



Mini MUST Online UPS

10-60 kVA 3/3, 3/1, 1/1
15-90 kVA 3/3



- + SERVERS
- + DATA CENTERS
- + MISSION CRITICAL
- + TELECOMMUNICATIONS DEVICES
- + INDUSTRIAL APPLICATION



Smart Energy
Solutions

The System

2

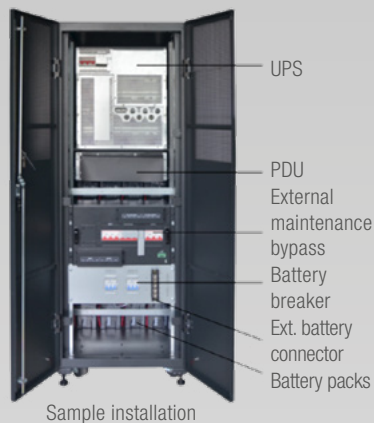
The first UPS in a rack that combines compact size, ease of use and installation flexibility



- + MODULAR DESIGN
- + HIGH POWER DENSITY
- + SUITABLE FOR RACK APPLICATION
- + ULTIMATE VERSATILITY (3/3, 3/1, 1/1)
- + HIGH EFFICIENCY

MiniMUST can be easily adapted to any type of installation thanks to the possibility to operate indifferently as 3/3, 3/1 or 1/1. The Coated boards make it a solution suitable for harsh environments and it increases the reliability and expected life obtaining a result among the most important in the market.

Product Design

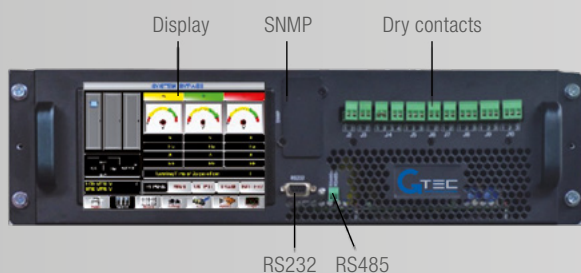


- + HOT SWAPPABLE MODULE
- + HOT SWAPPABLE BYPASS

MiniMust cutting edge architecture allows during maintenance to carry out the hot swapping of modules and the bypass.

Minimust can be installed as stand alone solution or it can be inserted in existing standard 19" cabinet.

Interface



7" colored touch screen easy to use with total control of parameters, setting and status of the system

Programmable dry contact for easier integration in local monitoring system

SNMP option for web monitoring

RS232 and RS485 communication port

Product range

MAXIMUM FLEXIBILITY IN YOUR HANDS



MINIMUST 10/20 KVA

This system is built to host 2 units of power module 10 kVA . It is an ideal solution for a low/medium load that requires redundancy or the possibility to expand the power in the future.

Maximum power 20 kVA cosphi = 1.



MINIMUST 10/40 KVA

This system is built to host 4 units of power module 10 kVA . It is an ideal solution for a medium load that requires redundancy or the possibility to expand the power in the future.

Maximum power 40 kVA cosphi = 1.

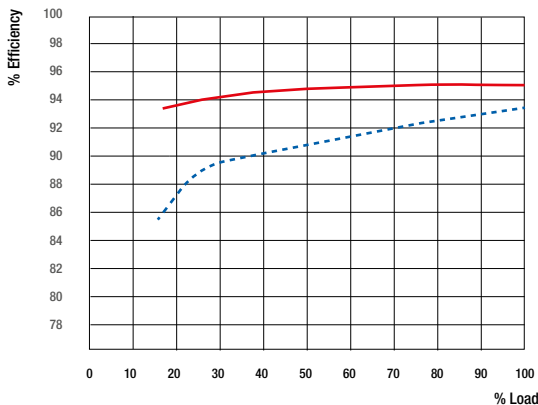


MINIMUST 10/60-15/90 KVA

This system is built to host 6 units of power module 10 kVA or 15 kVA. It is an ideal solution for a medium load that requires redundancy or the possibility to expand the power in the future.

