

## STARK Series

On-Line "Double Conversion" Technology,  
DSP Controlled IGBT Rectifier UPS  
3 phase in / 3phase out 10 to 40kVA

- ▶ IGBT Rectifier
- ▶ Real Digital Signal Processor (DSP) controlled transformerless design
- ▶ High Output Power Factor ( p.f.: 0,9 )
- ▶ Input Power Factor Correction PFC( >0,99 )
- ▶ Low Input Total Harmonic Distortion Level ( THDi  $\leq$  3% )
- ▶ High Efficiency ( up to 93% )
- ▶ Wide Input Voltage Range
- ▶ Cold Start Availability
- ▶ Increased Efficiency with Eco Mode Operation
- ▶ Fan Speed Control depending on internal temperature and load %
- ▶ Parallel Redundant Operation up to 4 Units
- ▶ Common Battery Application availability at Parallel Systems
- ▶ Configurable Battery Qty  
16, 18 or 20pcs @ 10 to 30kVA / 32, 34, 36 or 40pcs @ 40kVA )
- ▶ 3 Step Intelligent battery charging system
- ▶ Static and Manual Bypass Built-in
- ▶ User Friendly LCD/LED Display Panel with functional keypads
- ▶ Remaining back up time indication on the LCD Display panel
- ▶ Power derating operation availability at high temperature and altitude
- ▶ EPO (Emergency Power Off) Function
- ▶ Short Circuit, Overload, Overtemperature, Deep Discharge protections
- ▶ USB, RS232, RS485 & Dry Contact Communication Ports
- ▶ Compact dimension with internal battery placement availability

### Accessories Options

- Additional Relay Card
- SNMP Card(Internal)
- Parallel Connection Cable

### Battery Cabinets

- UPS looking battery Cabinets (different battery configuration available)  
V14, V15, V24, V33, V34
- Eco Cabinets (different battery configurations available)  
BC00, BC10, BC20, BC30, BC40, BC50, BC60



# STARK Series Specifications

MODEL	ST3310	ST3315	ST3320	ST3330	ST3340
Power (rVA)	10	15	20	30	40
Power (rW)	9	13,5	18	27	36
<b>INPUT</b>					
Phase Configuration	3Ph + N + PE				
Nominal Voltage	380 / 400 / 415 VAC				
Voltage Range (Full Load)	304-478			323-478	
Voltage Range (Half Load)	208-478				
Frequency	50/60 Hz $\pm$ 10% (auto sensing)				
Power Factor	0,99				
Total Harmonic Distortion (THDi)	3%				
<b>OUTPUT</b>					
Power Factor	0,9				
Phase Configuration	3Ph + N + PE				
Nominal Voltage	380 / 400 / 415 VAC (adjustable)				
Wave Form	Pure Sine Wave				
Total Harmonic Distortion at 100% load	$\leq$ 2% with linear load $\leq$ 5% with non linear load				
Frequency	50Hz or 60Hz (adjustable)				
Frequency Tolerance (free running)	(50/60 $\pm$ 0.2%)Hz @ Battery Operation				
Static Voltage Regulation (0%-100% load)	$<$ 1%				
Crest Factor	3:1				
Transfer Time	0sec				
Overload	60 min @ (%100-%110)				
	10 min @ (%110-%125)				
	1 min @ (%125-%150)				
	Transfers to Bypass @ $\geq$ %150 (On-line Mode)				
Total Efficiency	Up to 93%				
<b>BATTERY</b>					
Type	Maintenance-free lead acid batteries				
Recharge Time (for Internal Battery)	4-6h up to 90%				
Quantity per String	16/18/20pcs			32/34/36/38/40pcs	
Internal Battery Type	7Ah, 9Ah			None	
Internal Battery Quantity	Up to 40pcs			Up to 60pcs	
Standard Charging Current	1,35A	2,7A		4A	10A
Max Charging Current	10A				
Cold Start	Present				
<b>DISPLAY</b>					
Operation Modes	Normal Mode, Back up Mode, Eco Mode, Parallel Mode				
LCD display	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load%, Battery Voltage, Battery Current, Autonomy Time, Temperature				
<b>PROTECTION</b>					
	Overload, Over Voltage, Overheat, Short Circuit, Low Battery				
<b>COMMUNICATION</b>					
Interface (Communication ports)	USB, RS485, 3pcs Dry Contact Signal				
Dry Contact ( standard )	UPS Battery Low, AC Power Failure, Shut down UPS				
<b>ENVIRONMENT</b>					
Storage Temperature	-25°C - +55°C (15 to 40°C recommended for longer battery life time)				
Operating Temperature	0°C - 40°C (20 to 25°C recommended for longer battery life time)				
Humidity	up to 95% ( non-condensing )				
Max. Altitude without derating	up to 1000 meters				
Audible Noise at 1 m	$<$ 55 dB			$<$ 58 dB	
Protection Class	IP20				
<b>PHYSICAL SPECIFICATIONS</b>					
Dimensions(mm) (WxDxH)	250x828x868				
Weight - without battery ( kg )	57	63	64	71	73
<b>STANDARDS</b>					
Standards	EN62040-1-1 (Safety); EN62040-2 (EMC)				
<b>ACCESORIES</b>					
Optional	SNMP & Additional Relay Board				