

► **GRUPPI STATICI DI CONTINUITA' U.P.S.**  
— **UNINTERRUPTIBLE POWER SUPPLY**

► **SAFE EVO SERIES** ◀



**SAFE EVO series**  
**enjoy the silence**



# SAFE EVO series

## IMPROVED BATTERY LIFE

1000VA ~ 3000VA

SAFE EVO SERIES tower has got a number of smart features that increase battery life. Thanks to the new Battery Discharge protection control function, it's perfect for medium voltage substations applications.



### PERFECT FOR:



Servers



Telecom



Audio-Video



Medium voltage  
substation



Healthcare

### FEATURES

- Online double conversion VFI protection from 1000VA to 3000VA
- Extreme battery lifetime thanks to:
  - wide input voltage tolerance (110-300V)
  - wide input frequency tolerance (44-66Hz)
  - intelligent battery management
- Battery discharge level control, settable 30-100% of the available capacity
- Precise patented backup time estimation
- 2 programmable IEC outlets plus two Schuko
- Cold start to activate loads without mains
- Multiple operation modes to maximize energy efficiency
- Strong overload capability to improve CB's selectivity
- Manually activated extra service check
- Firmware upgradable for updates and customization
- Remote EPO and On/Off functions
- RS232 and USB port, comm. slot
- CEI 0-16 compliant

### OPTIONS



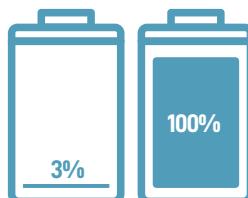
- USB card, RS485 card, dry contact relay card, SNMP/web card
- Extra RS232 card
- External battery cabinet
- Different outlets
- LED interface
- SAFE EVO 3000 version with 8 batteries

### WHAT'S IN THE BOX



- Input power cable
- Output power cable

### BATTERY DISCHARGE LEVEL CONTROL



- 1) Set your battery discharge percent level (3-100%)
- 2) When UPS is in battery mode, it stops when the set battery level is reached
- 3) UPS will be capable to turn on and discharge battery completely upon subsequent cold start

## SPECIFICATIONS

MODEL		SAFE EVO 1000	SAFE EVO 2000	SAFE EVO 3000
INPUT	Phase	Single phase		
	Voltage Range*	110~300Vac		
	Frequency Range	44~66Hz (Auto sensing)		
	Input Power Factor	>0.99 @ 100% linear load		
OUTPUT	Capacity	1000VA/900W	2000VA/1800W	3000VA/2700W
	Output Voltage	220/208/220/230/240 Vac		
	Output Power Factor	0.9		
	Output Voltage Distortion	<3% @ 100% Linear load <7% @ 100% non-linear load		
	Output Voltage Regulation	±1%		
	Frequency Range	±1Hz or ±3Hz (selectable)		
	Crest Factor	3:1		
	Output Waveform	Pure SineWave		
EFFICIENCY	Line Mode	Up to 92%		
	High Efficiency Mode	Up to 96,5%		
PHYSICAL	Dimensions (WxHxD, mm)	154x211x382.4	192x250x470	192x319.9x486
	Net Weight (kg)	11.6	22.2	29.8
BATTERY	Capacity	12Vdc/7AH		12Vdc/9AH
	Battery Number	3	6	6
	Battery Voltage	36	72	72
	Recharge Time (to 90%)	4 hours		
	Battery Bank	Code	BT060367-0000	BT120727-0000
		Number of batteries	6	12
		Battery type	Lead acid maintenance free 12V 7Ah/9Ah	
		Dimensions (WxHxD, mm)	154 x 258.2 x 403.6	192 x 319.9 x 552.8
DISPLAY	LCD measures	Voltage/Frequency/Load level/Battery voltage/Output current/Estimated back-up time/Temperature		
	Self-Diagnostics	Upon power-on, Front panel setting & software control, 24 hours routine check		
ALARM	Audible or Visual	Line failure/Battery Low/Transfer to bypass/System fault		
PROTECTION	Full protection	Overload, over temperature, short circuit, deep discharge, overcharge		
FUNCTION	Multi-Mode	Normal/ECO/CVCF		
	DC Start	Yes		
ENVIRONMENT	Operation Temperature	0~40°C		
	Operation Humidity	0%~90% (without condensing)		
	Altitude	1000m without derating		
	Noise Level	≤ 50dBA @ 1 meter front		
INTERFACE	Standard	RS-232, EPO, USB, Comm. Slot		
	Option	Dry contact card, SNMP/Web card, RS485		
	Compatible platforms	Microsoft Windows series, Linux, Mac		
STANDARDS & CERTIFICATIONS	Safety & EMC	IEC EN 62040-1, IEC EN 62040-2		
	Performance	IEC EN 62040-3		
	Marks	CE		
BACK PANELS	SAFE EVO 1000/2000/3000			

# SAFE EVO series

MORE POWER, EFFICIENCY AND REDUNDANCY

6000VA ~ 10000VA

SAFE EVO series tower features Power Factor 1 on all ratings, delivering 13% more active power than its competitors for the same kVA. And with 4 units in parallel also redundancy is at the highest!



