

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

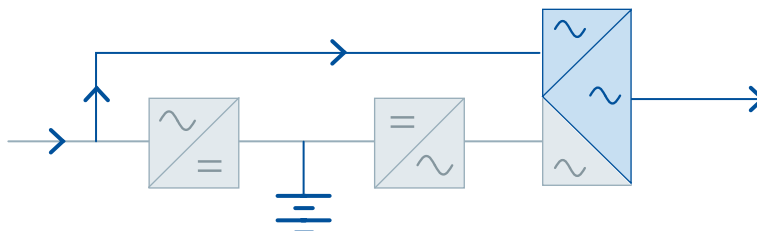


INGENIO ECS 100-160 kVA

Operating mode

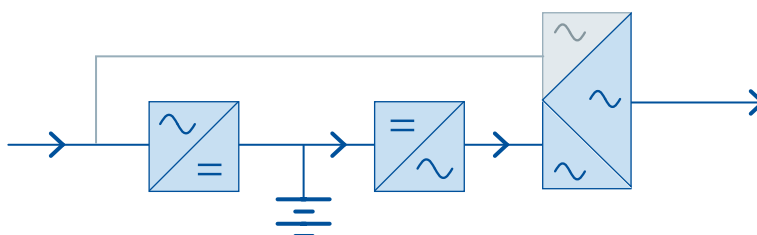
Changeover mode - Always On (AO)

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



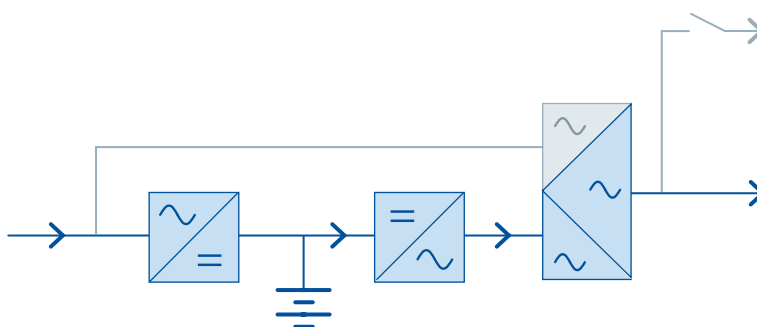
Mode without interruption - Always On (AO)

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 |
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