Standard specifications

Three-phase series

Item			Specifications											
Input power source			Three-phase 230V							Three-phase 460V				
Type (FRN___C1S-_U)			FRNF12C1S-2U	FRNF25C1S-2U	FRNF50C1S-2U	FRN001C1S-2U	FRN002C1S-2U	FRN003C1S-2U	FRN005C1S-2U	FRNF50C1S-4U	FRN001C1S-4U	FRN002C1S-4U	FRN003C1S-4U	FRN005C1S-4U
Applicable motor rating *1)		HP	1/8	1/4	1/2	1	2	3	5	1/2	1	2	3	5
Output ratings	Rated capacity *2)	kVA	0.31	0.59	1.1	1.9	3.1	4.3	6.7	1.1	1.9	2.9	4.3	7.1
	Rated voltage *3)	V	Three-phase, 200V/50Hz, 200, 220, 230V/60Hz							Three-phase, 380, 400, 415V/50Hz, 380, 400, 440, 460V/60Hz				
	Rated current *4)	A	0.8 (0.7)	1.5 (1.4)	3.0 (2.5)	5.0 (4.2)	8.0 (7.0)	11.0 (10.0)	17.0 (16.5)	1.5	2.5	3.7	5.5	9.0
	Overload capability		150% of rated current for 1min, 200% of rated current for 0.5s											
	Rated frequency		50, 60Hz											
Input ratings	Phases, voltage, frequency		Three-phase, 200 to 240V, 50/60Hz							Three-phase, 380 to 480V, 50/60Hz				
	Voltage/frequency variations		Voltage: +10 to -15% (Voltage unbalance *10) : 2% or less) Frequency: +5 to -5%											
	Momentary voltage dip capability *5)		When the input voltage is 165V or more, the inverter continues operation. If it drops below 165V, the inverter operates for 15ms.							When the input voltage is 300V or more, the inverter continues operation. If it drops below 300V, the inverter operates for 15ms.				
	Rated current *6)	A (with DCR)	0.57	0.93	1.6	3.0	5.7	8.3	14.0	0.85	1.6	3.0	4.4	7.3
		A (without DCR)	1.1	1.8	3.1	5.3	9.5	13.2	22.2	1.7	3.1	5.9	8.2	13.0
	Required power supply capacity *7)	kVA	0.2	0.3	0.6	1.1	2.0	2.9	4.9	0.6	1.1	2.0	2.9	4.9
Braking	Torque *8)	%	150		100		50	30		100		50	30	
	Torque *9)	%	—		150					150				
	DC injection braking		Starting frequency: 0.0 to 60.0Hz Braking time: 0.0 to 30.0s Braking level: 0 to 100% of rated current											
Enclosure (IEC 60529)			IP20, UL open type *11)											
Cooling method			Natural cooling				Fan cooling			Natural cooling		Fan cooling		
Weight		lbs.(kg)	1.3(0.6)	1.3(0.6)	1.3(0.6)	1.5(0.7)	3.7(1.7)	3.7(1.7)	5.1(2.3)	2.4(1.1)	2.6(1.2)	3.7(1.7)	3.7(1.7)	5.1(2.3)