## PERFECT FOR:



Critical IT equipment



Telecom



Healthcare



VOIP



Industry

## FEATURES



- kW = kVA - More available power than any other UPS of the same category
- 4 units parallel, 3+1 redundancy possibility with parallel kit
- Generator compatibility to guarantee efficient functioning
- Dual input
- Flexible battery configuration to best adapt to your needs
- Precise back-up time estimation
- Multiple operation modes to maximize energy efficiency
- Flash upgradable firmware for updates and customisation
- Hot swap batteries - batteries can be replaced while UPS working
- Remote EPO and On/Off functions
- USB, comm. slot
- Manually activated extra service check

## OPTIONS

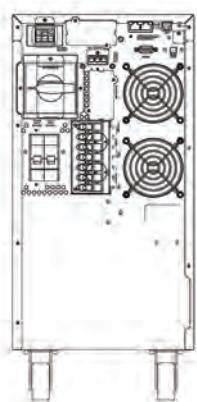


- Versions with transformer in the same footprint
- Extra battery charger
- External battery cabinets with the same aesthetics
- Parallel kit

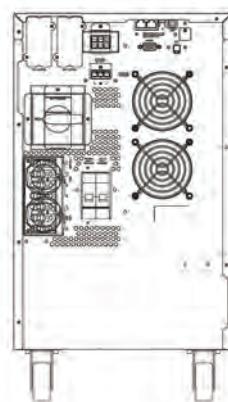
- 6kVA with 12 or 14 batteries
- Version EN 50171 third-party certified
- RS232, RS485, dry contact relay card, SNMP/web card
- External bypass switch and external socket

## BACK PANEL

SAFE EVO 6000



SAFE EVO 10000



# SPECIFICATIONS

MODEL		SAFE EVO 6000		SAFE EVO 10000		
INPUT	Phase	Single Phase				
	Voltage Range*	110~280Vac				
	Frequency Range	45~70Hz				
	Input Current Distortion	3%				
	Input Power Factor	Up to 0.99 @ Linear load				
OUTPUT	Capacity	6000VA/6000W		10000VA/10000W		
	Voltage	without transformer	220/208/220/230/240 Vac, settable			
		with transformer	120/208 or 110/220 or 115/230 or 120/240 Vac			
	Output Power Factor **	1				
	Output Voltage Distortion	≤2% @ 100% Linear load		≤7% @ 100% Non-Linear load		
	Output Voltage Regulation	without transformer	±1%			
		with transformer	±3%			
	Frequency Range	±1Hz or ±3Hz (selectable)				
	Crest Factor	3:1				
	Output Waveform	Pure SineWave				
EFFICIENCY		Online Mode	Up to 94%			
		ECO Mode	98%			
PHYSICAL	with batteries	Dimensions (WxHxD, mm)	240x513x700	288x513x700		
		Net Weight (kg)	78	93		
	with transformer & batteries	Dimensions (WxHxD, mm)	240x661x700	288x661x700		
		Net Weight (kg)	121	135		
BATTERY		Number	16/18/20 (12/14 optional)	16/18/20		
		Type	VRLA, Sealed maintenance free lead acid			
		Recharge Time (to 90%)	4hours			
		Charger	2-step (CC-CV), 1.7A (max.)			
Battery Cabinet	Code	BT6024037				
	Max battery n°/string	20				
	Max battery quantities	60				
	Dimensions (WxHxD, mm)	288x661x663				
	DISPLAY		Status on LED + LCD	Line mode, backup mode, ECO mode, bypass supply, battery low, battery bad/disconnect, overload, UPS fault		
			Readings on LCD	Input voltage, input frequency, output voltage, output current, output frequency, load percentage, battery voltage, inner temperature, backup time estimation		
			Self-Diagnostics	Upon power-on, manual control by panel & communication, self routine check		
	ALARM		Audible or Visual	Line failure/Battery low/Transfer to bypass/System fault		
	PROTECTION		Full protection	Overload, over temperature, short circuit, overcharge		
	FUNCTION		Multi-mode	Normal/ ECO/ Frequency converter		
			DC start	Yes		
			Parallel capacity	Up to 4 units (optional)		
			Parallel redundancy	3+1 (optional)		
	ENVIRONMENT		Operation Temperature	0~40°C		
			Operation Humidity	0%~90% (without condensing)		
			Altitude	1000m without derating		
			Noise Level	≤60dBA @ 1 meter		
	INTERFACE		Standard	USB, EPO/ROO, Comm. Slot		
			Option	RS232, RS485, Dry contact card, SNMP/Web card, RS232 card		
			Compatible platforms	Microsoft Windows series, Linux, Mac		
	STANDARDS & CERTIFICATIONS		Safety & EMC	IEC EN 62040-1, IEC EN 62040-2		
			Performance	IEC EN 62040-3		
			Marks	CE/TUV		

Specifications subject to change without notice

\* Depending on load percentage: 176~280VAC, without derating; 160~176VAC, derating to 75% load, 110~160VAC, derating to 50% load

\*\* Depending on battery number

# SAFE EVO

## 1/1 minitower - 3/1 tower

STANDARD COST EFFECTIVE  
PROTECTION FOR IT LOADS

**6000VA ~ 20000VA**

With its field proven technology, SAFE EVO is the cost effective solution for the majority of IT applications. Its Mini Tower version, with batteries included, guarantees installation simplicity.



