Gutor WxW
AC Inverter System

WEW 5 – 200 kVA single phase; WDW 10 – 220 kVA three phase

Higher ratings on request

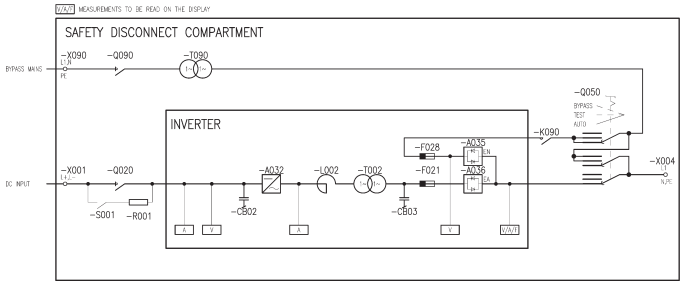
Gutor technology

Schneider Electric

Gutor WxW Technical Data: WEW single phase/WDW three phase	
Inverter Input	
DC	110/125/220/400 VDC
Inverter input range (output tolerance +/- 1%)	+20/-15%
Inverter maximum input range (Output tolerance +/- 10%)	typical +/- 25%
Bypass input voltage single phase three phase	 1 x 220/230/240 V +/- 10% 3 x 380/400/415 V +/- 10%
Frequency	50/60 Hz +/- 6%
Inverter output	
Nominal inverter rating	kVA at lagging 0.8 PF 1
Voltage single phase three phase	 1 x 220/230/240 V 3 x 380/400/415 V
Voltage regulation: static within 0 –100% load dynamic at 100% load surge regulation time	 +/- 1% +/- 4% < 25 ms
Overload: Inverter 1 min Inverter 10 min Bypass 100 ms	 150% 125% 1,000%
Short-circuit inverter 50 –100 ms	200%
Frequency	50/60 Hz
Frequency stability, free running	< 0.01%
Synchronization range	0.5/1/2/4/6/8%
Slew rate single unit	0.25/0.5/1/2/4 Hz/s programmable
Slew rate redundant system	4.0 Hz/s
Wave form	sinusoidal
Admissible output crest factor	unlimited
Distortion factor: Linear load Non-linear load according to IEC 62040-3	 ≤ 3% ≤ 5%
Allowable power factor	0.4 lag – 0.9 lead
Fault clearing capability	30% of UPS nom. current rated gG fuse (IEC® 60269) within 10 ms and bypass available
General data	
Ambient temperature range for storage	from -20 to +70 °C
Ambient temperature range for operation	from -10 to +40 °C (100% nominal load)
Altitude above sea level	1,000 m without load de-rating
Allowable air humidity	<95% (non condensing)
Noise level standard n+1 fan system	60 – 70 dBA depending on type
Noise level 100% redundant fans	65 – 75 dBA depending on type
Efficiency	up to 93% depending on type
Cooling	forced-air ventilation with redundant n+1 monitored fans
Degree of protection	IP20 according to IEC 60529
Paint	Pearl light gray, RAL 9022 structure
Standards	
Safety	IEC/EN 62040-1-2
EMC	IEC 62040-2, EN 50091-2
Performance	IEC/EN 62040-3
UPS classification	VFI-SS-111 acc. to IEC 62040-3
Conformity	CE-Label

Gutor WxW Specifications: WEW single phase / WDW three phase

Typical single-line drawing



Single phase drawing

Battery voltage and UPS ratings

Voltage (VDC)	110		125		220		400	
UPS ratings (kVA)	5	–	5	–	5	–	–	–
	10	10	10	10	10	10	–	–
	15	15	15	15	15	15	–	–
	20	20	20	20	20	20	–	–
	30	30	30	30	30	30	–	–
	40	40	40	40	40	40	–	–
	–	–	–	–	50	–	–	–
	–	60	–	60	60	60	–	–
	–	80	–	80	80	80	–	–
	–	–	–	–	100	100	–	–
	–	–	–	–	–	120	120	120
	–	–	–	–	–	–	150	–
	–	–	–	–	–	160	–	160
	–	–	–	–	–	–	200	–
	–	–	–	–	–	–	–	220

Higher ratings and other voltages on request

single phase *three phase*

Standard configuration

- Single inverter
- Inverter output voltage
  - single phase: 1 x 230 V
  - three phase: 3 x 400/230 V
- Bypass input voltage
  - single phase: 1 x 230 V +10/-10%
  - three phase: 3 x 400/230 V +10/-10%
- Frequency: 50 Hz +/- 6%
- Inverter input switch
- Power module for nominal rating
- Manual bypass switch three position in inverter
- Static switch EN (line-power side) with additional backfeed protection
- Static switch EA (inverter side)
- System front panel with additional LEDs for direct alarm display
- LC display unit with keyboard
- Alarm relays for battery operation and common alarm
- Bottom cable entry
- Ground terminal
- N+1 monitored two-speed fans
- Ambient temperature range from -10 to +40 °C
- Protection IP20
- Structure is painted pearl light gray, RAL 9022 structure
- Black start facility

