



SAMPLE DATASHEET

Ref: VEL-SOL-100-2026

Issued: May 2026

VELORA

100 kWp Grid-Tied Solar PV System

Three-phase rooftop / ground-mount system · IEC-compliant · monitoring-enabled.

CAPACITY

100 kWp DC / 100 kW AC

VOLTAGE

400 V · 3-phase · 50 Hz

STANDARD

IEC 61215 · IEC 62109

Engineering-Driven Supply.

Velora Engineering & Trading PLC · Addis Ababa, Ethiopia · www.veloraet.com



SAMPLE / INDICATIVE DATASHEET — actual specification confirmed at quotation

100 kWp Grid-Tied Solar PV System

Rooftop or ground-mount · three-phase · monitoring-enabled · IEC-compliant.

1. System Summary

Installed DC Capacity	100 kWp (nominal)
AC Output	100 kW · 400 V · 3-phase 4-wire · 50 Hz
Configuration	Grid-tied · optional hybrid with battery storage
Annual Yield (typical)	165,000 – 180,000 kWh/year (Addis Ababa irradiation)
Performance Ratio	≥ 80% (design target)
Reference Code	VEL-SOL-100-2026

2. PV Modules

Manufacturer	Tier-1 OEM (Jinko / LONGi / Trina / JA Solar class)
Technology	Monocrystalline PERC / TOPCon
Module Power	550 Wp (typical) · ~182 modules
Efficiency	≥ 21.3%
Certification	IEC 61215, IEC 61730, IEC 61701 (salt mist)
Warranty	12 years product · 25 years linear performance (≥ 84.8%)

3. Inverters

Type	Three-phase string inverter
Rated AC Power	2 × 50 kW (or 4 × 25 kW) units
MPPT Channels	≥ 6 per 50 kW unit
Max. Efficiency	≥ 98.6%
Protection	IP66 · DC/AC SPD Type II · integrated DC switch
Compliance	IEC 62109-1/2 · IEC 61727 · IEC 62116

4. Mounting & Balance of System

Mounting	Anodised aluminium rails, stainless fasteners (rooftop)
DC Cabling	TÜV/UL-certified solar cable, 4 mm² / 6 mm²
Combiner Boxes	IP65, with fuses, SPD and DC isolator
AC Distribution	MCCB, RCD, SPD per IEC 60364-7-712
Earthing	Equipotential bonding, dedicated PE conductor

5. Monitoring

Platform	OEM cloud-based portal · web/mobile access
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Sensors	Irradiance, module temperature, ambient temperature
Communication	Ethernet / Wi-Fi / 4G (project dependent)
Alarms	Inverter fault, low yield, communication loss

6. Compliance & Standards

- IEC 61215 / IEC 61730 — Module performance and safety.
- IEC 62109-1/-2 — Inverter safety.
- IEC 61727 / IEC 62116 — Grid-connection and anti-islanding.
- IEC 60364-7-712 — PV electrical installation.

7. Documentation Provided

- Module and inverter datasheets and certificates.
- Single-line diagram, layout and string configuration.
- Energy yield simulation report (PVsyst-class).
- Commissioning report and O&M manual.

Sample configuration. Final make, model and yield are confirmed against site survey and project specification at quotation.