

FUTURIZE THE POWER



VEGA - MODULAR INVERTER

MAIN FEATURES

- ✚ Green DesignFeatures
- ✚ Three phase output
- ✚ Power range: 20kVA/18kW
- ✚ Sine wave output voltage
- ✚ All modules are hot-swappable
- ✚ Auto selects operating frequency: 50 or 60Hz
- ✚ Integrated Maintenance bypass switch
- ✚ Touch screen controller
- ✚ CAN-bus communication for all system modules
- ✚ Load power factor: 0.7 lag to lead
- ✚ Communication: RS232, USB, SNMP
- ✚ Programmable voltage free contacts

Specifications

AC Input

- ✚ Three phase R, S, T, N, PE
- ✚ Input voltage: 400Vac, adjustable range 260-520Vac
- ✚ Auto selects operating frequency:
- ✚ 50Hz, adjustable range 45-55Hz
- ✚ 60Hz, adjustable range 55-65Hz
- ✚ Maximum Input current: 120×3A

DC Input

- ✚ Input voltage: 48Vdc, adjustable range 40-60Vdc
- ✚ Adjustable parameter setting range:
- ✚ 48Vdc: High voltage window: 55-62Vdc, automatic restart is the set value -2Vdc
- ✚ Low voltage window: 38-49Vdc
- ✚ Restart: 38-52Vdc (normal setting 50Vdc)
- ✚ Maximum Input current:
- ✚ 48Vdc system: 476A

AC Output

- ✚ Three phase R, S, T, N, PE
- ✚ Output voltage:
- ✚ Inverter output: 400Vac±2%;
- ✚ Bypass output: 400Vac, 260-520Vac
- ✚ Frequency: Adjustable range 45-55Hz or 55-65Hz.
- ✚ Frequency regulation: 50 or 60Hz ±0.03% (unsynched)
- ✚ Capacity: 20kVA/18kW
- ✚ Waveform: Sine wave
- ✚ Total harmonic distortion: ≤±2% (resistive load)
- ✚ Dynamic response: <±1% (for step resistive load change of 10-100-10%)
- ✚ Efficiency: ≥90% (86-91% depending on model rating)
- ✚ Current sharing: ≤±5%
- ✚ Crest factor: 3:1
- ✚ Power factor: 0.7 lead or lag



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Transfer time

Inverter to Bypass

- ⚡ DC voltage exceeds the setting range or overload: 0ms
- ⚡ Inverter fail/overload: Typical ≤ 1 ms

Bypass to Inverter

- ⚡ AC voltage exceeds the setting range: 0ms;
- ⚡ Mains lose: Typical ≤ 1 ms

Audible noise

- ⚡ ≤ 55 dB (A)

Protection

- ⚡ DC input: Over/under voltage shut down and reverse polarity protection
- ⚡ Short Circuit: Automatic current limit, system recovers upon removal of short circuit
- ⚡ Overload: 105-125% overload for 10 minutes, 125-150% overload for 10 seconds
- ⚡ Temperature: Automatic shutdown when internal temperature exceeds 90C, restart on temperature recovery. Fan speed is load level controlled.
- ⚡ Communication Interface
- ⚡ RS232, USB, http and SNMP
- ⚡ Safety Standard
- ⚡ IEC60950 compliant

Enviromental

- ⚡ Operating temperature: -5 to +50 (60)C, see temperature graph
- ⚡ Relative Humidity: <90%, non-condensing

Mechanical data

- ⚡ Dimension W x D x H (mm): 600x600x2000
- ⚡ Weight (kg): 200

Controller



Features

- ⚡ TFT3.2 inches touch screen interface
- ⚡ Same module for single and three phase systems
- ⚡ Hot swappable
- ⚡ Two level passwords: Administrator and user
- ⚡ Stores up to 500 alarm log.
- ⚡ Sets system working parameters, status and alarm history logs.
- ⚡ Displays system working parameters, status and alarm history log.
- ⚡ Visual and audible alarms
- ⚡ 8 programmable voltage free contacts

