

# T-ONE

**THREE TO SINGLE PHASE 10-15-20KVA**

## UNINTERRUPTIBLE POWER SUPPLIES – UPS THREE TO SINGLE PHASE TECHNICAL SPECIFICATION



# UNINTERRUPTIBLE POWER SUPPLIES

## Three phase to single phase

### On line double conversion

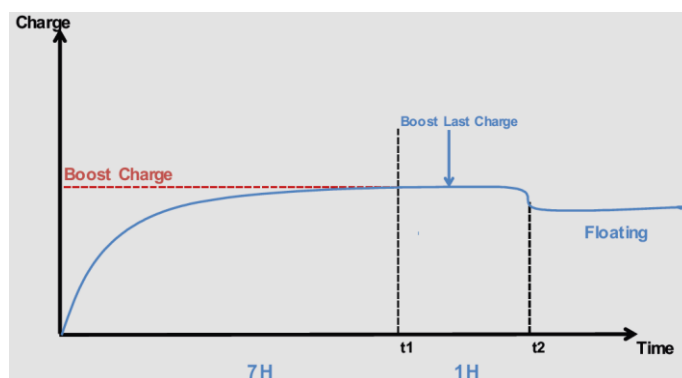
### T-ONE range

T-One is an on-line dual-conversion continuity unit with three-phase input and single-phase output.

is available in 3 sizes 10KVA – 15KVA – 20KVA.

T-One, with its high performances, guarantees maximum safety for all types of users. With the LCD display you can see the operating parameters, with the addition of the SNMP Ethernet card you are able to monitor the UPS remotely.

T-One, to safeguard the life expectancy of the batteries, uses a smart recharge; The batteries are charged in three phases, thus increasing the performance.



Charging graph

Technical data and images may be subject to a change without notice

# UNINTERRUPTIBLE POWER SUPPLIES

## Three-phase-single phase T-ONE range

| MODEL                  |                              | T-ONE10                                                                                                                                               | T-ONE15                                       | T-ONE20                    |
|------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------|
| RATED POWER            |                              | 10KVA/10kW<br>10KVA/9KW                                                                                                                               | 15KVA/15KW<br>15KVA/13.5KW                    | 20KVA/20KW<br>20KVA / 18KW |
| INPUT                  | Input                        | Three phase                                                                                                                                           |                                               |                            |
|                        | Power factor                 | ≥ 0.99                                                                                                                                                |                                               |                            |
|                        | Rated voltage                | 380VAC / 400VAC / 415VAC (Automatic selection)                                                                                                        |                                               |                            |
|                        | Rated frequency              | 50Hz/60Hz (selectable)                                                                                                                                |                                               |                            |
|                        | Voltage range                | 208 ~ 478Vac                                                                                                                                          |                                               |                            |
|                        | Frequency range              | 45 ~ 70Hz                                                                                                                                             |                                               |                            |
|                        | Bypass voltage range         | 220Vac max : default +25% (+10%, +15%, +20% optional)<br>230Vac max : default +20% (+10%, +15% optional)<br>240Vac max : default +15% (+10% optional) |                                               |                            |
|                        |                              | min : default -45% (-10%, -20%, -30% optional)                                                                                                        |                                               |                            |
| Bypass frequency range | ±1% - ±2% - ±4% - ±5% - ±10% |                                                                                                                                                       |                                               |                            |
| BATTERY                | Voltage<br>Standard unit     | ±120Vdc (20x9Ah)<br>(20x7Ah; 2x20 x 7/9Ah<br>optional); ±96Vdc<br>(16x9Ah)                                                                            | ±120Vdc (2x20x9Ah)<br>(2x20 pcs 7Ah optional) |                            |
|                        |                              | ±96/108/120Vdc (16~20 pcs)<br>standard unit and 20 batterie – PF=1.0<br>18 batteries: PF=0.9<br>16 batteries: PF=0.8                                  |                                               |                            |
|                        | Max charging current         | 1.35A                                                                                                                                                 | 2.7A                                          |                            |
| Transfer time          |                              | Line to battery: 0ms; line to bypass: 0ms                                                                                                             |                                               |                            |
| OUTPUT                 | Type                         | Single phase                                                                                                                                          |                                               |                            |
|                        | Voltage regulation           | ±1.0%                                                                                                                                                 |                                               |                            |
|                        | Harmonic distortion (THD)    | Less than 2% with 100% linear load                                                                                                                    |                                               |                            |
|                        |                              | Less than 5% with 100% non linear load                                                                                                                |                                               |                            |
|                        | Rated voltage                | 220V/230V/240Vac ±1.0%                                                                                                                                |                                               |                            |
|                        | Frequency regulation         | ±0.1% (single unit)                                                                                                                                   |                                               |                            |
|                        |                              | ±0.25% (parallel units)                                                                                                                               |                                               |                            |
|                        | Frequency                    | Line mode: sync with network (phase A)                                                                                                                |                                               |                            |
|                        |                              | Battery mode: 50Hz / 60Hz ±0.1Hz                                                                                                                      |                                               |                            |
|                        | Frequency sync               | 1Hz/s (single unit)                                                                                                                                   |                                               |                            |
|                        |                              | 0.5Hz/s (parallel unit)                                                                                                                               |                                               |                            |
|                        | Crest Factor                 | 3:1                                                                                                                                                   |                                               |                            |
|                        | AC Efficiency                | Up to 94.5%                                                                                                                                           |                                               |                            |
|                        | Dynamic response             | ± 5.0%                                                                                                                                                |                                               |                            |
| 40ms                   |                              |                                                                                                                                                       |                                               |                            |
| DC component           | ≤100mV                       |                                                                                                                                                       |                                               |                            |

