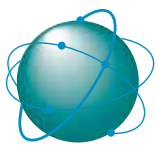


## **METARTEC'S MILLI 3:3 TOWER**

- True double-conversion
- DSP technology guarantees high performance
- Output power factor of 0.8
- Wide input voltage range (110-300 VAC)
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- Eco mode operation for energy saving (ECO)
- Accepts dual-mains inputs
- Emergency power off function (EPO)
- Generator compatible
- SNMP+USB+RS-232 multiple communications
- 3-stage extendable charging design for optimized battery performance
- Adjustable battery numbers
- Maintenance bypass available
- Optional N+X parallel redundancy
- Optional isolation transformer offers full isolation and complete common mode noise



**Further details on the MILLI 3:3 TOWER and information on Metartec's complete range of critical power products and services can be viewed at [www.metartec.com](http://www.metartec.com). Alternatively call us on 0845 50 40 444 or email [info@metartec.com](mailto:info@metartec.com)**



| MODEL                                |                         | MILLI 3:3 10kVA   | MILLI 3:3 20kVA                            | MILLI 3:3 30kVA          |
|--------------------------------------|-------------------------|---|--|--------------------------|
| PHASE                                |                         | 3-phase in / 3-phase out  |  |                          |
| CAPACITY                             |                         | 10000 VA / 8000 W   | 20000 VA / 16000 W                         | 30000 VA / 24000 W       |
| <b>INPUT</b>                         |                         |   |  |                          |
| Voltage Range                        | Low Line Transfer       | 176 VAC (phase voltage) $\pm$ 3% @ 100% load<br>110 VAC (phase voltage) $\pm$ 3% @ 50% load |  |                          |
|                                      | Low Line Comeback       | 186 VAC (phase voltage) $\pm$ 3% @ 100% load<br>120 VAC (phase voltage) $\pm$ 3% @ 50% load |  |                          |
|                                      | High Line Transfer      | 300 VAC (phase voltage) $\pm$ 3%  |  |                          |
|                                      | High Line Comeback      | 290VAC (phase voltage) $\pm$ 3%   |  |                          |
| Frequency Range                      |                         | 46~54 Hz or 56~64Hz   |  |                          |
| Power Factor                         |                         | $\geq$ 0.99 @ 100% load   |  |                          |
| <b>OUTPUT</b>                        |                         |   |  |                          |
| Output Voltage (Ph - N)              |                         | 3 x 400 VAC (3 Ph + N)  |  |                          |
| Output Voltage (Ph - Ph)             |                         | 3 x 400 VAC (Ph + Ph)   |  |                          |
| AC Voltage Regulation (Batt. Mode)   |                         | $\pm$ 1%  |  |                          |
| Frequency Range (Synchronized Range) |                         | 46~54Hz or 56~64Hz  |  |                          |
| Frequency Range (Batt. Mode)         |                         | 50 Hz $\pm$ 0.1 Hz or 60 Hz $\pm$ 0.1 Hz  |  |                          |
| Current Crest Ratio                  |                         | 3:1 (max.)  |  |                          |
| Harmonic Distortion                  |                         | < =2 % THD (Linear load) : < 5 % THD (Non-linear Load)                                      |  |                          |
| Transfer Time                        | AC Mode to Batt. Mode   | Zero  |  |                          |
|                                      | Inverter to Bypass      | Zero  |  |                          |
| Waveform (Batt. Mode)                |                         | Pure Sinewave   |  |                          |
| <b>EFFICIENCY</b>                    |                         |   |  |                          |
| AC Mode                              |                         | 90.5%   | 91%  | 91.3%                    |
| Battery Mode                         |                         | 86%   | 87%  | 88%                      |
| <b>BATTERY</b>                       |                         |   |  |                          |
| Standard Model                       | Battery Type            | 12 V / 9 Ah   |  |                          |
|                                      | Numbers                 | 20 pcs (18-20 pcs adjustable)*  | 20 pcs x 2 strings (18-20 pcs adjustable)* |                          |
|                                      | Typical Recharge Time   | 9 hours recovery to 90% capacity  |  |                          |
|                                      | Charging Current (max.) | 1A  | 2A   | 2A                       |
| Charging Voltage                     |                         | 273 VDC $\pm$ 1% (based on battery numbers at 20 pcs)                                       |  |                          |
| Long-run Model                       | Battery Type            | Depending on the capacity of external batteries   |  |                          |
|                                      | Numbers                 |   |  |                          |
|                                      | Charging Current (max.) | 4A  | 4A   | 12A                      |
|                                      | Charging Voltage        | 273 VDC $\pm$ 1% (based on battery numbers at 20 pcs)                                       |  |                          |
| <b>INDICATORS</b>                    |                         |   |  |                          |
| LCD Display                          |                         | UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, and Fault     |  |                          |
| <b>ALARM</b>                         |                         |   |  |                          |
| Battery Mode                         |                         | Sounding every 4 seconds  |  |                          |
| Low Battery                          |                         | Sounding every second   |  |                          |
| Overload                             |                         | Sounding twice every second   |  |                          |
| Fault                                |                         | Continuously sounding   |  |                          |
| <b>ENVIRONMENT</b>                   |                         |   |  |                          |
| Humidity                             |                         | 0-95 % RH @ 0- 40°C (non-condensing)  |  |                          |
| Noise Level                          |                         | Less than 60dB @ 1 Meter  | Less than 65dB @ 1 Meter                   | Less than 65dB @ 1 Meter |
| <b>MANAGEMENT</b>                    |                         |   |  |                          |
| Smart RS-232 / USB                   |                         | Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux, Unix, and MAC               |  |                          |
| Optional SNMP                        |                         | Power management from SNMP manager and web browser  |  |                          |