System

- Parallel redundant configuration
- Key switch on front panel
- Output distribution
- Other output voltages single phase 110 – 288 V
- Three phase 190 – 690 V
- Output Frequency 60 Hz

Inverter

- Diode for reverse polarity protection
- Inverter input isolator/circuit breaker
- Oversized inverter

Bypass

- Bypass-input protection (MCCB/isolator/fuse)
- Static-switch EA (inverter side)
- Bypass isolation transformer
- Bypass stabilizer with isolation transformer
- Backfeed protection

Indication and alarms

Inverter fuse blown	Ground fault DC
DC out of tolerance	5x options
Bypass line power fault	Fan failure
Battery discharged	Over temperature Power supply unit fault
EA inhibited	Battery Operation
EN inhibited	Inverter ON
Manual Bypass ON	
Asynchronous EA ON	External horn
Inverter fault EN ON	Overload Inverter/Bypass

Communication Interfaces

- Front-panel analog meter 96 x 96 or 72 x 72, cl. 1.5
- Transducer
- Relay board A077, 16 failsafe NO/NC contacts
- Relay board A078
- RS-232/485 interface (event log download)
- RJ-45 Ethernet port for Web browser based monitoring
- RS-485 modbus protocol (slave)
- IEC 61850
- External time synchronization

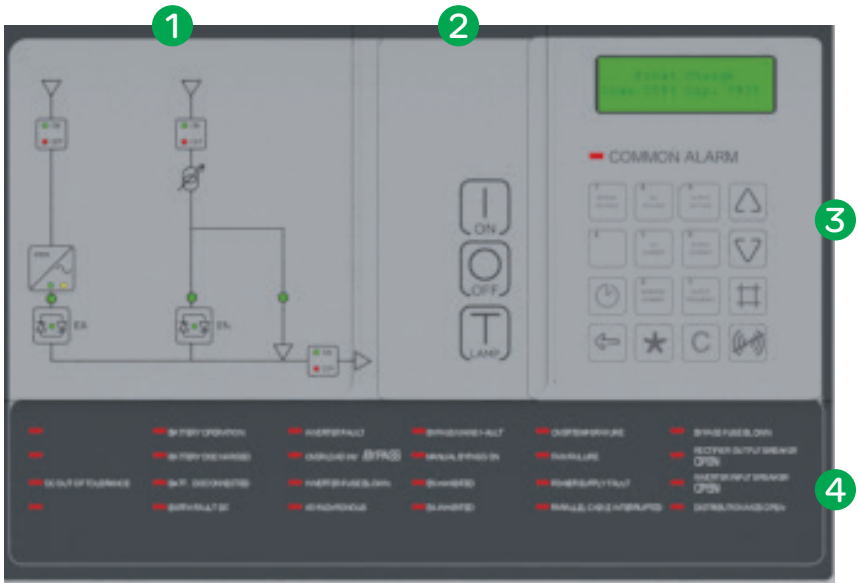
Mechanical

- Top/bottom cable entry
- Protection up to IP52 (NEMA® 12)
- Air filters at air inlet
- Ventilation 100% redundant
- Seismic design
- Space heaters
- Panel lighting
- Allowable altitude up to 4,000 m above sea level
- Frame color as required
- Ambient temperature maximum +55 °C

Human-machine interface (front panel)

The front panel includes a comprehensive and flexible human-machine interface. It is divided into four sections:

1. The system panel shows the system's current state of operation (i.e., which part of the system is currently supplying the load and which is in stand-by mode). LEDs also indicate possible faults.
2. Use the operations panel to turn the system on and off. The lamp-test button indicates whether all LED indication lights are functioning properly. To shut down the system, you have to press the ON and OFF buttons at the same time.
3. The display unit consists of a liquid crystal display, an alarm LED, an acoustic alarm, and a keypad. From here, the user can set operational parameters, obtain current measurement data, and access the event and alarm logs.
4. On the alarm-indication panel, the respective LEDs light up to indicate a possible fault or after an alarm has occurred.



Operational parameters

- Selectable second display language
- Auto start
- Bypass operation
- Set date/time

Measurements

- Load in percentage of nominal kVA rating
- AC bypass line power 2 voltage
- DC total current, DC voltage
- Battery temperature (with optional sensor)
- AC inverter current
- AC output voltage, current and frequency
- AC output peak current
- Event log with date and time (operating mode changes and alarms)

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