



Green Energy Power Solutions

MEAN WELL introduces comprehensive green energy solutions encompassing Solar Power, Charging, and Energy Storage to meet the diverse needs of various industries.



Introduction

MEAN WELL introduces comprehensive green energy solutions integrating **Solar Power, Charging, and Energy Storage** to meet the diverse application needs of various industries. The product line is covering a wide range that includes the next-generation industrial-grade 120W to 1700W chargers "**NPB and NPP series**", reliable and durable 250W to 5kW off-grid inverters "**NTS, NTU, and NTN series**", the upcoming 7.5kW to 20kW off-grid hybrid bidirectional inverters "**NTG series**", integrated intelligent monitoring modules "**CMU series**", 1000VA to 2000VA grid-tied microinverters "**PV-SMI series**", 60kW and 120kW three-phase grid-tide solar inverters "**PV-SGI series**", 500W to 2400W portable power stations "**ES-S series**", 3kW to 10kW online UPS systems "**ES-SU/TU series**", hybrid storage inverter "**ES-HSI series**" and foldable solar panel "**PV-PFSP200**".

In addition, MEAN WELL offers peripheral components such as MPPT controllers "**PV-ML series**" and batteries "**DJM/FT series**". With its complete solution portfolio, MEAN WELL enables customers to flexibly configure systems based on site-specific needs. Whether for industrial manufacturing, public infrastructure, security and fire protection, or medical facilities, MEAN WELL delivers stable, reliable, and efficient green energy systems tailored to various application scenarios.



Bidirectional Power Supply AC ↔ DC



BIC · NTN · NTG Series

- Fully digital control architecture, with conversion efficiency up to 94.5%
- BIC/NTN series: THD < 3%
- NTG series : THD < 5%
- Operates within a wide temperature range from -30°C to +70°C
- Supports multi-unit parallel operation
- Supports CANBus and MODBus-RTU (RS-485) communication
- All models feature intelligent fan speed control
- 5-year extended warranty



Series Name	BIC-2200	BIC-5K	NTN-5K	NTG-7K5	NTG-20K
Rated Power	2200W	5000W	5000W	7500W	20kW
Input Voltage Range	180~264Vac	180~305Vac	180~264Vac	340~530Vac	
Output Voltage Range	12V, 24V, 48V, 96V	24V, 48V, 96V, 380V	24V, 48V, 380V	48V, 96V, 380V	15V, 24V, 48V, 96V, 380V
Communication Protocol	CANBus	CANBus, MODBus-RTU	CANBus, MODBus-RTU	CANBus, MODBus-RTU	
Applications	Battery Testing / V2G / Energy Recovery	Energy Storage / Charging Station / V2G	Off-grid / UPS	Grid-connected + off-grid integrated	
Parallel Synchronized Operation Up to	19800W Max. (9 units)	30kW Max. (6 units)	30kW Max. (6 units)	45kW Max. (6 units)	60kW Max. (6 units)
Dimensions (Lx Wx H)	330x 140x 41mm	460x 211x 83.5mm	460x 211x 83.5mm	504x 211x 83.5mm	570x 424x 83.5mm



Inverter



NTS Series

- High surge power up to 2 times instantaneous peak power output, THD <3%
- Multiple intelligent protections (automatic shutdown when abnormal):
DC input: Reverse polarity, DC low alarm, DC low auto-shutdown, Over voltage
AC output: Short circuit, Overload, Over temperature
- Remote control module-IRC1/ IRC2/ IRC3 (optional for NTS-750~3200)
- -25°C~+70°C wide range operating temperature
- Compliance with International safety approvals
- Suitable for lead-acid (Pb) or lithium (li-ion) batteries
- Internal PCB conformal coating, high reliability
- Portable Carry Handle Kit (optional)
- 3-year warranty



