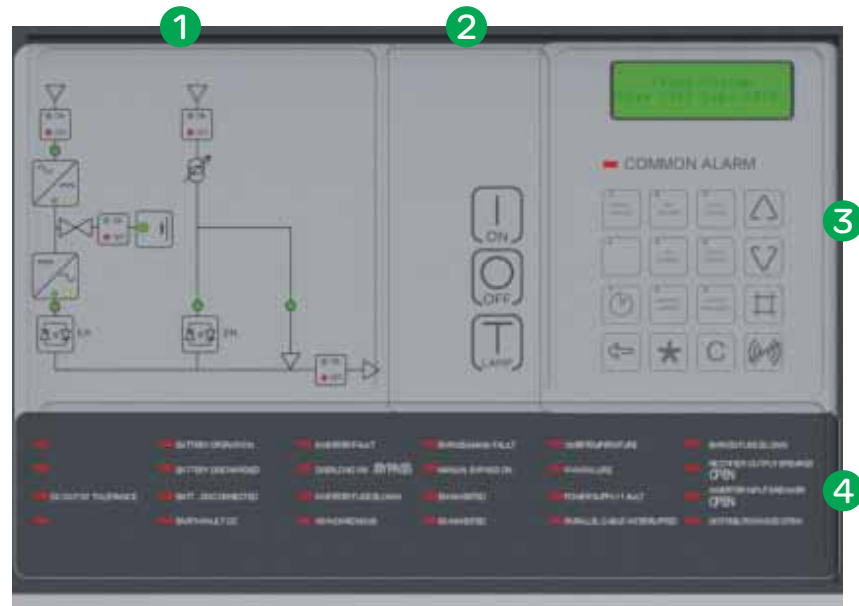


Human-machine interface (front panel)

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 Users can set operational parameters, obtain current measurement data, and access the event and alarm logs via the liquid crystal display. Additional options include an LED alarm, acoustic alarm, and keypad.
- 4 On the alarm-indication panel, the respective LEDs light up to indicate a possible fault, or that an alarm has occurred.



Operational parameters

- Selectable second display language
- Bypass operation
- Boost charge
- Auto boost (charge)
- Battery-capacity test
- Battery-monitor test (optional)
- Set date/time
- Auto start

Measurements

- Load in percentage of nominal kVA rating
- AC rectifier line power 1 voltage and current
- AC bypass line power 2 voltage
- DC total current, battery voltage, and current
- Battery temperature (with optional sensor)
- AC inverter current
- AC output voltage, current, and frequency
- AC output peak current
- Time left in battery operation with current load (optional with programmed battery data)
- Event log with date and time (operating mode changes and alarms)

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Gutor PxW AC UPS System

PEW 5 – 200 kVA single phase; PDW 10 – 220 kVA three phase

Higher ratings on request



Schneider
Electric

Gutor
technology

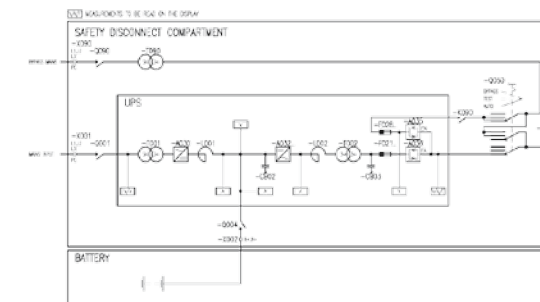
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Electric

Gutor PxW Technical Data: PEW single phase/PDW three phase

UPS Input	
Rectifier input voltage	3 x 380/400/415 V
Voltage tolerance DC in tolerance for function	+/- 10% -10/+15%
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%
Inrush current	<10 x IN (input current)
Intermediate DC circuit	
Voltage	110/125/220/400 VDC
Rectifier voltage tolerance	+/- 1% I-V characteristic
Float voltage at -10% line power	100 - 115% programmable
Boost voltage range at nominal line power	100 - 125% programmable
Boost charge time	1 - 24 h programmable
Charging current limitation	depending on battery, programmable
Inverter input range (Output tolerance +/- 1%)	+20/-15%
Inverter maximum input range (Output tolerance +/- 10%)	typical +/- 25%
UPS output	
Nominal UPS rating	kVA at 0.8 lagging PF/Inverter designed for PF1
Voltage single phase three phase	1 x 220/230/240 V 3 x 380/400/415 V
Voltage tolerance: 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 units	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	0.8 lag - 0.8 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
Degree of protection	IP20 according to IEC 60529
Paint	pearl light gray, RAL 9022 structure (other colors available upon request)
Efficiency	up to 93% depending on type
Cooling	forced ventilation (two speed) with n+1 redundant monitored fans
Standards: Safety EMC	IEC / EN 62040-1 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 PxW Specifications: PEW single phase/PDW 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	-	-
	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

Technical Data (Standard system)

- Single UPS
- UPS output voltage
 - single phase: 1 x 230 V
 - three phase: 3 x 400/230 V
- Rectifier input voltage: 3 x 400 V +10/-10%
- Bypass input voltage
 - single phase: 1 x 230 V +10/-10%
 - three phase: 3 x 400/230 V +10/-10%
- Frequency: 50 Hz +/- 6%
- Six-pulse Rectifier with isolation transformer
- Rectifier sized for output PF = 0.8
- Rectifier input switch
- Fixed charging voltage IU characteristic
- Static switch EN bypass (line power side) with additional backfeed protection
- LC display unit with additional alarm LEDs
- 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
- Pearl light gray, RAL 9022 structure (other colors available upon request)
- Manual bypass switch three position in UPS

Options

System

- Parallel redundant configuration
- Black start facility
- Key switch on front panel
- Output distribution
- Other output voltages
 - single phase 110 - 288 V
 - three phase 190 - 690 V
- Output frequency
 - 60 Hz

Rectifier

- Other input voltages
 - single phase: 190 - 690 V
 - three phase: 190 - 690 V
- Frequency
 - 60 Hz +/- 6 %
- Rectifier input/output protection (MCCB/isolator/fuse)
- 12-pulse rectifier with isolation transformer
- Oversized rectifier for higher back-up times
- Ripple filter

Inverter

- Inverter input isolator/circuit breaker
- Oversized inverter for higher short circuit capability

Bypass

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

Battery

- Battery circuit protection box (MCCB/Fuse)
- Battery circuit protection in rectifier (MCCB/Fuse)
- Battery management system
- Battery temperature sensor
- Battery asymmetry supervision
- Diode for reverse polarity protection

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
 - Rectifier line power fault · Ground fault · DC Inverter fuse blown
 - DC out of tolerance · 5x options · Bypass line power fault
 - Rectifier fuse blown · Fan failure · Power supply unit fault
 - Battery discharged · Overtemperature
- Relayboard A078
 - EA inhibited · Battery disconnected · Inverter ON
 - EN inhibited · Battery · Boost charge operation
 - Manual Bypass ON · Rectifier failure · Rectifier ON
 - Asynchronous · EA ON · External horn
 - Inverter fault · EN ON · Overload inverter/bypass
- 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

Indication and alarms

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

Additional options are available on request