



MINIMUST

10 - 90 kVA – Threephase Modular UPS

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Overview

MINIMUST is the innovative GTEC UPS that combines modular technology with low-medium power sizes.

Reliable and versatile, the system adapts to any type of applications.



MINIMUST Overview

PF1

Power Factor 1

with performance at the top of its category



Efficiency up to 95%

in Normal Mode



Modular architecture with
Hot Swap technology



Configuration flexibility
3/3, 3/1, 1/1



7" Colour
Touch Screen Display



- Rectifier and inverter with **IGBT technology**
- Standard programmable **clean contacts card**
- **Emergency Power Off** (EPO)
- **Digital microprocessor control with DSP** of the latest generation
- **Tropicalised boards** with high reliability
- **Hot Swap** Control and Bypass Module

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Flexible range



10 - 20
kVA



10 - 40
kVA



15 - 90
kVA

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Modular architecture



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Modular architecture



Hot Swap
modules



Redundancy
N+1



Can be installed
in 19" cabinets

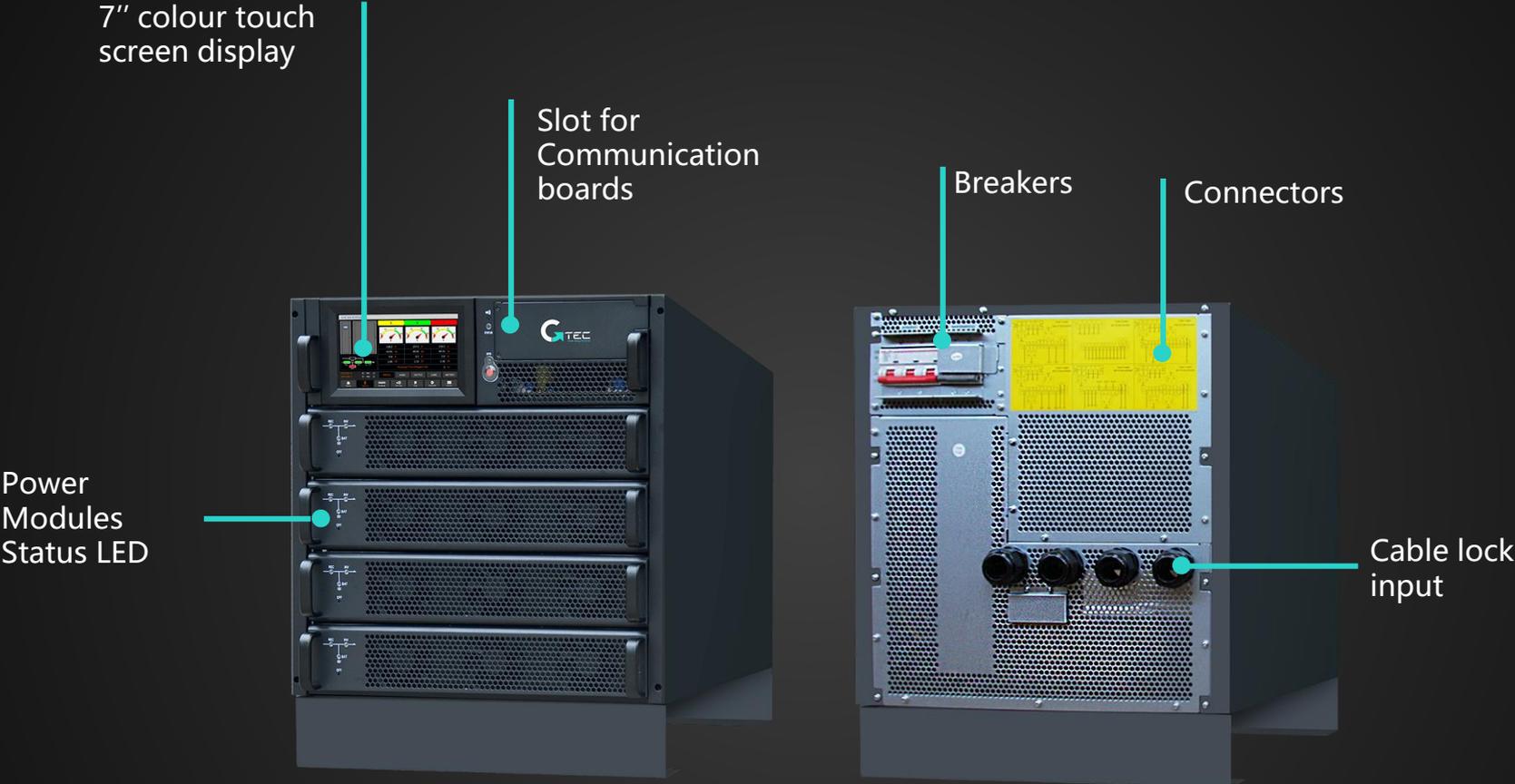


Smart Parallel
management



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Connections and interface





MINIMUST is equipped with an **advanced 7" colour touch screen display** that allows to quickly monitor the status of the system, as well as directly set the main settings.



