

Ideal combination of power and multiple-function. Dynamic torque-vector control promises optimum motor control under any operating conditions. Broad HP rating for Constant Torque application (G11S) and Variable Torque application (P11S)

Dynamic torque-vector control

Reduced motor instability at low speed

On-line tuning system

Environment-friendly features

Advanced, convenient functions

Global products, communication

Intelligent Keypad panel

Protective functions, Maintenance

Extensive product line

Many useful functions



Variation

FRENIC5000G11S series for general industrial machines

| Applicable motor rating [HP] | Three-phase 230V | Three-phase 460V | Applicable motor rating [HP] | Three-phase 230V | Three-phase 460V |
|------------------------------|------------------|------------------|------------------------------|------------------|------------------|
| 1/4 | FRNF25G11S-2UX | | 75 | FRN075G11S-2UX | FRN075G11S-4UX |
| 1/2 | FRNF50G11S-2UX | FRNF50G11S-4UX | 100 | FRN100G11S-2UX | FRN100G11S-4UX |
| 1 | FRN001G11S-2UX | FRN001G11S-4UX | 125 | FRN125G11S-2UX | FRN125G11S-4UX |
| 2 | FRN002G11S-2UX | FRN002G11S-4UX | 150 | | FRN150G11S-4UX |
| 3 | FRN003G11S-2UX | FRN003G11S-4UX | 200 | | FRN200G11S-4UX |
| 5 | FRN005G11S-2UX | FRN005G11S-4UX | 250 | | FRN250G11S-4UX |
| 7.5 | FRN007G11S-2UX | FRN007G11S-4UX | 300 | | FRN300G11S-4UX |
| 10 | FRN010G11S-2UX | FRN010G11S-4UX | 350 | | FRN350G11S-4UX |
| 15 | FRN015G11S-2UX | FRN015G11S-4UX | 400 | | FRN400G11S-4UX |
| 20 | FRN020G11S-2UX | FRN020G11S-4UX | 450 | | FRN450G11S-4UX |
| 25 | FRN025G11S-2UX | FRN025G11S-4UX | 500 | | FRN500G11S-4UX |
| 30 | FRN030G11S-2UX | FRN030G11S-4UX | 600 | | FRN600G11S-4UX |
| 40 | FRN040G11S-2UX | FRN040G11S-4UX | | | |
| 50 | FRN050G11S-2UX | FRN050G11S-4UX | | | |
| 60 | FRN060G11S-2UX | FRN060G11S-4UX | | | |

