

POWER CPS

5-100 kVA

STAND ALONE THREEPHASE UPS

1:1

3:1

3:3

The ideal solution for:

- ✓ EMERGENCY LIGHTING
- ✓ FIRE PROTECTION SYSTEMS
- ✓ ALARM SYSTEMS
- ✓ SMOKE EXTRACTORS

OVERVIEW

POWER CPS is the UPS designed to satisfy all the requirements of the **EN-50171** and **EN-62040** standards, whilst ensuring very high performance. The system is specifically designed for use in applications that are subject to safety standards, such as **fire prevention systems, emergency lighting systems, smoke extraction equipment and carbon monoxide detection.**

This UPS back-up, available both in the single-phase and three-phase version, is suitable for high power ratings, up to 100 kVA always with Power Factor 1.



Compliant with
EN-50171



Compliant with
EN-62040



BEST OVERLOAD CAPACITY

The system has a large power reserve, in fact, as specifically required by the EN50171 standard, POWER CPS is designed and sized to permanently manage an **overload at 120%** of the rated power.



HIGH PERFORMANCE

POWER CPS is the best solution for powering emergency devices and alarms because it guarantees maximum performance in the CPSS sector, e.g. **efficiency of up to 96,2% in Normal Mode**, as well as for high power ratings.

The UPS also features cutting-edge components such as the standard supply double input, rectifier and IGBT inverter.



OPTIMISED BATTERY MANAGEMENT

The UPS has protection against polarity inversion: this function guarantees the safety of maintenance workers whilst avoiding any damage if the batteries are inadvertently connected with the incorrect polarity.

The advanced battery management system also allows you to **adapt the charging voltage according to the temperature** and to prevent overheating and overloading of the batteries. The expected life of the batteries is thus extended and charging times are optimised.



SMART MAINTENANCE

POWER CPS has a standard supply **double input**. This important function ensures easier and safer maintenance of the UPS as well as allowing the use of two different power sources.

It is, in fact, possible to perform periodic checks using a specific input switch which interrupts the system power supply whilst leaving the bypass line active.



PRODUCT RANGE



CPS-TM / TT

System available in both the single-phase and three-phase version (1/1, 3/1, 3/3), with different power ratings from 5 to 50 kVA. The cabinet can hold up to 3 strings of 40 internal batteries.

Power Factor 1

Efficiency up to 96,2% in Normal Mode.

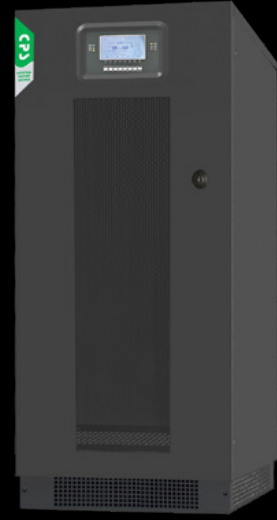


CPS-TT

Three-phase system (3/3) available in version with power from 65 to 100 kVA.

Power Factor 1

Efficiency up to 95,2% in Normal Mode.



CPS-TM3 / TT3

System available in both the single-phase and three-phase version (3/1, 3/3), with different power ratings from 6 to 100 kVA.

Power Factor 0.9

Efficiency up to 92,7% in Normal Mode.

COMPLIANT WITH EN 50171

- Fast battery charging: 80% charge in 12 hours
- Battery protection from damage resulting from reverse polarity
- Battery protection against deep discharges
- Long life battery with expected 10-year life
- Designed to hold 120% of the rated charge
- Metal housing with IP20 rating compliant with the EN 60598-1 standard

MAIN APPLICATIONS

EMERGENCY LIGHTING

Emergency exits, evacuation route, panic lightings, high-risk areas illumination.

FIRE ALARM

Automatic fire extinguishing systems, sprinkler systems, water-mist systems.

SMOKE DETECTION

Smoke extraction equipment and carbon monoxide detection devices.



