



PV Grid-tied Inverter (Central Inverter)

SolarOcean 1000MV-ST

Samil Power Station integrates new generation SolarOcean series central inverter, DC cabinets and all electronics to be custom-fitted into a prefabricated weather-sealed enclosure container for simple and speed installation on project site. There are many tailor-made options available to configure to specific project requirements for rated power at 1000kW.

The PV Power Station has two key advantages: a compact design which makes it easy to transport and to install, and its flexibility to have rampost or concrete supporting base available for applying on real various project sites.

This PV Power Station uses the new generation central inverter and oil filled MV transformers ranging from 11kV to 35kV to maximize its efficiencies and reliability. The modular layout design on inverter enclosure container allows for simple maintenance in all weather conditions.

FEATURES

- Turnkey solution for MW solar power plants
- Rated power at 1MW
- Compact design - easy to transport and to install
- Maximum efficiency – use of new generation central inverter and oil filled MV transformer

Datasheet of SolarOcean Series

| Inverter Model | SolarOcean 1000MV-ST |
|---|------------------------------------|
| Inverter | 2xSolarOcean 500TL |
| Input (DC) | |
| Max. DC voltage [V] | 1000 |
| MPPT voltage range (full load) [V] | 450-820 |
| Numbers of MPPT | 2x1 |
| Max. combined DC input current [A] | 2x1200 |
| Numbers of DC inputs available | 2x10 (10 inputs/DC cabinet) |
| Input Protections | |
| Isolation control (earth fault monitoring) | Yes |
| Integrated DC protection | Yes |
| Reverse polarity and backfeed current protection (each input) | Yes |
| Load-Breaking DC switch (each input, monitored) | Yes |
| Input surge protection | Yes |
| Output (AC) (before medium voltage transformer) | |
| Rated AC power [kW] | 2x500 |
| Max. AC current [A] | 2x1070 |
| Rated AC voltage/range [V] | 270+/-10% |
| Rated AC frequency/range [Hz] | 50 |
| Power factor (cos ϕ) | 0.9 lagging-0.9 leading |
| THDi (at rated power) | <3% |
| Output Protection (before medium voltage transformer) | |
| AC output circuit breaker per inverter (magneto-thermic switch)/breaking capacity | 1250A/50kA |
| Emergency stop | Yes |
| Overvoltage protection (power and aux input) | Yes |
| Conversion Efficiency (before medium voltage transformer) | |
| Peak efficiency | 98.6% |
| Euro efficiency | 98.3% |
| Communication/user Interface | |
| Communication | RS485 (standard)/CAN (optional) |
| Environmental Parameters | |
| Ingress protection (IP) | IP54 |
| Operating temperature range [$^{\circ}$ C/ $^{\circ}$ F] | -20-+50/-4-122 |
| Cooling (Inverter) | Air forced |
| Required ambient air cooling flow | 22000m ³ /h |
| Relative humidity | 5-95% (non-condensing) |
| Maximum altitude above sea level without derating | 3000m |
| Building Specifications | |
| Construction | Standard 20 FT container |
| Mounting | Cement block mount/rampost |
| Insulation | R4.2 |
| Wind load | 120kmph |
| Snow load | 45lb/FT ² |
| Dimensions (WxHxD) [mm/in] | 6058x2438x2869/238.5x96.0x113.0 |
| Overall weight [kg/lb] | 7500/16534.7 (without transformer) |
| Certificates | |
| Inverter | CQC, CE, TUV |
| Transformer (optional) | |
| Type and rating | Y/d11 - d11; oil filled/dry |
| Voltage | 11kV to 35kV |
| Cooling class | AN |
| Primary configuration | 2x270V |
| Conductor material (both primary and secondary) | Copper or Aluminum |
| Grid management (LVRT, anti-islanding) | Yes |