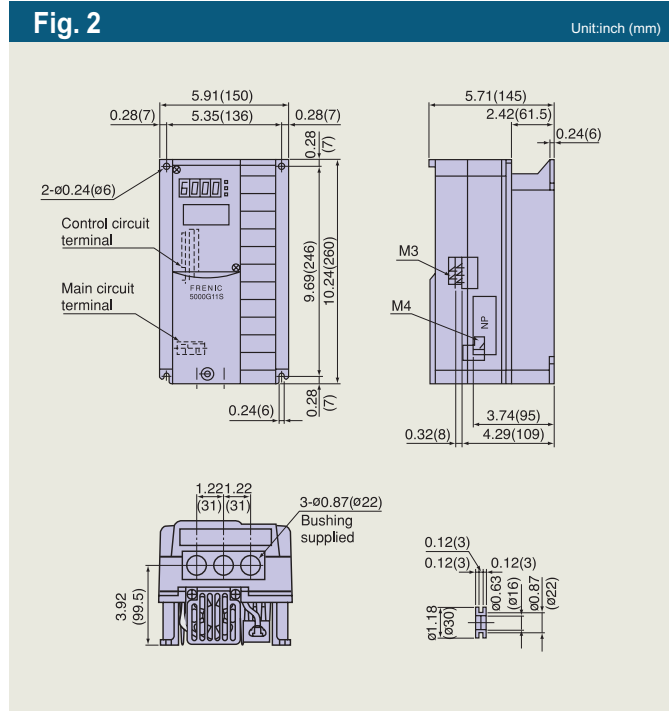
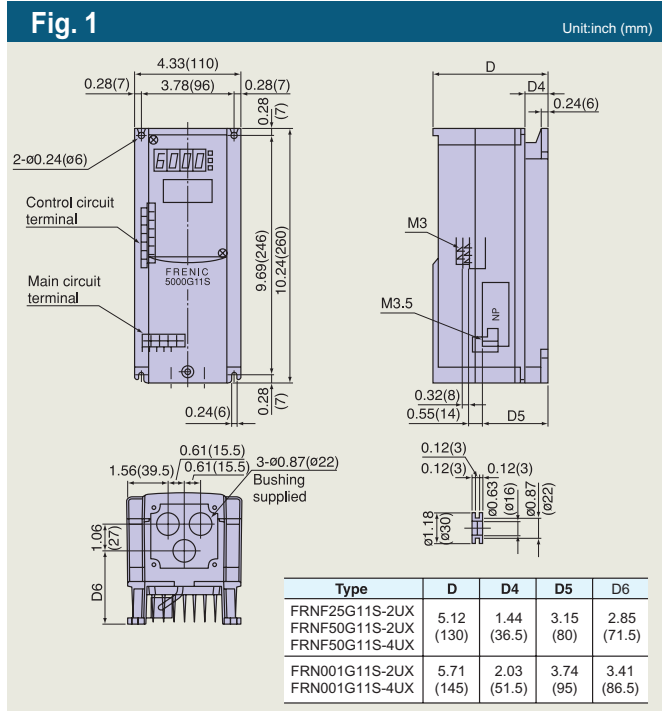
Standard specifications