### PERFECT FOR:



IT loads & servers



Commercial



Networking



Industry

### FEATURES



- Online protection with 0.9 power factor
- LCD display, the same User Interface as of all the RT range for greater ease of use
- Multiple operation modes to maximize energy efficiency
- Parallelable up to 4 units, for enhanced redundancy with parallel kit\*
- RS232 and USB connection
- Coordinated external battery cabinets
- Cold start, to turn on the load in battery mode
- Generator compatibility thanks to low input distortion\*
- Manually activated extra service check
- Simplified installation: a UPS with internal batteries can connect to external battery cabinets
- Remote EPO function

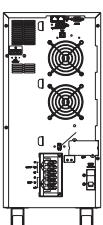
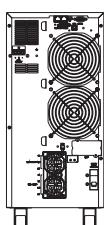
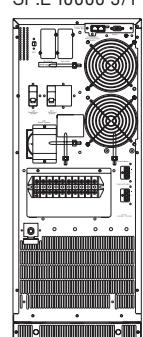
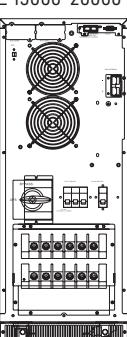
\* Depending on models

### OPTIONS



- Communication slot for MT
- Isolation transformer
- External manual bypass
- RS232, RS485, dry contact relay card, SNMP/web card

## SPECIFICATIONS

MODEL		SF.E 6000MT	SF.E 10000MT	SF.E 10000 3/1	SF.E 15000 3/1	SF.E 20000 3/1					
INPUT	Voltage*	160~280Vac (1phase)		277~485Vac (3phase)							
	Frequency	45~65Hz									
	Phase	Single Phase		Three Phase + Neutral							
	Power Factor	Up to 0.99									
OUTPUT	Voltage	200/208/220/230/240 Vac Selectable (208/120Vac optional)									
	Capacity	5400W	9000W	9000W	13500W	18000W					
	Frequency (Battery Mode)	$\pm 1\text{Hz}$ or $\pm 3\text{Hz}$ (selectable)									
	Current crest ratio	3:1									
	Harmonic distortion	<3% at Linear Load									
	Output waveform	Pure SineWave									
EFFICIENCY	DC start	Yes									
	Online Mode	Up to 91%									
	ECO Mode	Up to 98%									
PHYSICAL	Dimensions (WxHxD, mm)	220x508x630		290x748x645							
	Net Weight (kg)	71.5	74.5	101	60						
BATTERY	Number	20pcs (internal)			No internal battery						
	Type	Sealed maintenance free lead acid									
	Capacity	12V/7Ah		12V/9Ah							
	Rated Battery Voltage	240Vdc									
	Recharge Time (to 90%)	4-6 hours									
	Code	BCC40J0000	BCC40N0000	T60N00-0000	T60V00-0000						
	Max. Quantities	40		60							
DISPLAY	Dimension (WxHxD, mm)	220x508x630		290x748x645							
	Status on LED + LCD	Line mode, backup mode, ECO mode, bypass supply, battery low, battery fault, overload, UPS fault									
	Readings on LCD	Input voltage, input frequency, output voltage, output frequency, load percentage, load current, battery voltage, inner temperature									
ALARM	Self-Diagnostics	Upon power-on, front panel setting & software control, 24-hour routine checking									
	Audible or Visual	Line failure/Battery low/Transfer to bypass/System fault									
	PROTECTION	Overload, over temperature, short circuit, overcharge									
ENVIRONMENT	Operation Temperature	0~40°C									
	Operation Humidity	0%~90% (without condensing)									
	Altitude	1000m without derating									
	Noise Level	<50dBA @ 1 meter				<60dBA @ 1 meter					
INTERFACE	Standard	RS232, USB, EPO		RS232, USB, EPO, comm. slot							
	Options	Comm. slot, 2nd RS232, RS485, contact card, SNMP/Web card		2nd RS232, RS485, contact card, SNMP/Web card							
	Compatible platforms	Microsoft Windows series, Linux, Mac									
STANDARDS & CERTIFICATIONS	Safety & EMC	IEC EN 62040-1-1, IEC EN 62040-2									
	Performance	IEC EN 62040-3									
	Marks	CE									
BACK PANELS	SF.E 6000MT			SF.E 10000 3/1	SF.E 15000-20000 3/1						
	SF.E 10000MT										
BACK PANELS											

## SAFE EVO RACK - RACK PLUS

THE BEST ONLINE PROTECTION FOR ALL TYPES OF IT CABINETS

1000VA ~ 3000VA



Thanks to its reduced depth, SAFE EVO RACK Plus is perfect for short IT cabinets. While SAFE EVO RACK fits best where the available height is limited.

### PERFECT FOR:



Small offices



Commercial



Networking



Healthcare



Industry



CCTV alarm

### FEATURES



- Online double conversion
- Wide input voltage range to improve battery life
- Convertible rack/tower with rotating LCD
- Power Factor 0.9 adapted to the majority of the loads
- Battery autonomy on display based on battery capacity and quantity
- Small size - Can fit 500mm deep cabinets
- Simplified service: same spares of tower model
- Programmable outlets
- EPO, USB, Comm. Slot and RS232 port
- Battery deep discharge protection

### OPTIONS



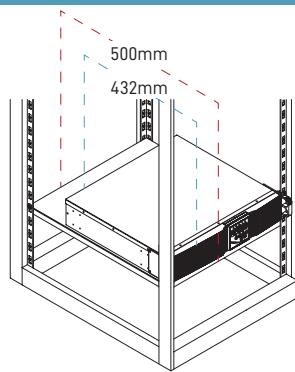
- CEI 0-16 compliant version
- Version with internal extra charger
- SFR\_3K\_MO version with 8 batteries
- USB card, dry contact relay card, SNMP/web card
- External bypass switch
- External socket

