



AEC ITALY CATALOG

2023





UPS SERIES IST 7



3:3

Power from 60kVA to 200kVA



kW = kVA

97%
Efficiency

UPS THREE-PHASE WITH EXPANDABLE MODULAR STRUCTURE

The **IST7 three-phase UPS** (60-200kVA) are AEC's range of **three-phase expandable online UPS**, double conversion tower UPS in powers starting from 60kVA up to 200kVA. The UPS IST7 series uses a **centralized modular design**, allowing future expansion of the UPS.

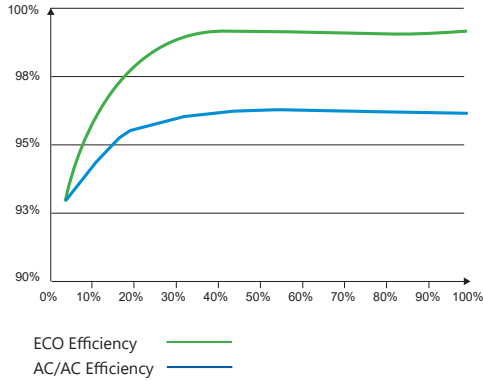
IST7 UPSs are available in **three sizes**, fixed power 60kVA, from 80 to 120kVA and from 160kVA to 200kVA. Thanks to the **inverter's 3 IGBT levels**, the UPS guarantee efficiency up to 97% and a unitary output power factor. They are directly configurable from the display, with **ample flexibility** in the number of batteries and **high overload capacity**. The innovative self-cleaning function reduces the risk of dust accumulation on the boards. The system includes the free contact card for alarms.

UPS THREE-PHASE EXPANDABLE

PRINCIPAL FEATURES

EFFICIENT AND EXPANDABLE

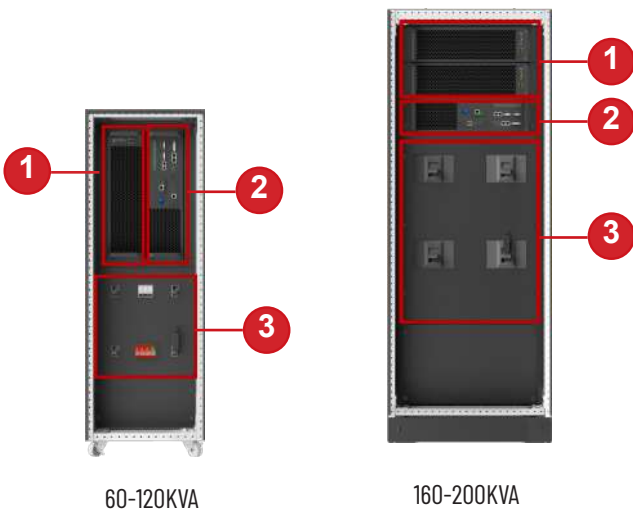
- Output power factor equal to 1;
- Maximum AC \ AC efficiency up to 97%;



- Innovative three-level IGBT technology integrated in the inverter section;
- Expandable in power directly on site and from the display;
- Shared batteries for parallel systems, a single battery pack for two N + 1 UPS;



MODULAR STRUCTURE



- 1** Power unit capacity 60kW | 80-120kW | 160-200kW
- 2** Bypass and control unit including RS485, Modbus and programmable dry contact
- 3** Power distribution unit with terminal block: Input, Output, Bypass and Battery

- Battery Configurations: from 28 to 48 monoblocks ($\pm 168 \sim \pm 288V_{cc}$);
- ECO mode with efficiency up to 99%, configurable from the display;
- Possibility of parallel installation (redundant or power) up to 1.6MW;
- Advanced control with double redundant DSP;



- Fully tropicalized electronic cards;
- Display available in 7 languages;
- Intelligent fans with high efficiency cooling, multiple modes to control their speed, extend their life and improve their efficiency.



Automatic fan control

COMPUTERIZED MONITOR TOUCH-SCREEN

IST7
60-80-100-120KVA



Display 4.3" Inches

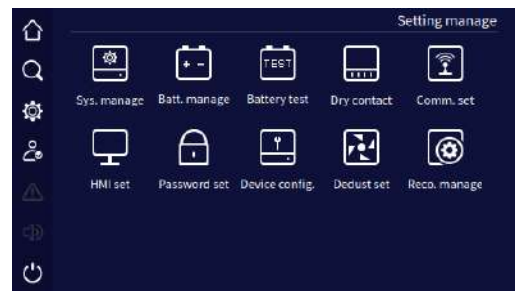
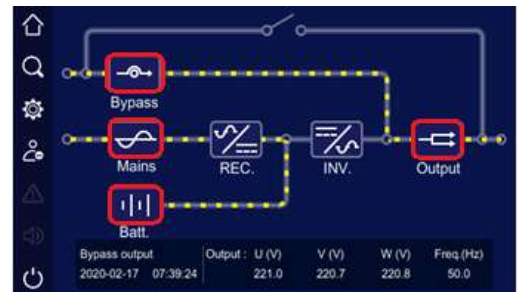
IST7
160-200KVA