UPS is equipped with professional **monitoring software** to display information in real time through a clear and intuitive screen, highlighting the operating status and main parameters of the UPS.



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Advanced communication



System main data screen



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Advanced communication



Battery status information screen



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Advanced communication



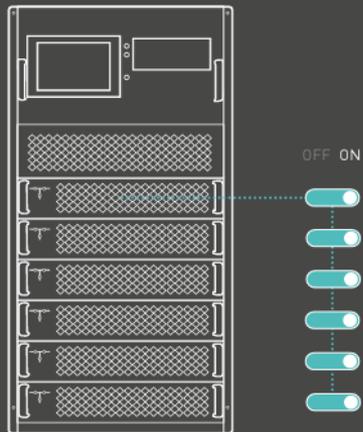
Information screen on the status of power modules



MINIMUST Smart Parallel Management

DAYTIME LOAD / FULL LOAD
75 kVA (n+1)

NORMAL OPERATION

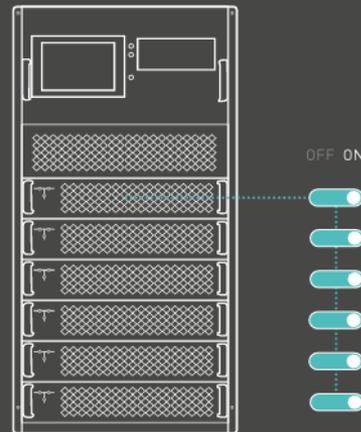


Working modules 6
Module's power 12,5 kVA
System efficiency **95%**

NIGHT LOAD / VARIABLE LOAD
15 kVA (n+1)

OPTION A

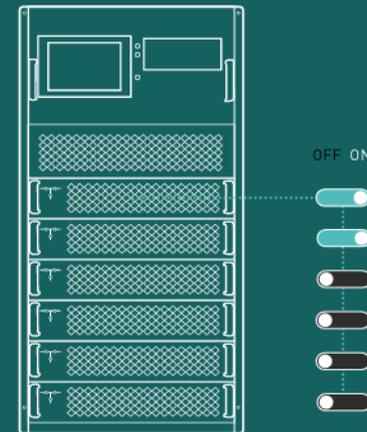
NORMAL OPERATION



Working modules 6
Module's power 2,5 kVA
System efficiency **89%**

OPTION B

SMART PARALLEL MANAGEMENT



Working modules 2
Module's power 7,5 kVA
System efficiency **95%**

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

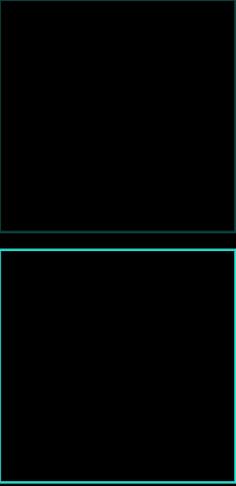
SYSTEM	
Efficiency	Normal operation: 95% Eco Mode operation: 99% Battery operation: 94,5%
Display	LED + LCD Touch screen
Protection degree	IP20
Interface	Standard equipment: RS232, RS485, dry contacts, EPO Optional: SNMP

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



Thanks for your attention

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