

EMERGENCY CENTRAL SYSTEMS 1- and 3-PHASE

ECS

from 10 kVA ——— to 160 kVA



Applications



Emergency
and safety systems



Emergency
lighting



Fire fighting



Safety equipment

Compliant with EN 50171

Ensuring a setup and
maintenance cost reduction
and easier periodical checks.

High recharge current

Battery charger
providing 80% autonomy
within 12 hours.

High overload capacity

Designed to withstand
120% permanent power
overload capability.

Emergency Central Systems designed in compliance to the international EN 50171 standard,
supplying uninterrupted quality power to emergency and safety installations.

Suitable for emergency and safety systems, emergency lighting, fire fighting and
safety equipment.

ECS: designed to guarantee power supply to your safety system in case of mains supply failure.

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).



E8000 ECS 10-20 kVA

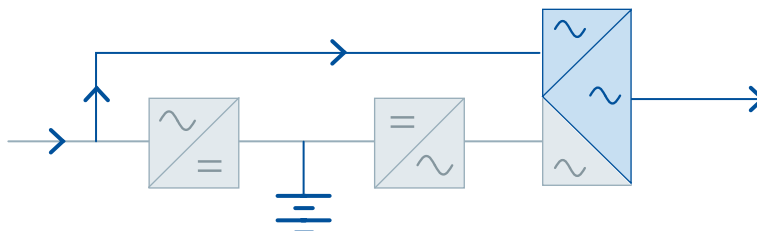


INGENIO ECS 100-160 kVA

Operating mode

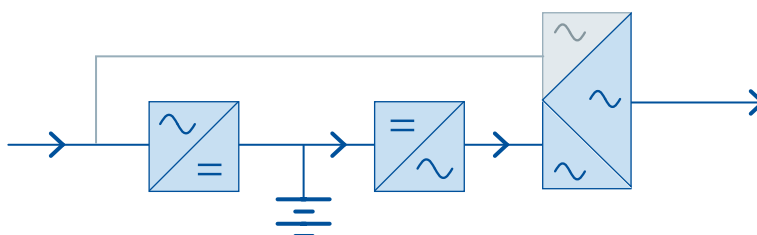
Changeover mode - Always On (AO)

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



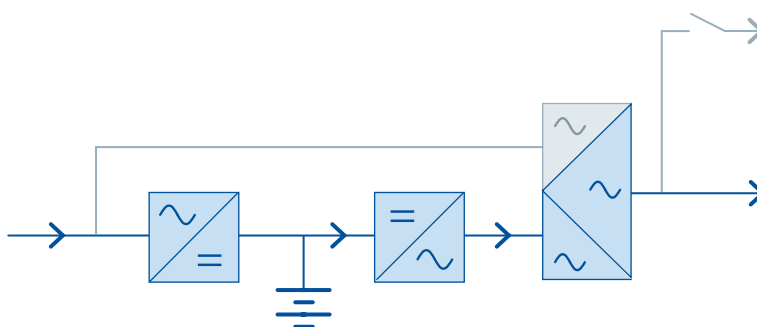
Mode without interruption - Always On (AO)

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)

The "Always on" part of the load is fed continuously whilst the "Emergency Only" part is only fed upon mains failure.



E8031 ECS - E8033 ECS technical data

Rating (kVA)	10	15	20
Nominal Power (kW)	9	13.5	18
Nominal power as per EN 50171 (kW)	7.5	11.3	15
UPS dimensions WxDxH (mm)	450x670x1200		
UPS weight (kg)	100	110	110
Battery configuration	External, 360 to 372 cells, VRLA (other options)		
Input			
Connection type	3/1-phase units: hardwired 4w (rectifier), 2w (bypass) 3/3-phase units: hardwired 4w (separate bypass input available on request)		
Nominal voltage	400 Vac 3-phase with neutral (rectifier) 220/230/240 Vac (3/1-phase bypass)		
Voltage tolerance	-20%, +15% (rectifier); ±10% (bypass)		
Frequency and range	50/60 Hz, 45 to 65 Hz		
Power factor	0.99		
Current distortion (THDi)	<4%		
Output			
Connection type	3/1-phase units: hardwired 2w 3/3-phase units: hardwired 4w		
Nominal voltage	3/1-phase units: 220/230/240 Vac 1-phase 3/3-phase units: 380/400/415 Vac 3-phase with neutral		
Frequency	50/60 Hz		
Voltage regulation	Static: ±1% ; Dynamic: IEC/EN 62040-3 Class 1		
Power factor	Up to 0.9, without power derating		
Overload capacity*	120% continuous, 150% for 10 min, >150% for 100 ms		
Efficiency (AC/AC)**	Up to 98%		
Classification by IEC/EN 62040-3	VFI-SS-111		

