

# GUTOR PXP AC UPS

Compact industrial AC UPS with PFC rectifier.



Gutor PXP is an online double conversion UPS system with power factor correction (PFC) rectifier to dramatically reduce total harmonic distortion (THDi) at its input.

## High Reliability

- Supported by a large installation base with many years of proven field experience.
- Decentralized control architecture.
- Redundant fans that can be monitored individually.

## Cost Effective

- Up to 94 percent energy efficiency eliminates and minimizes unnecessary cooling requirements.
- Low input THDi prevents oversized diesel generator.

## Footprint Optimization

- Power factor correction (PFC) rectifier eliminates the need for additional harmonic filters.
- Galvanic isolation management allows the transformers to be used only whenever required.
- Front access for operations and maintenance to reduce shadow footprint.

### Typical product layout

With combination of input, output, bypass transformers

5 - 40 kVA



1000

First cabinet: 600m  
Second cabinet: 400m

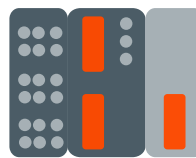
50 - 60 kVA



1800

First cabinet: 600m  
Second cabinet: 800m  
Third cabinet: 400m

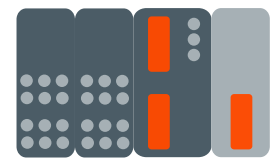
70 - 120 kVA



2000

First cabinet: 600m  
Second cabinet: 800m  
Third cabinet: 600m

140 - 160 kVA



2600

First cabinet: 600m  
Second cabinet: 600m  
Third cabinet: 800m  
Fourth cabinet: 600m

### Transformerless

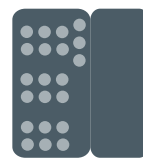


600



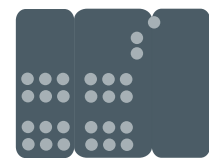
1200

First cabinet: 800m  
Second cabinet: 400m



1400

First cabinet: 800m  
Second cabinet: 600m



2000

First cabinet: 600m  
Second cabinet: 800m  
Third cabinet: 600m

Typical depth: 800mm & height: 1900mm with bottom cable entry

••• Power modules    Transformer    In mm

This product layout shows Gutor PXP with typical and optimized dimension - Other dimensions are available on request.

⊕ Bypass transformer is installed in a separated cabinet (light grey area).

**GUTOR**

## Flexible Engineering

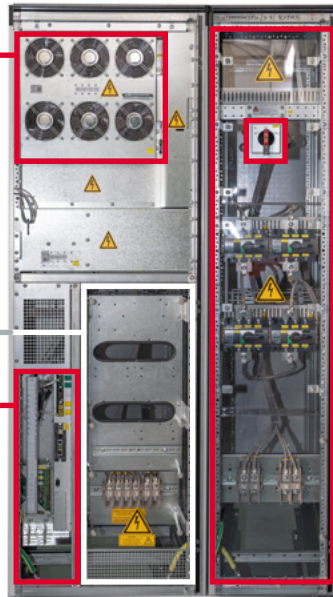
### Power Modules (20kVA each)

- ✓ Extra modules can be kept on stock for fast and easy servicing
- ✓ N+1 fan redundancy
- ✓ Achieve low MTTR
- ✓ Reduced spare parts stock

### Transformer (Optional)

### Communication Section

- ✓ Programmable relay board
- ✓ External connection board
- ✓ Network management card
- ✓ Parallel board



### Manual Bypass Switch

- ✓ To isolate & test the UPS system for service without disturbing the load
- ✓ 3 position bypass switches to secure maintenance operations

### Incoming / Bypass

- ✓ Wide centralized incoming section to connect all cables
- ✓ Pre-equipped with gland plate

Customized Gutor PXP UPS with 40kVA Transformerless version, bottom entry, with separated bypass cubicle on option. (1000mm width)

## Typical Configuration

- Bypass input breaker Q501
- Rectifier input breaker Q001
- 3 positions manual bypass Q601
- Battery breaker Q201
- with single or combination transformers
- Fixed charging voltage IU characteristic
- PFC rectifier (supplies 100% AC load @ 0.8 PF and charges battery with 20% of dedicated nominal power)
- Rectifier line power backfeed protection
- Programmable battery capacity test
- Human-machine interface (HMI) with additional LEDs for direct alarm display
- Ground terminal
- Bottom cable entry
- N+1 monitored two-speed fans
- Digital input
  - Emergency power off (EPO)
  - Two configurable inputs
- Digital (NO/NC relay)
  - Common alarm
  - Battery operation
  - Static bypass switch on

