

The FRENIC-Eco has the functions best-suited for the HVAC (Heating, Ventilating and Air Conditioning) market*, featuring small installation space, simple operation, wide model variations, and support international standards. The FRENIC-Eco contributes to energy-saving, labor-saving and system integration of variable torque load including fans and pumps, resulting in a total cost reduction.

*Chiller unit, Air handling unit (AHU), Fan coil unit (FCU), etc.

Energy efficient

Designed for long life

Simple maintenance

Optimal functions for HVAC

Easy-to-use panel design

Operator-friendly features

Network compatibility

Global compatibility



Variation

Standard type

Applicable motor rating(HP)	Three-phase 208V	Three-phase 460V	Applicable motor rating(HP)	Three-phase 208V	Three-phase 460V
1	FRN001F1S-2U	FRN001F1S-4U	100	FRN100F1S-2U	FRN100F1S-4U
2	FRN002F1S-2U	FRN002F1S-4U	125	FRN125F1S-2U	FRN125F1S-4U
3	FRN003F1S-2U	FRN003F1S-4U	150		FRN150F1S-4U
5	FRN005F1S-2U	FRN005F1S-4U	200		FRN200F1S-4U
7.5	FRN007F1S-2U	FRN007F1S-4U	250		FRN250F1S-4U
10	FRN010F1S-2U	FRN010F1S-4U	300		FRN300F1S-4U
15	FRN015F1S-2U	FRN015F1S-4U	350		FRN350F1S-4U
20	FRN020F1S-2U	FRN020F1S-4U	400		FRN400F1S-4U
25	FRN025F1S-2U	FRN025F1S-4U	450		FRN450F1S-4U
30	FRN030F1S-2U	FRN030F1S-4U	500		FRN500F1S-4U
40	FRN040F1S-2U	FRN040F1S-4U	600		FRN600F1S-4U
50	FRN050F1S-2U	FRN050F1S-4U	700		FRN700F1S-4U
60	FRN060F1S-2U	FRN060F1S-4U	800		FRN800F1S-4U
75	FRN075F1S-2U	FRN075F1S-4U	900		FRN900F1S-4U

Standard specifications

Three-phase 208V

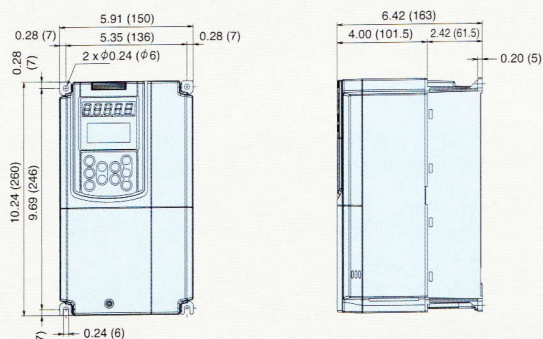
Item		Specifications																
Type (FRN____F1S-2U)		001	002	003	005	007	010	015	020	025	030	040	050	060	075	100	125	
Nominal applied motor (HP) *1)		1	2	3	5	7.5	10	15	20	25	30	40	50	60	75	100	125	
Output ratings	Rated capacity (kVA) *2)	1.6	2.7	3.8	6.0	9.0	11	16	21	27	31	41	51	60	76	98	123	
	Rated voltage (V) *3)	Three-phase, 200V to 240V (With AVR function)										Three-phase, 200V to 230V (With AVR function)						
	Rated current (A) *4)	4.6	7.5	10.6	16.7	25	31	47	60	75	88	114	143	169	211	273	343	
	Overload capability	120% of rated current for 1min.																
	Rated frequency	50, 60Hz																
Input ratings	Phases, voltage, frequency	Main power supply	Three-phase, 200 to 240V, 50/60Hz										Three-phase, 200 to 220V, 50Hz Three-phase, 200 to 230V, 60Hz					
		Auxiliary control power input	Single-phase, 200 to 240V, 50/60Hz										Single-phase, 200 to 230V, 50/60Hz					
	Auxiliary fan power input *5)	None										Single-phase, 200 to 220V, 50Hz Single-phase, 200 to 230V, 60Hz						
	Voltage/frequency variations	Voltage: +10 to -15% (Voltage unbalance 2% or less) *9), Frequency: +5% to -5%																
Rated current (A) *6)	(with DCR)	3.1	5.8	8.7	14.5	20.6	27.5	41.3	55.1	68.8	82.6	109	134	160	199	270	333	
	(without DCR)	5.1	9.1	12.9	21.5	30.8	40.8	59.4	76.6	94.0	110	144	179	215	—	—	—	
Required power supply capacity (kVA) *7)		1.2	2.2	3.2	5.3	7.5	10	15	20	25	30	40	49	58	72	98	120	
Braking	Torque (%) *8)	20.0										10 to 15						
	DC injection braking	Starting frequency: 0.0 to 60.0Hz, Braking time: 0.0 to 30.0s, Braking level: 0 to 60%																
DC reactor (DCR)		Option														Standard		
Applicable safety standards		UL508C, C22.2 No.14, EN50178-1997																
Enclosure (IEC60529)		IP20, UL open type										IP00, UL open type						
Cooling method		Natural cooling		Fan cooling														
Mass (lbs(kg))		7.1 (3.2)	7.3 (3.3)	7.3 (3.3)	7.5 (3.4)	13 (5.8)	13 (6.0)	15 (6.9)	21 (9.7)	21 (9.7)	25 (11.5)	51 (23)	73 (33)	75 (34)	90 (41)	90 (41)	265 (120)	