| MILLI 3:3 10 kVA Tower |                                |                          |          |          |          |                           |                      |              |                  |
|------------------------|--------------------------------|--------------------------|----------|----------|----------|---------------------------|----------------------|--------------|------------------|
| Type                   | Number of strings of batteries | Autonomy time in minutes |          |          |          | Dimensions D x W x H (mm) |                      | Weight (Kgs) |                  |
|                        |                                | 100% load                | 75% load | 50% load | 25% load | UPS                       | Battery internal     | UPS          | Battery internal |
| Standard               | 20                             | 4                        | 7.5      | 19       | 47       | 815 x 250 x 826           | internal             | 109          | internal         |
| Long Autonomy          | 40                             | 12.5                     | 28       | 44       | 59.8     | 815 x 250 x 826           | 592 x 250 x 826      | 38           | 120              |
| Long Autonomy          | 60                             | 33.5                     | 44       | 54.5     | 125      | 815 x 250 x 826           | 592 x 250 x 826      | 38           | 173              |
| Long Autonomy          | 80                             | 44                       | 51       | 60       | 139      | 815 x 250 x 826           | 592 x 250 x 826      | 38           | 226              |
| Long Autonomy          | 160                            | 60                       | 80       | 139      | 318      | 815 x 250 x 826           | 592 x 250 x 826 (x2) | 38           | 226 (x2)         |

| MILLI 3:3 20 kVA Tower |                                |                          |          |          |          |                           |                      |              |                  |
|------------------------|--------------------------------|--------------------------|----------|----------|----------|---------------------------|----------------------|--------------|------------------|
| Type                   | Number of strings of batteries | Autonomy time in minutes |          |          |          | Dimensions D x W x H (mm) |                      | Weight (Kgs) |                  |
|                        |                                | 100% load                | 75% load | 50% load | 25% load | UPS                       | Battery internal     | UPS          | Battery internal |
| Standard               | 40                             | 4.3                      | 7.5      | 20       | 46.9     | 815 x 250 x 826           | internal             | 164          | internal         |
| Long Autonomy          | 60                             | 7.1                      | 12.7     | 33.7     | 54.5     | 815 x 250 x 826           | 592 x 250 x 826      | 40           | 173              |
| Long Autonomy          | 80                             | 12.7                     | 28       | 44       | 59       | 815 x 250 x 826           | 592 x 250 x 826      | 40           | 226              |
| Long Autonomy          | 160                            | 44                       | 51       | 60       | 139      | 815 x 250 x 826           | 592 x 250 x 826 (x2) | 40           | 226 (x2)         |

| MILLI 3:3 30 kVA Tower |                                |                          |          |          |          |                           |                      |              |                  |
|------------------------|--------------------------------|--------------------------|----------|----------|----------|---------------------------|----------------------|--------------|------------------|
| Type                   | Number of strings of batteries | Autonomy time in minutes |          |          |          | Dimensions D x W x H (mm) |                      | Weight (Kgs) |                  |
|                        |                                | 100% load                | 75% load | 50% load | 25% load | UPS                       | Battery internal     | UPS          | Battery internal |
| Long Autonomy          | 60                             | 7                        | 10       | 14       | 35       | 815 x 300 x 1000          | 592 x 250 x 826      | 40           | 173              |
| Long Autonomy          | 80                             | 16                       | 17       | 40       | 90       | 815 x 300 x 1000          | 592 x 250 x 826      | 40           | 226              |
| Long Autonomy          | 160                            | 25                       | 40       | 60       | 120      | 815 x 300 x 1000          | 592 x 250 x 826 (x2) | 40           | 226 (x2)         |