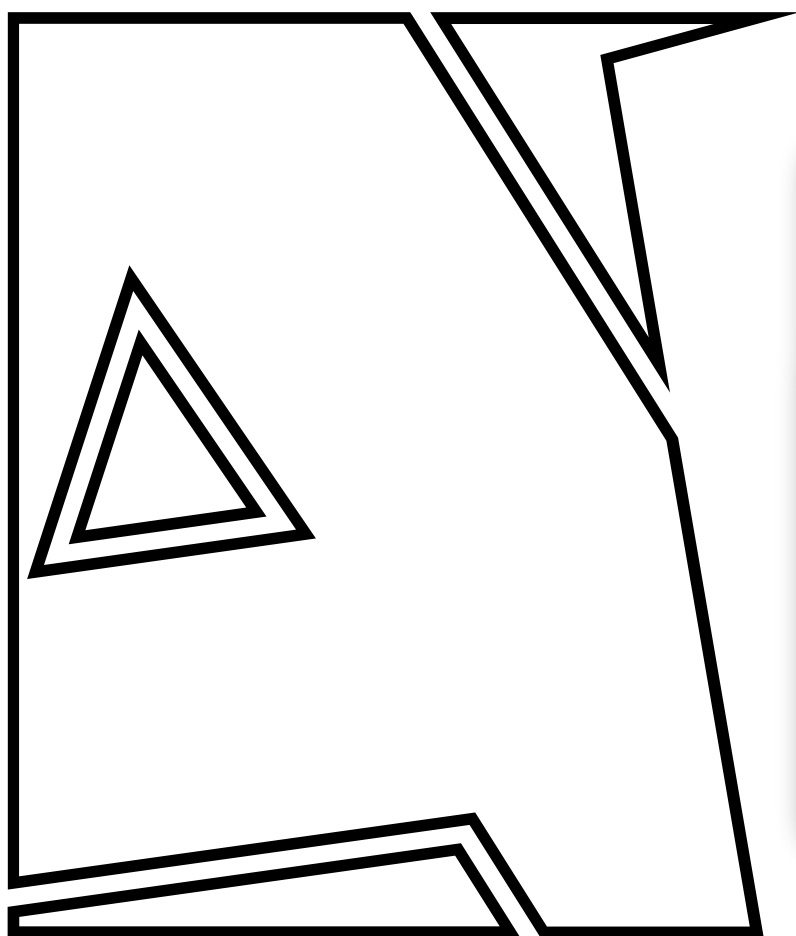




ARIET HD33100H

Three-phase online UPS

Online double conversion



**Critically important
objects**



**Construction
organizations**



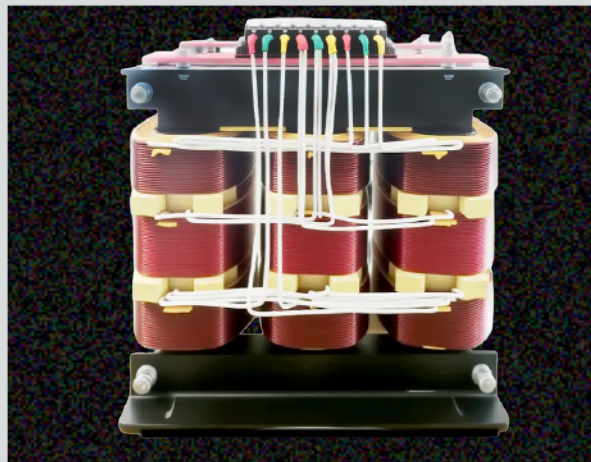
**Telecommunications
systems**



**Industrial
enterprises**

Online UPS ARIET HD33100H with three-phase input and three-phase output (3:3), in which a reliable circuit with a thyristor phase-controlled rectifier and an **IGBT** inverter is used, ensuring a high level of reliability and stability of operation, while the built-in isolation transformer additionally increases the safety and stability of the system.

Online system with fully digital control based on a dual-processor DSP, three-phase input and output, isolation transformer and zero transfer time, ensuring stable operation with the grid, batteries and diesel generators.



APPLICATION

Designed for stable and reliable operation in high-temperature conditions without loss of performance characteristics.

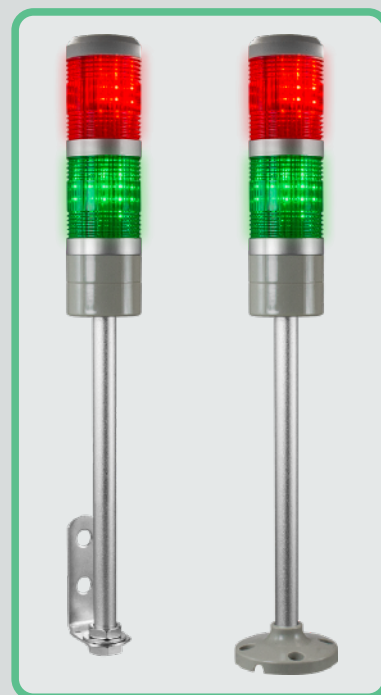
Design and materials used provide resistance to aggressive environmental influences, including dust, moisture and chemically active substances.