### WHAT'S IN THE BOX



- SFR.E\_1K/SFR.E\_1K Plus: 1 x input power cable + 1 x output power cable
- SFR.E\_2K - SFR.E\_3K/SFR.E\_2K - SFR.E\_3K Plus: 1 x input power cable + 2 x output power cable

### SAFE EVO RACK PLUS



With a depth of only **432mm**, Odin Plus fits cabinets as short as **500mm**

# SPECIFICATIONS

MODEL	SFR.E_1K	SFR.E_2K	SFR.E_3K	SFR.E_1K Plus	SFR.E_2K Plus	SFR.E_3K Plus			
INPUT	Voltage*	110~300Vac							
	Frequency	45~66Hz (Auto sensing)							
	Phase	Single Phase							
	Power Factor	>0.99 @ 100% linear load							
OUTPUT	Capacity*	1000VA/900W	2000VA/1800W	3000VA/2700W	1000VA/900W	2000VA/1800W			
	Voltage	200/208/220/230/240 Vac							
	Power factor	0.9							
	THDv	<3% @ 100% Linear load		<7% @ 100% non-linear load					
	Voltage regulation	1%							
	Frequency range	±1Hz or ±3Hz (selectable)							
	Crest factor	3:1							
	Output waveform	Pure sinewave							
	Output outlets	3x IEC C13	6x IEC C13	6x IEC C13 + 1x IEC C19	3x IEC C13	6x IEC C13 + 1x IEC C19			
EFFICIENCY	Online Mode	Up to 91%							
	ECO Mode	Up to 97%							
PHYSICAL	Dimensions (WxHxD, mm)	440x88x405	440x88x600	440x88x600	440x88x405	440x132x432			
	Net Weight (kg)	11.7	21.8	24.6	11.7	23			
BATTERY	Number	3	6	6	3	6			
	Voltage	36	72	72	36	72			
	Type	Sealed maintenance free lead acid 12Vdc							
	Recharge Time (to 90%)	4 hours							
	Empty Battery Bank	Code	BC060000-0000	BC120000-0000	BC060000-0000	BC120722-0000			
	Max. Quantities	6	12	12	6	12			
	Dimension (WxHxD, mm)	440x88x430	440x88x581		440x88x430	440x176x430			
DISPLAY	LCD measures	Voltage/Frequency/Load level/Battery level/Output current/Estimated							
	Self-Diagnostics	Upon power-on, front panel setting & software control, 24-hour routine checking							
ALARM	Audible or Visual	Line failure/Battery low/Transfer to bypass/System fault							
PROTECTION	Full Protection	Overload, over temperature, short circuit, discharge, overcharge							
ENVIRONMENT	Operation Temperature	0~40°C							
	Operation Humidity	0%~90% (without condensing)							
	Altitude	1000m without derating							
	Noise Level	≤50dBA @ 1 meter front							
INTERFACE	Type	RS232, EPO, USB and Comm. Slot							
	Communication slots	Dry contact card, SNMP/Web card, RS485 card							
	Compatible platforms	Microsoft Windows series, Linux, Mac							
STANDARDS & CERTIFICATIONS	Safety & EMC	IEC EN 62040-1, IEC EN 62040-2							
	Performance	IEC EN 62040-3							
	Marks	CE							
BACK PANELS	SFR.E_1K			SFR.E_2K					
	SFR.E_1K Plus			SFR.E_2K Plus					
	SFR.E_3K			SFR.E_3K Plus					

# SAFE EVO RACK

HIGHEST ACTIVE POWER  
FOR A RACK MOUNT UPS



6000VA ~ 10000VA

With its Power Factor 1, SAFE EVO RACK delivers the highest active power for the same kVA. The compact version with batteries included is the simplest choice for servers protection.

## PERFECT FOR:



IT loads & servers



Critical loads



Healthcare



Industry

## FEATURES



- kW = kVA – More available power than any other UPS of the same category
- Convertible rack/tower with rotating display
- Compact version with batteries included
- High efficiency also in online mode
- 4 units parallel, 3+1 redundancy possibility with parallel kit
- Generator compatibility to guarantee efficient functioning
- Extremely wide input voltage range, to reduce battery cycling and increase battery lifetime
- Flexible battery configuration to best adapt to your needs
- Precise patented back-up time estimation
- Multiple operation modes to maximize energy efficiency
- Flash upgradable firmware for updates and customization
- Manual extra service check
- USB, comm slot, EPO/ROO

## OPTIONS



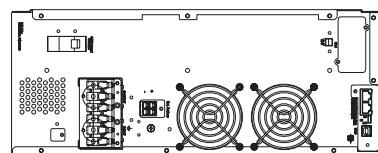
- External battery cabinets with the same aesthetics
- Versions with transformer in the same case of the battery bank
- Extra battery charger
- Parallel bypass box
- External maintenance bypass and sockets
- Rail kit
- RS232
- Version of 6000C with socket
- Dual input on 10kVA model
- External bypass switch
- External socket

