

High Performance Multifunctional Inverters

FRENIC-MEGA Series

Options and Accessories



FUJI ELECTRIC INVERTERS

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.

- NEMA 1 KITS
- REACTORS
- OPTION BOARDS



Options

DC REACTOR



Figure A

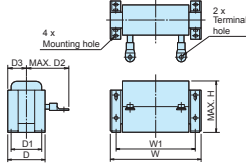


Figure B

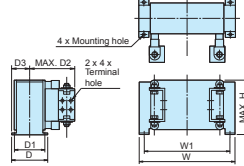
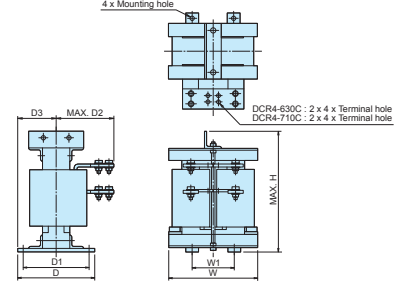


Figure C



Power supply voltage	Inverter type FRN-□□GIS -2U/4U	Option/ Standard	Reactor	Refer to:	Dimensions inch (mm)										Mass lb (kg)
					W	W1	D	D1	D2	D3	H	Mounting hole	Terminal hole		
230 V	100	Standard	DCR2-75C	Figure A	10,040.39 (25510)	8.86 (225)	4,170.08 (1062)	3.39 (86)	5.71 (145)	2,090.04 (531)	5.71 (145)	M6	M12	25 (11.4)	
	125		4,570.08 (1162)				3.78 (96)	6.1 (155)	2,280.04 (581)	31 (14)					
	150		4,570.08 (1162)				3.54 (90)	7.28 (185)		37 (17)					

Note: 100 HP or above type comes with a DC reactor (DCR) suitable for the LD-mode use

Power supply voltage	Inverter type FRN-□□GIS -2U/4U	Option/ Standard	Reactor	Refer to:	Dimensions inch (mm)										Mass lb (kg)	
					W	W1	D	D1	D2	D3	H	Mounting hole	Terminal hole			
460 V	100	Standard	DCR4-75C	Figure A	10,040.39 (25510)	8.86 (225)	4,170.08 (1062)	3.39 (86)	4.92 (125)	2,090.04 (531)	5.71 (145)	M6	M10	27 (12.4)		
	125		4,570.08 (1162)				3.78 (96)	5.51 (140)	2,280.04 (581)	32 (14.7)						
	150		4,570.08 (1162)				3.54 (90)	6.89 (175)		41 (18.4)						
	200		DCR4-110C				11,810.39 (30010)	10.43 (265)	4,960.16 (1264)	3.94 (100)	7.09 (180)	2,480.08 (632)	6.3 (160)	M8	M12	49 (22)
	250		DCR4-132C						5,180.16 (1314)	4.06 (103)	7.87 (200)	2,580.08 (655)				56 (25.5)
	300		DCR4-200C						5,550.16 (1414)	4.45 (113)	7.28 (185)	2,780.08 (70.52)				65 (29.5)
	350		DCR4-220C				13,780.39 (35010)	12.2 (310)	5,750.16 (1464)	4.65 (118)	7.87 (200)	2,870.08 (732)	7.48 (190)	M10	M12	72 (32.5)
	450		DCR4-280C						6,340.16 (1614)	5.24 (133)	8.27 (210)	3,170.08 (80.52)				79 (36)
	500		DCR4-355C						6,140.16 (1564)	5.04 (128)	7.87 (200)	3,070.04 (781)				86 (225)
	600		DCR4-400C				17,520.39 (44510)	13.58 (345)	5,710.16 (1454)	4.57 (117)	8.39 (213)	2,850.04 (72.51)	9.65 (245)	M10	M16	104 (47)
	700		DCR4-450C						5,910.16 (1504)	4.8 (122)	8.46 (215)	2,950.08 (752)				115 (52)
	800		DCR4-500C						6,50.16 (1654)	5.39 (137)	8.66 (220)	3,250.08 (82.52)				132 (60)
	900		DCR4-630C				11,220.39 (28510)	15.35 (390)	7,380.16 (1874)	6.69 (170)	7.68 (195)	4,080.08 (1042)	18.9 (480)	M12	M12	154 (70)
	1000		DCR4-710C						7,980.16 (2034)	6.99 (178)	8.86 (225)	4,210.08 (1072)				185 (85)

