

# KOHLER®

UNINTERRUPTIBLE  
POWER



## KOHLER *PW* 1000

Standalone tower or rack mount single-phase uninterruptible power supply  
with internal or external batteries

(1-10 kVA)

# Compact, convenient, *dependable* power.

For server, network, laboratory, distribution and retail applications – combining high reliability with low upfront costs to make it the perfect solution for mission critical applications.

Designed for single-phase uninterruptible power supply requirements.

Manufactured with the flexibility to meet the demands of today's critical applications, the KOHLER PW 1000 can be used as a standalone UPS device or installed into a standard 19" rack configuration, with connectivity options available for each.

The UPS completely regenerates the utility power to correct power disturbances in the mains and provides clean AC power, with voltage and frequency independency from the mains power supply (VFI).



## KOHLER PW 1000

- | Compact, innovative design enables use in either tower or 19" rack format (with optional slides)
- | True online double conversion, Class 1 VFI-SS-111 topology with additional modes: VFD Eco-mode and CVCF frequency conversion mode
- | Range of output options for additional peace of mind including USB, RS232, RS485 and SNMP
- | Autonomies to suit your application via internal batteries (1-3 kVA models) or matching external battery cabinets (all models)



## Advanced design

- | Innovative electronic design with wide input voltage and frequency ranges provides both high efficiency and increased battery life. In addition, end-discharge voltage management prevents damaging deep discharge of batteries during a power failure.
- | Protect sensitive loads via continuous online VFI mode or if required use continuous voltage continuous frequency (CVCF) mode for applications requiring frequency conversion.

## Easy installation, Convenient connectivity

- | PW 1000 1-3 kVA models are supplied via a standard 13A plug, whilst power output is through configurable IEC output sockets
- | PW 1000 6 and 10 kVA models require a hardwired supply, with output through simple hardwired terminal block connections.

## User-friendly operation

- | An easy-to read LCD display provides a real-time view of all major system parameters and current status including load level, battery level, operating mode and programmable output status.
- | Audible alarms and dedicated LEDs indicate key system alerts.

## Full system support

- | Kohler PW 1000 models are backed by Kohler Uninterruptible Power's commitment to quality, reliability and personalised support.
- | Our local design teams can develop a system customised to your needs and supported by a maintenance contract tailored to your specific requirements.

# Technical specification KOHLER PW 1000 (1–3 kVA)

Capacity	1 kVA	2 kVA	3 kVA
<b>Input</b>			
Nominal voltage	110-300 VAC		
Frequency	44-66 Hz		
Phase	Single phase		
Power factor	>0.99		
<b>Output</b>			
Voltage	200/208/220/230/240 VAC		
Voltage distortion	<3% with linear load, <7% with non-linear load		
Capacity	1000 VA / 900 W	2000 VA / 1800 W	3000 VA / 2700 W
Power factor	0.9		
Wave form	Pure sine wave		
Frequency	50–60 Hz (selectable) with stability $\pm 1$ Hz or $\pm 3$ Hz (selectable)		
Output sockets	3 x 10A IEC C13	6 x 10A IEC C13	6 x 10A IEC C13, 1 x 16A IEC C19
Crest factor	3:1		
Efficiency	Online mode (AC-AC), VFI: Up to 92%		Eco-mode, VFD: Up to 97%
Internal battery autonomy, mins	14 at 50% load, 5 at 100% load	15 at 50% load, 5 at 100% load	12 at 50% load, 4 at 100% load
Cold start from battery	Yes		
<b>Battery</b>			
Type	Sealed lead acid maintenance free (VRLA)		
Capacity	7.2 Ah		9.0 Ah
Internal Quantity (pcs)	3	6	6
Matching external battery cabinet enables expansion of battery system for increased autonomies. Consult KUP for details.			
<b>User Interface</b>			
LEDs, LCD and function keys	Easy access to functions and parameters including: voltage, frequency, load percentage, battery voltage, output voltage, programmable outlet 1 and 2, self test, overload function, estimated uptime and UPS temperature		
On / Off / Alarm Function	Separate on / off keys. Alarm silence function		
Self-diagnostics	Upon power on and software control		
<b>Protection</b>			
Overload AC mode & backup mode (delay before switching to bypass)	<105% continuously. >106%–120% for 30 seconds transfer to bypass. >121%–150% for 10 seconds transfer to bypass. >150% immediately transfer to bypass. Buzzer continuously alarms		
Emergency Power Off, EPO	2-pole, initiates immediate UPS shut down		
<b>Alarms</b>			
Audible & visual	Mains power failure, low battery, bypass transfer and UPS fault		
<b>Physical</b>			
Dimensions (mm) W x D x H	440 x 405 x 88 (2U)	440 x 600 x 88 (2U)	
Net weight (Kg) with batteries	18.0	34.4	39.6
Ingress protection	IP20		
<b>Environment</b>			
Operating temperature	0°C – 40°C		
Altitude	<1000 m with no power derating, >1000 m with 1% derating for every 100 m		
Humidity	90% RH maximum, non-condensing		
Environment – heat dissipation (approx)	150 W	275 W	415 W
Noise	$\leq 50$ dBA at 1m		
<b>Connectivity</b>			
Communication ports	USB (type B), RS232, EPO and additional slots for optional cards		
Optional connectivity accessories	Cards: SNMP, RS485 ModBus and dry contact relays		
<b>Standards</b>			
Regulatory	ISO 9001 manufacture; IEC EN 62040-1; IEC EN 62040-2; and IEC EN 62040-3		
Marking	CE, UKCA		