An optimal choice for critical infrastructure facilities where increased reliability and resistance to extreme conditions are required.

Optionally the UPS can be equipped with a status signal tower, providing clear visual indication of equipment operating modes.

The signal tower can be installed on the side of the **UPS cabinet** or on the top panel, which allows its location to be optimally adapted depending on installation conditions and equipment configuration.

Such a solution provides fast and convenient visual diagnostics of the system condition, increases ease of operation and allows prompt response to changes in **UPS** operating modes.



ADVANTAGES

Function for determining the condition of the capacitor and fan. Allows problems to be detected in advance and quickly eliminated.	Battery sharing function. Allows several UPS units to operate from one battery group.
Maximum number of installed batteries is from 29 to 40 pcs. The UPS is compatible with operation from different types of batteries — AGM, GEL, FLP, Lithium.	Printed circuit boards are waterproof, dustproof and protected against paint splashes. All critical UPS modules are protected from electromagnetic interference.
Operation with 100% unbalanced load, 100% nonlinear load. Air outlet upwards allows the UPS to be installed close to walls. UPS self-cleaning function.	The UPS has all necessary protections, including protection against output short circuit of the UPS, protection against UPS overload, protection against UPS overheating, protection against deep battery discharge, protection against reverse current.
Self-testing function with 100% UPS load simulation.	A redundancy function for critical elements has been implemented — power boards and UPS fans.
Fully digital architecture based on a dual-processor DSP chip provides advanced control, precise logic without zero drift and convenience of upgrading, debugging and maintenance.	Highly reliable topology with a thyristor phase-controlled rectifier, IGBT inverter and isolation transformer increases system safety, shock resistance and electrical isolation.
Direct battery connection to the bus guarantees zero transfer time between mains mode and battery mode, and the static switch provides instant (0 ms) switching between inverter and bypass.	Input and output characteristics allow operation with various voltage and frequency standards (380/400/415 V, 50/60 Hz), ensuring a high output power factor and excellent overload capability.
The POWER WALK IN function ensures smooth operation with diesel generators, prevents start-up problems and optimizes power distribution between the generator and the battery.	The intelligent battery management system automatically switches charging modes, predicts discharge time and performs self-diagnostics to increase battery service life.
Support for parallel operation according to the N+X scheme with automatic redundancy allows up to six UPS units to be combined and provides high system fault tolerance during main power outages.	Advanced monitoring and protection functions, including RS232/RS485 interfaces, LCD display and a full set of electrical protections, ensure status control, event logging and safe UPS operation.

Technical specifications

MODEL	HD33100H
Rated power	100 kVA
Main input	
Phase	3 phases, 4 wires + grounding
Rated voltage	380/400/415VAC $\pm$ 25%
Frequency	40~70Hz
Voltage range	138–485 V (305–476 V at 100% load)
Power factor	$\geq 0,99$
Bypass	
Phase	3 phases, 4 wires + grounding
Frequency	50/60Hz
Frequency range	± 2 (optional ± 0.5 , ± 1 , ± 2 , ± 3)
Voltage range	-25% ~+ 15%
Overload capacity	130%: long period; 170%: 10 min; 200%: 1 min; above 200%: 5 s
Output	
Rated voltage	380/400/415VAC $\pm 1\%$
Frequency	Automatic tracking of input frequency
Waveform	Pure sine wave
Power factor	0,9
Overload capacity	Load at 105% continuously without shutdown, $\leq 110\%$ — 60 min; load $\leq 130\%$ — 10 min; load $\leq 155\%$ — 1 min; above 155% — 1 s
Harmonic distortion	$\leq 1\%$ (100% linear load), $\leq 5\%$ (100% nonlinear load)
Peak current factor	3:1
Efficiency	94%
Battery voltage	384VAC (348~480VAC)
Battery charging current	20A (5-40A)
Display	Multifunction display allowing various UPS parameters to be shown, including input and output voltage, frequency, power, battery voltage, current, battery status, load percentage, UPS status, event log and other parameters.
Communication	RS232, RS485, “dry contact”, SNMP (optional)
Operating conditions	
Operating temperature	from -5°C to $+40^{\circ}\text{C}$
Storage temperature	$-25 \sim 55^{\circ}\text{C}$ (without battery)
Installation altitude	< 1000 m without power derating
Humidity	0 ~ 95% (without condensation)
Noise level	< 70 dB
Physical parameters	
Dimensions (W*D*H) mm	1000*800*2000
Net weight (kg)	725
Standards	IEC 62040-1, IEC 62040-2, IEC 62040-3