Series Name	NTS-250P	NTS-400P	NTS-300	NTS-450	NTS-750	NTS-1200	NTS-1700	NTS-2200	NTS-3200
Output Voltage	250W	400W	300W	450W	750W	1200W	1700W	2200W	3200W
AC Input Voltage	12Vdc model: 10 ~ 16.5Vdc, 24Vdc model: 20 ~ 33Vdc, 48Vdc model: 40 ~ 66Vdc								
DC Output Voltage	110Vac model: 100/110/115/120Vac, 230Vac model: 200/220/230/240Vac (selectable by DIP S.W.)								
Built-in Fan	X		✓	✓	✓	✓	✓	✓	✓
Dimensions (Lx Wx H)	186x 100.5x 32mm		210x 130x 55mm		270x 158x 67mm	333x 184x 70mm	400x 184x 70mm	420x 270x 98mm	420x 270x 98mm

NTU Series (Built-in UPS function)



- High surge power up to 2 times instantaneous peak power output, THD <3%
- Built-in UPS function (AC by-pass)
- Remote control module-IRC1/IRC2/IRC3
- -25°C~+70° wide range operating temperature
- Suitable for lead-acid (Pb) or lithium (li-ion) batteries
- Internal PCB conformal coating, high reliability
- Portable Carry Handle Kit (optional)
- 3-year warranty



Series Name	NTU-1200	NTU-1700	NTU-2200	NTU-3200
Output Voltage	1200W	1700W	2200W	3200W
AC Input Voltage	12Vdc model: 10 ~ 16.5Vdc, 24Vdc model: 20 ~ 33Vdc, 48Vdc model: 40 ~ 66Vdc			
DC Output Voltage	110Vac model: 100/110/115/120Vac, 230Vac model: 200/220/230/240Vac (selectable by DIP S.W.)			
AC by-pass(UPS)	10ms ; nverter ⇌ AC by-pass			
Built-in Fan	✓	✓	✓	✓
Dimensions (Lx Wx H)	333x 184x 70mm	400x 184x 70mm	420x 270x 98mm	420x 270x 98mm



Charger



NPB Series

- Intelligent detection, ultra-wide charging voltage
- Built-in CANBus protocol for control, setting and monitoring (450W~1700W)
- Multiple intelligent protections (auto shutdown when abnormal): Short circuit, over voltage, over temperature, battery reverse polarity
- -30°C~+70°C wide operating temperature range
- Multiple standard output connectors for selection: Anderson, XLR mic head, TB (terminal block)
- Applicable for lead-acid and lithium-ion batteries
- Portable Carry Handle Kit (optional)
- Comply with ITE IEC/EN/UL62368-1 and household appliances EN60335-1/-2-29 dual certification
- 3-year warranty



Series Name	NPB-120	NPB-240	NPB-360	NPB-450	NPB-750	NPB-1200	NPB-1700
Output Wattage	120W	240W	360W	450W	750W	1200W	1700W
AC input voltage	90~264Vac						
DC output voltage	14.4Vdc, 28.8Vdc, 57.6Vdc, 72Vdc (450W only)						
Built-in Fan		X	✓	✓	✓	✓	✓
Built-in CANBus		X		✓	✓	✓	✓
Dimensions (Lx W xH)	180x 96x 49mm			205x 135x 55mm	230x 158x 67mm	250x 158x 67mm	300x 184x 67mm

NPP Series



- Multi-function single unit battery charger or power supply
- Multiple intelligent protections (auto intelligent shutdown when abnormal): Short circuit, over voltage, over temperature, battery reverse polarity
- -30°C~+70°C ultra-wide operating temperature
- Standard output connector: TB (terminal block)
- Suitable for lead-acid battery
- Portable Carry Handle Kit (optional)
- 3-year warranty



Series Name	NPP-450	NPP-750	NPP-1200	NPP-1700
Output Wattage	450W	750W	1200W	1700W
AC input voltage	90~264Vac			
DC output voltage	14.4Vdc, 28.8Vdc, 57.6Vdc, 72Vdc (450W only)			
Built-in Fan	✓	✓	✓	✓
Dimensions (Lx Wx H)	205x 135x 55mm	230x 158x 67mm	250x 158x 67mm	300x 184x 67mm

