

# TEOS

## 10-200kVA INDUSTRIAL UPS

UPS τριφασικής εισόδου και μονοφασικής ή τριφασικής εξόδου. Με υψηλό συντελεστή ισχύος εξόδου Power Factor έως 1, είναι ειδικά σχεδιασμένα ώστε να υποστηρίξουν servers, data centers, συστήματα ασφαλείας καθώς και βιομηχανικές εφαρμογές. Δυνατότητα παράλληλης σύνδεσης έως 6 παρόμοιων μονάδων και σύνδεσης με γεννήτριες.

*3 phase in / 1 phase out*  
*3 phase in / 3 phase out*



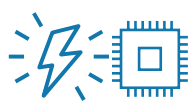
### ENHANCED POWER PROTECTION



TELECOM



BUILDING POWER  
INFRASTRUCTURE



CRITICAL  
LOADS



MEDICAL  
APPLICATIONS



SMALL DATA  
CENTERS



TRANSPORT  
INFRASTRUCTURE



INDUSTRIAL

## ΤΕΧΝΙΚΑ ΧΑΡΑΚΤΗΡΙΣΤΙΚΑ

- Τεχνολογία διπλής μετατροπής
- Τεχνολογία DSP που εγγυάται υψηλή απόδοση
- Συντελεστής ισχύος εξόδου έως 1
- Λειτουργία διόρθωσης συντελεστή ισχύος εισόδου σε όλες τις φάσεις
- Μετατροπέας συχνότητας με επιλογή 50Hz ή 60Hz
- Λειτουργία ECO για εξοικονόμηση ενέργειας
- Δυνατότητα διπλής εισόδου δικτύου (dual input - μόνο για μοντέλα 10K / 20kVA)
- Λειτουργία απενεργοποίησης έκτακτης ανάγκης (EPO)
- Συμβατότητα με γεννήτριες
- Οθόνη αφής 10" έγχρωμη
- Δυνατότητα πολλαπλών θυρών επικοινωνίας: USB + RS-232 (βασικός εξοπλισμός) / SNMP card (προαιρετικά)
- Έξυπνος σχεδιασμός φορτιστή 3 σταδίων για βέλτιστη απόδοση των μπαταριών και του χρόνου ζωής τους
- Προσαρμόσιμος αριθμός συσσωρευτών
- Μεταγωγικός διακόπτης συντήρησης (maintenance bypass)
- Δυνατότητα παράλληλης λειτουργίας N + X (προαιρετικά)
- Δυνατότητα μετασχηματιστή απομόνωσης (προαιρετικά) για την πλήρη απομόνωση και πλήρη απόσβεση θορύβου στον ουδέτερο

## GENERAL SPECIFICATIONS

- True double-conversion
- DSP technology guarantees high performance
- Output power factor up to 1
- Active power factor correction in all phases
- 50Hz/60Hz frequency converter mode
- ECO mode operation for energy saving
- Customized dual-mains inputs (10-20kVA)
- Emergency power off function (EPO)
- Generator compatible
- 10" color LCD touch screen
- Smart USB/RS-232 connectors and optional SNMP
- 3-stage smart charger design to optimize battery performance and life span
- Adjustable battery numbers
- Maintenance bypass available
- Optional N+X parallel redundancy
- Optional isolation transformer offers full isolation

