Equipment and solutions

CFJ Hybrid Solar Pumping Controller

Product technical datasheet

Hybrid variable frequency drive for solar pumping with MPPT and automatic switchover.

FT-P085 · Rev. 1

The CFJ variable frequency drive is a hybrid controller designed for solar pumping systems. Its MPPT technology optimizes photovoltaic panel output in real time. It supports flexible power input, automatically switching between solar energy and mains electricity or diesel.

Applications

- MPPT Function: Maximum yield in all environmental conditions.
- Pressure Control: Variable speed to maintain constant pressure.
- Hybrid Mode: Automatic management between solar and grid/generator.
- Integrated protections: Dry run, overvoltage, and phase loss.

Operating conditions

- Confirm the installation conditions, power supply and duty point before commissioning.

Engineering note	Confirm the installation conditions, power supply and duty point before commissioning.
Complementary equipment	Contact JOVAL for compatible accessories and equipment.
Resources and support	Pump selection guide · JOVAL technical support
Contact	+351 253 490 740 · joval@joval.pt

Technical specifications

Applications

Maximum input voltage (Voc)

800 VCC (Motor 400V) | 360 VCC (Motor 230V)

Minimum input voltage (VMPP)

400 VCC | 180 VCC

Recommended DC voltage (VMPP)

550 - 620 VCC | 280 - 330 VCC

Nominal AC input voltage

Three-phase 380 - 480 VAC; 50/60 Hz | Three-phase 200 - 240 VAC; 50/60 Hz

Nominal AC output voltage

Three-phase 400 VAC | Three-phase 230 VAC

Output frequency

0 - 400 Hz

Efficiency (VFD)

97 - 98 %

Ambient Temp.

-10 a 50 °C

Ventilation

Natural / Via internal fan

Recommended input power

1.2 times pump capacity (minimum)

Warranty

3 months

EMC Filter / Motor output

Built-in / Optional (from 50m)

- MPPT Function: Maximum yield in all environmental conditions.
- Pressure Control: Variable speed to maintain constant pressure.
- Hybrid Mode: Automatic management between solar and grid/generator.
- Integrated protections: Dry run, overvoltage, and phase loss.

Operating conditions

- Confirm the installation conditions, power supply and duty point before commissioning.

Engineering note Confirm the installation conditions, power supply and duty point before commissioning.