# Emergency Central Systems 1-Ph - 3-Ph from 10 to 160 kVA

## **Applications**

- Emergency and safety systems
- Emergency lighting
- Fire fighting
- Safety equipment

# Highlights

ECS

- Compliant with EN 50171
- On-line double conversion
- Paralleling up to 960 kVA



ECS

Emergency Central Systems 1-Ph - 3-Ph from 10 to 160 kVA

#### Compliance to EN 50171 standard

- 120% permanent power overload capability.
- Batteries with 10 years life expectancy.
- Acid proof battery cabinets and racks.
- Battery polarity reversal protection.
- Deep discharge protection.
- Short circuit protection.
- Battery charger to provide 80% autonomy within 12 hours.
- Battery charger temperature compensation.
- IP20 metal enclosure as per EN 60598-1.

## Features and Benefits

- Green Conversion technology, providing high efficiency and UPS components' life extension.
- Compact transformer free design for small footprint.
- Easy access for fast maintenance and low MTTR.

## Main options

- AO+EO mode kit.
- Isolation transformer.
- Separate rectifier and bypass input for E8000 ECS 3-phase output models.
- Parallel kit.
- Backfeed protection (standard with 10, 15 and 20 kVA ratings).

## Operating modes

#### Changeover mode - Always On (AO)

Loads are normally fed by the bypass line, during a mains failure the inverter takes over the load without interruption.

#### Mode without interruption -Always On (AO)

Loads are normally fed by the inverter output.

#### Changeover mode with additional control switching device for partial switching of the load - Always On + Emergency Only (AO+EO)

Some loads are fed by the inverter or bypass, while other loads are switched on only upon mains failure.





