

Solar Pumping Solution



The Fuji Electric Solar Pumping Solution.
Designed, developed and assembled in Europe.

FE Fuji Electric
Innovating Energy Technology



Why Solar Pumping?

- Your “off-grid” solution for irrigation and potable water extraction
- It represents significant savings, the cost are fixed and known
- No diesel and butane gas needed
- Renewable energy supply
- High reliability and long lifespan
- Functions quietly and automatically
- Wide capacity range
- Simple installation and easy to start up
- Low maintenance
- Environment friendly water supply solution - no fume pollution



Specific Functions of Solar Pumping

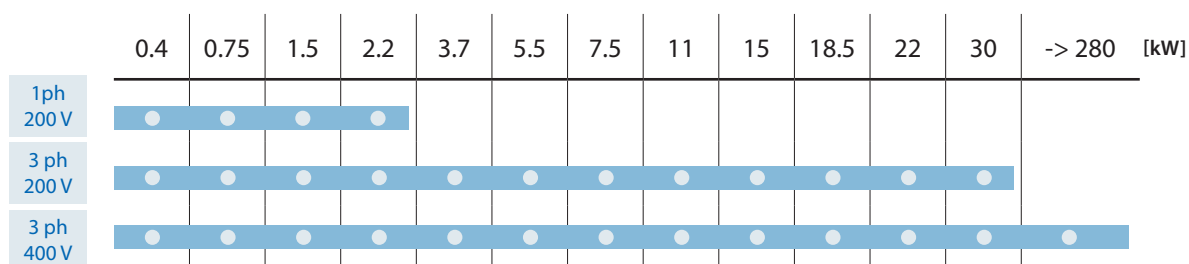
- True and outstanding MPPT function (Maximum Power Point Tracking)
- Start criteria by PV panel voltage and time
- Stop criteria selectable by frequency or power
- Dry pump detection function
- Low power function
- It allows to control asynchronous motors and permanent magnets synchronous motors
- Detection 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



Cabinet Solution

- Individual selection of components such as PV string terminals, fuses, main switch, ground fault detection, output filter etc.
- Compact IP54 solution available up to 280 kW
- Plus Cloud connectivity for remote access
- Designed, developed and assembled in Europe

Capacity range inverter



FRENIC-Ace



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.



Remote Options



■ Multifunctional keypad



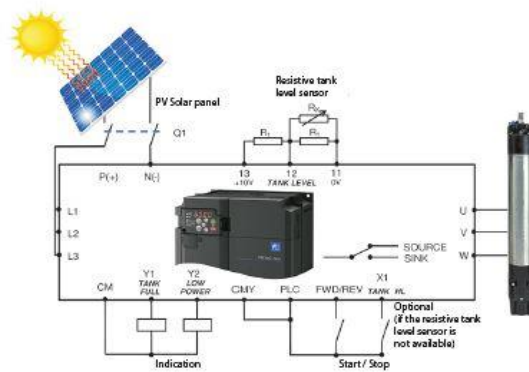
■ Control and monitor via VPN



■ Cloud connectivity

Solar Pumping Architectures

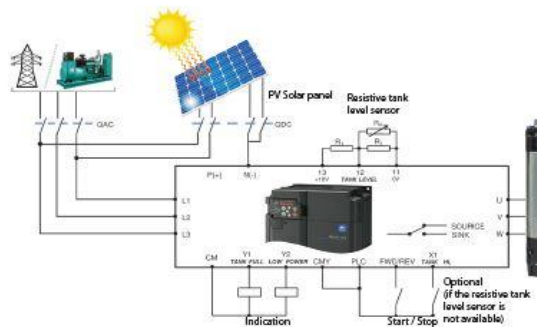
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"Off grid" Solar Pumping with isolated photovoltaic power supply

The system is supplied by the photovoltaic energy only.
Very simple and autonomous.

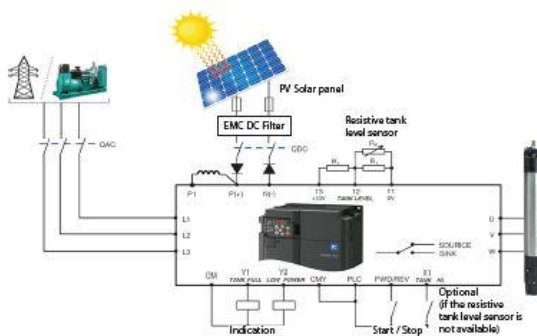
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Solar Pumping with selectable power supply (PV, grid or diesel generator)

The system can be supplied in DC, by photovoltaic panels or in AC by means of grid connection or diesel generator, switching the power supply depending on the operation conditions. To change the supply source, an external and safe commutation automatism is needed.

3



Solar pumping with assisted power supply (grid or diesel generator)

The system can be simultaneously supplied in AC (grid or generator) and DC (photovoltaic panel). In case of insufficient solar energy, the system will take the necessary energy from the connected grid or the diesel generator. This system is especially recommended for intensive irrigation.*

* Please be aware of regional regulations about this kind of connection.



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www.actionspeedcontrol.com

sales@actionspeedcontrol.com