## BACK PANEL

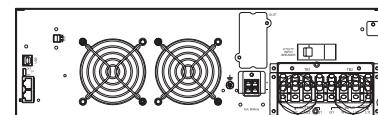
SFR EVO 6KVA



SFR EVO 6KVA C



SFR EVO 10KVA



## SPECIFICATIONS

MODEL	SFR.E_6KVA	SFR.EC_6KVA	SFR.E_10KVA
INPUT	Phase	Single Phase	
	Voltage Range**	110-280VAC	
	Frequency Range	45~70Hz	
	Current Distortion	<3%	
	Power Factor	Up to 0.99 @ 100% linear mode	
OUTPUT	Voltage (without transformer)	220/208/220/230/240 Vac, settable	
	Capacity	6000VA/6000W	6000VA/6000W
	Power Factor**	1	
	Voltage Distortion	≤2% @100% load	
		≤7% @100% non-linear load	
	Output Voltage Regulation	without transformer	±1%
		with transformer	±3%
	Frequency Range	±1Hz or ±3Hz (Selectable)	
EFFICIENCY	Crest Factor	3:1	
	Output Waveform	Pure Sinewave	
PHYSICAL	Online Mode	Up to 94%	
	ECO Mode	Up to 98%	
BATTERY	Dimensions (WxHxD, mm)	440x88x685	440x176x685
	Net Weight (kg)	18.5	60
	Number	16/18/20 (12/14 optional)	
	Type	VRLA, Sealed maintenance free lead acid	
	Recharge Time (to 90%)	4 hours	
	Charger (16/18/20 model)	2-step (CC-CV), 1.7A (max.)	
	Internal batteries	--	20x 5Ah
	Battery Bank	C20X3U00	--
DISPLAY	Code	--	C20X3U00
	Max quantities	20	
	Dimension (WxHxD, mm)	440x132x685	440x88x685
ALARM	Status on LED + LCD	Line mode, backup mode, ECO mode, bypass supply, battery low, battery bad/disconnect, overload UPS fault	
	Readings on LCD	Input voltage, input frequency, output voltage, output current, output frequency, load percentage, battery voltage, inner temperature, backup time estimation	
	Self-Diagnostics	Upon power-on, manual control by panel & communication, self routine check	
PROTECTION	Audible or Visual	Line failure/Battery low/Transfer to bypass/System fault	
FUNCTION	Full Protection	Overload, Over temperature, short circuit, overcharge	
	Multi-Mode	Normal/ECO/Frequency converter	
	DC start	Yes	
	Parallel capacity	Up to 4 units	
ENVIRONMENT	Parallel redundancy	3+1	
	Operation Temperature	0~40°C	
	Operation Humidity	0%~90% (without condensing)	
	Altitude	1000m without derating	
INTERFACE	Noise Level	≤60dBA @ 1 meter	
	Standard	USB, EPO/ROO	
	Option	RS232, RS485, Dry contact card, SNMP/WEB card, 2nd RS232 card	
STANDARDS & CERTIFICATIONS	Compatible platforms	Microsoft Windows series, Linux, Mac	
	Safety & EMC	IEC EN 62040-1, IEC EN 62040-2	
	Performance	IEC EN 62040-3	
	Marks	CE	

Specifications subject to change without notice

\* Depending on load percentage

\*\* Depending on number of battery

# SAFE EVO RACK 3/1

POWERFUL, ROBUST, RELIABLE

10000VA ~ 20000VA

On the market since many years, SAFE EVO RACK combines reliability and robustness to high power and great installation flexibility.



## PERFECT FOR:



Servers racks



Big IT loads



Small server rooms

## FEATURES



- On-line protection with 0,9 power factor
- LCD display
- Dual input (only for SAFE EVO 20k version)
- Full rated bypass line with single phase output
- Multiple operation modes to maximize energy efficiency
- Parallelable up to 4 units, for enhanced redundancy
- RS232, USB connection and comm. slot
- Emergency Power Off (EPO)
- Coordinated external battery cabinets
- Cold start, to turn on the load in battery mode
- Manually activated extra service check

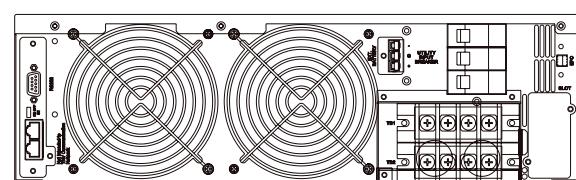
## OPTIONS



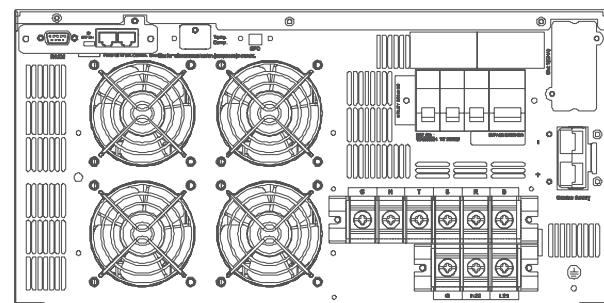
- Parallel kit
- External manual bypass
- RS232, RS485, SNMP, dry contacts boards

