

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 ±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, without derating			
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