Intelligent Controller



CMU Series

- Integrates with multiple MEAN WELL power products for energy management and optimization
- Available in standalone or 19-inch rackmount versions for versatile deployment
- Supports multiple communication interfaces
- Monitoring and control via web interface, supports remote firmware upgrades
- Monitors input/output voltage, output current, fan speed, temperature and others
- Certified to IEC62368-1, EN55032, and EN61000, offering industrial-grade EMC and noise immunity
- Built-in logging records device usage, alarms, and system status for easy diagnostics and maintenance
- Universal controller for various industries such as industrial automation, EV charging, communications, and lighting
- 5-year warranty



Series Name	CMU3	CMU2
Product Positioning	Next-generation AI intelligent controller supporting voice systems and cloud computing for smart energy management	Traditional digital controller suitable for monitoring and managing single or entire power systems
User Interface	No built-in control panel; operated via mobile APP, supports voice assistants (Google, Siri, Baidu)	Built-in 7" TFT touch panel with buttons for easy on-site configuration and real-time control
Communication Interface	RS-485 x2, CANbus x2, PMBus x2, Ethernet x2, USB-C, USB 2.0 x2	RS-232, RS-485, CANBus, PMBus, USB x2; supports various expansion card modules
Wireless Communication	Supports Bluetooth, WiFi, NFC, Matter	Not natively supported (expandable via optional modules)
Cloud Integration Capability	Supports AWS, MQTT, SMTP for uploading monitoring data and remote configuration	Supports Ethernet upload and web-based monitoring; simpler functionality
Data Logging & AI Analysis	Equipped with AI algorithms to analyze usage behavior and device health, offering optimization suggestions	Supports log and event recording, SD card data logging
Input Voltage	10~28Vdc	85~264Vac
Relay Output	2 relays (30V / 1A)	4 programmable relays (30V / 1A)
Analog / Digital I/O	4 digital input/output channels (Open Collector)	5 DIN / DOUT channels, 5 AOUT / AIN channels (0~10V)
Firmware Upgrade	Supports online Ethernet partitioned upgrade	Supports firmware upgrade via Ethernet or SD card
Supported Languages	English, Traditional Chinese, Simplified Chinese	English, Traditional Chinese, Simplified Chinese
Operating Temperature	-25°C~ +70°C	-25°C~ +60°C
Applications	Smart home/ building energy monitoring, power efficiency optimization, automated scheduling, and other AI applications	Conventional power system monitoring, aging test, EV charging, horticultural lighting and others
Dimensions (Lx Wx H)	192x 178x 45.5mm (Standalone) 482x 193.6x 44.5mm (Rackmount)	245x 70x 164.2mm (Standalone) 483.6x 66.3x 132mm (Rackmount)

Lead Acid Battery



DJM · FT Series

- Multi-layer designed, prevent leakage
- Reliable exhaust venting valve design, will not ignite or explode internally when exposed to open flames during charging
- Maintenance-free, no need to replenish electrolytes during use
- DJM series is suitable for industrial use, FT series narrow width dimensions suitable for 19" or 23" cabinets in communication rooms
- Certified by UL1989 / CE
- 3-year warranty



Series Name	DJM	FT
Rated Voltage	12V	
Capacity	38Ah, 65Ah, 100Ah	40Ah, 100Ah, 150Ah
Self Discharge	≤3%/月 @ Ta=25°C	
Dimensions (Lx Wx H)	197x 165x 170 mm (38Ah) 348x 167x 178 mm (65Ah) 330x 173x 212mm (100Ah)	277x 106x 222 mm (40Ah) 394x 110x 285mm (100Ah) 551x 110x 288mm (150Ah)



Portable Power Station



ES-S Series

- Built-in UPS function (AC by-pass)
- Pure sine wave output (THD<3%)
- Bidirectional inverter technology
- Intelligent APP-based control
- Battery Management System (BMS) for charge/discharge protection
- Intelligent temperature-controlled cooling fan
- Multiple charging methods: AC, car charger, solar
- Automotive-grade LiFePO₄ blade batteries
- Intelligent digital display screen
- 3-year warranty

Series Name	ES-S500		ES-S1000		ES-S2200	
Cell Type	LiFePO ₄					
Capacity	518Wh		1030Wh		2240Wh	
Input	AC: 500W MPPT: 200W		AC: 1200W MPPT: 800W		AC: 2000W MPPT: 2*600W	
Output	AC: 500W USB-C: 100W USB-A: 18W	DC5525: 120W Car Charge: 120W	AC: 1800W USB-C1: 100W USB-C2: 45W	USB-A: 18W DC5525: 120W Car Charge: 120W	AC: 2400W USB-C1: 100W USB-C2: 45W	USB-A: 18W DC5525: 120W Car Charge: 120W
Operating Temp.	-10°C~ +45°C					
Dimensions (Lx Wx H)	335x 180x 233mm		340x 220x 258mm		409x 298x 310mm	
Weight	7.5 ± 0.5KG		12.4 ± 0.5KG		26.2 ± 0.5KG	

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.