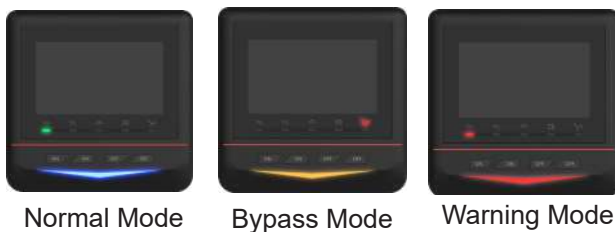
Display 7" Inches

SETTINGS FROM DISPLAY

- Access to the menu via different password levels (User, Technician and Manufacturer);
- Configuration for input, output, bypass, batteries, communications, language and operating modes;
- Periodic self-cleaning function, to expel impurities and reduce the risk of breakdowns;
- Large memory up to 10,000 events downloadable via the USB port integrated in the UPS;
- Advanced communication for installation and operation with diesel generators;
- Alarms from clean contact card, configurable from display;
- Periodic graphic recording of inverter, rectifier and control waveforms.



TOUCH-SCREEN DISPLAY WITH LED COLORED BAR



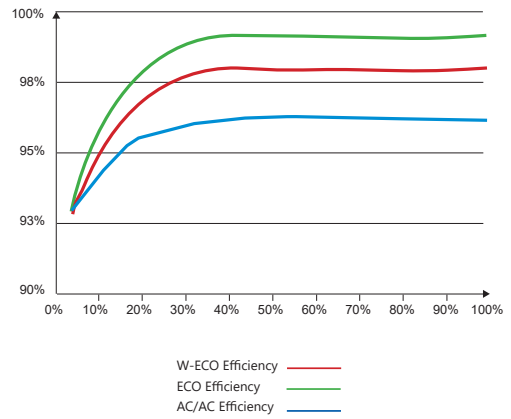
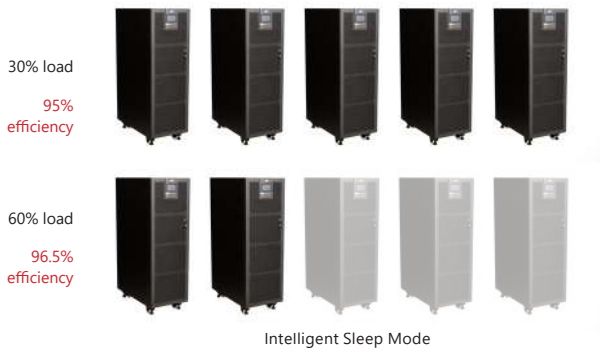
Normal Mode

Bypass Mode

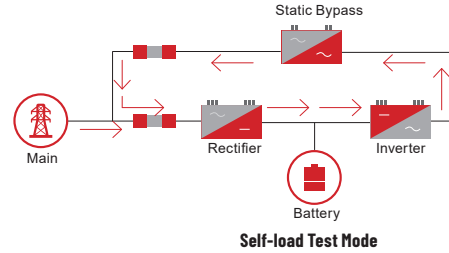
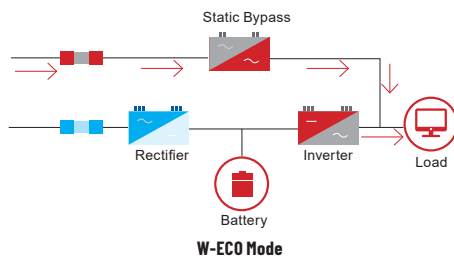
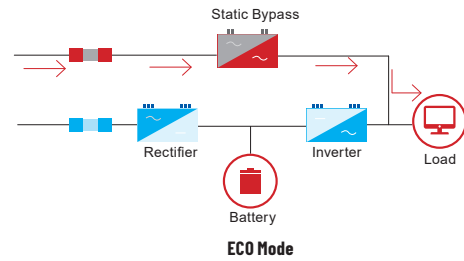
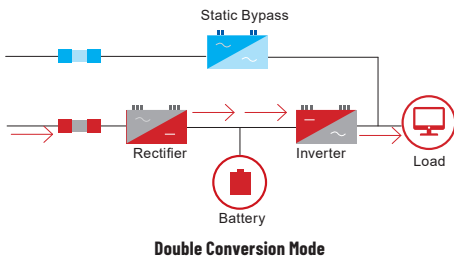
Warning Mode



SMART-SLEEP PARALLEL INTELLIGENCE

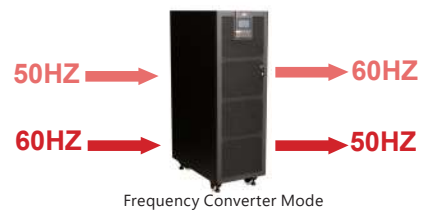


OPERATING MODES



FREQUENCY CONVERTER

- 50Hz-60Hz or 60Hz-50Hz converter mode;
- Possibility of disabling the static bypass and the DC power supply of the inverter.

