Fuji Electric
e-Front runners

FRENIC-MEGA Series

The inverter with the highest performance in the industry.
FRENIC-MEGA is a high performance, multifunctional inverter
Fuji Electric has developed by gathering the best of its technologies.
With our own state-of-the-art technology, the control performance has evolved to a new dimension.
FRENIC-MEGA has been developed with unyielding standards of quality and
flexibility to meet the demands of both simple and complex industrial applications.
Meeting the requirements for various applications, achieving lower maintenance,
and improved protection to environmental conditions.
FRENIC-MEGA, the inverter with the highest performance in the industry,
is about to redefine the common sense of general-purpose inverters.
Now, it is ready to provide a solution to your application needs!

Best in class vector control for general-purpose inverters

Powerful Solutions for versatile applications

Expanded power rating with flexibile configuration

Connectivity to many industrial networks

Designed for long life cycle with improved maintenance functions

Environmentally Friendly Designed

Global compatibility

Available Models

Nominal applied motor (HP)	Standard Inverter				
	Three-phase 230 V series		Three-phase 460 V series		
	LD spec (120%)	HD spec (150%)	LD spec (120%)	MD spec (150%)	HD spec (150%)
0.5	FRNF50G1S-2U	FRNF50G1S-2U	FRNF50G1S-4U		FRNF50G1S-4U
1	FRN001G1S-2U	FRN001G1S-2U	FRN001G1S-4U		FRN001G1S-4U
2	FRN002G1S-2U	FRN002G1S-2U	FRN002G1S-4U		FRN002G1S-4U
3	FRN003G1S-2U	FRN003G1S-2U	FRN003G1S-4U		FRN003G1S-4U
5	FRN005G1S-2U	FRN005G1S-2U	FRN005G1S-4U		FRN005G1S-4U
7.5	FRN007G1S-2U	FRN007G1S-2U	FRN007G1S-4U		FRN007G1S-4U
7.5		FRN010G1S-2U			FRN010G1S-4U
10	FRN010G1S-2U	FRN015G1S-2U	FRN010G1S-4U		FRN015G1S-4U
15	FRN015G1S-2U	FRN020G1S-2U	FRN015G1S-4U		FRN020G1S-4U
20	FRN020G1S-2U	FRN025G1S-2U	FRN020G1S-4U		FRN025G1S-4U
25	FRN025G1S-2U	FRN030G1S-2U	FRN025G1S-4U		FRN030G1S-4U
30	FRN030G1S-2U	FRN040G1S-2U	FRN030G1S-4U		FRN040G1S-4U
40	FRN040G1S-2U	FRN050G1S-2U	FRN040G1S-4U		FRN050G1S-4U
50	FRN050G1S-2U	FRN060G1S-2U	FRN050G1S-4U		FRN060G1S-4U
60	FRN060G1S-2U	FRN075G1S-2U	FRN060G1S-4U		FRN075G1S-4U
75	FRN075G1S-2U	FRN100G1S-2U	FRN075G1S-4U		FRN100G1S-4U

Nominal applied motor (HP)	Standard Inverter				
	Three-phase 230 V series		Three-phase 460 V series		
	LD spec (120%)	HD spec (150%)	LD spec (120%)	MD spec (150%)	HD spec (150%)
100	FRN100G1S-2U	FRN125G1S-2U	FRN100G1S-4U		FRN125G1S-4U
125	FRN125G1S-2U	FRN150G1S-2U	FRN125G1S-4U		FRN150G1S-4U
150	FRN150G1S-2U		FRN150G1S-4U	FRN150G1S-4U	FRN200G1S-4U
200			FRN200G1S-4U	FRN200G1S-4U	FRN250G1S-4U
250			FRN250G1S-4U	FRN250G1S-4U	FRN300G1S-4U
300			FRN300G1S-4U	FRN300G1S-4U	FRN350G1S-4U
350			FRN350G1S-4U	FRN350G1S-4U	FRN450G1S-4U
350				FRN450G1S-4U	
400					FRN500G1S-4U
450			FRN450G1S-4U	FRN500G1S-4U	FRN600G1S-4U
500			FRN500G1S-4U	FRN600G1S-4U	FRN700G1S-4U
600			FRN600G1S-4U	FRN700G1S-4U	FRN800G1S-4U
700			FRN700G1S-4U	FRN800G1S-4U	
800			FRN800G1S-4U		FRN900G1S-4U
900			FRN900G1S-4U		FRN1000G1S-4U
1000			FRN1000G1S-4U		

