

MAJOR ADVANTAGES

Universal Energy Commander
Intelligent Connectivity, Zero Hassle
Parallel up to 6 units
Unshakeable Stability
Defense-Grade Safety Options

DIMENSIONS

Size: 650 x 640 x 270 mm
Weight: 45 Kg

RATED PARAMETERS

- Power: 10/15/20 kW
- Max PV Input: 20/30/30 kW
- PV Voltage Range: 160-950 Vdc
- Battery Voltage: 150-600 Vdc
- Max Efficiency: 98.2%
Backup Power: 10/15/20 kW

OPERATING ENVIRONMENT

-25°C ~ +60°C
IP rating: IP66

www.enerstein-solar.com
contact@forge-solar.com

V. Inverter On-Grid Hybrid 3phase 10/15/20kW

The three-phase energy commander that masters any source, scales from home to business, and conquers any climate. Pure sine wave, ≤10ms switching, and ultra-wide MPPT harvesting in a smart, IP66-rated design.

- **AVAILABLE IN 3 SIZES**

For Premium Residential to Small Industrial/Commercial:
202-Inv-Hy10: Rated Power 10 kW, Max PV Input 20 kW
203-Inv-Hy15: Rated Power 15 kW, Max PV Input 30 kW
204-Inv-Hy20: Rated Power 20 kW, Max PV Input 30 kW

- **UNIVERSAL ENERGY COMMANDER**

Seamlessly orchestrates PV inverters, generators, and microgrid inputs for both new-build solar and smart retrofits, evolving with your energy needs.

- **INTELLIGENT CONNECTIVITY, ZERO HASSLE**

Real-time app monitoring with automatic cloud-based OTA upgrades puts expert system management in your pocket, not on your schedule.

- **EXPAND YOUR POWER HORIZON**

Parallel up to 6 units with robust EPS output, transforming residential backup into small commercial-grade power systems without replacing equipment.

- **ENGINEERED FOR UNSHAKEABLE STABILITY**

1.5x oversized PV and grid input capacity handles volatile conditions and surge demands that cripple standard inverters.

- **DEFENSE-GRADE SAFETY OPTIONS**

Optional Rapid Shutdown (RSD) and Arc Fault Circuit Interruption (AFCI) create a multi-layered protection shield for maximum peace of mind.

- **Installer Benefits:** Plug-and-play commissioning, remote diagnostics, flexible system sizing

All-Weather Armor: IP66 aluminum chassis for outdoor installation

Universal Compatibility: Supports PV, generators, microgrid systems

Smart Scheduling: Flexible charge/discharge for peak load shaving

Superior Backup: Excellent off-grid performance for non-linear loads



THE POWER TO GROW

From home energy hub to micro business command center

HIGH CHARGE

/DISCHARGE EFFICIENCY

Compatible with lithium battery and lead-acid battery

OUTSTANDING OFF-GRID OUTPUT PERFORMANCE

Adjustable to various non-linear load

HIGH PV INPUT RANGE

160V-950 Vdc

WARRANTY PERIOD

5 years

* paid warranty extension available to double the standard coverage period

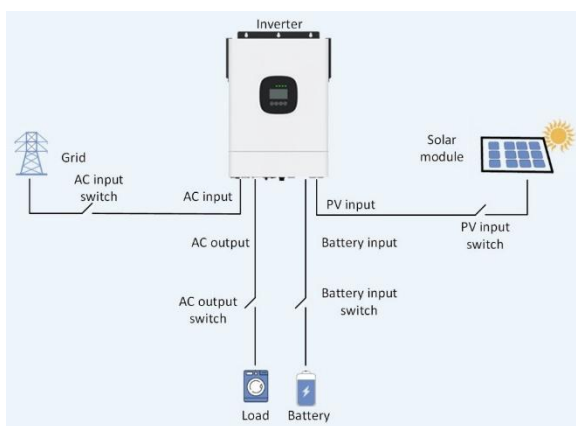
SKU

202-Inv-Hy10, 203-Inv-Hy15, 204-Inv-Hy20

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Three-Phase Inverter - Specification data*



- **Feature:** Ultra-Wide MPPT Range
Performance: 160-950Vdc
Customer benefit: Captures more solar energy in low-light conditions

- **Feature:** Battery Voltage Flexibility
Performance: 150-600Vdc
Customer benefit: Compatible with most high-voltage battery systems

- **Feature:** Pure Sine Wave Output
Performance: THDV $\leq 3\%$
Customer benefit: Safely powers sensitive electronics and appliances

- **Feature:** Seamless Backup Switching
Performance: $\leq 10\text{ms}$ transfer time
Customer benefit: Lights won't flicker during grid outages

- **Feature:** Generator Ready
Performance: 10-20kW input support
Customer benefit: Works with backup generators for ultimate reliability

- **Feature:** Extreme Climate Operation
Performance: -25°C to $+60^{\circ}\text{C}$
Customer benefit: Performs in harsh weather from deserts to mountains
- **Feature:** Whisper-Quiet Operation
Performance: 25-50dB noise level
Customer benefit: Quieter than a refrigerator—won't disturb your home
- **Feature:** Dual MPPT Trackers
Performance: 2 independent MPPTs
Customer benefit: Optimizes power from multiple roof orientations
- **Feature:** Global Certification Package
Performance: VDE, EN, IEC standards
Customer benefit: Approved for installation worldwide
- **Feature:** Surge Protection Built-In
Performance: DC Type II / AC Type II
Customer benefit: Protects your investment from lightning strikes

* Specifications in the datasheet are subject to change without notice

RELATED PRODUCTS

- I. Solar Panel 455 W
- III. LFP Battery: 16kW
- IV. Full Solution Solar Car Port