processing machines, printing machines, etc.

■ **Current response**

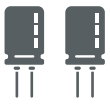


Long life expectancy (main components)

Many of the serviceable parts inside the inverter have been designed to meet customer equipment maintenance cycles.

Main circuit capacitor

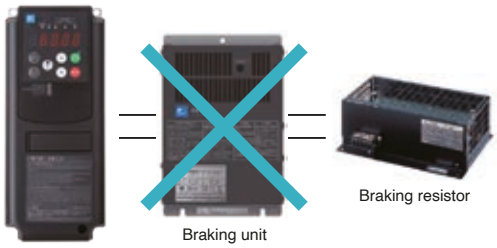
PCB Electrolytic capacitor



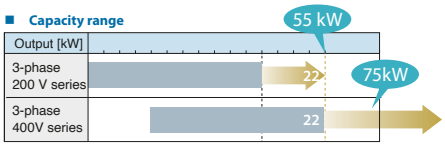
Cooling fan

Expands the capacity of the built-in braking resistor type

Comes standard with a larger capacity range and contributes to control panel space and cost savings.

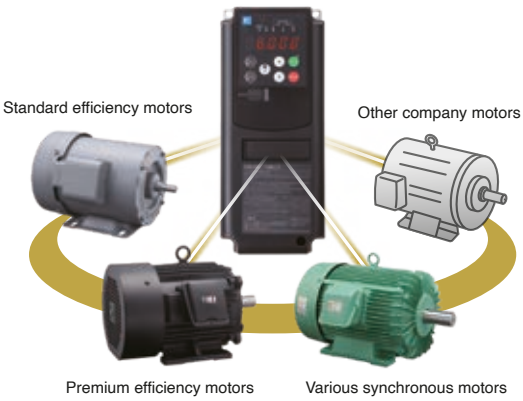


■ **Capacity range**



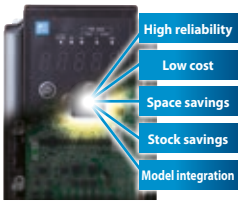
Can be used with any motor

Comes with new auto-tuning features that enable multi-drive operation using our induction and synchronous motors as well as those of other companies.



Customizable logic functions

Customizable inverter functions to meet your own specific needs. Requires no PLC or external control equipment (relays, timers, etc.) circuits, and can be configured simply by setting and combining various parameters inside the inverter.



Mini-PLC:
260
programming steps

Many more features

- Orientation function
- PID auto tuning function
- Load limiter
- Load adaptive control
- Supports a variety of networks
- Compatible with RS-485 communication (terminal block)
- G1 and G2 models have same mounting dimensions
- Simple wiring
- Easy parameter migration
- New operation keypad: TP-E2 and TP-A2SW
- Enhances alarm history and traceback functions
- Improves environmental resistance
- Globally compliant with overseas safety standards

Applications

- Fans and pumps
- Compressors
- Machine tools
- Press machines
- Winding machines
- Hoists
- Stacker cranes
- Multistory parking lots
- Automotive testing equipment
- Crushing machines
- Rolling mills
- Kilns

Designed with new operation keypad

G2 TP-E2

Standard Option

Character display

- 7-segment, 5-digit LED display.

"M/Shift" key

- The cursor can be moved to any position.
- Can assign the same signals as the digital input terminal (X terminal).
- Can fix the assigned signal to ON by pressing and holding the key.

"M" LED display

- Can use LEDs to monitor the digital output signals of inverters.
- Y-terminal signals can be assigned to enable checking whithout using a conventional loader or keypad.

G2 TP-A2SW

Multi-function Option

Character display

- Equipped with a highly visible LCD.
- Supports a total of 19 languages.

USB port

- Mounts to both standard keypad and multifunctional keypad.
- Can be directly connected to a PC with a commercially available USB cable (mini B).

Clock function

- Time data can be added to the alarm history. Battery (CR2032 type) not included.

SC card slot

- Can store traceback data on micro SD card.

Water resistant

- The front surface and sides are IP55 protected. The back side is IP20 protected.

Built-in Bluetooth

- Parameter changes and maintenance can be performed remotely using a mobile device. Radio law certified countries: Europe, North America, Japan, China, Thailand.

Model Variations

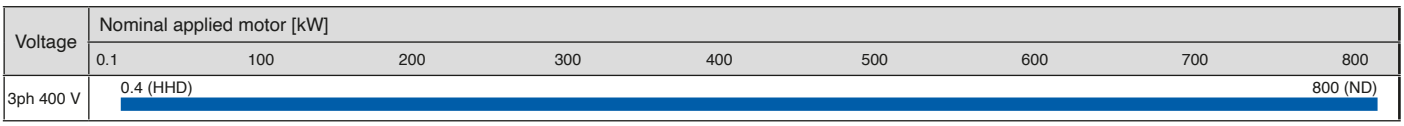
FRENIC-MEGA

Scan me or click me

Model list

HHD spec (High carrier frequency Heavy Duty) : 200%-3s, 150%-1min
HND spec (High carrier frequency Normal Duty) : 120%-1min

3-phase 400 VAC							
Applicable standard motor (kW)				Inverter model	Dimensions (mm)		
ND	HD	HND	HHD		W	H	D
-	-	-	0.4	FRN0002G2E-4G	110	260	130
-	-	-	0.75	FRN0003G2E-4G			145
-	-	-	1.5	FRN0004G2E-4G	150		
-	-	-	2.2	FRN0006G2E-4G			
-	-	-	3.7	FRN0009G2E-4G			
-	-	7.5	5.5	FRN0018G2E-4G	220		195
-	-	11	7.5	FRN0023G2E-4G			
-	-	15	11	FRN0035G2E-4G			
-	-	18.5	15	FRN0041G2E-4G	250	400	
-	-	22	18.5	FRN0045G2E-4G			
-	-	30	22	FRN0060G2E-4G			
45	37	37	30	FRN0085G2E-4G	326.2	550	261.3
55	45	45	37	FRN0105G2E-4G			
75	55	55	45	FRN0139G2E-4G	361.2	615	276.3
90	75	75	55	FRN0179G2E-4G		175	
110	90	110	75	FRN0217G2E-4G		740	
132	110	132	90	FRN0261G2E-4G	535.8		321.3
160	132	160	110	FRN0290G2E-4G			
200	160	200	132	FRN0376G2E-4G	536.4	1000	366.3
220	200	220	160	FRN0431G2E-4G			
280	220	280	200	FRN0547G2E-4G	686.4		
315	250	315	220	FRN0610G2E-4G			
400	315	355	280	FRN0739G2E-4G		1400	445.5
450	355	400	315	FRN0840G2E-4G			
560	400	500	355	FRN1039G2E-4G	886.4		446.3
630	450	560	400	FRN1169G2E-4G			
710	560	630	500	FRN1385G2E-4G	1006	1550	505.9
800	710	710	630	FRN1480G2E-4G			



Graph not to scale.

FRN 0003 G 2 E - 4 G

Code	Series name
FRN	FRENIC series

Code	Applicable motor rating
from 0002	from 0,4 kW
to 1386	to 630 kW, 710 kW

Code	Applicable range
G	High performance, multifunctional type

Code	Destination
G	Global

Code	Input power source
4	3-phase 400 V
2	3-phase 200 V

Code	Enclosure
S	Standard (basic type)
E	EMC filter built-in type

Code	Order of development
2	Series

Fuji Electric

Fuji Electric Europe GmbH
Headquarters Europe
Goethering 58
63067 Offenbach am Main
Germany
+49 (0)69 - 66 90 29 0

info.inverter@fujielectric-europe.com

www.fujielectric-europe.com