Note: 100 HP or above type comes with a DC reactor (DCR) suitable for the LD-mode use

Braking unit and Braking resistor (standard item)

LD mode

Power supply voltage	Nominal applied motor (HP)	Inverter type	Option			
			Braking unit		Braking resistor	
LD mode			Type	Qty	Type	Qty
Three phase 230V	0.5	FRNF50G1S-2U	BU37-2C	1	DB0.75-2C	1
	1	FRN001G1S-2U			DB2.2-2C	1
	2	FRN002G1S-2U			DB3.7-2C	1
	3	FRN003G1S-2U			DB5.5-2C	1
	5	FRN005G1S-2U			DB7.5-2C	1
	7.5	FRN007G1S-2U			DB11-2C	1
	10	FRN010G1S-2U			DB15-2C	1
	15	FRN015G1S-2U			DB22-2C	1
	20	FRN020G1S-2U			DB30-2C	1
	25	FRN025G1S-2U			DB37-2C	1
	30	FRN030G1S-2U			DB45-2C	1
	40	FRN040G1S-2U			DB55-2C	1
	50	FRN050G1S-2U			DB75-2C	1
	60	FRN060G1S-2U			DB110-2C	1
	Three phase 460V	0.5			FRNF50G1S-4U	BU37-4C
1		FRN001G1S-4U	DB2.2-4C	1		
2		FRN002G1S-4U	DB3.7-4C	1		
3		FRN003G1S-4U	DB5.5-4C	1		
5		FRN005G1S-4U	DB7.5-4C	1		
7.5		FRN007G1S-4U	DB11-4C	1		
10		FRN010G1S-4U	DB15-4C	1		
15		FRN015G1S-4U	DB22-4C	1		
20		FRN020G1S-4U	DB30-4C	1		
25		FRN025G1S-4U	DB37-4C	1		
30		FRN030G1S-4U	DB45-4C	1		
40		FRN040G1S-4U	DB55-4C	1		
50		FRN050G1S-4U	DB75-4C	1		
60		FRN060G1S-4U	DB110-4C	1		

MD mode

Power supply voltage	Nominal applied motor (HP)	Inverter type	Option			
			Braking unit		Braking resistor	
LD mode			Type	Qty	Type	Qty
Three phase 460V	150	FRN150G1S-4U	BU132-4C	1	DB110-4C	1
	200	FRN200G1S-4U			DB132-4C	1
	250	FRN250G1S-4U			DB160-4C	1
	300	FRN300G1S-4U	BU220-4C	1	DB200-4C	1
	350	FRN350G1S-4U			DB220-4C	1
	350	FRN450G1S-4U			DB132-4C	1
	450	FRN500G1S-4U	BU220-4C	2	DB160-4C	2
	500	FRN600G1S-4U			DB200-4C	2
	600	FRN700G1S-4U			DB200-4C	3
700	FRN800G1S-4U	3	DB160-4C	3		

HD mode

Power supply voltage	Nominal applied motor (HP)	Inverter type	Option			
			Braking unit		Braking resistor	
HD mode			Type	Qty	Type	Qty
Three phase 230V	0.5	FRNF50G1S-2U	BU37-2C	1	DB0.75-2C	1
	1	FRN001G1S-2U			DB2.2-2C	1
	2	FRN002G1S-2U			DB3.7-2C	1
	3	FRN003G1S-2U			DB5.5-2C	1
	5	FRN005G1S-2U			DB7.5-2C	1
	7.5	FRN007G1S-2U			DB11-2C	1
	10	FRN010G1S-2U			DB15-2C	1
	15	FRN015G1S-2U			DB22-2C	1
	20	FRN020G1S-2U			DB30-2C	1
	25	FRN025G1S-2U			DB37-2C	1
	30	FRN030G1S-2U			DB45-2C	1
	40	FRN040G1S-2U			DB55-2C	1
	50	FRN050G1S-2U			DB75-2C	1
	60	FRN060G1S-2U			DB110-2C	1
	Three phase 460V	0.5			FRNF50G1S-4U	BU37-4C
1		FRN001G1S-4U	DB2.2-4C	1		
2		FRN002G1S-4U	DB3.7-4C	1		
3		FRN003G1S-4U	DB5.5-4C	1		
5		FRN005G1S-4U	DB7.5-4C	1		
7.5		FRN007G1S-4U	DB11-4C	1		
10		FRN010G1S-4U	DB15-4C	1		
15		FRN015G1S-4U	DB22-4C	1		
20		FRN020G1S-4U	DB30-4C	1		
25		FRN025G1S-4U	DB37-4C	1		
30		FRN030G1S-4U	DB45-4C	1		
40		FRN040G1S-4U	DB55-4C	1		
50		FRN050G1S-4U	DB75-4C	1		
60		FRN060G1S-4U	DB110-4C	1		

