Aytemiz MAKELSAN®
Uninterruptible Power Supplies/Generator

POWER FORLIFE



HF SERIES T3
ON-LINE UPS

10-30 kVA 3:1 PHASE
10-60 kVA 3:3 PHASE

- True 3-Level Rectifier & Inverter Technology
- Ultra-High Energy Efficiency
- Easy Synchronization with External Sources
- DSP-Controlled Double-Conversion Technology
- Internal Isolation Transformer

DATA CENTER | MEDICAL | INDUSTRIAL | TRANSPORT | EMERGENCY

3-LEVEL TECHNOLOGY | VFI TYPE ON-LINE UPS | TOWER | 24H SERVICE

Dahili İzolasyon Trafosu ile Daha Yüksek Güvenilirlik

• Yeni nesil 3 level teknolojisine sahip, yüksek verimlilik, yüksek güvenilirlik ve sağlamlığın mükemmel bileşimi olan, online 3 fazlı kesintisiz güç kaynağı HF Ailesinin LevelUPS T3 üyesi bir çok endüstrinin ve özellikle medikal sektörünün daha güvenilir güç talebini karşılamak için tasarlanmıştır.

• Gerçek 3 level doğrultucu ve evirici teknolojisi ve dahili standard izolasyon trafosu ile HF Ailesinin LevelUPS T3 üyesi, veri güvenliği ve tüm diğer kritik uygulamalarda endüstrinin en güvenilir UPS sistemlerinden biridir.

BUREAU VERITAS Certification
LEVELUPS Serisi Bureau Veritas tarafından Avrupa Ürün Performansı standardına göre sertifikalandırılmıştır. (EN 62040-3)

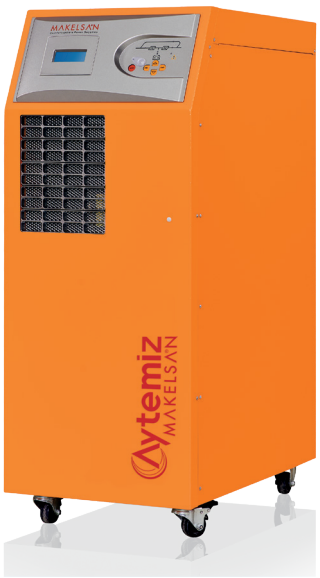
TSE TSE-HYB CE

Compact Design

- Designed with an Integrated transformer ensuring galvanic isolation on the output for ultimate safe installation.
- Easyto install and service and can be integrated into harsh commercial and industrial environments.
- Compactfootprintand matching batterycabinets

Low Total Cost of Ownership

- Less energy consumption to supply the loads thanks to high efficiency.
- Reduced energy loss.
- Reduced electricity usage and aır conditioning requirements.
- Reduction in operating cost of UPS.
- IGBT based power factor correction technology provides input power factor close to 1 (e:: 0,99). The high input power leads to reduced electricity pay-out, minimizes cable, switchboard, fuse and generator requirements, thus red uci ng i nvestment cost.
- Low input current total harmonic distortion (THDi) less than%3 helps to avoid the disturbance and expensive harmonic filters.
- Small footprint and easy maintenance



HF SERIES

Maximum Availability

- Parallel configuration allows up to 8 units for redundancy (N+1) and power increase
- Loop connection helps the UPS system to continue the operation when the connection cable is inturrupted.

Standard Electrical Features

- Parallel-Redundant (N+X) Systems
- Co-Againg
- Dual Input
- Common Battery
- Beckfeed Protection
- Cold Start (Optional)
- Advanced Battery Management
- Short-Circuit and Overload Protection
- Parallel Connection Ready
- Redundant Power Supply
- Power Walk-in (progressive rectifier start when mains returns)
- Battery Temperature Sensor
- Static and Manual Bypass Operation

