

FARPAK

EP

TL C Series 10~200Kva 3:3phase



High reliability design

- Wide input voltage range 138-485Vac (Phase voltage 80-280Vac),no derating when input voltage \geq 305Vac.

Power saving

- High input power factor,it can be up to 0.99.
- Three level inverter topology, the efficiency can be up to 96%.

Parallel redundancy function

- Support parallel expanded operation:maximum is 6 units.
- Support sharing batteries for the UPS in parallel.

Flexible battery configuration

- Batteries number of each group can be selected from 30 pieces to 50 pieces.
- Large charging current can meet the requirement of long time backup.

Strong load capacity

- Output power factor is 1.0, UPS can supply power to 100% unbalance load.
- High adaptability for load, it can connect full inductive load or capacitive load.

Compatible with generator

- Power Walk In function,it can reduce the start current impact to system, and it can reduce the capacity of generator.

LBS function

- LBS function can realize 2 independent UPS system work in synchronization, and it enhances the reliability of the system.

Intelligent management

- Support RS485, RS232, SNMP, dry contact card.



Technical Specifications

MODEL	TLC10	TLC15	TLC20	TLC30	TLC40
Capacity (VA/Watts)	10K / 9K	15K / 13.5K	20K / 18K	30K / 27K	40K / 36K
INPUT					
Nominal Voltage	380/400/415Vac(3Ph+N+PE)				
Operating Voltage Range	208-478Vac@half load; 305-478Vac@full load				
Operating Frequency Range	50Hz: 45-55Hz, 60Hz: 54-66Hz				
Power Factor	≥0.99				
Bypass Voltage Range	Max.voltage: 220V: +25%(Optional +10%,+15%,+20%)				
	230V: +20%(Optional +10%,+15%)				
	240V: +15%(Optional +10%)				
ECO Range	Min. voltage: -45% (Optional -10%, -20%, -30%)				
Harmonic Distortion (THDi)	Same as bypass				
OUTPUT					
Output Voltage	380/400/415Vac(3Ph+N+PE)				
Power Factor	0.9				
Voltage Regulation	±1%				
Frequency	Line Mode	±1%/ ±2%/ ±4%/ ±5%/ ±10% of the rated frequency(Optional)			
	Bat. Mode	50/60(1 ± 0.1%)Hz			
Crest Factor	3:1				
Harmonic Distortion (THDv)	≤2% with linear load				
	≤5% with non-linear load				
Waveform	Pure Sinewave				
Transfer Time	Utility to Battery : 0ms; Utility to Bypass: 0ms				
EFFICIENCY					
Efficiency	95%				
BATTERY					
Battery Voltage	Standard unit	± 120Vdc (20pcs 12V9AH)	± 120Vdc (2x20pcs 12V9AH)	± 120Vdc (3x20pcs 12V9AH)	N/A
	Long run unit	Selectable Voltage: ± 96V/ ± 108V/ ± 120Vdc			
Charging Current (A)	Standard unit	1.35	2.7	4.05	N/A
	Long run unit	Max.current 10A		Max.current 20A	Max.current 20A
PROTECTION					
Overload	Line Mode	Load ≤ 110%: last 60min, ≤ 125%: last 10min, ≤ 150%: last 1min, ≥ 150% turn to bypass mode immediately			
	Bat. Mode	Load ≤ 110%: last 10min, ≤ 125%: last 1min, ≤ 150%: last 5S, ≥ 150% shut down UPS immediately			
	Bypass Mode	20A(Input breaker)	32A(Input breaker)	40A(Input breaker)	63A(Input breaker)
Short Circuit	Hold Whole System				
Overheat	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately				
Battery Low	Alarm and Switch off				
INDICATORS					
Audible & Visual Alarms	Line Failure, Battery Low, Overload, System Fault				
Status LED & LCD Display	Line Mode, Backup Mode, Eco Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault				
Parameters On The LCD Panel	Input/Output Voltage, Input/Output Frequency, Load Level, Battery Level, Inner Temperature & Remaining Battery Backup Time				
MANAGEMENT					
Communication Interface	RS-232,RS-485,USB,Parallel card, SNMP card(Optional), Relay card (Optional),Battery temperature sensor(optional)				
ENVIRONMENT					
Operating Temperature	0 ~ 40°C				
Storage Temperature	-25 ~ 55°C				
Humidity Range	0 ~ 95% (Non-condensing)				
Altitude < 1500m					
Noise Level	<55dB		<58dB		<70dB
PHYSICAL					
Dimension W × D × H (mm)	250x828x868				
Net Weight (kg)	115/57	170/63	171/64	223/71	73
STANDARDS					
Noise Suppression	Complies with EN62040-2				
Safety	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				