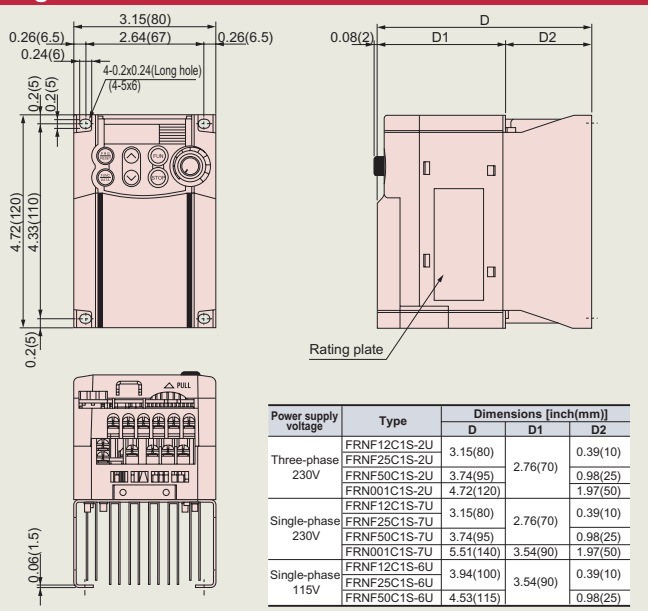
*1) Fuji's 4-pole standard motor
*2) Rated capacity is calculated by regarding the output rated voltage as 220V for three-phase 230V and single-phase 230V, and as 440V for three-phase 460V.
*3) Output voltage cannot exceed the power supply voltage.
*4) Use the inverter at the current given in ( ) or below when the carrier frequency setting is higher than 4kHz (F26: 4 to 15) or the ambient temperature is 40˚C(104˚F) or higher.
*5) Tested under the standard load condition (85% load for nominal applied motor).
*6) Calculated under Fuji-specified conditions.
*7) Obtained when a DC REACTOR (option) is used.
*8) Average braking torque obtained with AVR control OFF (Varies with the efficiency of the motor.)
*9) Average braking torque obtained by use of external braking resistor (standard type available as option)
*10) Voltage unbalance [%] = $\frac{\text{Max voltage [V] - Min voltage [V]}}{\text{Three-phase average voltage [V]}} \times 67$ (IEC 61800-3 (5.2.3))
If this value is 2 to 3%, use AC REACTOR (ACR).
*11) NEMA1 kit (option) is required for the enclosure conforming to the UL standard TYPE1 (NEMA1).
Use the inverter in the ambient temperature range from -10 to +40˚C(14 to 104˚F).

External Dimensions

Without EMC filter type

Fig. 1

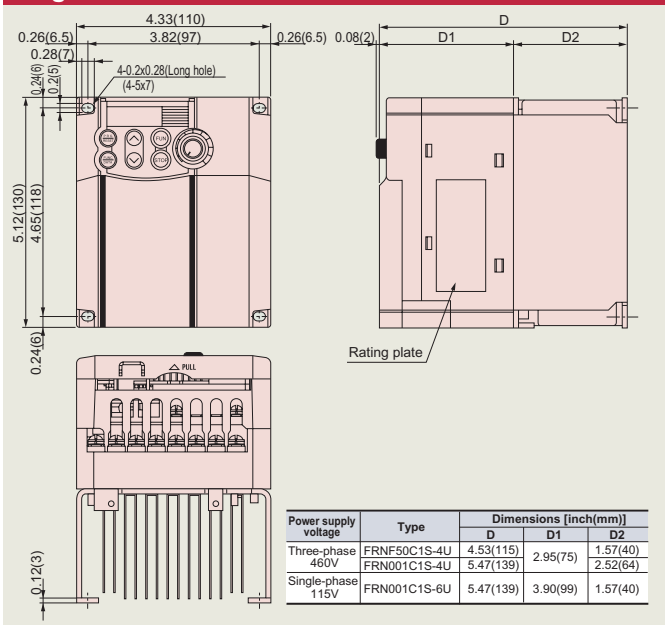
Unit:inch (mm)



Power supply voltage	Type	Dimensions [inch(mm)] D	D1	D2
Three-phase 230V	FRNF12C1S-2U	3.15(80)	2.76(70)	0.39(10)
	FRNF25C1S-2U			
	FRNF50C1S-2U	3.74(95)		0.98(25)
	FRN001C1S-2U	4.72(120)		1.97(50)
Single-phase 230V	FRNF12C1S-7U	3.15(80)	2.76(70)	0.39(10)
	FRNF25C1S-7U			
	FRNF50C1S-7U	3.74(95)		0.98(25)
	FRN001C1S-7U	5.51(140)	3.54(90)	1.97(50)
Single-phase 115V	FRNF12C1S-6U	3.94(100)	3.54(90)	0.39(10)
	FRNF25C1S-6U			
	FRNF50C1S-6U	4.53(115)		0.98(25)

Fig. 2

Unit:inch (mm)



Power supply voltage	Type	Dimensions [inch(mm)] D	D1	D2
Three-phase 460V	FRNF50C1S-4U	4.53(115)	2.95(75)	1.57(40)
	FRN001C1S-4U	5.47(139)		2.52(64)
Single-phase 115V	FRN001C1S-6U	5.47(139)	3.90(99)	1.57(40)

Note) ·The symbols ** followed by the inverter type FRN□□□C1S-2U represent the following numeral codes: 21 (Braking resistor built-in type), None (Standard)

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.

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