Advanced Communication Features

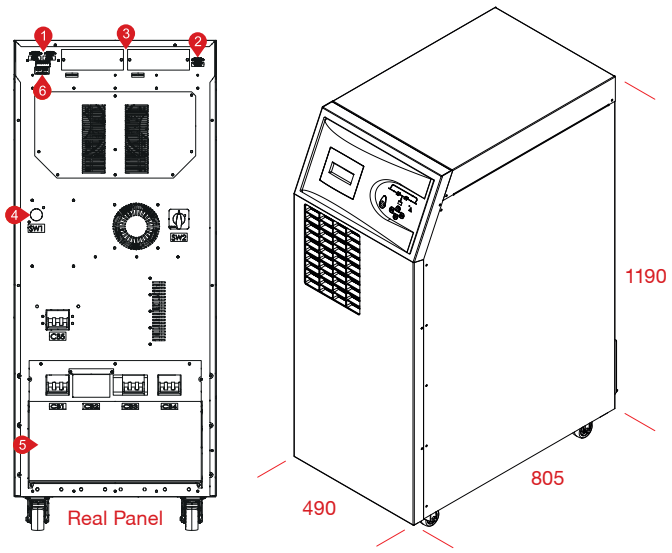
- 1500 Real-Time Event Log with Detailed Parameters
- User-Friendly Multilingual 320x240 Graphical Display
- Operating Information
- Monitoring and Shutdown Software
- RS232 Serial and RS485 Ports
- 2 Communication Slots
- ModBUS RTU / ModBUS TCP (Optional)
- Remote Emergency Power Off (Optional)
- Remote Display Panel (Optional)
- Dry Contact (Optional)
- SSNMP (Optional)
- ProfiBUS (Optional)

Flexibility

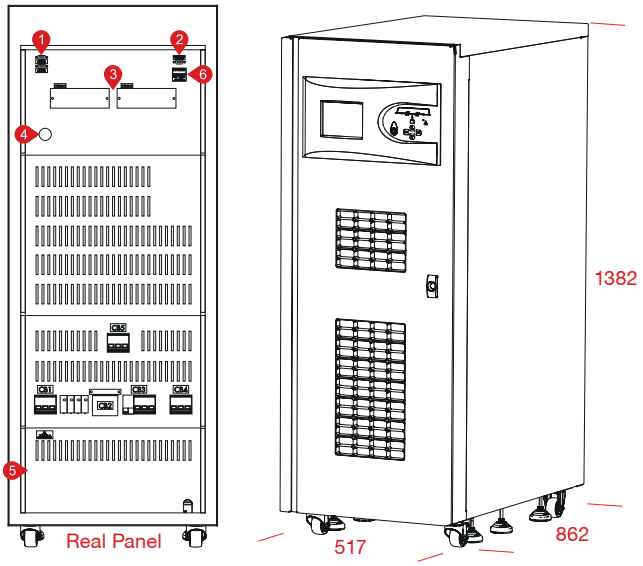
- Temperature sensor for external battery cabinets for extended runtime.
- External battery cabinets for different battery sizes are designed to provide long backup times.
- Different sizes (10–40 kVA) cabinets for larger capacity of internal batteries when long autonomy times are reqired.
- 3/1 phase version is available for 10–30 kVA power ratings frequency converter mode.
- Isolation transformers for changing the neutral connection in different power supply configurations or providing galvanic isolation between input and output.
- EN 50171 compliant version for supplying emergency lighting systems.

DETAILS

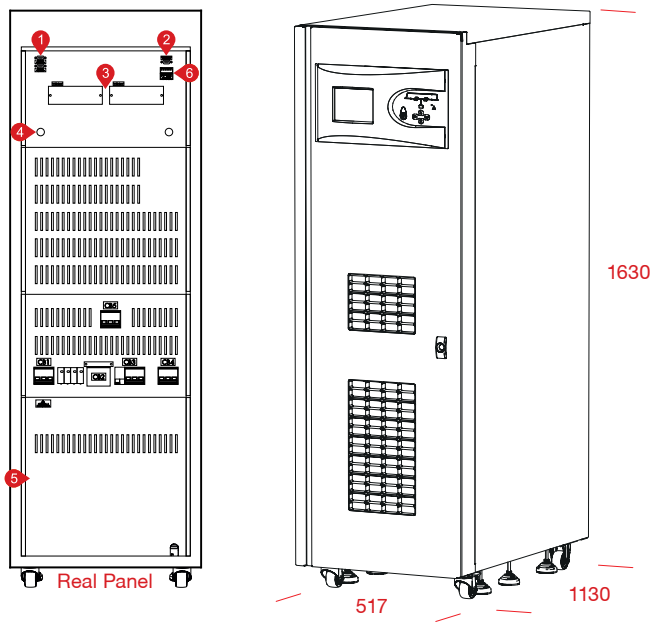
HF SERIES T3 10-15 kVA PF:0.9 Optional(1 ve 0.8)