Specifications are subject to change without prior notice.

Technical Specifications:

	TLC50	TLC60	TLC100	TLC120	TLC150	TLC160	TLC180
Capacity (VA/Watts)	50k / 50k	60k / 60k	100k / 100k	120k / 120k	150k / 150k	160k / 160k	180k / 180k

INPUT

Nominal voltage	380/400/415Vac, (3Ph+N+PE)
Operating voltage range	138~485Vac for 40%load; 305~485Vac for full-load
Operating frequency range	40~70Hz
Power factor	≥0.99
Harmonic distortion (THDi)	≤3% (100% linear load)
Bypass voltage range	220Vac Max.voltage: +25%(optional +10%,+15%,+20%) 230Vac Max.voltage: +20%(optional +10%,+15%) 240Vac Max.voltage: +15%(optional +10%) Min. voltage: -45% (optional -20%,-30%) Frequency synchronize tracing range: ± 10%
Generator input	Support

OUTPUT

Output voltage	380/400/415Vac (3Ph+N+PE)
Voltage regulation	± 1%
Power factor	0.9 & 1
Output frequency	1.Line Mode: synchronize with input; when input frequency > ± 10% (± 1%/± 2%/± 4%/± 5% optional), output (50/60± 0.1)Hz. 2.Battery Mode:(50/60± 0.1)Hz
Crest factor	3:1
Harmonic distortion (THDv)	≤ 1% with linear load ≤ 4% with non linear load
Efficiency	96%

BATTERY

Battery voltage	Optional Voltage: ± 180V/ ± 192V/ ± 204V/ ± 216V/ ± 228V/ ± 240/ ± 252/ ± 264/ ± 276/ ± 288/ ± 300Vdc(30/32/34/36/38/40/42/44/46/48/50pcs optional); 360Vdc~600Vdc (30~50 pcs, 36 pcs default, 36 to 50 pcs output power factor 1.0; 32~34 pcs output power factor 0.9; 30 pcs output power factor 0.8;)		
Charge Current(A) (charge current can be set according to battery capacity installed)	Max.current 20A	Max.current 40A	Max.current 60A

SYSTEM FEATURES

Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms		
Overload	INV Mode	110% overload for 60 min; 125% overload for 10 min; 150% overload for 1 min	
	Bypass Mode	135% overload for long time; >1000% overload for 100 ms	
Backfeed protection	Support		
Alarm	Overload, utility abnormal, UPS fault, battery low, etc.		
Protection	Short circuit, overload, over temperature, battery low, fan fault alarm.		
Remote LCD	Support		
Communication	USB, RS232, RS485, Parallel port, Coupler dry contact, Intelligent slot, LBS, SNMP card (optional), Relay card (optional)		

ENVIRONMENTAL

Operating temperature	0°C ~ 40°C		
Storage temperature	25°C ~ 55°C (no battery)		
Humidity range	0 ~ 95% (non condensing)		
Altitude	< 1500m.When>1500m		
Noise level	<55dB	<58dB	<60dB
			<62dB
			<63dB
			<64dB

PHYSICAL

Dimension D × W × H (mm)	828x250x868			850x442x1200			
Net weight (kg)	80	83	147	152	180	190	200

STANDARDS

Safety	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		

Specifications subject to change without prior notice.