E-AblePower Technology

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DATASHEET · EAP-DS-20261107-SDP16AVS-R01

16 kW Split-Phase

Off-grid hybrid inverter with AVS · 120/240 Vac · 48 V battery

A split-phase off-grid hybrid inverter that combines PV charging, mains charging, UPS bypass and battery inversion in one unit. The AVS stage holds the output within 3 % while the 16 kW / 24 kVA platform runs 120/240 Vac loads from a 48 V lithium or lead-acid bank, with dual 12 kW PV inputs and parallel operation up to six units.

OFF-GRID HOMES | BACKUP POWER | RV AND MOBILE | AGRICULTURE | WORKSHOPS | MICROGRID



16 kW	24 kVA	120/240 Vac	48 V
RATED OUTPUT	SURGE POWER	SPLIT-PHASE OUTPUT	BATTERY VOLTAGE

KEY FEATURES

01
16 kW continuous, 24 kVA surge
Split-phase 120/240 Vac output at power factor 1, with a 24 kVA surge for motor and compressor starts.

02
AVS output regulation
The automatic voltage stabiliser keeps the AC output within 3 %, so sensitive loads see a stable supply when the source moves.

03
Dual 12 kW PV inputs
Two MPPT channels rated 36 A + 36 A and 12,000 W + 12,000 W, with a 90–450 Vdc window and 500 Vdc maximum open-circuit voltage.

04
300 A combined charging
Up to 300 A PV, 200 A AC or 300 A combined charge current for a 48 V bank; float 54 V, overcharge protection 61 V.

05
Parallel up to six units
Parallel quantity 1–6 for larger sites, with lithium battery auto-activation and RS232 / RS485 / CAN communication.

06
Pure sine, 10 ms transfer
Pure sine wave output and a typical 10 ms transfer; overload is staged at 105–110 %, 110–125 % and above 125 %.

SCOPE OF SUPPLY

- 16 kW split-phase hybrid inverter with AVS
- Dual MPPT PV charger, 36 A + 36 A
- 48 V lithium / lead-acid battery interface
- LCD display, RS232 / RS485 / CAN
- Optional WiFi monitoring

APPLICATION NOTE

Size the battery bank and PV array against the site load profile, not the inverter nameplate. Parallel units share the load but each unit still needs its own DC protection and equal-length battery cabling.

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TECHNICAL SPECIFICATIONS

AC INPUT AND OUTPUT

Rated output capacity	**16 kW**
Surge power	**24 kVA**
AC output voltage	**120/240 Vac**
Rated input voltage	**85–140 Vac**
AC bypass output	**120/240 Vac ±3 %**
Frequency	**50/60 Hz auto adaptive, ±0.1 %**
Power factor	**1**
Switch time	**10 ms typical**
Waveform	**Pure sine wave**
Overload (battery mode)	**105–110 %: 5 min; 110–125 %: 10 s; >125 %: 5 s**

PV INPUT AND CHARGER

Solar charger type	**MPPT**
Max PV input current / power	**36 A + 36 A / 12,000 W + 12,000 W**
MPPT range at operating voltage	**90–450 Vdc**
Max PV open-circuit voltage	**500 Vdc**
Max PV charge current	**300 A**
Max AC charge current	**200 A**
Max combined charge current	**300 A**
MPPT efficiency	**Up to 99.9 %**

BATTERY

Nominal voltage	**48 Vdc**
Float charge voltage	**54 Vdc**
Overcharge protection	**61 Vdc**
Battery type	**Lithium and lead-acid**
Max efficiency, battery mode	**93.5 %**

GENERAL DATA

Ingress protection	**IP21**
Operating temperature	**−10 to +60 °C**
Relative humidity	**5–95 %, non-condensing**
Storage temperature	**−15 to +60 °C**
Dimensions (H × W × D)	**670 × 390 × 585 mm**
Net weight	**90 kg**
Max operating altitude	**4,000 m (derating above 1,000 m)**
Parallel quantity	**1–6**
Interface	**LCD; RS232 / RS485 / CAN; WiFi optional**
Warranty	**2 years**
Certification	**CE, IEC 62109, EN 50549**
Packing	**Single export carton**

NOTES

- Certification set as agreed for EU market; the supplied product sheet does not print certificates.
- Overload timing is reproduced from the source; the ±5 % tolerance in the original wording is not repeated here.
- Parallel operation requires matched firmware and equal battery cable lengths; confirm the parallel kit with the factory.

Specifications are nominal and may change without notice. The contractual revision is the one confirmed in the order acknowledgement. Draft R01 for internal review.