



AEC ITALY CATALOG

2023



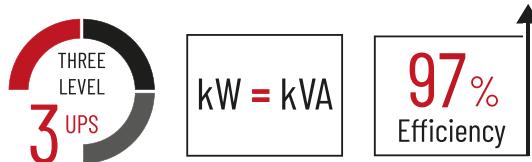


UPS SERIES IST 7



3:3

Power from 60kVA to 200kVA



UPS THREE-PHASE WITH EXPANDABLE MODULAR STRUCTURE

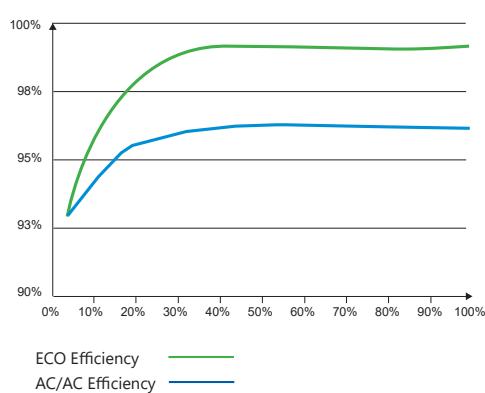
The **IST7 three-phase UPS** (60-200kVA) are AEC's range of **three-phase expandable online UPS**, double conversion tower UPS in powers starting from 60kVA up to 200kVA. The UPS IST7 series uses a **centralized modular design**, allowing future expansion of the UPS.

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.

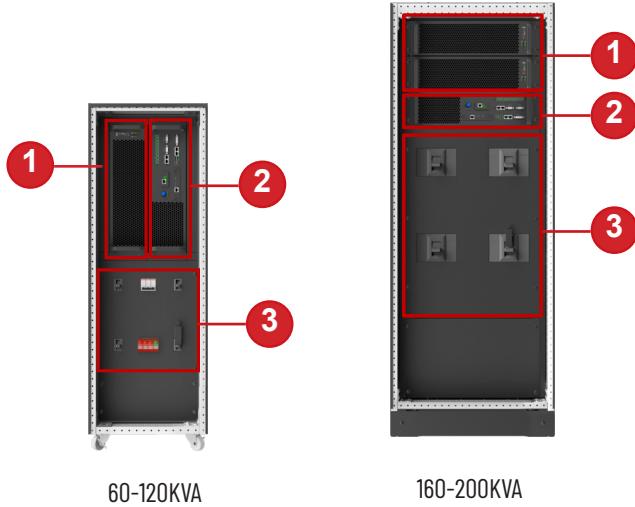
PRINCIPAL FEATURES

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

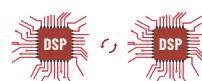


- 1 Power unit capacity 60kW | 80-120kW | 160-200kW
- 2 Bypass and control unit including RS485, Modbus and programmable dry contact
- 3 Power distribution unit with terminal block: Input, Output, Bypass and Battery



Common battery pack

- Battery Configurations: from 28 to 48 monoblocks ($\pm 168 \sim \pm 288$ Vcc);
- 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

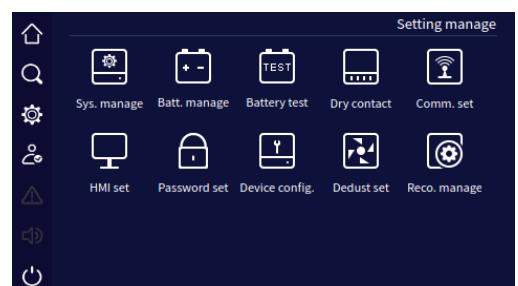
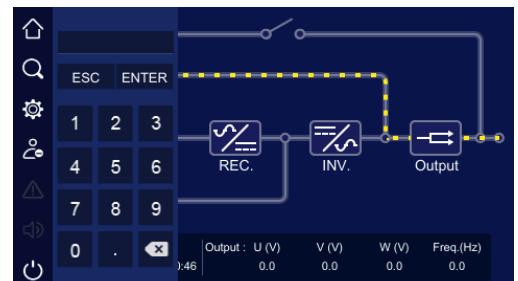
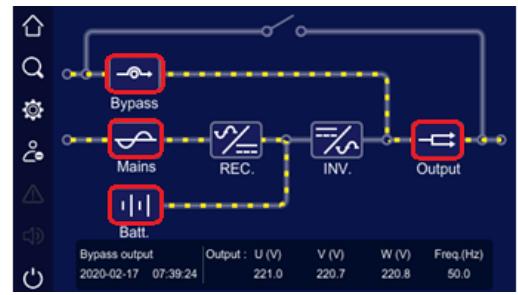
160-200KVA