Other Options

Other options

Parts name	Type	Remarks
EtherNet card	OPC-G1-ETH	The Ethernet option card allows for connectivity to various Ethernet protocols. These include: - EtherNet/IP - Modbus/TCP - BACnet/IP - Profinet-IO The card also contains an embedded web server for configuration of numerous additional functions such as alarm evaluation with email notification, dashboard GUI with multiple windows for monitoring, virtual keypad interface, and protocol configuration.
DeviceNet card	OPC-G1-DEV	The DeviceNet option card allows for connectivity to a DeviceNet network. The card allows for control or monitoring of the inverter, monitor and change function codes, and the use of explicit messaging. The following are specifications for the DeviceNet options. - 64 Nodes, maximum, including the Master device. - Data Rate (baud rate): 125 kbps, 250 kbps, 500 kbps - I/O Message: Polling and Change of State supported - Applicable Profile: AC Drive profile - Reading and writing all the function codes applicable to the FRENIC-MEGA (I/O Message (User Defined Assembly Instance or Access to Function Codes Instance) and Explicit Message) This product has been tested by ODVA authorized Independent Test Lab and found to comply with ODVA's DeviceNet Conformance Test Version 20.
CC-link card	OPC-G1-CCL	The CC-Link option card allows for connectivity to a CC-Link network. The card allows for control or monitoring of the inverter and for monitoring and changing of function codes. The following are specifications for the CC-Link option. - CC-Link Version: Complies with CC-Link versions 1.10 and 2.00 - Applicable Profile: Inverter (1 station occupied) - Monitoring the status of the FRENIC-MEGA (running status, frequency, output torque, output current, output voltage, etc.) - Reading and writing from/to function codes applicable to the FRENIC-MEGA
PROFIBUS DP card	OPC-G1-PDP	The Profibus-DP option card allows for connectivity to a Profibus network. The card allows for control or monitoring of the inverter and for monitoring and changing of function codes. The following are specifications for the Profibus option. - PROFIBUS version: DP-V0 compliant - Transmission speed: 9,600 bps to 12 Mbps - Maximum network cable length per segment: 100 m (12 Mbps) to 1200 m (9.6 kbps) - Applicable Profile: PROFIDrive V2 compliant
CANopen	OPC-G1-COP	The CANopen is the card which supports various open bus types. With this card, the following operations can be performed using PC or PLC. - Operation frequency setting - Operation command setting (FWD, REV, RET, etc.) - Data code setting for each function code - Reading trip data
T-link interface card	OPC-G1-TL	Up to 12 inverters can be connected by connecting the Fuji's PLC and the inverter via T-link (I/O transmission). - Operation frequency setting - Operation command setting (FWD, REV, RET, etc.)
PG interface card (supporting 12V)	OPC-G1-PG	Having this card built-in to the inverter allows the speed control and the position control.
PG interface card (supporting 5V)	OPC-G1-PG2	Having this card built-in to the inverter allows the speed control and the position control.
PG Synchronization Card	OPC-G1-PG22	Velocity synchronization card, allowing both master and slave encoder inputs.
Digital input interface card	OPC-G1-DI	Using this card allows frequency setting by 8, 12, 15, and 16 bits, and by BCD code.
Digital output interface card	OPC-G1-DO	The output interface card to be equipped with FRENIC-MEGA, which allows monitoring frequency, output voltage, and output current with binary code.
Analog input/output interface card	OPC-G1-AIO	Using this card allows the torque limit value input, frequency and frequency ratio setting with analog input.
Relay output card	OPC-G1-RY	Using this card allows relay output of the inverter general output signal (transistor output).

NEMA1 Cover NEMA1-□G1-□

NEMA1 kit, when fitted to the FRENIC-MEGA series, protects the inverter body with the structure that conforms to the NEMA1 standard (approved as UL TYPE1).

