

FRENIC-Ace

For Solar Pumping

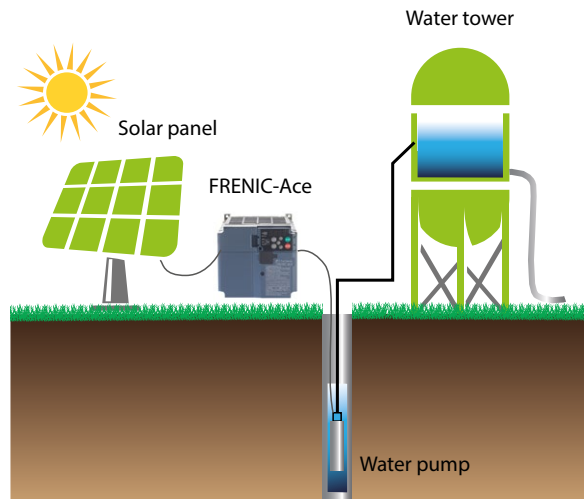


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Specific Functions of Solar Pumping

- True and outstanding MPPT function (Maximum Power Point Tracking)
- Start criteria by system conditions and time
- Stop criteria selectable
- Dry pump detection function
- Low power function
- It allows to control asynchronous motors and permanent magnets synchronous motors
- Detection of sudden changes of conditions (especially irradiance)
- Two sets of PID gains, for a fast and smooth operation
- Water tank level control
- Grid connection selectable for maintenance and backup system



Generic specifications

	400 V Motor	200 V Motor
Maximum input voltage (Voc)	800 VDC	360 VDC
Minimum input voltage	400 VDC	180 VDC
Recommended voltage DC (VMPP)	550 - 620 VDC	280 - 330 VDC
Nominal input voltage AC	3ph 380 - 480 V, 50/60 Hz	3ph 200 - 240 V, 50/60 Hz
Nominal output voltage AC	3ph 400 V	3ph 200 V
Output frequency	0 - 400 Hz	
Efficiency (inverter)	97 - 98%	
Ambient temperature range	-10 to 50° C	
Cooling	Natural / by means of internal fan	
Recommended input power	1.2 times the pump capacity (minimum)	
Warranty	3 years	
EMC filter* / Motor output	Built-in / optional (from distances over 50 m)	

*For more information regarding EMC filters (AC/DC) please contact Fuji Electric.

Power Range and Dimensions

Motor (kW)	IP Class	Motor Voltage [3ph 400 VAC] AC Power Supply [3ph 400 VAC] ^{#3} DC Voltage Supply [400 to 800 VDC]		IP Class	Motor Voltage [3ph 200 VAC] AC Power Supply [3ph 200 VAC] ^{#3} DC Voltage Supply [180 to 360 VDC]		IP Class	Motor Voltage [3ph 200 VAC] AC Power Supply [1ph 200 VAC] ^{#3} DC Voltage Supply [180 to 360 VDC]		Dimensions (mm)		
		Model	[A] ^{#2}		Model	[A] ^{#2}		Model	[A] ^{#2}	W	H	D
0.1							IP20	FRN0001E2E-7GA-CLI-SOL	0.8	68	127	112
0.2				IP20	FRN0002E2E-2GA-CLI-SOL	1.3	IP20	FRN0002E2E-7GA-CLI-SOL	1.6	68	127	112
0.4				IP20	FRN0002E2E-2GA-CLI-SOL	2	IP20	FRN0003E2E-7GA-CLI-SOL	3.0	68	127	112/127
0.75	IP20	FRN0002E2E-4GA-CLI-SOL	1.8	IP20	FRN0004E2E-2GA-CLI-SOL	3.5	IP20	FRN0005E2E-7GA-CLI-SOL	5	110/68/110	130/127/130	162/127/129
1.1	IP20	FRN0004E2E-4GA-CLI-SOL	3.4	IP20	FRN0006E2E-2GA-CLI-SOL	6	IP20	FRN0008E2E-7GA-CLI-SOL	8	110/68/140	130/127/130	186/152/199
1.5	IP20	FRN0006E2E-4GA-CLI-SOL	5	IP20	FRN0010E2E-2GA-CLI-SOL	9.6	IP20	FRN0008E2E-7GA-CLI-SOL	8	140	130	199
2.2	IP20	FRN0006E2E-4GA-CLI-SOL	5	IP20	FRN0010E2E-2GA-CLI-SOL	9.6	IP20	FRN0011E2E-7GA-CLI-SOL	11	140	130	199
3.0	IP20	FRN0007E2E-4GA-CLI-SOL	6.3	IP20	FRN0012E2E-2GA-CLI-SOL	12				140	130	199
4	IP20	FRN0012E2E-4GA-CLI-SOL	11.1	IP20	FRN0020E2E-2GA-CLI-SOL	19.6				140	130	199
5.5	IP20	FRN0012E2E-4GA-CLI-SOL	11.1	IP20	FRN0020E2E-2GA-CLI-SOL	19.6				140	130	199
7.5	IP20	FRN0022E2E-4E-CLI-SOL	17.5	IP20	FRN0030E2S-2GB-CLI-SOL	30				181.5/180	285/220	208/158
11	IP20	FRN0029E2E-4E-CLI-SOL	23	IP20	FRN0040E2S-2GB-CLI-SOL	40				181.5/180	285/220	208/158
15	IP20	FRN0037E2E-4E-CLI-SOL	31	IP20	FRN0056E2S-2GB-CLI-SOL	56				220/220	332/260	245/190
18.5	IP20	FRN0044E2E-4E-CLI-SOL	38	IP20	FRN0069E2S-2GB-CLI-SOL	69				220/220	332/260	245/190
22	IP20	FRN0059E2E-4E-CLI-SOL	45	IP20	FRN0088E2S-2GB-CLI-SOL	88				250	400	195
30	IP20	FRN0072E2E-4E-CLI-SOL	60	IP20	FRN0115E2S-2GB-CLI-SOL	115				250/250	400/400	195/195
37	IP00	FRN0085E2E-4E-CLI-SOL	75							326.2	550	261
45	IP00	FRN0105E2E-4E-CLI-SOL	91							326.2	550	261
55	IP00	FRN0139E2E-4E-CLI-SOL	112							361.2	615	276
75	IP00	FRN0168E2E-4E-CLI-SOL	150							361.2	675	276
90	IP00	FRN0203E2E-4E-CLI-SOL	176							361.2	740	276
110	IP00	FRN0240E2E-4E-CLI-SOL	210							536.4	740	321
132	IP00	FRN0290E2E-4E-CLI-SOL	253							536.4	740	321
160	IP00	FRN0361E2E-4E-CLI-SOL	304							536.4	1000	366
200	IP00	FRN0415E2E-4E-CLI-SOL	377							536.4	1000	366
220	IP00	FRN0520E2E-4E-CLI-SOL	415							686.4	1000	366
280	IP00	FRN0590E2E-4E-CLI-SOL	520							686.4	1000	366

1: HND Overload capability: 120% for 1 min at 50°C

2: [A] = Current

3: Grid connection selectable for maintenance and backup system

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