Catalog
UPS

2025

AEC

www.aecups.com

UPS Online | Series FERRUS SP

Power capacity: 20 kVA

FERRUS SP Split-phase UPS are AEC's double conversion online UPS Series and comes in a Tower format with powers of 20kVA=20kW.
The UPS FERRUS SP series adopts the most innovative IGBT technologies with three level, ensuring efficiency up to 94% and a unitary output power factor.

The UPS are available in models with internal batteries or combined with external battery cabinets for longer runtimes FERRUS SP UPS are split-phase 120/240V input and output configuration with auto-sensing frequency 50/60Hz.

Description

Discover the AEC Ferrus SP Series Split Phase UPS (20 kVA), a compact yet powerful solution engineered for maximum reliability and efficiency in 120/240V applications. Its advanced **3-level IGBT inverter** design **delivers up to 94% AC-AC efficiency**, minimizing energy waste and reducing heat generation.
With a **unity output power factor (PF = 1)**, every kVA provides full usable kilowatts, maximizing your power output. Ferrus 20kVA comes in 2 models, 40X9 Model with internal batteries upto 40 pcs 9Ah and L Model for external batteries. UPS are equipped with a DC port for external battery expansion, and an **integrated isolation transformer for complete galvanic separation,** electrical noise suppression, and enhanced safety. A powerful 8A charger, equal to four times the industry standard—accelerates battery recharge times and supports up to 8 additional battery packs.

UPS Uninterruptible Power Supply
Online double conversion **3 Level IGBT Technology**;

Unity output power factory PF=1 **kVA=kW**;

Isolation transformer integrated;

Powerfull standard charger 8A settable;

Maintenance manual bypass integrated;

Input-Output Split phase 120/240V;

Ultra-high efficiency up to **94%**;

Output Terminal block for hardwire installations;

Multiple communications RS232+EPO+USB;

External battery banks compatibility.

Features

TIER 1 UPS
Highest efficiency

High-rate VRLA Batteries

8A Charger for fast recharge

THREE LEVEL 3 UPS

kW = kVA

94% Efficiency

WARRANTY 2 YEARS

24h/7 ASSISTANCE

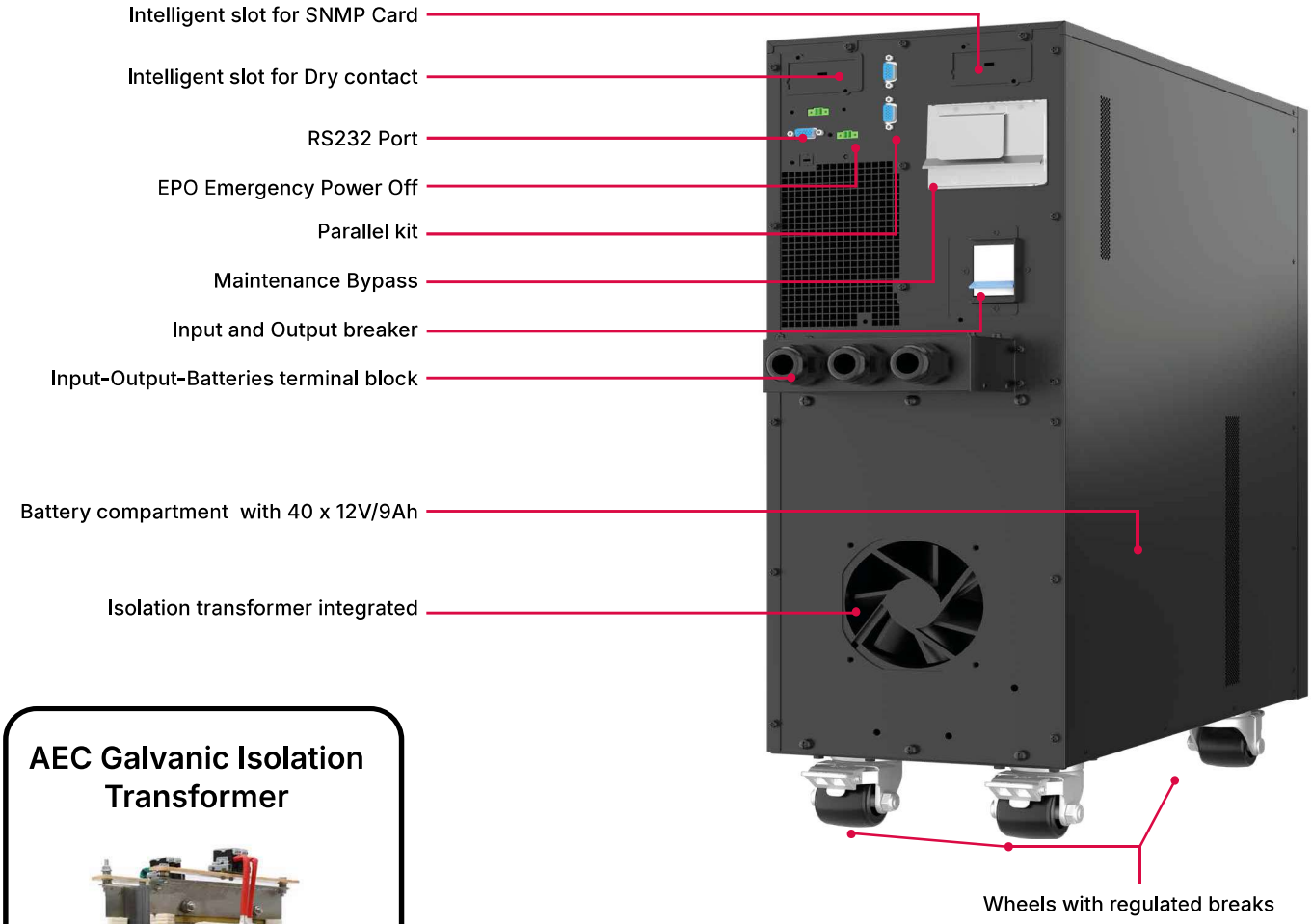
Scan the QR code to find out more informations on FERRUS SP UPS!

