



Technical Data Sheet

PxW AC UPS System > PEW 5-200 kVA single phase > PDW 10-220 kVA three phase

> Higher ratings on request





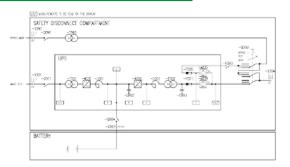
Technical data PEW single phase / PDW three phase

UPS input	Rectifier input voltage	3x380/400/415V
	Voltage tolerance	
	DC in tolerance	+/-10%
	for function	+10/-15%
	Bypass input voltage single phase	1x220/230/240V +/-10%
	three phase	3x380/400/415V +/-10%
	Frequency	50/60 Hz +/-6 %
	Inrush current	<10x IN (input current)
Intermediate DC circui	it Voltage	110/125/220/400VDC
	Rectifier voltage tolerance	+/-1% I-V characteristic
	Float voltage range at -10% line power	100-115% programmable
	Boost voltage range at nominal line power	100-125 % programmable
	Boost charge time	1-24h programmable
	Charging current limitation	depending on battery, programmable
	Inverter input range (Output tolerance +/-1%)	+20/-15%
	Inverter maximum input range (Output tolerance $+/-1/0$)	
	` ```` _ ````	
JPS output	Nominal UPS rating	kVA at 0.8 lagging PF
	Voltage single phase	1x220/230/240V
	three phase	3x380/400/415V
	Voltage tolerance:	
	static within 0-100 % load	+/-1 %
	dynamic at 100 % load surge	+/-4%
	regulation time	<25 ms
	Overload:	
	Inverter 1 min	150 %
	Inverter 10 min	125 %
	Bypass 100 ms	1000 %
	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	≤3%
	Non-linear load according to IEC 62040-3	≤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
oporal data	Ambient temperature renge for stores	from 20 to + 70 °C
eneral data	Ambient temperature range for storage Ambient temperature range for operation	$\frac{\text{from -20 to +70 °C}}{\text{from -10 to +40 °C} (100 \% \text{ pominal load})}$
		from -10 to +40 °C (100 % nominal load)
	Altitude above sea level	1000 m without load de-rating
	Allowable air humidity	<pre><95 % (non condensing)</pre>
	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	pebble gray, RAL 7032 structured
	Efficiency	up to 93 % depending on type
	Cooling	forced ventilation with redundant n+1 monitored fans
	Standards:	
	Safety	IEC/EN 62040-1
	EMC Performance UPS classification Conformity	IEC / EN 02040-1 IEC 62040-2, EN 50091-2 IEC / EN 62040-3 VFI-SS-111 acc. to IEC 62040-3 CE-Label

Data subject to changes

Specification PEW single phase/PDW three phase

Typical single-line drawing



Single phase drawing

Battery voltage & UPS ratings

Voltage (VDC)	11	C	12	5	22	0	40	0
	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	-	-
UPS ratings (kVA)	-	-	-	-	50	-	-	-
) sốc	-	60	-	60	60	60	-	-
ratir	-	80	-	80	80	80	-	-
SAL	-	-	-	-	100	100	-	-
_	-	-	-	-	-	120	120	120
							150	
	-	-	-	-	-	160	-	160
	-	-	-	-	-	-	200	-
	-	-	-	-	-	-	-	220

Higher ratings and other voltages on request

single phase three phase

Standard configuration

Single UPS

Single UPS				
UPS output voltage	single phase	1x230V		
	three phase	3x400/230V		
Rectifier input voltage		3x400V +10/-10%		
Bypass input voltage	single phase	1x230V +10/-10%		
	three phase	3x400/230V +10/-10%		
Frequency		50 Hz +/-6%		
Six-pulse Rectifier wi	th isolation transfor	mer		
Rectifier sized for out	put PF = 0.8			
Rectifier input switch				
Fixed charging voltag	e I-V characteristic)		
Static switch EN Byp	ass (line power sid	e) 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-s	speed fans			
Ambient temperature range from -10 to +40 °C				
Protection IP20				
Painting pebble gray,	RAL 7032 structu	red		
Battery MCCB in UP	S			
Manual Bypass Swite	ch 3 pos in UPS			

Options

Parallel redundant co	nfiguration				
Other input voltages	single phase	190-690V			
	three phase	190-690V			
Other output voltages		110-288V			
	three phase	190-690V			
Frequency 60 Hz +/-	6%				
12-pulse Rectifier with	n isolation transfo	ormer			
Oversized rectifier					
Rectifier fuse					
Bypass input switch o	or MCCB				
Rectifier input MCCB					
Sensor for temperatu	re dependent bat	ttery charging voltage,			
recommended for sea	aled batteries and	d wide temperature range			
Battery temperature a	alarm				
Diode for reverse pola	arity protection				
Rectifier output isolate	or/circuit breake	ſ			
Battery fuse in UPS					
Battery fuse box					
Battery MCCB box					
Inverter input isolator,	/circuit breaker				
Oversized inverter					
Static Switch EA (Inve	erter side)				
Battery Monitor (prog	rammable batter	y data)			
Battery asymmetry su					
AC and DC ground fa					
RS-232/485 interface					
	RJ-45 Ethernet port for WEB browser based monitoring				
RS-485 MODBUS Pr					
External time synchro					
Top and/or bottom c	able entry				
Space heaters					
Ventilation 100% red	undant				
Panel lighting					
Ambient temperature					
Allowable altitude up		e sea level			
Protection up to IP52					
Other colors					
Bypass isolation trans					
Bypass stabilizer with	isolation transfor	rmer			
Black start facility					
Key switch on front p	anel				

Additional analog meters 96x96, cl. 1.5

Set with VM DC, AM Bat & output FM, VM & AM
Set with Input VM & AM with select switch
kW of output
Power factor

Relay board A077, 16 fail-safe 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 fa			
Battery discharged	Overtemperatu	re		

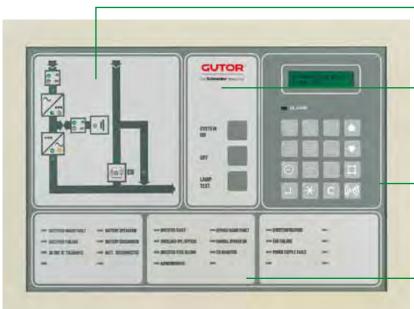
Relay board A078, 16 fail-safe NO/NC contacts:

EA inhibited	Battery disconnected	Inverter ON	
EN inhibited	Battery	Boost charge operation	
Manual Bypass ON	Rectifier failure	Rectifier ON	
Asynchronous	EAON	External horn	
Inverter fault	EN ON	Overload Inverter/Bypass	

Additional options are available on request

Human-machine interface (front panel)

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



- **The system panel** shows the system's current state of operation (which part of the system is currently supplying the load and which is in standby mode). LEDs also indicate possible faults.

Operations for turning on and off the system and a lamp test button for checking whether all LED indications are functioning properly. To shut down the system, you have to press the ON and OFF buttons at the same time.

- **The display** unit consists of an LC 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.
- **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		
Boost charge		
Auto boost (charge)		
Battery capacity test		
Battery monitor test (optional)		
Set date/time		

Measurements

Load in % 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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