

| MODEL | MMUST-20R | MMUST-40R | MMUST-60R | MMUST-90R |
|------------------------------------|--|-------------------|----------------|---|
| Maximum system power | 20 kVA / 20 kW | 40 kVA / 40 kW | 60 kVA / 60 kW | 90 kVA / 90 kW |
| Module power | 10 kVA / 10 kW | | | 15 kVA / 15 kW |
| MAIN INPUT | | | | |
| Grid system | 3 Phases + Neutral + Ground standard (1P+N+G optional) | | | |
| Rated voltage / Frequency | 380V/400V/415V threephases with neutral, 220V/230V/240V singlephase, 50/60Hz | | | 380V/400V/415V threephases with neutral, 50/60Hz |
| Voltage range | Up 276 Vac; Down 132 Vac -20%~-40% rated power derating from 100%~80% | | | |
| Frequency range | 40-70Hz | | | |
| Power factor | >0.99 | | | |
| Current THDi | 4% | | | |
| BYPASS INPUT | | | | |
| Grid system | 3 Phases + Neutral + Ground standard (1P+N+G optional) | | | |
| Rated voltage / Frequency | 380V/400V/415V threephases with neutral, 220V/230V/240V singlephase, 50/60 Hz | | | |
| Voltage range | Default: -20% ~ +15% Selectable up to: -40% ~ +25% | | | |
| Frequency range | Selectable, ± 1 Hz ~ ± 5 Hz, default ± 2 Hz | | | |
| Bypass overload | 125%, long term operation 125%<load<130%, 10 minutes 130%<load<150%, 1 minute load>150%, 300 milliseconds | | | 110%, long term operation 110%<load<130%, 5 minutes 130%<load<150%, 1 minute load>150%, 300 milliseconds |
| OUTPUT | | | | |
| Rated voltage / Frequency | 380V/400V/415V threephases with neutral, 220V/230V/240V singlephase, 50/60 Hz | | | 380V/400V/415V threephases with neutral, 50/60 Hz |
| Power factor | 1 | | | |
| Voltage THDv | <1% (linear load); <5.5% (non-linear load) | | | |
| Voltage precision | 1.5% | | | |
| Transient response | <5% for step load (20-80%; 100-20%) | | | |
| Transient recovery | <30ms for step load (0-100%; 100-0%) | | | |
| Inverter overload | <102%, long term operation 110%, 60 minutes 125%, 10 minutes 150%, 1 minute >150%, 200 milliseconds | | | |
| Frequency regulation from battery | 50/60 Hz $\pm 0.1\%$ | | | |
| Synchronized range | Selectable, ± 1 Hz ~ ± 5 Hz, default ± 2 Hz | | | |
| Synchronized slew rate | Selectable, 0.1 Hz/S ~ 5 Hz/S, default 0.5 Hz/S | | | |
| Crest factor | 3:1 | | | |
| BATTERIES | | | | |
| Battery rate voltage | ± 240 VDC (selectable) | | | |
| Number of batteries * | Standard: 40 (20+20) batteries 12V Selectable: 32-44, if <40 a power derating must be applied | | | |
| Charger voltage precision | 1% | | | |
| Batteries arrangement | External | | | |
| Battery type | Pb / Ni-Cd | | | |
| SYSTEM | | | | |
| Efficiency | Normal operation: 95% Eco Mode operation: 99% Battery operation: 94,5% | | | |
| Display | LED + LCD Touch screen | | | |
| Protection degree | IP20 | | | |
| Interface | Standard equipment: RS232, RS485, dry contacts, EPO Optional: SNMP | | | |
| ENVIRONMENT | | | | |
| Operating temperature | 0 ~ 40 °C | | | |
| Storage temperature | -25 ~ 70 °C | | | |
| Relative humidity | 0 ~ 95% (no condensing) | | | |
| Noise (dBA at 1 meter far) | Maximum 56 dB | | | Maximum 58 dB |
| Altitude | <1000m; load derated 1% per 100m, from 1000 ~ 2000m | | | |
| MECHANICAL DATA | | | | |
| Power module dimensions W*D*H (mm) | 436*590*85 (2U) | | | |
| Power module weight (Kg) | 15,3 | | | 15,5 |
| Cabinet dimensions W*D*H (mm) | 485*697*398 (7U) | 485*697*575 (11U) | 485*751*1033 | |
| Cabinet weight (Kg) | 42 | 51 | 70 | |
| Colour | RAL 7021 | | | |

Note: technical specifications and data could be changed without notification

* Our standard battery cabinets are 20+20 batteries