## BACK PANEL

SFR.E\_10K\_TM



SFR.E\_15K\_TM + SFR.E\_20K\_TM



## SPECIFICATIONS

MODEL		SFR.E_10K_TM	SFR.E_15K_TM	SFR.E_20K_TM		
INPUT	Voltage*		190-485VAC			
	Frequency*	45-65Hz		45~70Hz		
	Phase	Three Phase + Neutral				
	Power Factor	Up to 0.99 @ Linear load				
OUTPUT	Voltage*	200/208/220/230/240 Vac, selectable				
	Capacity	10000VA/9000W	15000VA/13500W	20000VA/18000W		
	Frequency (Battery Mode)	±1Hz or ±3Hz (Selectable)				
	Current Crest Ratio	3:1				
	Harmonic Distortion	<3% at Linear load				
	Output Waveform	Pure Sinewave				
	Efficiency	Up to 93%				
	Efficiency ECO Mode	Up to 95%				
	DC Start	Yes				
PHYSICAL	Dimensions (WxHxD, mm)	440x132x680	440x220x720			
	Net Weight (kg)	28	36			
EXTERNAL BATTERY CABINET	Number	20pcs				
	Type	Sealed maintenance free lead acid				
	Capacity	12V/9AH				
	Rated battery voltage	240Vdc				
	Recharge Time (to 90%)	6 hours				
	Code	C20X3U00 (plus extra cable)	C20V3U00			
	Dimension (WxHxD, mm)	440x132x685	440x132x680			
DISPLAY	Status on LED + LCD	Line mode, backup mode, ECO mode, bypass supply, battery low, battery bad/disconnect, overload UPS fault				
	Readings on LCD	Input voltage, input frequency, output voltage, output frequency, load percentage, battery voltage & inner temperature				
	Self-Diagnostics	Upon power-on, LCD setting & software control, 24-hour routine checking				
ALARM	Audible or Visual	Line failure/Battery low/Transfer to bypass/System fault				
PROTECTION	Full Protection	Overload, Over temperature, short circuit, overcharge				
FUNCTIONS	Multi-Mode	Normal/ECO/Frequency converter				
	DC start	Yes				
	Parallel capacity	Up to 4 units				
	Parallel redundancy	3+1				
ENVIRONMENT	Operation Temperature	0~40°C				
	Operation Humidity	95% (without condensing)				
	Altitude	1000m without derating				
	Noise Level	<50dBA @ 1 meter	<60dBA @ 1 meter			
INTERFACE	Standard	RS232, USB, EPO, comm. slot				
	Communication slots	RS232, USB, RS485, Dry contact card, SNMP/Web card				
	Compatible platforms	Microsoft Windows series, Linux, Mac				
STANDARDS & CERTIFICATIONS	Safety & EMC	IEC EN 62040-1, IEC EN 62040-2				
	Performance	IEC EN 62040-3				
	Marks	CE				

Specifications subject to change without notice

\* Based on model and/or load percentage

# ATS

## (Automatic Transfer Switch)

### RELIABLE SUPPLY FOR SINGLE CORDED SERVERS

Highly reliable Automatic Transfer Switch with user friendly interface.  
Hot swappable version for maximum supply availability.



#### PERFECT FOR:



IT applications



Single corded servers



Alarm & security systems

#### FEATURES



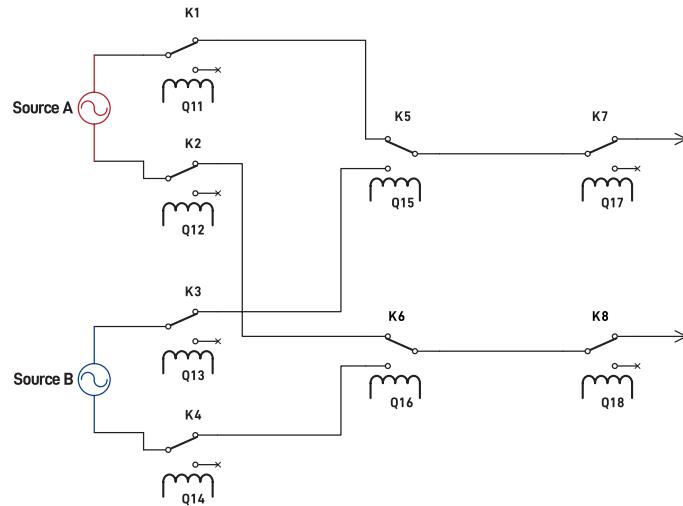
- Two separate independent sources
- Provide redundant power supply to single corded equipment
- Fast automatic switch between two sources
- High reliability
- User friendly operation with LCD/LED display
- Single phase 16A/32A
- 19" rack design
- ITS version: hot swappable ATS version for maintenance purposes
- Proven field measured reliability
- New Output terminals for 32A : 12x IEC C13 + 2x IEC C19 + 1x full rated hard wired terminals
- Output terminals for 16A : 8x IEC C13 + 1x IEC C19

#### OPTIONS

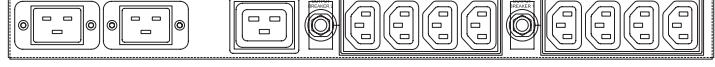
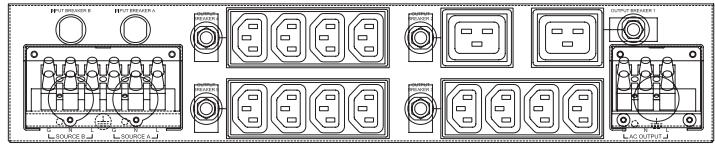
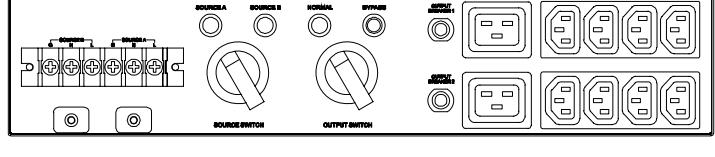