Online UPS System



ES-SU/TU Series

- Available in rack or tower types
- Adopting DSP control technology
- Output power factor of 1
- Frequency conversion mode: 50Hz/60Hz
- Emergency power-off (EPO) function
- Generator-compatible
- Supports USB and RS-232 communication
- LCD panel display
- Adjustable charging current
- 3-year warranty

Series Name	ES-SU3K		ES-SU6K		ES-SU10K	
Output Power	3KVA / 3kW		6KVA / 6kW		10KVA / 10kW	
Voltage / Frequency	208/ 220/ 230/ 240Vac 50/60Hz					
Harmonic Distortion	≤2% THD (Linear load) ≤5% THD (Non-linear load)			≤1% THD (Linear load) ≤4% THD (Non-linear load)		
Dimensions (Lx Wx H)	300x 190x 318mm (Tower Type) 310x 438x 88mm (Rack Type)			369x190x 318mm (Tower Type) 509x 438x 88mm (Rack Type / 2U)		

Series Name	ES-SU6K-RL		ES-TU6K-RL	
Output Power	6KVA / 6kW			
Voltage / Frequency	208/ 220/ 230/ 240Vac 50/60Hz			
Harmonic Distortion	≤1% THD (Linear load) ≤4% THD (Non-linear load)		≤2% THD (Linear load) ≤3% THD (Non-linear load)	
Dimensions (Lx Wx H)	610x 438x 88mm(2U)		678x 418x 129mm(3U)	

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.



Micro Inverter



PV-SMI Series

- CEC weighted average efficiency up to 96.5%
- Equipped with various protections such as GFDI, surge protection
- APP monitoring with built-in WiFi or PLC communication methods
- Real-time control of plant operation status
- Automatic high temperature and fault warning
- -40°C to 65°C wide operation temperature
- Easy Installation
- 10-year warranty
(25-year warranty for B/C type)



Series Name	PV-SMI-1000	PV-SMI-2000
Rated Power	1000VA	2000VA
Input Voltage	22~55Vdc	
Output Voltage	A: 230Vac, B: 208Vac, C: 240Vac	
Pure Sine Wave Output	THD <5%	THD <3%
MPPT Tracking Efficiency	>99.5%	
Protection Class	IP67(A Type), NEMA6(B, C Type)	
Dimensions (Lx Wx H)	268x 250x 46.5mm	351x 275.5x 39.5mm

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.



Hybrid Storage Inverter



ES-HSI Series

- Built-in 2 MPPT trackers
- Configurable grid or solar input priority
- Supports energy storage from generator
- Built-in WiFi with APP for mobile monitoring
- Supports lead-acid and lithium batteries
- Reserved communication port for BMS (RS485)
- 5-year warranty



Series Name	ES-HSI-6K	ES-HSI-12K
Rated Power	6KW	12KW
AC Input Voltage	Single phase 170V~280V	Three phase 295V~500V
AC Output Voltage	220V / 230V / 240V	400V
PV Input Voltage (Max.)	80~500Vdc	150~ 900Vdc
Battery Voltage	48V	
Waterproof Protection	IP66	
Dimensions (Lx Wx H)	192x 414x 630mm	247x 500x 650mm

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.