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Inverter Module Features

- ✚ The module suits both single and three phase systems
- ✚ CAN bus communication
- ✚ Inverter address identification
- ✚ Hot swappable
- ✚ Efficiency, typically $\geq 90\%$



Electrical data

DC Input

- ✚ Input voltage: 48Vdc, adjustable range 40-60Vdc

Protection parameters:

48Vdc: High voltage shutdown window: 55-62Vdc, restart set by controller

Maximum Input current: 48Vdc: 83A@40Vdc

AC Output

- ✚ Single phase L,N, PE
- ✚ Output voltage: 230Vac $\pm 2\%$
- ✚ Output frequency: No mains sync regulation is 50 or 60Hz $\pm 0.03\%$, Adjustable range 45-55Hz or 55-65Hz with sync to mains
- ✚ Capacity: 3,3kVA/3kW@40C
- ✚ Waveform: Sine wave
- ✚ Total harmonic distortion: $\leq \pm 2\%$ (resistive load)
- ✚ Dynamic response: 10-100-10% step load change: $< \pm 1\%$
- ✚ Efficiency: $\geq 90\%$
- ✚ Crest factor: 3:1
- ✚ Power factor: 0.7 lead or lag

Audible noise

- ✚ $\leq 55\text{dB(A)}$

Protection

- ✚ DC input: Over/under voltage shut down and reverse polarity
- ✚ Short Circuit: Automatic current limit, the inverter recovers upon removal of short circuit
- ✚ Temperature: Automatic shutdown when internal temperature exceeds 90C, restart on temperature recovery. Fan speed is load level controlled.

Communication:

- ✚ CAN-bus

MTBF

- ✚ More than 150000 hours. (To MIL-HDBK-217E)

Safety Standard

- ✚ IEC60950 compliant

Environmental

- ✚ Operation temperature: -5 to +50C (see graph figure 1 below)
- ✚ Relative Humidity: $< 90\%$, non-condensing

Mechanical data

- ✚ Dimension W x D x H (mm): 221W x 355D x 88H
- ✚ Weight: 5.2kg

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Static Switch Features

- ✎ Redundant parallel design option
- ✎ Three phase output
- ✎ Uninterrupted transfer
- ✎ Hot swappable
- ✎ DC and AC powered
- ✎ Operates without CVC01 controller
- ✎ CAN bus communication
- ✎ FAN speed load controlled with FAN alarm
- ✎ Overload capability: 105% to 125% for 10 minutes, 126% to 150% for 10 seconds



Electrical data

DC Input

- ✎ Input voltage: 48Vdc, 40-60Vdc (DC and AC powered)

Bypass Input

- ✎ Three phase R, S, T, N
- ✎ Input voltage: 208Vac, adjustable range 147-260Vac
- ✎ Input frequency: 50Hz adjustable range 45-55Hz or 60Hz, adjustable range 55-65Hz
- ✎ Maximum Input current: 141×3A

AC Output

- ✎ Three phase R, S, T - 208Vac system: 208Vac $\pm 2\%$, adjustable range 147-260Vac in bypass mode.
- ✎ Output frequency: 50 or 60Hz $\pm 0.03\%$ with inverter output and unsynced, adjustable 45-55Hz or 55-65Hz
- ✎ Capacity: 12kVA/12kW×3
- ✎ Waveform: Sine wave
- ✎ Efficiency: $\geq 99\%$

Audible noise

- ✎ $\leq 55\text{dB(A)}$

Protection

- ✎ Short Circuit: Automatic current limit
- ✎ Overload: 105-125% overload for 10 minutes; 125-150% overload for 10 seconds
- ✎ Over temperature: Automatic shutdown when internal temperature exceeds 90C, restart on temperature recovery. Fan speed is load level controlled.

Communication

- ✎ CAN-bus

MTBF

- ✎ More than 180000 hours. (To MIL-HDBK-217E)

Safety Standard

- ✎ IEC60950 compliant

Environmental

- ✎ Operation temperature: -5 to +65C
- ✎ Relative Humidity: <90%, non-condensing

Mechanical data

- ✎ Dimension W x D x H (mm): 482.6 × 340 × 88
- ✎ Weight (kg) : 11

