AEC ITALIA
CATALOG

2022

WWW.AECUPS.COM

UPS SERIES IST 7

3:3 **Power from 50kVA to 200kVA**

THREE LEVEL 3 UPS

kW = kVA

97% Efficiency

UPS THREE-PHASE WITH EXPANDIBLE MODULAR STRUCTURE

The **IST7 three-phase UPS** (50-200kVA) are AEC's range of **three-phase expandable online UPS**, double conversion tower UPS in powers starting from 50kVA up to 200kVA. The UPS IST7 series uses a **centralized modular design**, allowing future expansion of the UPS.

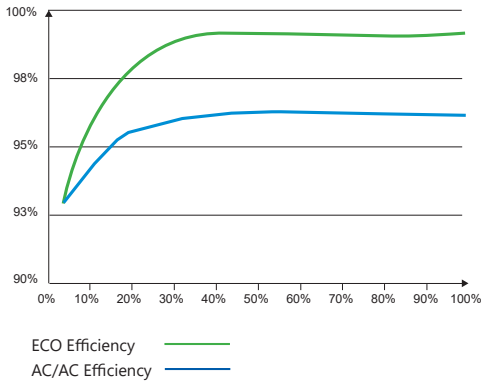
IST7 UPSs are available in **two sizes**, from 50kVA to 120kVA and from 160kVA to 200kVA. Thanks to the **inverter's 3 IGBT levels**, the UPS guarantee efficiency up to 97% and a unitary output power factor. They are directly configurable from the display, with **ample flexibility** in the number of 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

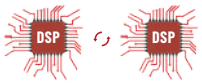
- Output power factor equal to 1;
- Maximum AC \ AC efficiency up to 97%;



- 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;

Pacco batteria in comune

- Battery Configurations:
  from 15 to 20 monoblocks (±180~±240Vcc);
- 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;

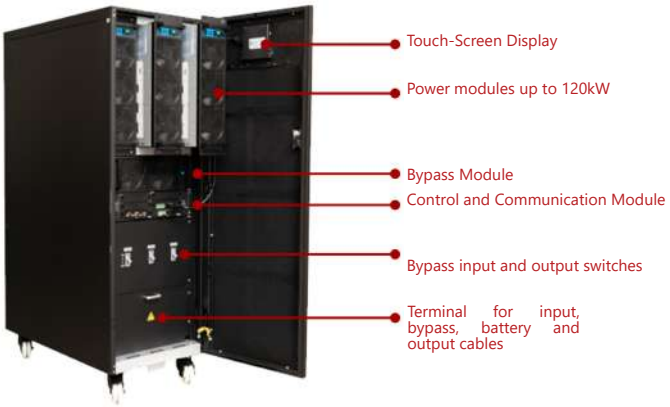


- Fully tropicalized electronic cards;
- Display available in 7 languages;
- Intelligent fans with high efficiency cooling, multiple modes to control their speed, extend their life and improve their efficiency.

