

FE Fuji Electric
e-Front runners



**Fuji Electric frequency inverter
for HVAC and pump control**



0,75 – 560kW
3-phase 400V
IP20/00 & IP54



Contribution to energy saving

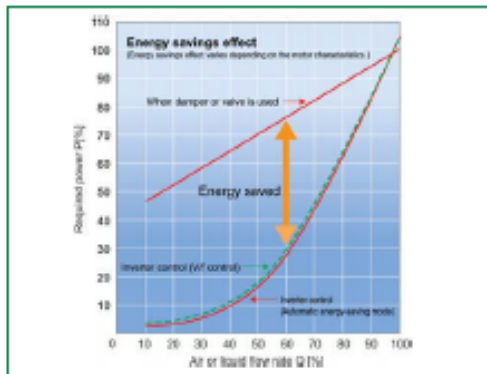
Automatic energy saving operation function

In addition to the motor losses, the inverter losses are also kept to a minimum with the FRENC Eco when applied to fans or pumps.

Cooling fan ON/OFF control function

The inverter's cooling fan can be stopped for noise reduction and energy saving whenever the motor is stopped.

Example for energy saving



Simple operation

Analog input monitor

Analog signals can be sent to the inverter to allow status monitoring of peripheral equipment and issuance of commands to peripheral equipment.

Quick setup menu

Up to 19 frequently used or important function codes can be defined for quick setup in order to shortcut operation and management.

Standard keypad capable of remote operation with optional extension cable

Data can be easily copied to the second or more inverters with the code copying function.

Multi-function keypad (option)

A backlit LCD is installed to allow simple set up through interactive data entry. Function codes can be added or deleted to or from the 19 function codes within the quick setup function.

Multi-function keypad with built-in copy-function

Seeing that the optional multi-function keypad is provided with a built-in copy function, data can be easily copied to the second inverter without requiring individual setups.

Easy maintenance and many protective functions

The lifetime of the main circuit capacitor can be estimated

Because the capacitor's life compared with its initial value can be checked, the replacement timing of the main circuit capacitor can be determined.

A long-life cooling fan is provided

Use of a long-life cooling fan (design life: 87600 hours for models up to 30kW; 61300 hours for models above 30kW; at an ambient temperature of 40°C and a load factor of 80%) reduces replacement work.

Cumulative running time is recorded and displayed

The inverter records and displays the cumulative "motor running time" and "inverter running time" (PC board capacitor running time, cooling fan running time), so that they can be used to determine machine and inverter maintenance.

It is possible to output lifetime forecast signal to the transistor output

This signal is output when the main circuit capacitors in the DC bus circuit, the electrolytic capacitors on the PC boards or the cooling fans are near the end of their service life.

The alarm history for the 4 latest alarms is recorded

Detailed information from back as far as the latest 4 alarms can also be checked.

Protective function against phase loss in input/output

It is possible upon start-up and operation.

Protective function for grounding fault

Protection is provided for an overcurrent caused by a grounding fault.

Protection of motor with PTC thermistor

In addition to the protection of the motor with an electronic thermal relay, a PTC thermistor can be used for motor protection.



Item		Specifications														
Type (FRN___F1S-4E)		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18,5	22	30	37	45	55	
Nominal applied motor (kW) *1		0.75	1.5	2.2	4.0	5.5	7.5	11	15	18.5	22	30	37	45	55	
Output ratings	Rated capacity (kVA) *2	1,9	2,8	4,1	6,8	9,5	12	17	22	28	33	44	54	64	80	
	Rated voltage (V) *3	Three-phase, 380, 400 V/50 Hz, 380, 400, 440, 460 V/60 Hz (with AVR function)														
	Rated current (A) *4	2.5	3.7	5.5	9.0	12.5	16.5	23	30	37	44	59	72	85	105	
	Overload capability	120% of rated current for 1 min														
	Rated frequency	50, 60 Hz														
Input ratings	Phases, voltage, frequency	Main power supply	Three-phase, 380 to 480 V, 50/60 Hz										Three-phase, 380 to 440 V/50 Hz Three-phase, 380 to 480 V/60 Hz			
		Auxiliary control power input	Single-phase, 380 to 480 V, 50/60 Hz										Single-phase, 380 to 440 V/50 Hz Single-phase, 380 to 480 V/60 Hz			
	Auxiliary fan power input *5	None													*10	
	Voltage/frequency allowance	Voltage: +10 to -15% (Voltage unbalance: 2% or less)*9, Frequency: +5 to -5%														
	Rated current (A) *6	(with DCR)	1.6	3.0	4.5	7.5	10.6	14.4	21.1	28.8	35.5	42.2	57.0	68.5	83.2	102
(without DCR)		3.1	5.9	8.2	13.0	17.3	23.2	33.0	43.8	52.3	60.6	77.9	94.3	114	140	
Required power supply capacity (kVA) *7	1.2	2.2	3.1	5.3	7.4	10	15	20	25	30	40	48	58	71		
Braking	Torque (%) *8	20										10 to 15				
	DC braking	Starting frequency: 0,0 to 60,0 Hz, Braking time: 0,0 to 30,0 s, Braking level: 0 to 60%														
DC reactor (DCR)	Option															
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 (kg)	3,1	3,2	3,3	3,4	3,4	5,8	6,0	6,9	9,4	9,9	11,5	23	24	33		