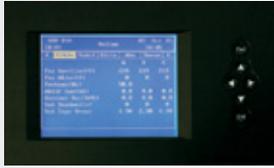


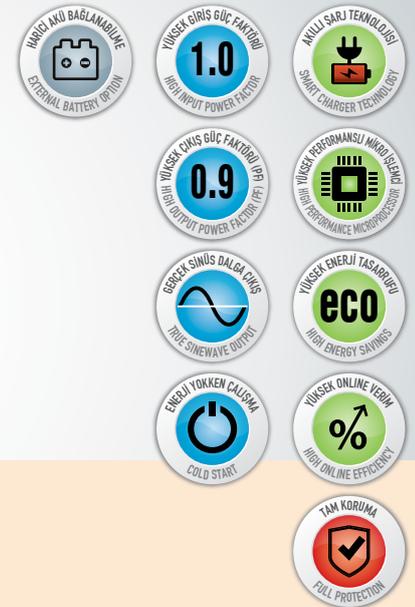
TUNCMATIK
MODULTECH
30- 1560 kVA
ONLINE MODULAR UPS



UPS Cabinet Control Panel



Module Control Panel



Why modular UPS

The most pronounced advantage of modular UPSs is the fact that they can exhibit higher powers at a smaller space. Maximum available power must be supplied for critical applications such as data centers, where the available space for UPS installation is very limited and costly. Modular UPSs meet this requirement. Modular UPSs also consume less electrical energy due to their high operating efficiencies and hence pay off their initial investment in a short period of time.

Advantages of a modular structure:

- Fast installation
- Fast maintenance with no interruption in operation
- Low maintenance cost
- Low cost of capacity increase
- N+X redundant mode of operation
- Plug-and-play type power modules
- Flexibly scalable UPS cabinet
- Flexibly scalable battery cabinets

Modular systems for increasing capacity and high reliability

- Highly reliable N+X architecture
- kVA=kW, more active power owing to unity output power factor (It is possible to connect more loads to the output of same power rated UPS)
- As your business grows, the capacity can be increased when needed due to its modularity (Possibility of expanding capacity by virtue of horizontal and vertical architecture)
- High efficiency (low electric energy bills)
- Fast and easy service due to modular structure (reduced service and maintenance costs)
- No harmonic related problems on the utility mains due to its low input current THDi value (Increase in overall efficiency of the facility power distribution system)
- Common battery for more than one UPS module

- Wide range of input voltage and input frequency (Compatible with the electrical operating conditions worldwide)

Capacity increase with the growth of your business

Best possible architecture to meet the needs of capacity increase in the future.

For example, 240kVA UPS can be built for a data center by assembling eight 30kVA UPS modules in a ten-rack capable cabinet. There will be two racks unoccupied. When the load increases in the data center, then the capacity of the UPS can be readily increased up to 300kVA just by adding two 30kVA modules in the cabinet without paying an extra installation cost.

High input power factor

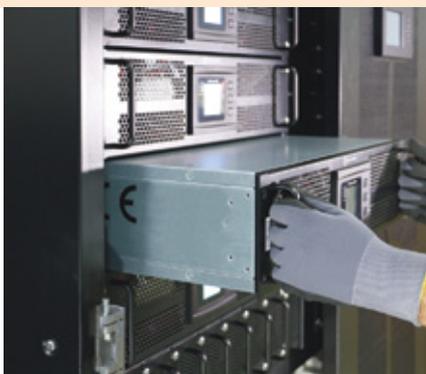
Power supplies draw from the mains not only active electrical energy, but also reactive electrical energy. High reactive energy drawn by power supplies increases power losses and hence the electric bills.

PF values close to unity, as is the case with MODULTECH UPS, result in a low reactive power consumption and consequently reduced electric power losses.