HF SERIES T3 20kVA (0.9) 15 kVA PF:1



HF SERIES T3 30-40-60 kVA PF:0.9 (Optional 0.8 / 1)



1. Parallel Port Terminal
2. RS232 Terminal
3. Optional Card Slots
4. DC Bus Boost Button
5. Connection Terminal
6. xternal Battery Temperature Sensor Terminal

MODEL		HF SERIES T3 ON-LINE UPS 10-60 kVA 3:3PHASE 10-30 3:1 PHASE						
Capacity		10kVA	15kVA	15kVA	20kVA	30kVA	40kVA	60kVA
Power Watt		9kW	13.5kW	13.5kW	18kW	27kW	36kW	54kW
INPUT								
Nominal Voltage		380/400/415 VAC 3 P+N+PE (Optional 220/380 VAC -37% +22% 3 P+N+PE)						
Voltage Tolerance		- 15% +18%						
Frequency Tolerance Range		50 / 60 Hz ±%10 (Selectable)						
Power Factör		>0.99						
Total Harmonic Distortion (THDi)		<3%						
ÇIKIŞ								
		0.9 (optional 0.8/1)		1	0.9	0.9 (optional0.8/1)		
Voltage Range		380/400/415 VAC 3 Faz + N						
Voltage Tolerance		Static ±1, Dynamic ±3						
Efficiency		95%						
Frequency Tolerance Range		50Hz / 60Hz ±0,01 (Battery Mod)						
THD (THDv)		Linear Load < 2%, Non-Linear Load < 5%						
Crest Factor		3:1						
Overload Capacity*		At 125% Load 10min, at 150% Load 1min						
Frequency	AC Mod	±1%, ±2% , ±4%, ±5%, ±10% (Optional)						
	Battery Mod	50/60 ±0.1Hz						
STATIC BYPASS								
Nominal Voltage		380/400/415 VAC 3 P+N						
Voltage Tolerance		±15% (±1% – ±25% onfigurable within the range)						
Frequency Tolerance		±5% (±1% – ±25% onfigurable within the range)						
BATTERY								
Quantity (12V DC VRLA)		60						
Charging Capacity		25% of Active Power (Nominal 0,1 C10, Adjustable)						
ENVIRONMENTAL								
Operating Temperature		For UPS 0°C/ +40°C For Battery+ 15°C/ +25°C						
Storage Temperature		For UPS -15°C/ +45°C For Battery 0°C/ +30°C						
Protection Class		IP20						
Humidity		%0-95 ((Without Condensation)						
Altitude		< 1 000m: Correction Factor 1, <2000m: Correction Factor >0. 92, <3000m: Correction Factor >0.84						
Noise Level		<53dBA		<55dBA		<60dBA		
COMMUNICATION								
Communication Port		Rs232 Standart, RS485 and SNMP Adapter Option						
STANDARTLAR								
Quality		ISO 9001, ISO 14001, ISO 45001, ISO 10002, CE, TSE, TSE-HYB						
Performance		EN62040-3 (VFI-SS-111, Bureau Veritas Certified)						
EMC/LVD		EN62040-2, EN62040-l, TS EN ISO/IEC 17025 Acredited Test Report						
DIMENSIONS & WEIGHT		10kVA	15kVA	15kVA	20kVA	30kVA	40kVA	60kVA
Cabinet Dimensions(mm)	Width	490			517	517		
	Depth	805			862	1130		
	Height	1190			1382	1630		
Net Weight (kg)		235	260		350	343	452	785
Packaging Dimensions (mm)	Width	600			670	620		
	Depth	900			900	1180		
	Height	1400			1630	1830		
Gross Weight (kg)		260	285		375	403	512	855

* Under specific conditions,
3-phase input / 1-phase output version is available (10–30 kVA).

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