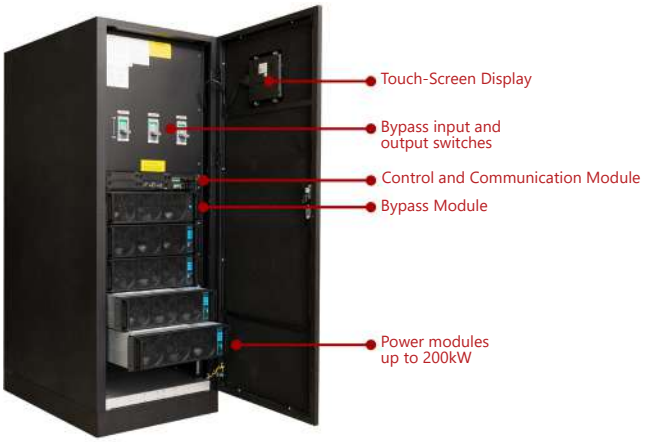
Automatic fan control

MODULAR STRUCTURE

50kVA-120kVA Version

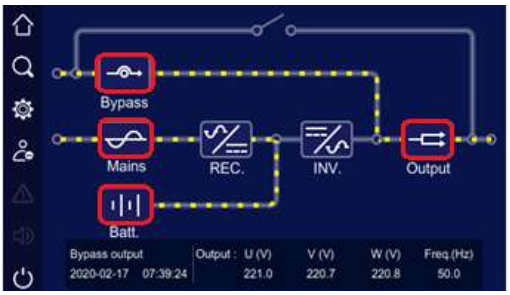


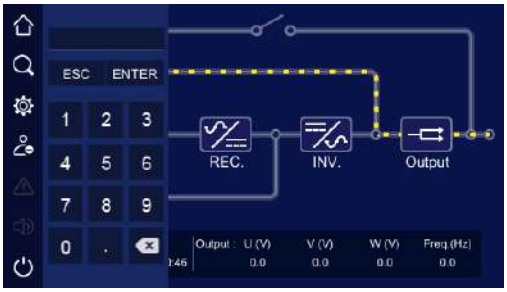
160kVA-200kVA Version



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.



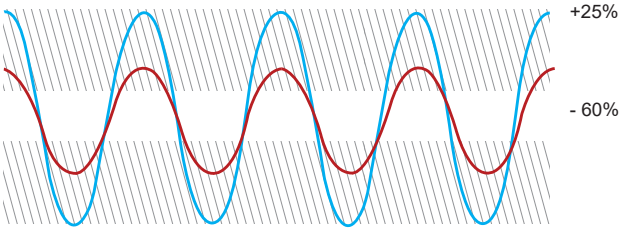


Display 4.3" Inches

Display 7" Inches

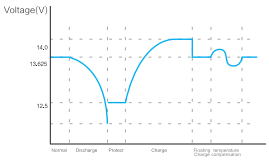
EXCELLENT PERFORMANCE

- 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 ;



Single-phase or three-phase power supply range

- Advanced 3-stage battery charging and maintenance system;



3 charging stages

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

MINIMUM SIZE

- Extremely small size:
  120kW only 450x840x1400mm for max 242Kg;
  200kW only 600x900x1600mm for max 380Kg;
- Version up to 120kW with integrated wheels and brakes;
- Possibility of reducing the weight of the structure by extracting the power, bypass and control modules:
  120kW empty structure weight 100Kg;
  200kW empty structure weight 175Kg;

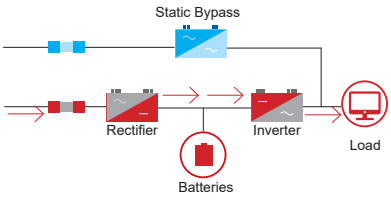
IST7 120kW compared with typical UPS 120kW

Frequency Converter Mode

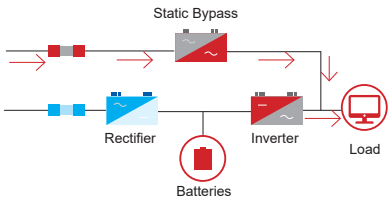
FREQUENCY CONVERTER

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

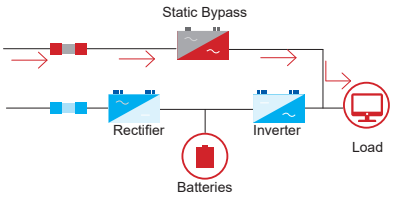
OPERATING MODES



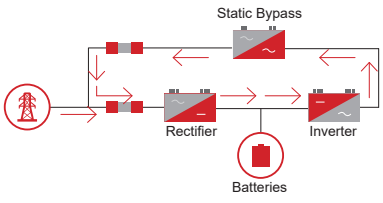
Double Online Conversion



OnLine-ECO Mode



ECO Mode



Self-loading Test Mode

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).

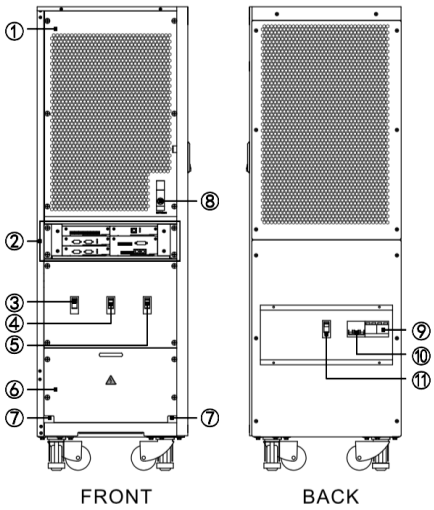
ECONOMIC SAVING

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:

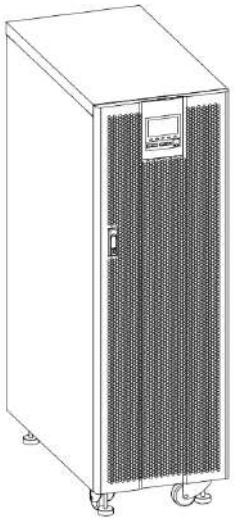
- **Daily savings:**
  (120kVA*1*96% - 120kVA*0.9*93%)*24 hours= 354.24 kWh;
- **Daily financial savings:**
  354.24 kWh*0.15€/kWh = 53.1€;
- **Annual saving:** 354.24 kWh*365 days = 129.297,6 kWh;
- **Annual Financial saving:** 129.297,6 kWh*0.15€ = **19.395 € per year**

APPEARANCE

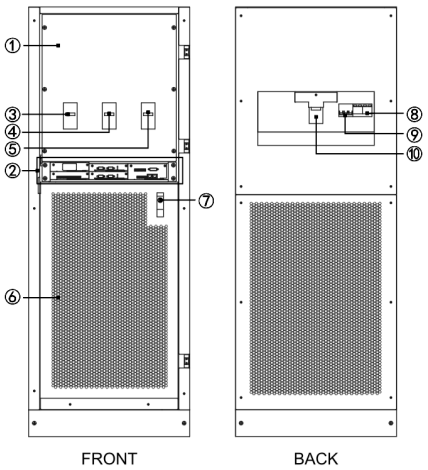
IST7 50-120KVA



1. MODULE PROTECTION COVER;
2. CONTROL MODULE;
3. INPUT DISCONNECTOR;
4. BYPASS DISCONNECTOR;
5. OUTPUT DISCONNECTOR;
6. TERMINAL BLOCK PROTECTION COVER;
7. COMMUNICATION CABLE ENTRY HOLES;
8. START BUTTON FROM BATTERIES;
9. MANUAL BYPASS DISCONNECTOR.



IST7 160-200KVA



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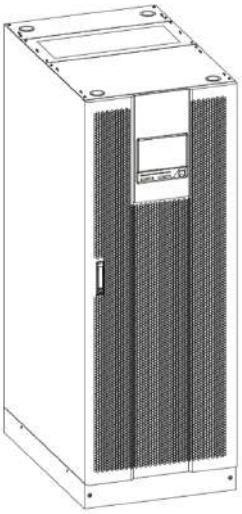
8. MANUAL BYPASS DISCONNECTOR.



TECHNICAL SPECIFICATIONS						
MODELS	IST7050	IST7080	IST7100	IST7120	IST7160	IST7200
INPUT						
VOLTAGE (VAC)	380/400/415 (138~485 L-L)					
FREQUENCY (HZ)	40~70					
BYPASS VOLTAGE (VAC)	380/400/415: -20%~+15%					
POWER FACTOR	≥0.99					
THDI	≤3%					
PHASES	3+N+PE					
OUTPUT						
POWER (KVA)	50	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					
THREE-PHASE VOLTAGE STABILIZATION AT FULL UNBALANCED LOAD	≤2%					
WAVEFORM	Pure sine wave, THD<1% linear					
EFFICIENCY	97%					
OVERLOAD	105%~115% Overload for 60mins; 116%~130% Overload for 10mins; 131%~150% Overload for 1min; >150% Overload for 200ms					
BATTERIES						
BATTERIES VOLTAGE (VDC)	±192/±216 (±180/±204/±216/±228/±240 configurable)					
	External					
MAX. CHARGING CURRENT (A)	1-30				1-40	
OTHER SPECIFICATIONS						
COMMUNICATIONS	RS485, MODBUS, Free Contact Card (RS232 e SNMP opzionali)					
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)	450×840×1400				600×900×1600	
WEIGHT (KG)	180	210	242		320	350
CERTIFICATIONS						
STANDARDS	CE (Reference standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; Classification IEC EN 62040-3)					

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ASSISTANCE 24\7 ON ALL SOCIAL NETWORK

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