Three-Phase Grid-Tied Solar Inverter



PV-SGI Series

- The maximum efficiency up to 98.7%
- Up to 6 MPPT trackers for complex applications, improving system power generation
- Supports up to 20A input current per string
- Intelligent isolation and disconnection switch to prevent faults and enhance system reliability
- PID nighttime recovery for improved energy production**
- Supports aluminum wire, saving the cost of AC cable
- High-precision string detection and IV curve diagnosis** for accurate fault localization
- High-precision intelligent DC arc detection (AFCL)**
- 3-year warranty



Series Name	PV-SGI-60K	PV-SGI-120K
Rated Output Voltage	60kW	120kW
Max. Input Voltage	1100Vdc	
AC Output Voltage	380V	
Waterproof Protection	IP66	
Operating Temp.	-30°C~ +60°C	
Dimensions (Lx Wx H)	720x 555x 288mm	1050x 687x 355mm

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.

**PID recovery, IV curve diagnosis, and AFCL arc detection are optional

MPPT Controller



PV-ML Series

- Simultaneous input from solar panels, batteries, and loads; supplies power to DC loads
- Multiple load operation modes to meet diverse user needs
- Supports various battery types including lead-acid and lithium
- Natural air cooling, ensuring completely silent operation
- MPPT efficiency up to 99%
- Supports 2-string or multi-parallel solar panel connections
- Complete charge and discharge protection mechanism
- Highly integrated design to reduce installation space and wiring complexity
- 3-year warranty



Series Name	PV-ML24	PV-ML48
Output Voltage	12V / 24Vdc	12V / 24V / 36V / 48V
Input Voltage	100Vdc max.	150Vdc max.
Input Current	20A, 40A	60A
Output Cell Type	Lead-acid battery / Lithium battery / User-defined	
Communication Protocol	RS232	RS232 / RS485
Waterproof Protection	IP32	
Dimensions (Lx Wx H)	210x 151x 59.5mm (20A model) 238x 173x 72.5mm (40A model)	285x 205x 93mm

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.

Foldable Solar Panel



PV-PFSP200

- Foldable and portable (4-fold design)
- Magnetic handle for easy storage and carrying
- Adjustable stand for better charging performance
- Equipped with USB and Type-C output ports
- 20°C~70°C wide operating temperature range
- 6.5 kg, 3-year warranty



Series Name	PV-PFSP200
STC Peak Power	200W±5%
Battery Efficiency	21.8%
Open Circuit Voltage	28.56V
Type-C Output	5V / 3A, 9V / 2A, 12V / 1.5A
USB Output	5V / 3A, 9V / 2A, 12V / 1.5A
Waterproof Protection	IP55
Dimensions (Lx Wx H)	2325x 545x 5mm (Unfolded) 628x 545x 30mm (Folded)

NOTE: Standards vary by country. Please check with MEAN WELL or your local distributor to ensure compliance before purchase.



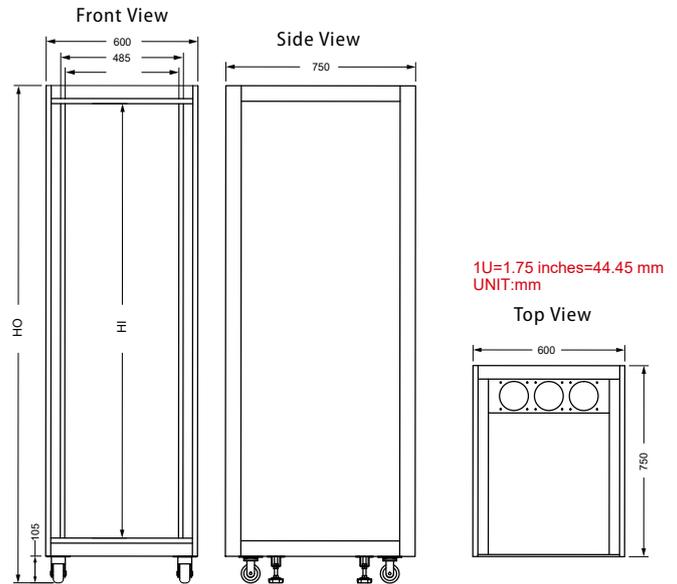
19" Rack Cabinet



RA Series

RA series, the 19" industrial standard cabinets that heights range from 15U to 42U. It has been widely used with MEAN WELL's 3+N product line; there are also brackets, fixed shelves, vented rack panels, blanking panels and cooling fans and other accessories meet customer installation needs. The products are suitable for system power supplies, servers, audio visual control, monitoring systems and storage devices.