Low input current harmonics

It is a measure of how much the input current drawn by UPS from the mains deviates from sinusoidal waveform. THDi stands for Total Harmonic Distortion in current. With a quality UPS equipment, it is expected that this value be low. Currents which are rich in harmonics increase power losses and supply voltage distortions. Other electrical and electronic devices fed from the same distorted voltage bus get reverse affected.

MODULTECH UPSs meet the electrical standards with their low THDi values less than 3%.



Where to use

MODULTECH series UPSs can be used reliably as a power supply of critical loads for which uninterrupted operation is a must.

- Data centers • Hospitals • Airports • Factories • Lighting
- Emergency power systems • Smart buildings



TECHNICAL SPECIFICATIONS



TUNCMATIK
MODULTECH
20-1560 kVA
ONLINE MODULAR UPS



CAPACITY		300 kVA	520 kVA
Capacity (VA/Watts)	UPS cabinet	300 kVA / 300 kW	520 kVA / 520 kW
	Module	30 kVA / 30 kW	40 kVA / 40 kW
INPUT			
Nominal voltage	380/400/415 VAC, (3Ph+N+PE)		
Voltage range	208-478 VAC		
Frequency range	40 - 70 Hz		
Power factor	≥ 0.99		
Bypass voltage range	Max. voltage: 220V +25% (optional +10%, +15%,+20%) 230V 20% (optional +10%, +15%) 240V 15% (optional +10%) Min. voltage -45% (optional -20%, -30%) Frequency protection range: ±10%		
Harmonic distortion (THDi)	2% (100% nonlinear load)		
Generator input	Support		
OUTPUT			
Output voltage	380/400/415 VAC, (3Ph+N+PE)		
Voltage regulation	± 1%		
Power factor	0.9/1 (Customized)		
Output frequency	1. Line mode: ±1%, ±2%, ±4%, ±5%, ±10% / 2. Battery mode: {50/60 ±0.1%} Hz		
Crest factor	3:1		
Harmonic distortion (THDi)	≤ 2% with linear load / ≤ 5% with non linear load		
Efficiency	95.5%		
BATTERY			
Battery voltage	± 240VDC; battery quantity (optional)		
Charge Current	UPS cabinet	100A (Max.)	130A (Max.)
	Module	10A (Max.) [charge current can be set according to battery capacity installed]	
Backup time	Depends on the capacity of external batteries		
SYSTEM FEATURES			
Transfer time	Utility to battery: 0ms; Utility to bypass: 0ms		
Overload	Line mode	Load ≤110%: last 60min, ≤125%: last 10min, ≤150% last 1min, ≤150% turn to bypass mode immediately	
	Battery mode	Load ≤110%: last 10min, ≤125%: last 1min, ≤150% last 1s, ≤150% shut down UPS immediately	
	Bypass mode	Breaker (10kVA: 20A / 15kVA: 32A / 20kVA: 40A)	
Short circuit	Hold whole system		
Noise suppression	Complies with EN62040-2		
Communication interface	UPS cabinet: RS232, RS 485, Dry contact, Intelligent slot x 2 (SNMP card, Relay card optional)		
ENVIROMENTAL			
Operating temperature	0 ~ 40 °C		
Storage temperature	-25 ~ 55 °C		
Humidity range	0 ~ 95% (non condensing)		
Altitude	< 1500m		
Noise level	< 65dB		
DIMENSIONS & WEIGHT			
Dimension D x W x H (mm)	UPS cabinet	600 x 1100 x 2000	860 x 1200 x 2000
	Module	443 x 580 x 131 (3U)	
Net weight (kg)	UPS cabinet	310	860
	Module	33	35
INDICATORS & ALARM			
LCD Panel	UPS status, Load level, Battery level, Input/Output voltage, Discharge timer, Fault conditions		
Alarm	Battery mode, Low battery, Overload, Fault		
STANDARTS & CERTIFICATION			
Security	IEC/EN62040-1, IEC/EN60950-1		
EMC	IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8		