E8000 ECS

INGENIO ECS

Berri

Rating (kVA)	10	15	20	30	40	50		
Nominal power (kW)	9	13.5	18	27	36	45		
Nominal power as per EN 50171 (kW)	7.5	11.3	15	22.5	30	37.5		
UPS dimensions WxDxH (mm)	450x670x1200							
UPS weight (kg)	100	110	110	140	140	170		
Battery configuration		E	xternal, 360 to 372 cells	, VRLA (other option	s)			
, s				, , , ,	,			
	3/1-phas	se units: hardwired 4v	v (rectifier),	3/3	phase units: hardwire	ed 4w		
Connection type	2w (bypass)			(separate bypass input available on request)				
	3/3-phase uni	ts: hardwired 4w (separ	ate bypass input					
	available on request)							
Nominal voltage	400 Vac 3-phase with neutral (rectifier) 220/230/240 Vac (3/1-phase bypass) 400 Vac 3-phase with neutral (rec					(rectifier)		
Voltage tolerance			-20%, +15% (rectifier	1: +10% (bypass)				
Frequency and range			50/60 Hz, 45					
Power factor			0.99					
Current distortion (THDi)								
			<4%	)				
put	0./1			2 (2		1.4		
Connection type		-phase units: hardwire 3-phase units: hardwire		3/3 phase units: hardwired 4w				
	,	units: 220/230/240		380/400/415 Vac 3-phase with neutral				
Nominal voltage	· · ·	: 380/400/415 Vac 3-		380/400/415 Vac 3-phase with neutral				
Frequency	· · ·		50/60	Hz				
Voltage regulation			Static: ±1%; dynamic: IEC,					
Power factor			o 0.9, lagging or leading		atina			
		001			unig			
Overload capacity*	120% continuous; 150% for 10 min;							
			180% for	60 s				
Efficiency (AC/AC)**			Up to 9	8%				
lassification as per IEC/EN 62040-3			VFI-SS-1	11				
nectivity and function extensions								
Front panel		Graphic	display, mimic LED pane	l and keyboard, loc	al EPO			
•				•				
Remote communication	Included: serial RS232 and USB; terminal block for battery breaker auxiliary contact. Optional: input terminal block (remote emergency power off, battery circuit breaker aux. cont., external maintenance bynasic circuit breaker aux. cont. diseal made aux. cont : SNMP adapter (Ethernet)							
	external maintenance bypass circuit breaker aux. cont., diesel mode aux. cont.); SNMP adapter (Ethernet), Web interface (Ethernet), ModBus-TCP/IP (Ethernet), ModBus-RTU (RS485), from ModBus-RTU to PROFIBUS DP adapter;							
					and convor chutdow			
	SPDT co		note system monitoring p		-	n software		
	SPDT co	Isolation transfe	ormer; transformers/auto	transformers for vol	age adjustment;	n software		
Optional function extensions	SPDT co external maint	Isolation transfo enance bypass; custo load-sync for single L	ormer; transformers/auto m battery cabinets; wall- JPS; AO+EO mode kit; s	transformers for vol mounted battery fus eparate input for re	age adjustment; e switch box; battery ctifier and bypass lin	n software thermal probe;		
	SPDT co external maint	Isolation transfo enance bypass; custo load-sync for single L	ormer; transformers/auto m battery cabinets; wall-	transformers for vol mounted battery fus eparate input for re	age adjustment; e switch box; battery ctifier and bypass lin	n software thermal probe;		
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<b>em</b> Protection degree Colour	SPDT co external maint	Isolation transfo enance bypass; custo load-sync for single L models}; parallel kit; b	prmer; transformers/auto m battery cabinets; wall- JPS; AO+EO mode kit; s packfeed protection (stand IP 20 RAL 70	transformers for vol mounted battery fus eparate input for re lard with 10, 15 and ) 16 de installation allow	age adjustment; e switch box; battery ctifier and bypass lin d 20 kVA ratings); oth	n software thermal probe;		
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Rating (kVA)	60	80	100	125	160			
Nominal power (kW)	60	80	100	125	160			
Nominal power as per EN 50171 (kW)	50	67	83	104	133			
UPS dimensions WxDxH (mm)			560x940x1800					
UPS weight (kg)	250	300	320	360	380			
Battery configuration		External 3	360 to 372 cells, VRLA (othe	r options)	1			
nput								
Connection type		Hard	dwired 4w (rectifier), 4w (by	pass)				
Nominal voltage		400 Vac 3-phase with neutral (rectifier) 380/400/415 Vac 3-phase with neutral (bypass)						
Voltage tolerance		-20	%, +15% (rectifier); ±10% (byp	bass)				
Frequency and range			50/60 Hz, 45 to 65 Hz					
Power factor			>0.99					
Current distortion (THDi)			<3%					
Output								
Connection type			Hardwired 4w					
Nominal voltage		380/	400/415 Vac 3-phase with	neutral				
Frequency			50/60 Hz					
Voltage regulation		dy	Static: ±1%; mamic: IEC/EN 62040-3 Clas	ss 1				
Power factor		U	p to 1, without power derati	ng				
Overload capacity*		120% continuous; 150% for 10 min; 180% for 60 s						
Efficiency (AC/AC)**			Up to 99%					
Classification as per IEC/EN 62040-3		VFI-SS-111						
Connectivity and function extensio	15							
Front panel		Graphic display, mimic LED panel and keyboard, local EPO						
Remote communication		Included: serial RS232 and USB; backfeed protection monitoring contact, input terminal block (remote emergency power off, battery circuit breaker aux. cont., external maintenance bypass circuit breaker aux. cont., diesel mode aux. cont.]. Optional: SNMP adapter (Ethernet), Web interface (Ethernet), ModBus-TCP/IP (Ethernet), ModBus-RTU (RS485), from ModBus-RTU to PROFIBUS DP adapter; SPDT contact relay board; remote system monitoring panel; UPS managing and server shutdown software						
Optional function extension		lsolation transformer; transformers/autotransformers for voltage adjustment; external maintenance bypass; custom battery cabinets; wall-mounted battery fuse switch box; battery thermal probe; parallel kit, load-sync for single UPS and load-sync box (2 UPS systems); AO+EO mode kit; backfeed protection; other options on request						
System								
Protection degree		IP 20						
Colour		RAL 9005						
Installation layout		Wall and side by side installation allowed						
Accessibility		Front access, bottom cable entry						
Other features				*as per EN 50171 **	as per IEC/EN 620			
Environmental								
Operating temperature range	•		0°C to +40°C					
Storage temperature range			-10°C to +70°C					
Altitude (AMSL)		< 1000 m without po	ower reduction, > 1000 m wi	th reduction of 0.5% per 10	0 m			
		< 1000 m without pc	ower reduction, > 1000 m wi <60	th reduction of 0.5% per 10	0 m			

CPSS EN 50171 Quality assurance, environment, health and safety ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007 IEC/EN 62040-1 Safety EMC IEC/EN 62040-2 Environmental aspects IEC/EN 62040-4 Test and performance IEC/EN 62040-3 IEC 60529 Protection degree Marking CE