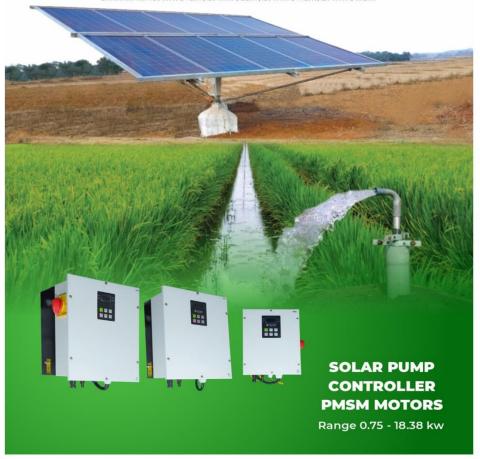




An ISO 9001:2015 Certified Company

TUV Rheinland (India) Pvt Ltd, UL Certified Efficiency IEst. IEC 61683.1999 Environment Test: IEC 60068-2-1:2007, IEC 60068-2-2007, IEC 60068-2-14.2009, IEC 60068-2-30.2005





## **SOLAR PUMP CONTROLLER PMSM MOTORS - AN OVERVIEW**

Most of the energy produced around the world is used to operate pumps. Compared to diesel generator pumps, the TEXTRO solar pump drive is environmentally friendly, with a long lifetime and low maintenance costs. It is independent from the grid and produces no pollution or noise. Typical applications are irrigation, community water supply, and agriculture.

The drive has many solar - specific and pump control functions, such as built-in maximum power point tracking. Our drive ensures you to get the best output power possible from your solar panel and it maximizes the performance of your pump along the day while the automatic start and stop with solar radiation can save money and fuel during daylight hours.

## How it's Works?

The solar drive converts the DC voltage input to a 3-phase AC output with variable voltage and frequency. The MPPT algorithm of solar drive extracts maximum power available from the solar panels during the day and operates the motor at variable speed based on the power input to the drive.

The frequency range in which the drive operates depends upon the motor speed, and the power available from the solar panel. As the sunshine varies during the day, power input to the drive varies and the solar drive generates variable V/F ratio thus controlling the speed of the motor, which in turn regulates the pump impeller speed.

## SPECIFICATIONS:

- 0.75 to 7.5 kW/O.5 to 25Hp.
- Input voltage for 200V Solar drive
   Solar power: Vmpp: 283VDC 373VDC and Voc = 382VDC max.
   Grid power: 230V, 50/60H2 single or 230V, 50/60Hz, 3 phase.
- Input voltage for 400V Solar drive.
   Solar power: Vmpp = 500VDC 700VDC and Voc = 7SOVDC max.
   Grid power: 400V, 50/60Hz, 3 phase.
- Operates without grid directly from photovoltaic (PV) cells.
- · Automatic start and stop with solar radiation.
- Built-in maximum power point tracking (MPPT).
- Factory wired enclosure ensures reduced installation

## BENEFITS

- Pumping of water for irrigation for drinking water supply in off grid areas.
- Farmer can cultivate multiple crops throughout the year in off grid areas.
- Lower operation expense compared to diesel numps
- Zero emission of green house gases.
- · Reduced load on national grid.



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