

ES SERIES

Line Interactive ES series (True Sine Wave) 1KVA - 7.5KVA



Rear of
ES 1 and 1.5 KVA Tower



Rear of
ES 2.0 KVA Tower



Rear of
ES 1U 1 and 1.5KVA



Rear of
ES RT/LR 2U 1, 1.5 and 2 KVA



Rear of
ES RT/LR 3U 3KVA



Rear of
ES 7.5 KVA TR 3U



Rear of
ES 5KVA RT 3U

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**POWER FOR THE
NON-STOP WORLD**

ES SERIES 1KVA - 7.5KVA

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- **Pure sine wave**
Output on Battery
- **Intelligent Charging controlled**
- **98% Efficiency in ECO Mode**
- **Range 1.0KVA - 7.5KVA**
- **Intelligent interactive LCD control panel**
- **Multiple interfaces options:**
RS232/RS485/MODBUS/USB/SNMP
- **Compact design**
Standard and long backup time
- **Cold start**
Starts on battery, no mains power required
- **Protection against overload, overheating, surges, spikes, short circuit, over charging**
- **Ability to Integrate with Genset**
- **Easy battery replacement**

Due to rising electricity costs, Energy Saving has become one of today's most important issues. It is a trend to operate ECO –Economical mode on big capacity on-line double conversion UPS. This seems to virtually turn UPS back to Stand by (Off-line) era.

Our new ES pure sine wave line-interactive UPS are based on Energy Saving and Environmental Protection. In addition to providing high quality Sine Wave power and low Harmonic Distortion to support both Linear and Non-linear loads the ES series has a built in wide range AVR (automatic voltage regulator) on Bypass circuit which stabilises power and makes the ES series operate even more effectively and safely than an On-line double conversion UPS operated under ECO mode.

ES pure sine wave line-interactive UPS

vs

on-line double conversion UPS operated under ECO mode

Wider input range: More than 10% wider input main power voltage range than an on-line UPS

High overall efficiency : Consumes much less power than an on-line double conversion UPS during bypass mode operation

Better stability: Concise designed compact unit gives better stability.

Economically smaller: Smaller footprint. Less expense for users.

Exceptional Design . . .