- 120V versions available
- ITS with single full load terminal output

#### ATS BLOCK DIAGRAM



# SPECIFICATIONS

MODEL		COMM_SFE.16/230Vac	COMM_SFE.32/230Vac	ITS_SFE.32/230Vac		
INPUT	Voltage	200/208/220/230/240 (±5%/10%/15%/20%)		200/208/220/230/240 (±5%/10%/15%/20%)		
	Acceptable voltage	150~300Vac		150~300Vac		
	Frequency	50/60Hz (±5%/10%/15%/20%)				
	Maximum input current	16A	32A	32A		
OUTPUT	Voltage	200/208/220/230/240		200/208/220/230/240		
	Maximum output current	16A	32A	32A		
	Transfer time (ms)	8~12ms (typical)		8~12ms (typical)		
PROTECTION		Output short circuit/ Internal electronic circuit/ Electronic circuit				
INTERFACE	Standard	RS232, USB, 5x output dry contacts, comm. slot				
	Option	RS485, SNMP				
	Display	LED - Source A and/or B available, fault conditions LCD - alarms, measures, faults				
PHYSICAL	Inlet	IEC-C20 x2	30A cable terminal x2	30A cable terminal x2		
	Outlet	IEC-C13 x8 IEC-C19 x1	IEC C13 x 12 IEC C19 x2 Full load terminal	IEC-C13 x8 IEC-C19 x2		
	Dimensions (WxHxD) mm	440x44x275	440x88x275	440x88x325		
	Net Weight (kg)	4	6	6		
ENVIRONMENT	Operating temperature	-5~+40°C @0%~90% (non-condensing)				
	Safety	Safety	IEC EN 60950-1			
		EMC	IEC EN 62310-2			
BACK PANELS	<p><b>COMM_SFE.16/230Vac</b></p> 					
	<p><b>COMM_SFE.32/230Vac</b></p> 					
	<p><b>ITS_SFE.32/230Vac</b></p> 					

Specifications subject to change without notice

# SAFE EVO TT

TECHNOLOGY, PERFORMANCE AND VALUE FOR MONEY IN THE SMALLEST FOOTPRINT

10kVA ~ 20kVA

Thanks to its reduced footprint, Safe EVO TT is the optimum choice when the available space is limited. Moreover, the included features meet the needs of the majority of IT installations with a very positive value-for-money.



## PERFECT FOR:



Small datacenter



Telecom



Healthcare



Industry

## FEATURES



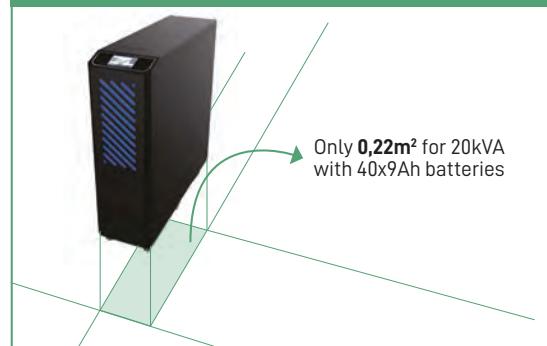
- The smallest footprint of its category: 0,22m<sup>2</sup> for 20kVA with 40x9Ah internal batteries
- Up to 95% efficiency in online mode
- Built-in high current battery charger (10kVA with up to 7A standard charger)
- 4 poles manual bypass and Breakers
- Easy maintenance thanks to the vertical boards
- Generator compatibility with ramp up configurable in power and time delay
- Wrong phase sequence rotation protection
- THDi <3% for a minimized grid impact
- High overload capability up to 1 minute @150%
- Cold start function included
- Logfile, UPS information and settings easily downloadable on removable SD card from LCD, to simplify service operations
- Up to 40 x 9Ah internal battery
- Wide range of battery number per string from 26 to 40 LCD settable
- Parallelable up to 6 units, in power or redundancy, LCD settable
- Standard separate or common batteries for parallel systems
- Touch screen display for quick and user friendly operation
- Wide communication offer as a standard: two com slots, RS232, USB, programmable dry contacts

## OPTIONS



- SNMP, RS485, Modbus boards
- External temperature sensor
- Parallel kit

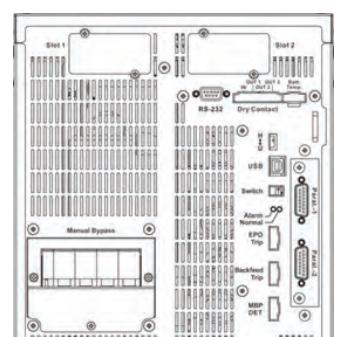
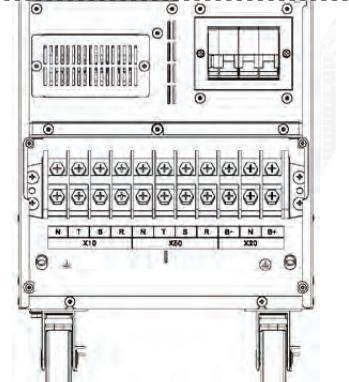
## THE SMALLEST FOOTPRINT



