

Vertiv UL33 UPS

20-100 kVA | three-phase transformer-based online UPS

Features and options

Double-conversion topology with fourth-generation IGBT rectifier and DSP control. Input power factor near unity; brochure minimum input harmonic figure below 3%. Decentralized parallel operation of up to eight units, without a centralized bypass cabinet, with digital current sharing. Delta/Z0 output isolation transformer for DC isolation and third-harmonic reduction. Intelligent battery management; 6-inch Chinese/English LCD; enclosed air paths, redundant fans and coated circuit boards; optional air filters.

Optional accessories: battery temperature sensor, dry-contact card, Web/SNMP card, JBUS/MODBUS interface and SiteMonitor software. Applications include data centers, banking, telecom operations, automation, production and test systems.

Parameter	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA
Output power factor	0.8	0.8	0.8	0.8	0.8	0.8
W x D x H (mm)	600 x 860 x 1400	600 x 860 x 1400	800 x 860 x 1800	800 x 860 x 1800	900 x 850 x 1900	900 x 850 x 1900
Weight (kg)	440	528	654	811	790	790
Noise at 1 m (dB)	55	55	55	55	70	70

Rectifier and input

Parameter	Specification
Rated supply	380 VAC, three-phase three-wire; 50/60 Hz
Voltage window (source wording)	208-437 V; full load at -20% to +15%; linear derating from -25% to -45%, with 50% load at -45%.
Input frequency range	50 Hz ±10%
Input power factor	>0.99 at full load
Power walk-in / soft start	1-255 seconds, default 10 seconds
Rectifier regulation / DC ripple	0.5% / ±1%

UL33 | output, bypass and system

Inverter output

Parameter	Specification
Rated output	380 V, three-phase four-wire
Voltage regulation	Typical $\leq \pm 1\%$ steady state; $\leq \pm 5\%$ transient
Transient recovery	< 20 ms
Overload	105-125%: 10 min; 125-150%: 1 min; $> 150\%$: 200 ms
Phase displacement	$< 0.5^\circ$ at 100% balanced or 100% unbalanced load
Voltage THD	Typical $< 1\%$ at 100% linear load; $< 3\%$ at 100% nonlinear load

Bypass and frequency

Parameter	Specification
Bypass input	380/400/415 VAC, three-phase four-wire
Bypass voltage limits	Default -20% to +15%; software-selectable limits listed in source: -40%, -30%, -10%, +10%, +15%.
Bypass overload	$\leq 135\%$ continuously; 1000% for 20 ms
System frequency	50 Hz, configurable
Synchronization range	± 0.5 to ± 3 Hz, adjustable in 0.5 Hz steps
Internal-clock accuracy	50/60 Hz $\pm 0.02\%$
Full-load system efficiency	Up to 93%

UL33 | operating conditions

Environment and source-listed standards

Parameter	Specification
Operating temperature	0-40°C
Storage temperature	-25 to 70°C, excluding batteries
Humidity	0-95% RH, non-condensing
Altitude	≤1500 m; above 1500 m, derate by 1% per additional 100 m
Protection	IP20
Safety / EMC / design and test references	IEC 62040-1-1 / IEC 62040-2 / IEC 61000-4, as printed in the 2017 brochure

Source and edition notes

Independently prepared English technical edition by IWELL, 22 October 2026. This is not an official Vertiv English publication. Specifications refer to the cited source revision; confirm the exact model and supplied configuration before selection.

Source: UL33-20-100kVA-Brochure-ZH.pdf

Manufacturer source: <https://www.vertiv.com/globalassets/products/critical-power/uninterruptible-power-supplies-ups/liebert-ul33-20-100kva/liebert-ul33.pdf>

Source: E-X6210690-0317 (2017), both pages. The input-voltage row combines limits that do not fully align arithmetically; it is retained as published and requires manufacturer confirmation for operation at an extreme. The source recommends a Tier 3/4 dual-bus arrangement for critical applications; this is a source application note, not a new certification claim.