Three-phase 230V

| Type | FRN___G11S-2UX | F25 | F50 | 001 | 002 | 003 | 005 | 007 | 010 | 015 | 020 | 025 | 030 | 040 | 050 | 060 | 075 | 100 | 125 | | | | | | | | |
|------------------------------------|--------------------------------------|--|--|-----------|-----------|-----------|-----------|------------|------------|---------|---------|-------------|--------------------------|---|-----------|---------|------------|----------------|---|-----|--|----------|------------------|--|--|--|--|
| Nominal applied motor | HP | 1/4 | 1/2 | 1 | 2 | 3 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 100 | 125 | | | | | | | | |
| Output ratings | Rated capacity *1) | kVA | 0.6 | 1.2 | 2.0 | 3.2 | 4.4 | 6.8 | 9.9 | 13 | 18 | 23 | 29 | 36 | 46 | 58 | 72 | 86 | 113 | 138 | | | | | | | |
| | Rated voltage *2) | V | 3-phase 200V/50Hz 200, 220V, 230V/60Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated current *3) | A | 1.5 | 3.0 | 5.0 | 8.0 | 11 | 17 | 25 | 33 | 46 | 59 | 74 | 87 | 115 | 145 | 180 | 215 | 283 | 346 | | | | | | | |
| | Overload capability | | 150% of rated current for 1min. 200% of rated current for 0.5s | | | | | | | | | | | 150% of rated current for 1min. 180% of rated current for 0.5s | | | | | | | | | | | | | |
| | Rated frequency | Hz | 50, 60Hz | | | | | | | | | | | | | | | | | | | | | | | | |
| Input ratings | Phases, Voltage, Frequency | | 3-phase 200 to 230V 50/60Hz | | | | | | | | | | | 3-phase 200 to 220V/50Hz (220 to 230V/50Hz) *5) 200 to 230V/60Hz | | | | | | | | | | | | | |
| | Voltage / frequency variations | | Voltage : +10 to -15% (Voltage unbalance *6) : 2% or less) Frequency : +5 to -5% | | | | | | | | | | | | | | | | | | | | | | | | |
| | Momentary voltage dip capability *7) | | When the input voltage is 165V or more, the inverter can be operated continuously. When the input voltage drops below 165V from rated voltage, the inverter can be operated for 15ms . The smooth recovery method is selectable. | | | | | | | | | | | | | | | | | | | | | | | | |
| | Rated current *8) (with DCR) | A | 0.94 | 1.6 | 3.1 | 5.7 | 8.3 | 14.0 | 19.7 | 26.9 | 39.0 | 54.0 | 66.2 | 78.8 | 109 | 135 | 163 | 199 | 272 | 327 | | | | | | | |
| | Rated current *8) (without DCR) | A | 1.8 | 3.4 | 6.4 | 11.1 | 16.1 | 25.5 | 40.8 | 52.6 | 76.9 | 98.5 | 117 | 136 | 168 | 204 | 243 | 291 | - | - | | | | | | | |
| Required power supply capacity *9) | kVA | 0.4 | 0.6 | 1.1 | 2.0 | 2.9 | 4.9 | 6.9 | 9.4 | 14 | 19 | 23 | 28 | 38 | 47 | 57 | 69 | 95 | 114 | | | | | | | | |
| Control | Starting torque | | 200% (with Dynamic torque-vector control selected) | | | | | | | | | | | 180% (with Dynamic torque-vector control selected) | | | | | | | | | | | | | |
| Braking | Standard | Braking torque | 150% | | | | | 100% | | | | | 20% *10) | | | | | 10 to 15% *10) | | | | | | | | | |
| | | Time | 10 | | | | | 5 | | | | | 5 | | | | | No limit | | | | | | | | | |
| | Duty cycle | 10 | | | | | 5 | | | | | 3 | | | | | 2 | | | | | No limit | | | | | |
| | Braking torque (Using options) | 150% | | | | | | | | | | | 100% | | | | | | | | | | | | | | |
| | DC injection braking | | Starting frequency: 0.1 to 60.0Hz | | | | | | | | | | | Braking time: 0.0 to 30.0s | | | | | Braking level: 0 to 100% of rated current | | | | | | | | |
| Enclosure (IEC 60529) | | IP 40 | | | | | | | | | | | IP 00 (IP 20 : Option) | | | | | | | | | | | | | | |
| Cooling method | | Natural cooling | | | | | | | | | | | Fan cooling | | | | | | | | | | | | | | |
| Standards | | -UL/cUL | | | | | | | | | | | -Low Voltage Directive | | | | | -EMC Directive | | | | | TÜV (up to 30HP) | | | | |
| | | -IEC 61800-2 (Ratings, specifications for low voltage adjustable frequency a.c. power drive systems) | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | -IEC 61800-3 (EMC product standard including specific test methods) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | lbs(kg) | 4.9 (2.2) | 4.9 (2.2) | 5.5 (2.5) | 8.4 (3.8) | 8.4 (3.8) | 8.4 (3.8) | 13.4 (6.1) | 13.4 (6.1) | 22 (10) | 22 (10) | 23.1 (10.5) | 23.1 (10.5) | 63.9 (29) | 79.4 (36) | 97 (44) | 101.4 (46) | 154.3 (70) | 253.5 (115) | | | | | | | | |

NOTES: *1) Inverter output capacity (kVA) at 440V in 460V series, 220V in 230V series. *2) Output voltage is proportional to the power supply voltage and cannot exceed the power supply voltage. *3) Current derating may be required in case of low impedance loads such as high frequency motor. *4) When the input voltage is 380V/50Hz or 380 to 415V/60Hz, the tap of the auxiliary transformer must be changed. *5) Order individually. *6) Refer to the IEC 61800-3 (5.2.3). *7) Tested at standard load condition (85% load). *8) This value is under FUJI original calculation method. (Refer to the Technical Information.) *9) When power-factor correcting DC reactor is used. *10) With a nominal applied motor, this value is average torque when the motor decelerates and stops from 60Hz. (It may change according to motor loss.)

External Dimensions



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 FA Components & Systems Co., Ltd.
Fuji Electric Corp. of America
http://www.fujielectric.com/products/ac_drives/
 47520 Westinghouse Drive Fremont, CA 94539, U.S.A. Tel.+1-510-440-1060 Fax.+1-510-440-1063