Specifications (Standard Unit)

Three-phase 230V series

Rating for LD (Low Duty) mode inverters for light load, (HD(High Duty) and MD (Medium Duty) motor rating are available in sales catalog and manual)

Type(FRN□G1S-2U)		F50	001	002	003	005	007	010	015	020	025	030	040	050	060	075	100	125	150
Nominal applied motor (HP) (Output rating) *1		0.5	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	150
Output ratings	Rated capacity (kVA) *2	1.2	2.0	3.2	4.4	7.2	11	13	18	24	30	35	46	58	72	86	113	138	165
	Rated voltage (V) *3	Three-phase 200 to 240 V (with AVR function)												Three-phase 200 to 230 V (with AVR function)					
	Rated current (A) *4	3	5	8	11	18	27	31.8 (29)	46.2 (42)	59.4 (55)	74.8 (68)	88 (80)	115 (107)	146	180	215	283	346	415
	Overload capability	150%-1 min, 200%-3.0 s						120%-1 min											
Input power	Voltage, frequency	200 to 240 V, 50/60 Hz												200 to 220 V, 50 Hz, 200 to 230 V, 60 Hz					
	Allowable voltage/frequency	Voltage: +10 to -15% (Interphase voltage unbalance: 2% or less) *5, Frequency: +5 to -5%																	
	Required capacity (with DCR) (kVA) *6	0.6	1.2	2.2	3.1	5.2	7.4	10.0	15.0	20.0	25.0	30.0	40.0	48.0	58.0	71.0	98.0	116	143
Braking	Torque (%) *7	150%		100%			70%			15%				7 to 12%					
	Braking transistor	Built-in												—					
	Built-in braking resistor	Built-in								—									
	Braking time (s)	5 s					3.7 s		3.4 s	—									
	Duty cycle (%ED)	5	3	5	3	2	2.2		1.4	—									
DC reactor (DCR)		Option															Standard *8		
Applicable safety standards		UL508C, C22.2 No.14, EN61800-5-1:2007																	
Enclosure (IEC60529)		IP20, UL open type												IP00, UL open type					
Cooling method		Natural cooling			Fan cooling														
Weight / Mass lbs (kg)		3.8 (1.7)	4.4 (2.0)	6.2 (2.8)	6.6 (3.0)	6.6 (3.0)	14 (6.5)	14 (6.5)	14 (6.5)	13 (5.8)	21 (9.5)	21 (9.5)	22 (10)	55 (25)	71 (32)	93 (42)	95 (43)	137 (62)	232 (105)

Three-phase 460V series

Rating for LD (Low Duty) mode inverters for light load, (HD(High Duty) and MD (Medium Duty) motor rating are available in sales catalog and manual) (0.5 to 100 HP)