- *1) Standard 4-pole motor
- *2) Rated capacity is calculated by assuming the output rated voltage as 208V for three-phase 208V.
- *3) Output voltage cannot exceed the power supply voltage.
- *4) An excessively low setting of the carrier frequency may result in the higher motor temperature or tripping of the inverter by its overcurrent limiter setting. Lower the continuous load or maximum load instead. (When setting the carrier frequency (F26) to 1kHz, reduce the load to 80% of its rating.)
- *5) Use [R1,T1] terminals for driving AC cooling fans of an inverter powered by the DC link bus, such as by a high power factor PWM converter. (In ordinary operation, the terminals are not used.)

- *6) Calculated under Fuji-specified conditions.
- *7) Obtained when a DC reactor (DCR) is used.
- *8) Average braking torque (Varies with the efficiency of the motor.)
- *9) Voltage unbalance (%) = $\frac{\text{Max. voltage (V)} - \text{Min. voltage (V)}}{\text{Three-phase average voltage (V)}} \times 67$ (IEC61800-3 (5.2.3))
If this value is 2 to 3%, use an AC reactor (ACR).

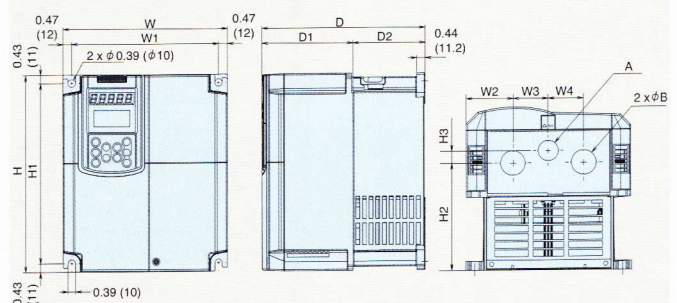
External Dimensions (For 50HP and above, please contact to Fuji sales)

Main body of standard inverter (7.5HP or smaller) Unit:inch (mm)



Power supply voltage	Type
Three-phase 208V	FRN001F1S-2U
	FRN002F1S-2U
	FRN003F1S-2U
	FRN005F1S-2U
	FRN007F1S-2U
Three-phase 460V	FRN001F1S-4U
	FRN002F1S-4U
	FRN003F1S-4U
	FRN005F1S-4U
	FRN007F1S-4U

Main body of standard inverter (10 to 40HP) Unit:inch (mm)



Power supply voltage	Type	Dimensions (inch (mm))													
		W	W1	W2	W3	W4	H	H1	H2	H3	D	D1	D2	ΦA	ΦB
Three-phase 208V	FRN007F1S-2U	8.66	7.72	2.50	1.83	1.83	10.24	9.37	5.58	0.63	—	—	—	—	—
	FRN010F1S-2U	(220)	(196)	(63.5)	(46.5)	(46.5)	(260)	(238)	(141.7)	(16)	—	—	—	—	—
	FRN015F1S-2U	8.66	7.72	2.50	1.83	1.83	10.24	9.37	5.38	0.83	8.46	4.67	3.80	1.06	1.34
	FRN020F1S-2U	(220)	(196)	(63.5)	(46.5)	(46.5)	(260)	(238)	(136.7)	(21)	(215)	(118.5)	(96.5)	(27)	(34)
	FRN025F1S-2U	9.84	8.90	2.64	2.28	2.28	15.75	14.88	6.54	0.08	—	—	—	—	—
Three-phase 460V	FRN030F1S-2U	(250)	(226)	(67)	(58)	(58)	(400)	(378)	(166.2)	(2)	—	—	—	—	—
	FRN010F1S-4U	8.66	7.72	2.50	1.83	1.83	10.24	9.37	5.38	0.63	—	—	—	—	—
	FRN015F1S-4U	(220)	(196)	(63.5)	(46.5)	(46.5)	(260)	(238)	(136.7)	(21)	8.46	4.67	3.80	1.06	1.34
	FRN020F1S-4U	(220)	(196)	(63.5)	(46.5)	(46.5)	(260)	(238)	(136.7)	(21)	(215)	(118.5)	(96.5)	(27)	(34)
	FRN025F1S-4U	9.84	8.90	2.64	2.28	2.28	15.75	14.88	6.54	0.08	—	—	—	—	—
FRN030F1S-4U	(250)	(226)	(67)	(58)	(58)	(400)	(378)	(166.2)	(2)	—	—	—	—	—	
	FRN040F1S-4U	—	—	—	—	—	—	—	—	—	—	—	—	—	—



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