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

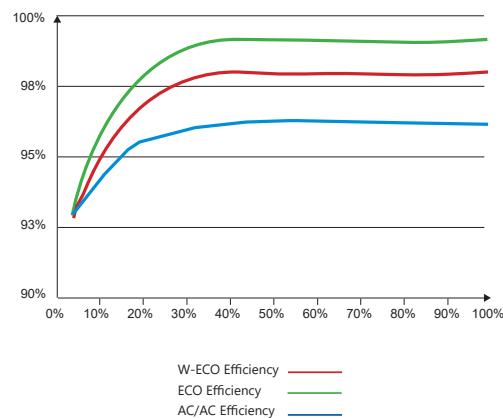


Bypass Mode

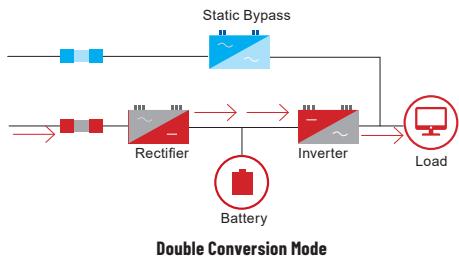


Warning Mode

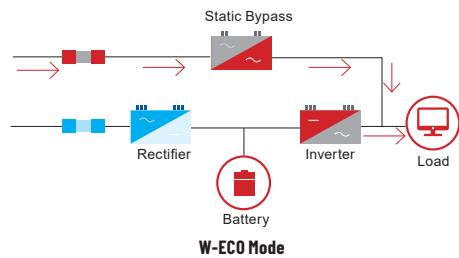
SMART-SLEEP PARALLEL INTELLIGENCE



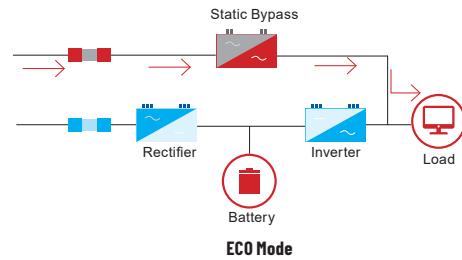
OPERATING MODES



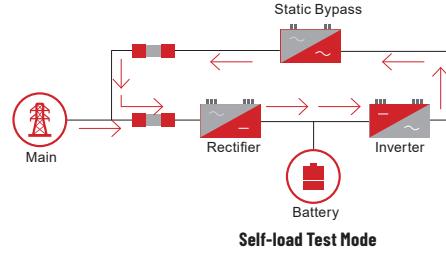
Double Conversion Mode



W-ECO Mode



ECO Mode



Self-load Test Mode

FREQUENCY CONVERTER

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



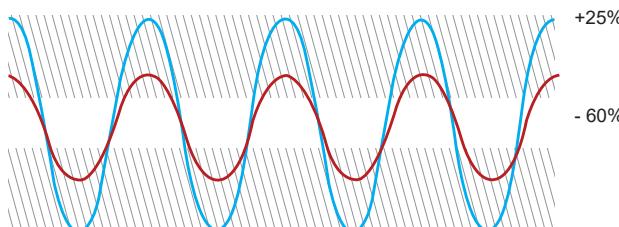
STANDARD AND COMMUNICATIONS

- 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).

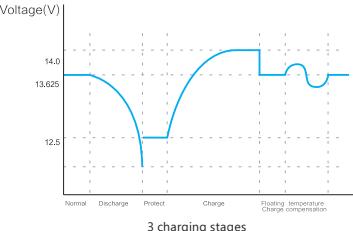
EXCELLENT PERFORMANCE

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

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

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





CONTACTS

Main office

+39 02 94158991

Mobile\WhatsApp

+39 3715547475

Head office address

Via Nerviano 55, 20045

Lainate, MI

Italia

Web & Email

www.aecups.com

info@aecups.com