Type (FRN□□□G1S-4U)		F50	001	002	003	005	007	010	015	020	025	030	040	050	060	075	100		
Nominal applied motor (HP) (Output rating) *1		0.5	1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100		
Output ratings	Rated capacity (kVA) *2	1.2	2.0	3.2	4.4	7.2	11	13.1	18.3	24	29	36	48	60	73	89	120		
	Rated voltage (V) *3	Three-phase 380 to 480 V (with AVR function)																	
	Rated current (A)	1.5	2.5	4	5.5	9	13.5	16.5	23	30.5	37	45	60	75	91	112	150		
	Overload capability	150%-1 min, 200%-3.0 s						120%-1 min											
Input power	Voltage, frequency	380 to 480 V, 50/60 Hz																	
	Allowable voltage/frequency	Voltage: +10 to -15% (Interphase voltage unbalance: 2% or less) *5, Frequency: +5 to -5%																	
	Required capacity (with DCR) (kVA) *6	0.6	1.2	2.2	3.1	5.2	7.4	10	15	20	25	29	40	48	58	71	96		
Braking	Torque (%) *7	150%		100%			70%			15%				7 to 12%					
	Braking transistor	Built-in												—					
	Built-in braking resistor	Built-in								—									
	Braking time (s)	5 s					3.7 s		3.4 s	—									
	Duty cycle (%ED)	5	3	5	3	2	2.2		1.4	—									
DC reactor (DCR)		Option															Standard *8		
Applicable safety standards		UL508C, C22.2 No.14, EN61800-5-1:2007																	
Enclosure (IEC60529)		IP20, UL open type												IP00, UL open type					
Cooling method		Natural cooling			Fan cooling														
Weight / Mass lbs (kg)		3.8 (1.7)	4.4 (2.0)	5.7 (2.6)	6.0 (2.7)	6.6 (3.0)	14 (6.5)	14 (6.5)	14 (6.5)	13 (5.8)	21 (9.5)	21 (9.5)	22 (10)	55 (25)	57 (26)	68 (31)	73 (33)		

(125 to 1000 HP)

Type (FRN□□□G1S-4U)		125	150	200	250	300	350	450	500	600	700	800	900	1000					
Nominal applied motor (HP) (Output rating) *1		125	150	200	250	300	350	450	500	600	700	800	900	1000					
Output ratings	Rated capacity (kVA) *2	140	167	202	242	300	331	414	518	590	669	765	932	1092					
	Rated voltage (V) *3	Three-phase 380 to 480 V (with AVR function)																	
	Rated current (A)	176	210	253	304	377	415	520	650	740	840	960	1170	1370					
	Overload capability	120%-1 min																	
Input power	Voltage, frequency	380 to 440 V, 50 Hz 380 to 480 V, 60 Hz																	
	Allowable voltage/frequency	Voltage: +10 to -15% (Interphase voltage unbalance: 2% or less) *5, Frequency: +5 to -5%																	
	Required capacity (with DCR) (kVA) *6	114	140	165	199	248	271	347	436	489	547	611	773	871					
Braking	Torque (%) *7	7 to 12%																	
	Braking transistor	—																	
	Built-in braking resistor	—																	
	Braking time (s)	—																	
	Duty cycle (%ED)	—																	
DC reactor (DCR)		Standard *8																	
Applicable safety standards		UL508C, C22.2 No.14, EN61800-5-1:2007																	
Enclosure (IEC60529)		IP00, UL open type																	
Cooling method		Fan cooling																	
Weight / Mass lbs (kg)		93 (42)	137 (62)	141 (64)	207 (94)	216 (98)	284 (129)	309 (140)	540 (245)	540 (245)	728 (330)	728 (330)	1169 (530)	1169 (530)					

*1 US-4P standard induction motor *2 Rated capacity is calculated assuming the rated output voltage as 230 V for 230 V series and 460 V for 460 V series. *3 Output voltage cannot exceed the power supply voltage.
*4 To use the inverter with the carrier frequency of 3 kHz or more at the surrounding temperature of 40°C (104°F) or higher, manage the load so that the current comes to be within the rated ones enclosed in parentheses ( ) in continuous running.

*5 Voltage unbalance(%) = $\frac{\text{Max. voltage (V) - Min. voltage (V)}}{\text{Three-phase average voltage (V)}} \times 67$(IEC 61800-3)
If this value is 2 to 3%, use an optional AC reactor (ACR).

*6 Required when a DC reactor (DCR) is used.
*7 Average braking torque for the motor running alone, without external braking resistor. (It varies with the efficiency of the motor.)
*8 The FRN100G1S-2U or higher type comes with a DC reactor (DCR).

Safety Precautions

Before using this inverter, carefully read the instruction manual, specifications, etc. or consult us or the shop of purchase to fully understand the correct usage of the inverter.

Fuji Electric Corp. of America

47520 Westinghouse Drive Fremont, CA 94539, U.S.A
Tel.+1-510-440-1060
Fax.+1-510-440-1063 http://www.fujielectric.com/fecoa