## SETTINGS EASILY DOWNLOADABLE ON SD CARD



# SPECIFICATIONS

MODEL		SF.E_10K_TT	SF.E_15K_TT	SF.E_20K_TT
INPUT	Voltage		400V 3phase + N	
	Voltage Tolerance		±20% @100% load	
	Frequency		45~70Hz	
	Power Factor		≥ 0.99	
	THDi		<3%	
OUTPUT	Voltage		380/400/415V 3phase + N	
	Voltage Tolerance		±5%~±25% (programmable)	
	Power Factor		0.9	
	Frequency		50/60Hz	
	Frequency Tolerance		±0.01% (free running)	
	Crest Factor		3:1	
	Voltage Harmonic Distortion		<2% with linear load; ≤5% with distorting load	
BATTERY	Overload	110% for 60 minutes, 125% for 10 minutes, 150% for 1 minutes, >150% and <300% for 3 seconds		
	Number	26~40pcs configurable		32~40pcs configurable
	Charging current Max	7A		14A
	Common Battery		Yes	
EFFICIENCY	Internal Batteries		Available for housing 9Ah 40 pcs	
	VFI Mode		Up to 95%	
	ECO Mode		>98%	
GENERAL	Backup Mode		Up to 93,5%	
	Parallel		Up to 6 units (optional)	
	Dimensions (WxHxD, mm)		260x890x850 (with wheel)	
	Weight (kg)	74		76
	Protection Grade		IP20	
	Display and MMI		4.3" color LCD touch screen	
	Built-in Communication Port		RS232, USB, EPO, Dry Contact, 3IN + 1OUT	
ENVIRONMENT	Optional Communication		2 communication slots for SNMP card, RS-485 modbus card, Dry contact card	
	Operation Temperature		0~40°C	
	Operation Humidity		0%~95% (without condensing)	
	Standards		IEC EN 62040-1, IEC EN 62040-2	
	Mark		CE	
BACK PANEL	Noise		<52dBA @ 1 meter	
	Communication cables connections			
	Power cables connections			

# SAFE EVO LINE INTERACTIVE

## THE POWER OF EXPERIENCE

450VA ~ 2000VA

Based on more than 20 years of experience in line-interactive technology, SAFE EVO LINE INTERACTIVE combines the most up-to-date technologies and the highest reliability of the market.



### PERFECT FOR:



Home



Shops



PC & Networks



Small Offices

### FEATURES



- Line-interactive simulated sinewave UPS
- Integrated Voltage Regulator (AVR) for sags, spikes, under and over voltages
- Cold start to switch on the UPS without mains
- Wide input voltage and frequency range, for a longer battery life
- Easy battery replacement
- Plug-in charging - UPS charging battery even when turned off
- Automatic battery test
- Smart battery management system enhancing battery life
- Downloadable monitoring Software (Emily) with event-data log. To protect your PC by shutdown no need for to
- USB connection port
- 2 years EU warranty on UPS

### OPTIONS



- Communication cable
- Carton gift box customization
- RS232 Port
- Many front and back panel customization possibilities
- RJ45 surge protection for telephone lines

### WHAT'S IN THE BOX



- Input power cable
- Output power cable

### EASY BATTERY REPLACEMENT

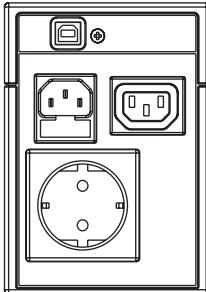
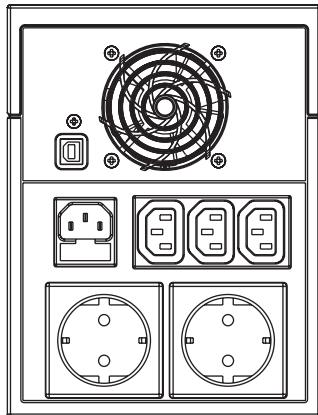
SAFE EVO 450-650-850



SAFE EVO 1000-1500-2000



## SPECIFICATIONS

MODEL		SF450 LCD	SF650 LCD	SF850 LCD	SF1000 LCD	SF1500 LCD	SF2000 LCD
INPUT	Voltage Range	160Vac~290Vac					
	Frequency Range	45~65Hz (Auto sensing)					
	Phase	Single Phase					
OUTPUT	Capacity	270W	380W	500W	600W	900W	1200W
	Output Voltage (Battery mode)	220/230/240Vac ±10%					
	Frequency Range (Battery mode)	50/60Hz ±1Hz					
	Transfer Time	2~6ms (typical)					
	Output Waveform	Simulated SineWave					
PHYSICAL	Dimension (WxHxD, mm)	100 x 140 x 292			148 x 198 x 315		
	Net Weight (kg)	4	5	5.5	9	10.5	11.8
BATTERY	Type & Number	12V/5Ah x 1	12V/7Ah x 1	12V/9Ah x 1	12V/7Ah x 2	12V/7Ah x 2	12V/9Ah x 2
	Recharge Time (to 90%)	4~6 hours					
DISPLAY	LCD	AC mode, AVR mode, battery mode, battery level, load level, input voltage, output voltage, fault and battery weak					
ALARM	Audible or Visual	Battery mode/ battery low/ overload/ system fault					
PROTECTION	Full protection	Overload, short circuit, discharge, overcharge and optional RJ-11/RJ-45 surge protection					
FUNCTION	DC Start	Yes					
	Plug-in charging	Yes					
ENVIRONMENT	Operation Temperature	0~40°C					
	Operation Humidity	0%~90% (without condensing)					
	Altitude	1000m without derating					
	Noise Level	≤ 40dB					
INTERFACE	Interface	USB (optional RS232)					
	Compatible platforms	Microsoft Windows series, Linux, Mac					
STANDARDS & CERTIFICATIONS	Safety & EMC	IEC EN 62040-1, IEC EN 62040-2					
	Performance	IEC EN 62040-3					
	Marks	CE					
BACK PANELS		SF 1000/1500/2000					
		SF 450/650/850					
							



**TIPO DI CONTRATTI DISPONIBILI:**

- > BASIC LEVEL
- > MID LEVEL
- >TOP LEVEL

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**TYPE OF CONTRACT:**

- > BASIC LEVEL
- > MID LEVEL
- >TOP LEVEL

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**WE SHIP WORLDWIDE**





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