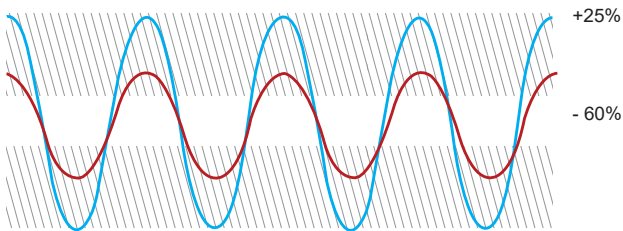


STANDARD AND COMMUNICATIONS

- Clean contact card with 5 alarms;
- Bypass switch for maintenance;
- EPO emergency release button on the front, remote clean contact on the back;
- Starting from battery by means of a specific button;
- Integrated RS485 and Modbus communication port;
- Protection against reverse polarity of the batteries;
- SNMP network card for remote control and monitoring (optional);
- NC \ NO dry contact card for further 12 alarms (optional).

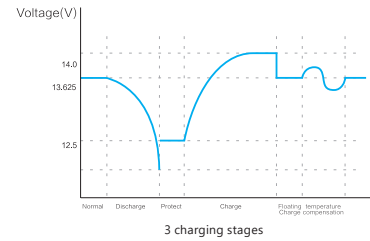
EXCELLENT PERFORMANCE

- Efficiency higher than 95% even at low loads;
- Maximum output tolerance, ability to operate with 100% unbalanced loads;
- Double input with wide tolerance, compatible with diesel generators ;



Three-phase power supply range

- Advanced 3-stage battery charging and maintenance system;



- Redundant and hot extractable power modules (rectifier and inverter);
- Centralized bypass module with battery start button;

MORE OPTIONS

- Flexible Network Management: SNMP
- Expanded dry contact kit (4 in 4 out)
- BMS kit for lithium battery communication
- Intelligent Battery Monitoring System
- Battery tripping kit
- N+X in parallel
- Input and output isolation transformer
- SPD: C Grade
- Battery Charge Temperature Compensation



ECONOMIC SAVING

Let's take an example on a 120kVA AEC UPS working at full load H24 with average efficiency of 96% and a unit output power factor, comparing it with a typical UPS with standard efficiency 93% and output power factor = 0.9:



- **Daily savings:**
 $(120\text{kVA} \cdot 1 \cdot 96\% - 120\text{kVA} \cdot 0.9 \cdot 93\%) \cdot 24 \text{ hours} = 354.24 \text{ kWh};$
- **Daily financial savings:**
 $354.24 \text{ kWh} \cdot 0.15\text{€}/\text{kWh} = 53.1\text{€};$
- **Annual saving:** $354.24 \text{ kWh} \cdot 365 \text{ days} = 129.297,6 \text{ kWh};$

- **Annual Financial saving:** $129.297,6 \text{ kWh} \cdot 0.15\text{€} =$ **19.395 € each year**

TECHNICAL SPECIFICATIONS						
MODELS	IST7-60	IST7-80	IST7-100	IST7-120	IST7-160	IST7-200
INPUT						
VOLTAGE (VAC)	380/400/415 (138~485 L-L)					
FREQUENCY (HZ)	40~70					
BYPASS VOLTAGE (VAC)	+20% (-10/-15/-30 selectable) / +15% (10/20/25 selectable)					
POWER FACTOR	≥0.99					
THDI	≤3%					
PHASES	3+N+PE					
OUTPUT						
POWER (KVA)	60	80	100	120	160	200
POWER FACTOR	1					
VOLTAGE (VAC)	L-N: 220/230/240±1% L-L: 380/400/415±1%					
FREQUENCY (HZ)	50/60±0.1					
THD	3+N+PE					
VOLTAGE STABILIZATION	≤2% at full unbalanced load					
WAVEFORM	Pure sine wave, THDv<1% at linear load, THDv<3% at non-linear load					
EFFICIENCY	97%					
OVERLOAD	≤130%: long run; 130%< load ≤150%: 5min; 150%< load ≤200%: 1s; 200%< load≤300%: 100ms; >300%: immediately.					
BATTERIES						
BATTERIES VOLTAGE (VDC)	±168 ~±288 adjustable					
STANDARD BATTERY CONFIGURATION	External					
MAX. CHARGING CURRENT (A)	30			60		
OTHER SPECIFICATIONS						
COMMUNICATIONS	RS485, MODBUS, Free Contact Card (SNMP optional)					
DISPLAY	Touch screen+LED					
ALARMS	Low batteries, Anormal input, Overload, Block/Fault ecc.					
PROTECTION	Low batteries, Overload, Short-circuit, Over-temperature ecc.					
NOISE (DB)	<65					
TEMPERATURE (°C)	0~40					
HUMIDITY	0~95%					
DIMENSIONS (L×W×H)(MM)	400×960×1200			600×1000×1600		
WEIGHT (KG)	145	161	171	312	320	
CERTIFICATIONS						
STANDARDS	CE (Reference standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; Classification IEC EN 62040-3)					

ALL INFORMATION IS INDICATIVE, MAY BE MODIFIED BY AEC AT ANY TIME AND DOES NOT CONSTITUTE CONTRACTUAL OBLIGATIONS.

YOUTUBE VIDEO TUTORIAL



ASSISTANCE 24\7 ON ALL SOCIAL NETWORK





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