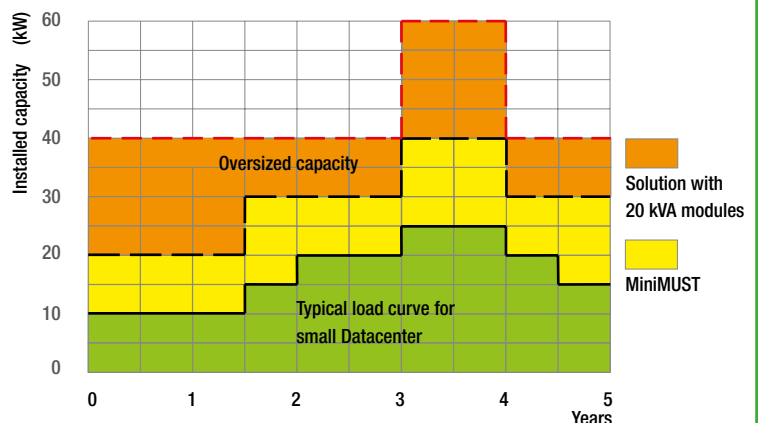
Maximum power 90 kVA cosphi = 1.

Green Technology



- + High efficiency provided by the most recent electronic technology (95% normal mode, 99% eco mode).
- + Flat curve of efficiency in a large power range that minimizes energy losses at lower load.

+ Excellent input and output electrical performances such as very low harmonic distortion to the mains, which means a clean electrical network without disturbances to other critical loads, as well as lower energy losses.



Technical Specifications

Rev. 16/06/2017

MODEL	10 KVA - 60 KVA	15 KVA - 90 KVA				
	10 kW - 60 kW	15 kW - 90 kW				
MAIN INPUT						
Input Voltage	380V/400V/415V (three phases with neutral) 220V/230V /240V (singlephase)	380V/400V/415V (three phases with neutral)				
Input frequency	50/60Hz					
Power factor	>0.99					
Input voltage window	up 276 Vac ; down 132 Vac -20%~-40% rated power derating from 100%~80%					
Frequency window	40-70Hz					
BATTERY						
Battery voltage	±240VDC					
Type	VRLA AGM/GEL; Ni-Cd					
BYPASS						
Bypass voltage	380V/400V/415V (three phases with neutral) 220V/230V/240V (singlephase)					
Bypass voltage window	-20%+15% default; -40%+25% selectable					
Bypass overload capability	125%, long time operation 125%< load <130%, last for more than 10 mins 130%<load<150%,last for more than 1 min load>150%, last for more than 300ms	110%, long time operation 110%< load <130%, last for more than 5 mins 130%<load<150%,last for more than 1 min load>150%, last for more than 300ms				
OUTPUT						
Output Voltage	380V/400V/415V (three phases with neutral) 220V/230V /240V (singlephase)	380V/400V/415V (three phases with neutral)				
Voltage precision	1.5%					
Voltage THD(Total Harmonic Distortion)*	THD<1%(linear load), THD<5.5%(nonlinear load)					
Power factor	1					
Phase tolerance	120°±0.5° (balance and unbalance load)					
Crest factor	3:1					
Overload capability	<102%, long time 110%, transfer to bypass after 60minutes 125%, transfer to bypass after 10 minutes 150%, transfer to bypass after 1 minute >150%, transfer to bypass after 200ms					
SYSTEM						
System efficiency*	Normal mode: 95% ECO mode: 99%					
Battery mode efficiency*	94,5%					
Display	7" touched colorful LCD+LED					
IP class	IP20					
Interface (Communication Ports)	RS232,RS485,Dry contactor,SNMP card(optional),EPO					
Installation/Connection	Back or bottom cable entry					
Operation temperature	0-40°C					
Storage temperature	-25°C~70°C					
Relative humidity	0-95% (non-condensing)					
Noise(dB)(1m away from front panel)	56dB (one module)	58dB (one module)				
Dimension(W*D*H)mm Net Weight(kg)	6-module cabinet: RM060/10X	485*751*1033	70	6-module cabinet:RM090/15X	485*751*1033	70
	4-module cabinet: RM040/10X	485*697*575 (11U)	51			
	2-module cabinet: RM020/10X	485*697*398 (7U)	42			
	Power Module: PM10X	436*590*85 (2U)	15,3	Power Module: PM15X	436*590*85 (2U)	15,5
Standards	European directive: L V 2014/35/EU Low voltage directive; EMC 2014/30/EU Electromagnetic compatibility directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2 Classification according to IEC 62040-3 (Voltage Frequency Independent) VFI - SS - 111					

*Tested in 3/3 mode

Note: product specifications are subject to change without further notice.



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