- The surface coated with electrostatic powder, which is dust-proof, anti-oxidation, not easy to scratch, and resistant
- There are no screw parts on the side panels of the cabinet, so as the upper and lower frames; keeps the overall appearance
- In order to increase the wiring space, the front width of the cabinet is increased to 600mm while the internal remains a standardized frame of 19 inches
- Three 4-inch module fans can be installed on the top of the cabinet; optional modules of 110V/220V for purchase & self-assemble (Standard cabinets are configured with blanking panels)
- Equipped with braked wheels and leveling screws to maintain the balance of the cabinet and prevent it from shaking



RA



RA-C

Series Name	RA	RA-C
Production Site	Taiwan	China
Dimensions (Hx Wx D)	15U External: 912x600x750mm Internal: 667x450x660mm	15U External: 912x600x750mm Internal: 667x450x660mm
	22U External: 1224x600x750mm Internal: 979x450x660mm	22U External: 1224x600x750mm Internal: 979x450x660mm
	30U External: 1579x600x750mm Internal: 1334x450x660mm	30U External: 1579x600x750mm Internal: 1334x450x660mm
	35U External: 1801x600x750mm Internal: 1556x450x660mm	35U External: 1801x600x750mm Internal: 1556x450x660mm
	42U External: 2112x600x750mm Internal: 1867x450x660mm	42U External: 2112x600x750mm Internal: 1867x450x660mm