UPS integrated isolation transformer

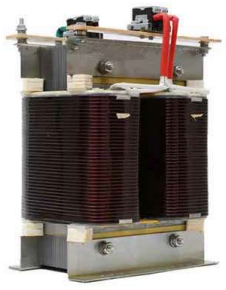
This high-performance Split Phase 120/240V UPS features an **integrated isolation transformer** that provides complete galvanic isolation, suppresses electrical noise, and protects against ground loops and voltage disturbances. Designed for critical applications, it ensures clean, stable, and uninterrupted power for sensitive electronics, mixed-voltage loads, and environments where electrical integrity is essential.

Details

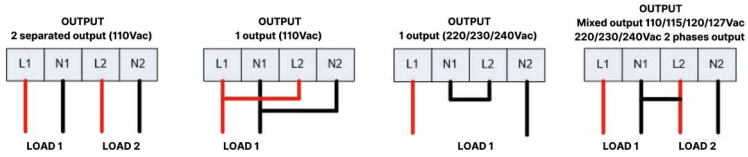
FERRUS SP 20kVA



AEC Galvanic Isolation Transformer



UPS Outputs configurations



Three level IGBT technology

The 3-level IGBT inverter delivers superior performance by switching between +Vdc, 0 V, and −Vdc, producing a cleaner, more sinusoidal output.

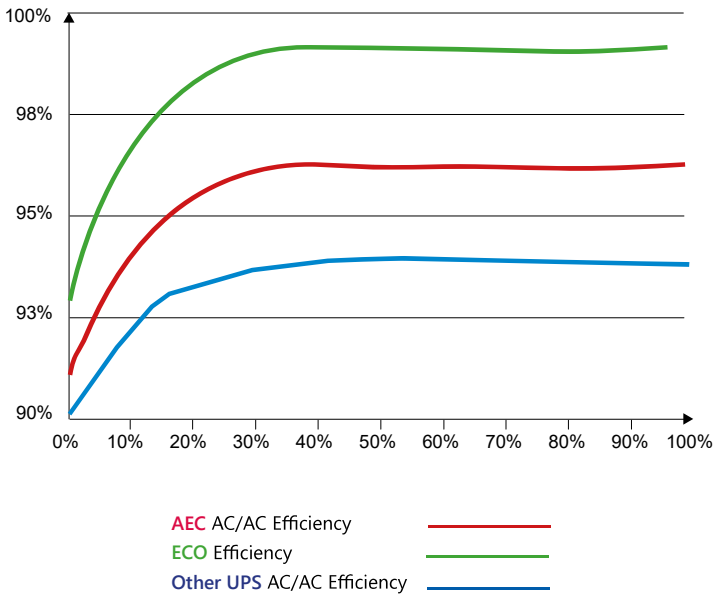
Key benefits:

Low THD: Minimizes distortion and interference.