Connectivity and function extensions

Front panel	Graphic display, mimic LED panel and keyboard, local EPO
Remote communication	Included: serial RS232 and USB; terminal block for battery breaker auxiliary contact. Optional: input terminal block (remote emergency power off, 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; SPDT contact relay board; remote system monitoring panel; UPS managing and server shutdown software
Optional features	Isolation transformer; transformers/autotransformers for voltage adjustment; external maintenance bypass; custom battery cabinets; wall-mounted battery fuse switch box; battery thermal probe; load-sync for single UPS; AO+EO mode kit; separate input for rectifier and bypass line (for 3-phase output models); parallel kit; other options on request

System

Protection degree	IP 20
Colour	RAL 7016
Installation layout	10 cm wall-gap, side by side installation allowed
Accessibility	Front and top access, bottom cable entry

*as per EN 50171 **as per IEC/EN 62040-3

Other features

Environmental

Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +70°C
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m
Audible noise at 1 m (dBA)	< 52

Standards and certifications

CPSS	EN 50171
Quality assurance, environment, health and safety	ISO 9001:2015, ISO 14001:2015, BS OHSAS 18001:2007
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Environment aspects	IEC/EN 62040-4
Test and performance	IEC/EN 62040-3
Protection degree	IEC 60529
Marking	CE

INGENIO ECS technical data

Rating (kVA)	30	40	60	80	100	125	160
Nominal Power (kW)	30	40	60	80	100	125	160
Nominal power as per EN 50171 (kW)	25	33.3	50	67	83	104	133
UPS dimensions WxDxH (mm)	465x650x1230		560x940x1505		560x940x1800		
UPS weight (kg)	120	140	210	225	320	360	380
Battery configuration	External, 360 to 372 cells, VRLA (other options)						
Input							
Connection type	Hardwired 4w		Hardwired 4w (rectifier), 4w (bypass)				
Nominal voltage	400 Vac 3-phase with neutral (rectifier) 380/400/415 Vac 3-phase with neutral (bypass)						
Voltage tolerance	-20%, +15% (rectifier); ±10% (bypass)						
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	Static: ±1% ; Dynamic: IEC/EN 62040-3 Class 1						
Power factor	Up to 1, without power derating						
Overload capacity*	120% continuous, 150% for 10 min, >150% for 100 ms						
Efficiency (AC/AC)**	Up to 99%						
Classification by IEC/EN 62040-3	VFI-SS-111						
Connectivity and function extensions							
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 features	Isolation 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; AO+EO mode kit; backfeed protection; other options on request						
System							
Protection degree	IP 20						
Colour	RAL 9005						
Installation layout	10 cm wall-gap, side by side installation allowed		Wall and side by side installation allowed				
Accessibility	Front and top access, bottom cable entry				Front access, bottom cable entry		

*as per EN 50171 **as per IEC/EN 62040-3

Other features

Environmental	
Operating temperature range	0°C to +40°C
Storage temperature range	-10°C to +70°C
Altitude (AMSL)	< 1000 m without power reduction, > 1000 m with reduction of 0.5% per 100 m
Audible noise at 1 m (dBA)	< 60
Standards and certifications	
CPSS	EN 50171
Quality assurance, environment, health and safety	ISO 9001:2015, ISO 14001:2015, BS OHSAS 18001:2007
Safety	IEC/EN 62040-1
EMC	IEC/EN 62040-2
Environment aspects	IEC/EN 62040-4
Test and performance	IEC/EN 62040-3
Protection degree	IEC 60529
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