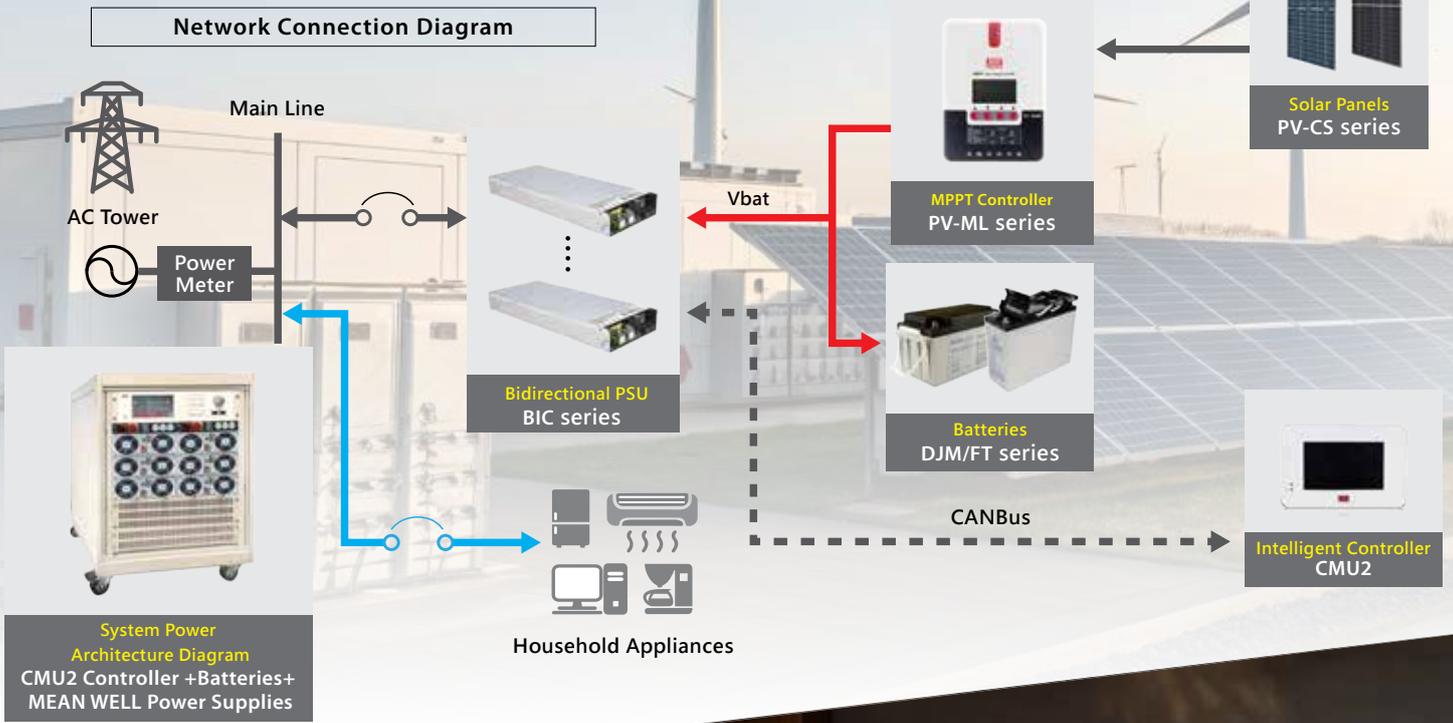


※ Scan the QR code to access the complete cabinet quick selection guide

Commercial Energy Storage

- High-efficiency bidirectional converters supporting parallel expansion
- Modular battery packs for flexible configuration
- Supports both grid-tied and off-grid solutions
- Intelligent controllers for system monitoring and management
- Compatible with solar MPPT controllers for solar energy applications

Network Connection Diagram



Residential Energy Storage

High-Efficiency Power Generation

- Built-in 2 MPPT trackers
- Up to 95% conversion efficiency

Flexible Expansion

- Plug-and-play PV interface
- Configurable grid or solar input priority
- Parallel up to 9 units (single/three-phase)

Smart & Reliable

- Programmable charge/discharge
- WiFi remote monitoring
- IP66 protection for harsh environments





Mobile Energy Storage

- Supports parallel synchronous operation up to 30kW (5+1 units)
- Available in both single-phase and three-phase output configurations
- Integrated with CMU2 intelligent monitoring and energy management
- Uninterruptible power function with AC bypass; switchover time <10ms
- MPPT control technology ensures optimal utilization of solar energy



One-Stop Solution

MEAN WELL offers dozens of models tailored for energy storage and charging applications, enabling customers to flexibly configure reliable and stable green energy systems with ease.



High Reliability Products

All products are developed with a focus on 4S (Software, System, Solution, Service) and 3H (High Cost-Performance, High Added Value, High Productivity), ensuring industrial-grade reliability and customer-centric performance.



Global Rapid Service

With nearly 10,000 power supply models available in stock, MEAN WELL offers a 14-day lead time for customers with recurring standard power supply orders. Backed by a global inventory and 260+ authorized distributors, MEAN WELL ensures prompt delivery, professional support, and dependable service wherever you are.



Taiwan (Headquarters)
MEAN WELL Enterprises Co., Ltd.
Tel +886-2-2299-6100(rep.)
e-mail info@meanwell.com

U.S.A (California)
MEAN WELL USA, INC.
Tel +1-833-635-7201 (California)
+1-856-266-9438 (New Jersey)
+1-816-601-4034 (Kansas city)
e-mail info@meanwellusa.com

Europe (The Netherlands)
MEAN WELL EUROPE N.V.
Tel +31-20-758-6000
e-mail info@meanwell.eu

China
MEAN WELL (GUANGZHOU) ELECTRONICS CO., LTD.
Tel +86-20-3773-7100 / 400-800-3608(sales) e-mail info@meanwell.com.cn

SUZHOU MEAN WELL TECHNOLOGY CO., LTD.
(SUZHOU MEAN WELL INTELLIGENT PARK)
Tel +86-512-6508-8600 e-mail info@meanwell.cc

Asia
MEAN WELL MALAYSIA SDN. BHD.
Tel +603-8070-8120 e-mail wswong@meanwellasean.com

MEAN WELL INDIA ELECTRONICS PRIVATE LIMITED
Tel +91-8068-728613 e-mail info@meanwellindia.com

MEAN WELL SINGAPORE PTE. LTD.
Tel +886-2-2299-6100 etc.864 e-mail info@meanwell.com

MEAN WELL (HONG KONG) HOLDING LIMITED
Tel +852-2643-9098 e-mail vickiho@meanwell.com.hk

MEAN WELL TURKEY DIŞ TİCARET ANONİM ŞİRKETİ
Tel +90-850-532-4667 e-mail a.argilli@meanwell.com