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| PROTECTIONS             | Acceptable overload in line mode (then switch to bypass) | < 110 %, max 1h                                                                                                       |                            |                            |
|                         |                                                          | 110% ~ 125%, max 10 min                                                                                               |                            |                            |
|                         |                                                          | 125% ~ 150%, max 1 min                                                                                                |                            |                            |
|                         |                                                          | > 150% immediate switch to bypass                                                                                     |                            |                            |
|                         | Overload in bypass mode                                  | < 110 % max 10'; 110% ~ 125% max 1'; 125% ~ 150% max 5"; > 150% immediate switch to bypass                            |                            |                            |
|                         | IN BYPASS                                                | 64A breaker                                                                                                           | 100A breaker               | 126A breaker               |
|                         | Short circuit                                            | Peak 150 A                                                                                                            | Peak 270 A                 | Peak 300 A                 |
|                         | Overheat                                                 | Line mode: switch to bypass; battery mode: immediate switch off                                                       |                            |                            |
|                         | Low battery                                              | Alarm and switch off                                                                                                  |                            |                            |
|                         | Self-diagnosis                                           | At start up and with software                                                                                         |                            |                            |
|                         | EPO (optional)                                           | Immediate switch off                                                                                                  |                            |                            |
|                         | Batteries                                                | Advanced battery management                                                                                           |                            |                            |
|                         | Noise suppression                                        | Complies with en60240-2                                                                                               |                            |                            |
| ALARMS                  | AUDIBLE AND VISUAL                                       | Line fault, Low battery, overload, system fault                                                                       |                            |                            |
| DISPLAY                 | LED e LCD state                                          | Line mode, battery mode, low battery, battery fault, overload, ups fault                                              |                            |                            |
|                         | LCD Reading                                              | Input voltage, input frequency, output frequency, output voltage, load %, battery voltage, internal temperature.      |                            |                            |
| COMMUNICATION INTERFACE |                                                          | USB, RS232, RS485, Parallel (optional), clean contacts, intelligent slot, SNMP card (optional), relay card (optional) |                            |                            |
| AMBIENT                 | Working temperature                                      | 0°C ~ 40°C (batteries excluded)                                                                                       |                            |                            |
|                         | Warehouse temperature                                    | 25°C ~ 55°C (batteries excluded)                                                                                      |                            |                            |
|                         | Relative humidity                                        | 0 ~ 95% non-condensing                                                                                                |                            |                            |
|                         | Altitude                                                 | <1500m if >1500m power is derated                                                                                     |                            |                            |
| OTHER CHARACTERISTIC    | Protection                                               | IP20                                                                                                                  |                            |                            |
|                         | Dimensions (WxDxH) mm                                    | 250x900x868                                                                                                           |                            |                            |
|                         | Weight kg.                                               | 125                                                                                                                   | 180                        | 181                        |
|                         | Safety                                                   | CE, EN/IEC 62040-2, EN/IEC 62040-1-1                                                                                  |                            |                            |
|                         | Colour                                                   | black                                                                                                                 |                            |                            |

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