High Efficiency: Exceeds 94% with reduced switching losses.

Compact Design: Smaller filters lower cost and space.

Enhanced Reliability: Reduced stress extends component life.



Smart LCD Display

The integrated LCD display offers real-time visibility and complete control over all critical UPS parameters. Users can easily monitor input, bypass, and output voltages, load status, battery level, frequency, temperature, and communication settings—all from a single interface.

Key features include:

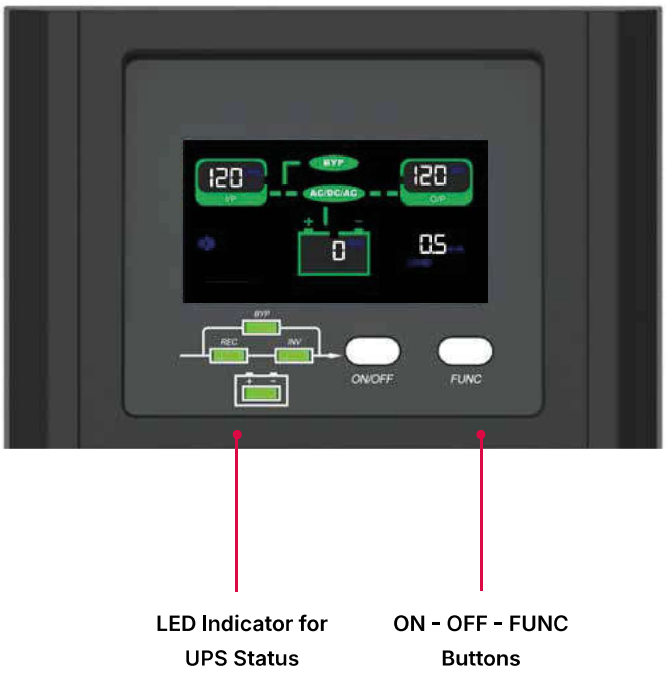
User-friendly navigation for quick access to system information and configuration.

Adjustable charger current (1–4/8A) directly from the display.

Customizable output voltage settings for site-specific needs.

Status indicators and event logs for fast diagnostics and performance tracking.

Designed for both technicians and end users, the display ensures intuitive control and rapid access to the UPS.



Standards and certifications

Scan the QR code to download the User Manual FERRUS SP 20kVA!

Technical specifications

MODELS	FER20000SP-L	FER20000SP-40X9
Input		
Voltage (VAC)	120V (Split phase L1,L2,N,G); 120/240V (Split phase L1,L2,N,G)	
Frequency (HZ)	40~70Hz	
Input range (VAC)	L-L 110~300VAC (100% load=176VAC~276VAC, 85% load =160VAC, 75% load =132VAC, 60% load=120VAC)	
THDI	≤3%	
Phase	L+L+G	
Socket - Plug	Terminal block + Sockets (optional)	
Output		
Power capacity (W)	20000	20000
Power factor	1	
Voltage (VAC)	120V (Split phase L1,L2,N,G); 120/240V (Split phase L1,L2,N,G)	
Frequency (HZ)	50/60±0.1	
THD	≤1%THD, linear load; ≤5%THD, non-linear load	
Waveform	Pure sinewave	
AC/AC Efficency	94%	
Overload	102%~110%: 10mins, 111%~130%:1mins,131%~150%: 30 seconds	
Socket - Plug	Terminal block + Sockets (optional)	
Battery		
Voltage (VDC)	192/240Vdc settable	240Vdc
Standard battery	External	Internal 40 pcs x 12V\9Ah
Max. current Charger (A)	Max 8A settable 1-8	
Other specifications		
Recharging time	< 8 Hours	
Communications	Standard: RS232, E.P.O Contact	Optional: and USB Port, SNMP, Modbus, Dry contact
Noise (DB)	<50dB	
Temperature (°F - °C)	0°C - 40°C	32°F - 104°F
Umidity	<95%	
Dimensions (W*D*H) in	13.7*25*27.7 in	13.7*25*47.2 in
Dimensions (W*D*H) cm	35*63.5*70.5 cm	35*63.5*120 cm
Weight (Lb - Kg)	216Lb - 98Kg	452Lb - 205Kg (Including 40 pcs 12V\9Ah batteries)
Certifications		
Standards	CE (IEC EN 62040-1; EMC IEC EN 62040-2; IEC EN 62040-3);	

All information is for reference only, subject to change by AEC at any time, and does not constitute contractual obligations.

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