Power supply voltage	Inverter type	NEMA1 model number	Power supply voltage	Inverter type	NEMA1 model number
Three phase 230V	FRNF50G1S-2U	NEMA1-0.4G1-24	Three phase 460V	FRNF50G1S-4U	NEMA1-0.4G1-24
	FRN001G1S-2U	NEMA1-0.75G1-24		FRN001G1S-4U	NEMA1-0.75G1-24
	FRN002G1S-2U	NEMA1-3.7G1-24		FRN002G1S-4U	NEMA1-3.7G1-24
	FRN003G1S-2U	NEMA1-3.7G1-24		FRN003G1S-4U	NEMA1-3.7G1-24
	FRN005G1S-2U	NEMA1-3.7G1-24		FRN005G1S-4U	NEMA1-3.7G1-24
	FRN007G1S-2U	NEMA1-11G1-24		FRN007G1S-4U	NEMA1-11G1-24
	FRN010G1S-2U	NEMA1-11G1-24		FRN010G1S-4U	NEMA1-11G1-24
	FRN015G1S-2U	NEMA1-11G1-24		FRN015G1S-4U	NEMA1-11G1-24
	FRN020G1S-2U	NEMA1-11G1-24		FRN020G1S-4U	NEMA1-11G1-24
	FRN025G1S-2U	NEMA1-22G1-24		FRN025G1S-4U	NEMA1-22G1-24
	FRN030G1S-2U	NEMA1-22G1-24		FRN030G1S-4U	NEMA1-22G1-24
	FRN040G1S-2U	NEMA1-22G1-2		FRN040G1S-4U	NEMA1-22G1-24
	FRN050G1S-2U	NEMA1-37G1-24		FRN050G1S-4U	NEMA1-37G1-24
	FRN060G1S-2U	NEMA1-75G1-24		FRN060G1S-4U	NEMA1-37G1-24
	FRN075G1S-2U	NEMA1-75G1-24		FRN075G1S-4U	NEMA1-75G1-24
FRN100G1S-2U	NEMA1-75G1-24	FRN100G1S-4U	NEMA1-75G1-24		
FRN125G1S-2U	NEMA1-75G1-2	FRN125G1S-4U	NEMA1-75G1-24		
FRN150G1S-2U	NEMA1-220G1-24	FRN150G1S-4U	NEMA1-110G1-4		
			FRN200G1S-4U	NEMA1-110G1-4	
			FRN250G1S-4U	NEMA1-160G1-4	
			FRN300G1S-4U	NEMA1-160G1-4	
			FRN350G1S-4U	NEMA1-220G1-24	
			FRN450G1S-4U	NEMA1-220G1-24	
			FRN500G1S-4U	NEMA1-315G1-4	
			FRN600G1S-4U	NEMA1-315G1-4	
			FRN700G1S-4U	NEMA1-400G1-4	
			FRN800G1S-4U	NEMA1-400G1-4	
			FRN900G1S-4U	NEMA1-630G1-4	
			FRN1000G1S-4U	NEMA1-630G1-4	

Restrictions on mounting an optional card

Y: Available N: Not Available

Mounting port	OPC-G1S-□□			
	PG, PG2, PG22	DI, DO, AIO, DEV	RY	ETH, TL, COP, PDP, CCL, SX
C PORT	Y	Y	N	N
B PORT	N	Y	Y	N
A PORT	N	Y	Y	Y
Remarks	※1	※2	※3	※2

*1 Any one of the above can be mounted on only C port.

*2 Only one card can be mounted on any of A, B, or C ports.

Cards can be mounted on DI, DO, and AIO ports at the same time, however, two identical cards cannot be allowed.

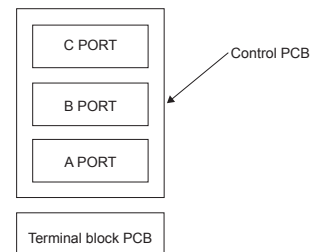
*3 The cards can be mounted on both A and B ports.

Two RY cards can be mounted at the same time.

The number of RY contact points of a card is two. If three or four points are necessary, prepare two cards.

Note: There are also restrictions on mounting when using the optional communications card. Contact us for details.

Note: When mounting the NEMA option, only one optional card can be mounted. (RY card allows mounting of two cards.)