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Specifications ES Series

| Line Interactive Sine wave output | | IRU UPS | | Tower UPS | | | Rack / Tower Option for UPS | | | | | Long Run Time UPS require accompanying Battery Pack | | | | | Batt Pack | |
|-----------------------------------|-------------------------------|---|------------|-------------|-------------|-------------|-----------------------------|---------|----------|-------------|-------------|---|---------|----------|-----------------------|----------|------------------|------------|
| Model | Energy Saver Series (ES xxx) | ES 1RU10 | ES 1RU 15 | EST 10 | EST 15 | EST 20 | ESRT 10 | ESRT 15 | ESRT 20 | ESRT 30 | ESRT 50 | ESLR 10 | ESLR 15 | ESLR 20 | ESLR 30 | ESLR 50 | ESLR 75 | ES BP 3 RU |
| Capacity | VA/Watt | 1.0/625 | 1.5/938 | 1.0/625 | 1.5/938 | 2.0/1250 | 1.0/625 | 1.5/938 | 2.0/1250 | 3.0/1875 | 5.0/3125 | 1.0/625 | 1.5/938 | 2.0/1250 | 3.0/1875 | 5.0/3125 | 7.5/4688 | |
| Input | Nominal Voltage | 230 VAC | | | | | | | | | | | | | | | | |
| | Voltage Range | 170 VAC ~ 300 VAC | | | | | | | | | | | | | | | | |
| | Frequency | 45Hz - 70 Hz auto sensing | | | | | | | | | | | | | | | | |
| | Boost Transfer | 208 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Boost Return | 218 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Buck Transfer | 252 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Buck Return | 242 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Low Voltage Transfer to Batt | 190 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Low Voltage Return | 200 VAC ± 2% | | | | | | | | | | | | | | | | |
| Output | High Voltage Transfer to Batt | 286 VAC ± 2% | | | | | | | | | | | | | | | | |
| | High Voltage Return | 276 VAC ± 2% | | | | | | | | | | | | | | | | |
| | Wave Form | Pure Sine Wave | | | | | | | | | | | | | | | | |
| Overload Protection | Efficiency | >80% | | | | | | | | | | | | | | | | |
| | Line Mode | > 110% then buzzer alarm and amber LED continuously blinking | | | | | | | | | | | | | | | | |
| Short Circuit Protection | Battery Mode | 110% ~ 150% for 30 seconds: >150% for 200ms, then UPS Shuts Down | | | | | | | | | | | | | | | | |
| | Line Mode | Circuit Breaker | | | | | | | | | | | | | | | | |
| Cold Start | Battery Mode | Electronic Circuit | | | | | | | | | | | | | | | | |
| | DC Start | Yes | | | | | | | | | | | | | | | | |
| Transfer Time | Typical | <4ms | | | | | | | | | | | | | | | | |
| Battery Voltages | | 24 VDC | 24 VDC | 24 VDC | 36 VDC | 36 VDC | 24 VDC | 36 VDC | 36 VDC | 36 VDC | 48 VDC | 24 VDC | 36 VDC | | | 48 VDC | | Various |
| Battery Amp | | 6V 9 Ah | 6V 9 Ah | 7.2 Ah | 7.2 Ah | 9 Ah | 7.2 Ah | 7.2 Ah | 9 Ah | 7.2 Ah | 9AH | Requires ES BP 3 RU Batt Box7.2 OR 9 Ah as required | | | | | 16 x 7.2 or 9 Ah | |
| LCD Display | | UPS status; I/P & O/P Voltage, frequency; Load Level; Battery voltage & Level; internal tempaure Normal Green, Warning AmberFault RED | | | | | | | | | | | | | | | | |
| Audible alarm | Battery Mode | Beeping every 4 seconds | | | | | | | | | | | | | | | | |
| | Low Battery | Beeping every 1 second | | | | | | | | | | | | | | | | |
| | UPS Fault | Continuous Beep | | | | | | | | | | | | | | | | |
| | Overload | Beeping 2 x every second | | | | | | | | | | | | | | | | |
| Communications Interface | | Various combinations of RS232; SNMP;USB; Dry Contact & AS 400 available as options | | | | | | | | | | | | | | | | |
| Dimensions(WxHxD in mm) | | 440/44/515 | 440/44/515 | 145/210/380 | 145/210/445 | 145/210/445 | 440/88/465 | | | 440/132/465 | 440/132/620 | 440/88/465 | | | 440/132/465 | | 440/132/465 | |
| Net Weight Kg | | 18 | 20 | 16.5 | 17.5 | 22.5 | 16 | 17.5 | 24.5 | 36.9 | 49.8 | 16 | 17.5 | 24.5 | 25 | 34.6 | | |
| Environment | Operating Environment | 0 - 40 Deg C Relative Humidity 0 - 95% Non Condensing | | | | | | | | | | | | | | | | |
| | Noise Level | Less than 55dBA (@1.0 Meter) | | | | | | | | | | | | | | | | |
| Outlets / Connections | | 4 IEC | 4 IEC | 3 IEC | | 6 IEC | | | 10 IEC | 10 IEC + TB | 6 IEC | | | 10 IEC | 5 IEC+ Terminal Block | | | |

Note

Big capacity UPS units are used for expensive and precision-made instruments. Accordingly on-line structure design is mostly required. As new technology in control and development is improved, Energy Saving ECO operation mode has become acceptable and is now widely employed by users to preserve precious earth resources and to save expensive running cost. We see it as a monumental change to UPS engineering and this is why we keep focussed our efforts to develop the more efficient and Energy Saving (ES)series.

ES Series range includes 1KVA, 1.5KVA, 2KVA, 3KVA, 5KVA and 7.5KVA.

Please refer to brochures for detail specifications.

Should you require more information or advice. call

1800 634 307