# Technical specification KOHLER PW 1000 (6–10 kVA)

General Data	6 kVA	10 kVA
<b>Input</b>		
Nominal voltage	110-280 VAC (176-280 VAC without derating)	
Frequency	45-70 Hz	
Phase	Single phase	
Power factor	>0.99 at 100% linear load	
<b>Output</b>		
Voltage distortion (THD)	<2% with linear load, <7% with non-linear load	
Voltage	200/208/220/230/240 VAC selectable	
Voltage regulation	+/-1% (until low battery warning)	
Capacity (1.0 rated power factor)	6000 VA/6000 W	10000 VA/10000 W
Wave form	Pure sine wave	
Crest factor	3:1	
Efficiency	Online mode (AC-AC), VFI: Up to 94%	Eco-mode, VFD: Up to 98%
Cold start from battery	Yes	
Input/output connection	Hardwired via terminal block	
<b>External battery cabinet</b>		
Type	Sealed lead acid maintenance free	
Capacity	12 V/9 AH	
<b>User Interface</b>		
LEDs, LCD and function keys	Easy access to functions and parameters including: voltage, frequency, load percentage, battery voltage, output voltage, programmable outlet 1 and 2, self test, overload function, estimated uptime and UPS temperature	
On / Off / Alarm Function	Separate on / off keys. Alarm silence function	
Self-diagnostics	Upon power on and software control	
<b>Alarms</b>		
Audible	Mains power failure, low battery, bypass transfer and UPS fault	
<b>Protection</b>		
Overload, inverter supply	Sliding scale: 105% continuous, 125% 30 secs, 150% 160 ms, >150% immediate transfer to bypass	
<b>Physical</b>		
Dimensions (mm) W x D x H	440 x 680 x 88 (2U)	440 x 680 x 132 (3U)
Net weight (kg)	18.5	21.5
Ingress protection	IP20	
<b>Environment</b>		
Operating temperature	0°C – 40°C (UPS only. For effective operation / max service life, advised batteries to be 20-25°C)	
Altitude	<1000 m with no power derating, >1000 m with 1% derating for every 100 m	
Humidity	0-90% (non-condensing)	
Heat dissipation (100% linear load)	<450 W	<650 W
Noise	≤60 dBA at 1 m	
<b>Connectivity</b>		
Communication ports	USB (Type B), EPO / Remote On / Off Contact and additional slots for optional cards	
Optional connectivity accessories	Cards: SNMP, RS232, RS485 ModBus, dry contact relays	
<b>Standards</b>		
Regulatory	ISO 9001 manufacture; IEC EN 62040-1; IEC EN 62040-2; and IEC EN 62040-3	
Marking	CE, UKCA	
<b>External battery bank (up to six per UPS)</b>		
Type	Sealed lead acid maintenance free (VRLA)	
Capacity	12 V/9 Ah x 20 pcs connected in a single string	
Weight and Dimensions	11 kg excl batteries; 61 kg incl. 20 batteries. W440 mm x D685 mm x H132 mm (3U)	
Regulatory	ISO 9001 manufacture; IEC EN 62040-1; IEC EN 62040-2; and IEC EN 62040-3	
Autonomy at 75% load – 1 cabinet	12 mins	5 mins
Autonomy at 75% load – 2 cabinets	30 mins	15 mins
Autonomy at 75% load – 3 cabinets	51 mins	19 mins
Autonomy at 75% load – 6 cabinets	108 mins	60 mins



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