# TEOS 200 PRO

INDUSTRIAL UPS *3 phase in / 1 phase out* 10-30 kVA



MODEL		TEOS 210L PRO	TEOS 220L PRO
TESCOM CODE		<b>UPS.0698</b>	<b>UPS.0699</b>
PHASE		<b>3 phase in / 1 phase out</b>	
CAPACITY		10000 VA / 10000 W	20000 VA / 20000 W
<b>INPUT</b>			
Nominal Voltage		3 x 400 VAC (3Ph+N)	
Voltage Range		110-300 VAC @ 50% load 176-276 VAC @ 100% load	
Frequency Range		46~54 Hz or 56~64Hz	
Power Factor		≥ 0.99 @ 100% load	
<b>OUTPUT</b>			
Output Voltage		208/220/230/240VAC	
AC Voltage Regulation (Batt. Mode)		± 1%	
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz	
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz	
Current Crest Ratio		3:1 (max.)	
Harmonic Distortion		≤ 2 % THD (Linear Load) ≤ 5 % THD (Non-linear Load)	
Transfer Time	AC Mode to Batt. Mode	zero	
	Inverter to Bypass	zero (when phase lock fails, <4ms interruption occurs from inverter to bypass)	
Waveform (Batt. Mode)		Pure Sine wave	
Overload	AC Mode	100-110% for 60 min, 110-125% for 10 min, 125%~150% 1min, >150% immediately	
	Battery Mode		
<b>EFFICIENCY</b>			
AC Mode		95.5%	
ECO Mode		98.5%	
Battery Mode		94.5%	
<b>BATTERY</b>			
Long-run Model	Battery Type - Numbers	Depending on the capacity of external batteries	
	Internal Battery Space	20 pcs	32 pcs
	Charging Current (max.)	4A (12A optional)	12A
	Charging Voltage	273 VDC ± 1% (Based on 20pcs batteries)	
<b>INDICATORS</b>			
LCD Panel		10" Touch Type color LCD	
<b>PROTECTION</b>			
Full Protection		Overload, Over-temperature, Utility abnormal, UPS fault, UPS warning, battery low, etc	
<b>ALARM</b>			
Battery Mode		Sounding every 4 seconds	
Low Battery		Sounding every second	
Overload		Sounding twice every second	
Fault		Continuously sounding	
<b>PHYSICAL</b>			
Long-run Model	Dimension, D X W X H (mm)	626x 250 x 827	
	Net Weight (kgs)	46.5	
<b>ENVIRONMENT</b>			
Operation Humidity		0-95 % RH @ 0- 40°C (non-condensing)	
Noise Level		Less than 58dB @ 1 Meter	Less than 65dB @ 1 Meter
<b>MANAGEMENT</b>			
Smart RS-232/USB		Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC	
Optional SNMP		Power management from SNMP manager and web browser	

\*\*\* Derate capacity to 90% of capacity when the output voltage is adjusted to 208VAC.

\*\*When using internal batteries from 18-19, the unit will de-rate according to below formula: P=Prating x N/20

\* Product specifications are subject to change without further notice

\* L means long-run model

# TEOS 400

INDUSTRIAL UPS *3 phase in / 3 phase out* 10-80 kVA



MODEL	TEOS 410B	TEOS 420B	TEOS 430B	TEOS 440	TEOS 460	TEOS 480
TESCOM CODE	UPS.0742	UPS.0743				
PHASE	3-phase in / 3-phase out					
CAPACITY	10KVA / 10KW	20KVA / 20KW	30KVA / 30KW	40KVA / 40KW	60KVA / 60KW	80KVA / 80KW
<b>INPUT</b>						
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)					
Voltage Range	-30% ~ +20%					
Frequency Range	40~70 Hz					
Power Factor	≥ 0.99 @ 100% load					
Harmonic Distortion (THDi)	< 3% at full linear load					
<b>OUTPUT</b>						
Output Voltage	3 x 360*/380/400/415 VAC (3Ph+N)					
AC Voltage Regulation (Batt. Mode)	± 1%					
Frequency Range (Synchronized Range)	46~54Hz or 56~64Hz					
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz					
Current Crest Ratio	3:1 (max.)					
Harmonic Distortion	≤ 1 % THD (Linear Load) ≤ 3 % THD (Non-linear Load)					
Transfer Time	zero					
AC mode to Battery mode Inverter to Bypass	zero					
Waveform (Batt. Mode)	Pure Sine Wave					
Overload	100-110% for 60 min, 111-125% for 10 min, 126%~150% for 1 min; >150% or 400ms					
<b>BYPASS</b>						
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)					
Overload Capability	105-110% for 1 hr, 111-125% for 10 min, 126-150% for 1 min, >150% for 200ms					
<b>EFFICIENCY</b>						
AC Mode	96 %					
ECO Mode	99 %					
Battery Mode	96 %					
<b>BATTERY</b>						
Battery Type	12V/9Ah	12V/9Ah	12V/7Ah	12V/9Ah	Depending on the capacity of external batteries	
Numbers	(10+10)pcs	(16+16)pcs	(16+16)pcs x 2 strings	(16+16)pcs x 2 strings		
Typical Recharge Time	9 hours recover to 90% capacity					
Charging Current (max.)	1A ~ 12A (Adjustable)					
Charging Voltage	+/-136.5 VDC ± 10%	+/-218 VDC ± 10%			+/-13.65V*N (N=16~20)	
<b>INDICATORS</b>						
LCD Panel	10" Touch Type color LCD					
<b>ALARM</b>						
Battery Mode	Sounding every 4 seconds					
Low Battery	Sounding every second					
Overload	Sounding twice every second					
Fault	Continuously sounding					
<b>PHYSICAL</b>						
Dimension, D x W x H (mm)	626 x 250 x 750		815 x 300 x 1000		790 x 360 x 1010	
Net Weight (kgs)	93	139	225	250	108	113
<b>ENVIRONMENT</b>						
Operation Temperature	0-40°C					
Operation Humidity	<95% and non-condensing					
Noise Level	Less than 55dB @ 1 Meter	Less than 58dB @ 1 Meter	Less than 65dB @ 1 Meter	Less than 70dB @ 1 Meter		Less than 75dB @ 1 Meter
PARALLEL CAPABILITY	up to 6 units					
<b>MANAGEMENT</b>						
Smart RS-232/USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC					
Optional SNMP	Power management from SNMP manager and web browser					