To all our customers who purchase Fuji Electric products included in this catalog:

Please take the following items into consideration when placing your order.

When requesting an estimate and placing your orders for the products included in these materials, please be aware that any items such as specifications which are not specifically mentioned in the contract, catalog, specifications or other materials will be as mentioned below.

In addition, the products included in these materials are limited in the use they are put to and the place where they can be used, etc., and may require periodic inspection. Please confirm these points with your sales representative or directly with this company.

Furthermore, regarding purchased products and delivered products, we request that you take adequate consideration of the necessity of rapid receiving inspections and of product management and maintenance even before receiving your products.

1. Free of Charge Warranty Period and Warranty Range

1-1 Free of charge warranty period

- (1) The product warranty period is "Three years from shipment"
- (2) However, in cases where the use environment, conditions of use, use frequency and times used, etc., have an effect on product life, this warranty period may not apply.
- (3) Furthermore, the warranty period for parts restored by Fuji Electric's Service Department is "6 months from the date that repairs are completed."

1-2 Warranty range

- (1) In the event that breakdown occurs during the product's warranty period which is the responsibility of Fuji Electric, Fuji Electric will replace or repair the part of the product that has broken down free of charge at the place where the product was purchased or where it was delivered. However, if the following cases are applicable, the terms of this warranty may not apply.
 - 1) The breakdown was caused by inappropriate conditions, environment, handling or use methods, etc. which are not specified in the catalog, operation manual, specifications or other relevant documents.
 - 2) The breakdown was caused by the product other than the purchased or delivered Fuji's product.
 - 3) The breakdown was caused by the product other than Fuji's product, such as the customer's equipment or software design, etc.
 - 4) Concerning the Fuji's programmable products, the breakdown was caused by a program other than a program supplied by this company, or the results from using such a program.
 - 5) The breakdown was caused by modifications or repairs affected by a party other than Fuji Electric.
 - 6) The breakdown was caused by improper maintenance or replacement using consumables, etc. specified in the operation manual or catalog, etc.
 - 7) The breakdown was caused by a chemical or technical problem that was not foreseen when making practical application of the product at the time it was purchased or delivered.
 - 8) The product was not used in the manner the product was originally intended to be used.
 - 9) The breakdown was caused by a reason which is not this company's responsibility, such as lightning or other disaster.
- (2) Furthermore, the warranty specified herein shall be limited to the purchased or delivered product alone.
- (3) The upper limit for the warranty range shall be as specified in item (1) above and any damages (damage to or loss of machinery or equipment, or lost profits from the same, etc.) consequent to or resulting from breakdown of the purchased or delivered product shall be excluded from coverage by this warranty.

1-3. Trouble diagnosis

As a rule, the customer is requested to carry out a preliminary trouble diagnosis. However, at the customer's request, this company or its service network can perform the trouble diagnosis on a chargeable basis. In this case, the customer is asked to assume the burden for charges levied in accordance with this company's fee schedule.

2. Exclusion of Liability for Loss of Opportunity, etc.

Regardless of whether a breakdown occurs during or after the free of charge warranty period, this company shall not be liable for any loss of opportunity, loss of profits, or damages arising from special circumstances, secondary damages, accident compensation to another company, or damages to products other than this company's products, whether foreseen or not by this company, which this company is not be responsible for causing.

3. Repair Period after Production Stop, Spare Parts Supply Period (Holding Period)

Concerning models (products) which have gone out of production, this company will perform repairs for a period of 7 years after production stop, counting from the month and year when the production stop occurs. In addition, we will continue to supply the spare parts required for repairs for a period of 7 years, counting from the month and year when the production stop occurs. However, if it is estimated that the life cycle of certain electronic and other parts is short and it will be difficult to procure or produce those parts, there may be cases where it is difficult to provide repairs or supply spare parts even within this 7-year period. For details, please confirm at our company's business office or our service office.

4. Transfer Rights

In the case of standard products which do not include settings or adjustments in an application program, the products shall be transported to and transferred to the customer and this company shall not be responsible for local adjustments or trial operation.

5. Service Contents

The cost of purchased and delivered products does not include the cost of dispatching engineers or service costs. Depending on the request, these can be discussed separately.

6. Applicable Scope of Service

Above contents shall be assumed to apply to transactions and use of the country where you purchased the products. Consult the local supplier or Fuji for the detail separately.