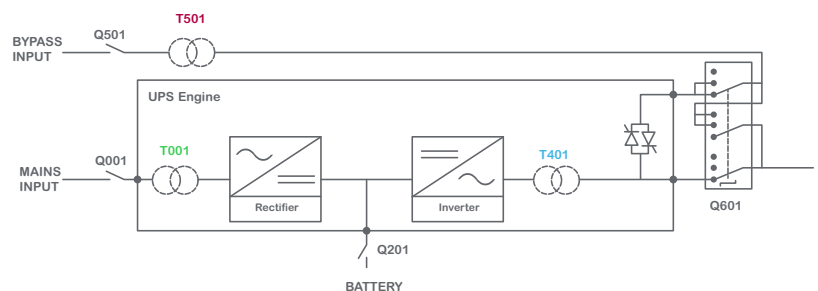
## Optional Features

- Voltage adaptation for rectifier, bypass or output
- Separated bypass cubicle
- Transformerless version
- Top cable entry
- Analog meters 72 x 72mm or 96 x 96mm
- Digital outputs (NO/NC relay output)
- Fail-safe alarms
- Communication (NMC, RS-485 Modbus or TCP, IEC 61850)
- DC & AC ground fault alarm
- Customized footprint
- Air filters, color, space heaters, panel lighting
- Battery protection (fuse, MCCB)
- Battery temperature alarm with up to 3 sensors
- Battery monitoring system
- Additional options are available upon request

## Single-line diagram

Optimize your configuration by selecting the right transformer as required:

- ✓ Galvanic isolation
- ✓ Voltage adaptation
- ✓ True dual inputs
- ✓ DC earth fault monitoring



## Gutor PXP technical Data

UPS input	
Rectifier input voltage	3 x 380/400/415 V *Other voltage optional
Rectifier input voltage tolerance	-10/+15%
Rectifier input frequency	41 - 70 Hz (auto detection)
Rectifier current total harmonic distortion	<5% @ 100% load
Rectifier input power factor	typical 0.96 - 0.98
Inrush current	8 - 10IN
Bypass input voltage Gutor PXP 1000 Gutor PXP 3000	1 x 220/230/240 V +/-10% *Other voltage optional 3 x 380/400/415 V +/-10% *Other voltage optional
Bypass input frequency	50/60 Hz +/-8%
Battery circuit	
Battery voltage	400 VDC
Battery operating charge	335 - 540VDC
Float voltage at -10% line power	programmable within battery operated range
Boost voltage at nominal line power	programmable within battery operated range
Boost charge time	1-24 h programmable
Charging current limitation	programmable
UPS output	
Nominal UPS ratings at 0.8 lagging PF	5, 10, 15, 20, 30, 40, 50, 60, 80, 100, 120, 140, 160 kVA
Bypass output voltage Gutor PXP 1000 Gutor PXP 3000	1 x 220/230/240 V (other voltages optional) 3x380/400/415 V (other voltages optional)
Voltage tolerance: static within 0 - 100%load dynamic for 0 - 100% or 100 - 0% regulation time to +/-1% regulation time to +/-3%	+/- 1% +/- 5% <60 ms <20 ms
Overload Inverter Bypass	230%/60 ms, 150%/1min., 125%/10 min. 1,000%/100 ms, 150%/1 min., 125%/10 min.
Frequency	50/60 Hz
Frequency stability, free running	<0.01%
Synchronization range	0.5/1/2/4/6/8% programmable
Slew rate single phase systems	0.25/0.5/1 Hz/s programmable
Slew rate three phase systems	0.25/0.5/1/2/4/6 Hz/s programmable
Wave form	sinusoidal
Admissable output crest factor	3

Distortion factor:	
Linear load	<2%
Non-linear load according to IEC 62040-3	<5%
Allowable power factor	0.8 lag - 0.8 lead
<b>General Data</b>	
Ambient temperature range for storage	from -30 to +80 °C
Ambient temperature range for operation	from -10 to +40 °C (100% nominal load) *Above 40°C available upon request with derating
Altitude above sea level	<1,000 m without de-rating
Allowable air humidity	<95 (non condensing)
Noise level standard n+1 fan system	55 - 65 dBA depending on type
Degree of protection	Up to IP42 according to IEC 60529 *Higher rating available on request
Paint	pearl light gray, RAL 9022 structure
Standards:	
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Performance	IEC/EN 62040-3
UPS classification	VFI-SS-111 acc. to IEC 62040-3
Conformity	CE-Label
Efficiency	up to 94% depending on type
Cooling	forced ventilation (two speed) with n+1 redundant monitored fans