\* When output voltage is set as 3 x 360VAC, the output power of the unit will be de-rated to 90%. \* Product specifications are subject to change without further notice

# TEOS 400

INDUSTRIAL UPS *3 phase in / 3 phase out* 100-200 kVA



MODEL	TEOS 4100	TEOS 4120	TEOS 4160	TEOS 4200	
PHASE	3-phase in/3-phase out				
CAPACITY	100KVA / 90KW	120KVA / 108KW	160KVA / 144KW	200KVA / 180KW	
PARALLEL CAPABILITY	4				
<b>INPUT</b>					
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)				
Voltage Range	208-304 VAC @ 70% load 305-478 VAC @ 100% load				
Frequency Range	40~70Hz				
Power Factor	≥ 0.99 @ 100% load				
Harmonic Distortion (THDi)	< 3% at full linear load				
<b>OUTPUT</b>					
Output Voltage	3 x 380/400/415 VAC (3Ph+N)				
AC Voltage Regulation (Batt. Mode)	± 1%				
Frequency Range (Synchronized Range)	46~54Hz or 56~64Hz				
Frequency Range (Batt. Mode)	50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio	3:1 (max.)				
Harmonic Distortion (THDv)	≤ 2 % THD (Linear Load) ≤ 4 % THD (Non-linear Load)				
Transfer Time	AC mode to Battery mode	zero			
	Inverter to Bypass	zero			
Waveform (Batt. Mode)	Pure Sine Wave				
Overload Capability	105-110% for 1 hr, 111-125% for 10 min, 126-150% for 1 min, >150% for 200ms				
<b>BYPASS</b>					
Nominal Voltage	3 x 380/400/415 VAC (3Ph+N)				
Voltage Range	-30% ~ +20%				
Frequency Range (Synchronized Range)	+/- 1Hz, +/- 2Hz, +/- 4Hz (default: 4Hz)				
Overload Capability	105-110% for 1 hr, 111-125% for 10 min, 126-150% for 1 min, >150% for 200ms				
<b>EFFICIENCY</b>					
AC Mode	94%				
ECO Mode	98%				
Battery Mode	93%				
<b>BATTERY</b>					
Long-run Model	Battery Type	Depending on the capacity of external batteries			
	Numbers	32~40 pcs (Adjustable)			
	Charging Current (max.)	24A	32A	40A	48A
	Charging Voltage	+/-13.7V*N (N = 16~20)			
<b>INDICATORS</b>					
LCD Panel	10" Touch Type color LCD				
<b>PHYSICAL</b>					
Dimensions, D x W x H (mm)	940 x 567 x 1015		1040 x 567 x 1452		
Net Weight (kgs)	199	234	306	340	
<b>ENVIRONMENT</b>					
Operation Temperature	0-40°C				
Operation Humidity	<95% and non-condensing				
Altitude**	0 ~ 1000m at full load				
Noise Level	Less than 70dB @ 1 Meter		Less than 73dB @ 1 Meter		
<b>MANAGEMENT</b>					
Smart RS-232/USB	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7/8, Linux and MAC				
Optional SNMP	Power management from SNMP manager and web browser				

\*\*If the UPS is installed or used in a place where the altitude is higher than maximum height, the output power will be derated 1% per 100m.

\*When output voltage is set as 3 x 360VAC, the output power of the unit will be derated to 90%.