

# **Online UPS** MU9020 HF G5

20 kVA (3:1/1:1)PF1.0



#### Features

- Advanced DSP and 3-level technology
- Output power factor 1.0
- Active power factor correction (APFC), input power factor up to 0.99
- High efficiency 95% (up to 98% in ECO mode)
- Advanced digital parallel technology
- 3:1 to 1:1 model settable
- Wide input voltage range (190 ~ 499 Vac) and frequency range (40 ~ 70 Hz)
- 50 / 60 Hz frequency auto sensing
- Two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Dual-input design, supporting independent bypass
- Flexible battery configuration (settable 16 20 pcs batteries)
- Digitally controlled charger
- High charging current available (Max. 10 A)
- Charging voltage and current configured by demands
- Linear derating in low voltage input reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic floating / equalizing charge control, charger dormancy control, increasing battery life by 50%

## Rear Panel

- 1. RS232
- 2. EPO
- 3. Parallel Port (optional)
- 4. USB (optional)
- 5. Temperature Detection (optional)
- 6. Intelligent Slot
- 7. Reserved: for manual bypass or battery breaker or outlets ect.
- 8. Fans
- 9. Bypass Breaker
- 10. Input Breaker
- 12.Terminals and Cover

- Ability to switch on the UPS with batteries
- Settable delayed start time when mains power is restored, reducing the impact on power grid or generator
- Fan speed varies intelligently with temperature, reducing noise and extending its service life
- Equipped with self-aging function
- Compact internal layout, miniaturized the complete unit for small
- LCD+LED display, multi-functional keys operation, friendly humanmachine interface
- Powerful background software for parameters configuration
- Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
- Effective software and hardware protection function, robust selfdiagnostic function, and abundant event log for check

#### Available Options

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD, and SMS alarms



20 kVA (H)

### **Specifications**

MODEL	MU9020 HF G5
Capacity	20 kVA / 20 kW
INPUT	
Input wiring	Three-phase five-wire (3 Φ + N + PE)
Rated voltage	380 / 400 / 415 Vac
Voltage range	190 ~ 305 Vac (linear derating between 50% and 100% load); 305 ~ 499 Vac (no derating)
Rated frequency	50 / 60 Hz (auto-sensing)
Frequency range	40 ~ 70 Hz
Power factor	≥ 0.99
Bypass voltage range	- 40% ~ +15% (settable)
Total harmonic distortion (THDi)	≤ 5%
OUTPUT	
Output wiring	Single-phase three-wire (1 Φ + N + PE)
Rated voltage	208 (PF=0.9) / 220 / 230 / 240 Vac
Voltage regulation	± 1%
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz $\pm$ 0.1% Hz in battery mode
Waveform	Sinusoidal
Power factor	1
Total harmonic distortion (THDv)	≤ 1% (linear load); ≤ 3% (non-linear load)
Crest factor	3:1
Overload	102% ~ 110% for 10 min, 110% ~ 125% for 1 min, 125% ~ 150% for 30 s
BATTERIES	
DC voltage	192 Vdc (192 ~ 240 Vdc settable)
Number of battery	16 pcs (16 ~ 20 settable)
Inbuilt battery (standard model)	12V / 7 Ah x 32
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Charging current	Standard model: 1 A; Long time model: 5 A (default), 1 ~ 5 A settable; 10 A (optional)
Recharge time	Standard model: 90% capacity restored in 8 hours; Long time model: depend on the capacity of battery
SYSTEM	
Efficiency	≥ 94% at 100% load, max. 95% at 60% load, ≥ 98% in ECO mode
Transfer time	0 ms
Protections  Max. number of parallel	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and fan failure
connections	4
Communications	RS232 (standard), USB / RS485 / dry contacts / SNMP / battery temperature compensation (optional)
Display	LCD + LED
OTHERS	
Operating temperature	0°C ~ 40°C
Storage temperature	-25℃ ~ 55℃ (without battery)
Relative humidity	0 ~ 95% (non-condensing)
Altitude	≤ 1000 m, derating 1% for each additional 100 m
IP rating	IP 20
Noise level at 1 m	≤ 58 dB
Dimensions (W $\times$ D $\times$ H) (mm)	191 × 495 × 515 (H)
Packaged dimensions (W × D × H) (mm)	285 × 593 × 618 (H)
Net weight (kg)	26.5 (H)



S means standard model; H means long time model.
 All specifications are subject to change without notice.