MODEL	CPS006TM	CPS008TM	CPS010TM	CPS015TM	CPS020TM	CPS010TT	CPS015TT	CPS020TT	CPS030TT	CPS040TT
Usage load according to EN50171	5 kVA / 5 kW	6 kVA / 6 kW	8 kVA / 8 kW	12 kVA / 12 kW	16 kVA / 16 kW	8 kVA / 8 kW	12 kVA / 12 kW	16 kVA / 16 kW	24 kVA / 24 kW	32 kVA / 32 kW
MAIN INPUT										
Grid system	3F+N+PE / 1F+N+PE					3F+N+PE				
Rated voltage / Frequency	380/400/415 VAC (3 ϕ), 220/230/240 VAC (1 ϕ), 50/60 Hz					380/400/415 VAC, 50/60 Hz				
Voltage range	320~480 VAC full load, 240~480 VAC at 50% load (3 ϕ) 184~276 VAC full load, 140~276 VAC at 50% load (1 ϕ)					320~480 VAC full load 240~480 VAC at 50% load				
Maximum input current	14 A (3 ϕ) 42 A (1 ϕ)	17 A (3 ϕ) 51 A (1 ϕ)	17 A (3 ϕ) 51 A (1 ϕ)	31.5 A (3 ϕ) 94.5 A (1 ϕ)	40 A (3 ϕ) 120 A (1 ϕ)	21 A	31.5 A	40 A	63 A	80 A
Frequency range	40~72 Hz (rectifier operating range)									
Power factor	0.99									
Current THDi	≤4%	≤3%	≤2.5% (1 ϕ), ≤3% (3 ϕ)			≤3%				
OUTPUT										
Rated voltage / Frequency	220/230/240 VAC, 50/60 Hz					380/400/415 VAC, 50/60 Hz				
Load power factor	1									
Sinewave	Pure sine wave									
Voltage THDv	<1% (linear load) ≤1.5% (non-linear load)									
Voltage precision	±0.5% (0-100% linear load)									
Inverter overload	<120% long term operation, 120-132%, 60 minutes, 132-150%, 10 minutes, 150-180%, 1 minute, 180-240%, 0.5 seconds, >240%, 0.2 seconds,									
Bypass overload	132% long term operation, 132-150%, 60 minutes, 150-180%, 10 minutes, 180-240%, 1 minute, >240%, 20 seconds									
Frequency regulation	50/60 Hz ±0.01% (battery mode)									
Synchronized range	Default ±5%; (selectable ±0.10% ~ ±10%)									
Synchronized slew rate	Selectable (0.5 Hz/S ~ 2 Hz/S)									
Crest factor	3:1 - 3.6:1 usage load according to EN50171									
BATTERIES										
Battery type	Pb 10 years									
Number of batteries in series	40									
Nominal voltage	±240 VDC									
Batteries arrangement	Internal or external									
Number and capacity of internal batteries	3 x 40 12 V / 9 Ah									
External battery capacity	Selectable									
BATTERY CHARGER										
Discharge battery alarm	Settable (in order to guarantee 10 minutes as minimum pre-alarm time)									
Recharge current with usage load according to EN50171	6 A	8 A	9 A	15 A	15 A	9 A	15 A	15 A	22 A	26 A
Floating voltage	2.27 V/cell default (settable)									
Boost voltage	2.38 V/cell default (settable)									
Recharge time	<12 h for 180% capacity recharge									
SYSTEM										
Efficiency - Normal operation	95.9		95.8	96.0	95.7	96.1	96.2	95.9	96.1	
Efficiency - Eco Mode operation	99.0	99.1	99.0	98.9		99.3	99.5		99.6	99.8
Efficiency - Battery operation	95.9						96.4		96.5	96.5
Display	LED + LCD Touch Screen									
Protection degree	IP20 standard, IP21/31 optional, dust filter optional									
Interface	Standard equipment: RS232, USB, dry contacts, Cold Start, EPO Optional: RS485, SNMP, parallel kit									
Operating mode	Online Mode: load always supplied by inverter Standby Off Mode: load powered only during mains failure or through external control EcoMode: load supplied on static bypass mode EOS Mode: 2 split loads, one load works in Online Mode and the second in Standby Off Mode									
Transfer load time	0 ms in Online Mode									
Compliance	EU Directive: 2014/35/EU Low voltage directive; e 2014/30/EU Electromagnetic compatibility directive • Safety: EN62040-1 • EMC: EN62040-2 C2 • Performance: EN62040-3 (Voltage Frequency Independent) VFI - SS - 111 • Centralised power supply systems: EN50171									
MECHANICAL DATA										
Dimensions W*D*H (mm)	440*840*1320									
Weight (Kg)	102	103	105	107	103	105	107	112	116	
Colour	RAL 7016									

MODEL	CPS060TT	CPS080TT	CPS100TT	CPS120TT
Usage load according to EN50171	50 kVA / 50 kW	65 kVA / 65 kW	85 kVA / 85 kW	100 kVA / 100 kW
MAIN INPUT				
Grid system	3F+N+PE			
Rated voltage / Frequency	380/400/415 Vac threephase + N, 50/60Hz			
Voltage range	320~480 VAC full load, 240~480 VAC at 50% load			
Maximum input current	120 A	155 A	195 A	230 A
Frequency range	40 - 72 Hz (rectifier operating range)			
Power factor	0.99			
Current THDi	≤3%			
OUTPUT				
Rated voltage / Frequency	380 V (Pn-2%), 400 V, 415 V; 50/60 Hz			
Load power factor	1			
Sinewave	Pure sine wave			
Voltage THDv	<1% (linear load), ≤1.5% (non-linear load)			
Voltage precision	±0.5%			
Inverter overload	120% long term operation 120-132%, 60 minutes 133-150%, 10 minutes 151-180%, 1 minute 181-240%, 0.5 seconds >240%, 0.2 seconds			
Bypass overload	132% long term operation 133-150%, 60 minutes 151-180%, 10 minutes 181-240%, 1 minute >240%, 20 seconds			
Frequency regulation	50/60 Hz ±0.01% (battery mode)			
Synchronized range	Default ±5%; (adjustable ±0.10% ~ ±10%)			
Synchronized slew rate	Adjustable (0.5 Hz/S ~ 2 Hz/S), default 1 Hz/S			
Crest factor	3:1			
BATTERIES				
Battery type	VRLA / AGM sealed lead acid batteries, open-vented batteries, NiCd batteries, lithium batteries			
Batteries arrangement isposizione batterie	External			
Number of batteries in series	Default 40 (20+20), selectable from 15 to 22 (if <20 a power derating must be applied)			
Nominal voltage	±240 VDC			
External battery capacity	Selectable			
BATTERY CHARGER				
Discharge battery alarm	Settable (in order to guarantee 10 minutes as minimum pre-alarm time)			
Recharge current	30 A			
Floating voltage	2.27V/cell default (settable)			
Boost voltage	2.40V/cell default (settable)			
Recharge time	<12 h for l'80% capacity recharge			
SYSTEM				
Efficiency - Normal operation	95.9	95.2	95.2	95.2
Efficiency - Eco Mode operation	99.1	98.7	99.1	99.2
Efficiency - Battery operation	96.6	94.1	95.4	94.1
Display isplay	LED + LCD Touch Screen			
Protection degree	IP20 *			
Interface	Standard equipment: RS232, USB, dry contacts, Cold Start, EPO Optional: RS485, SNMP, parallel kit			
Operating mode	Online Mode: load always supplied by inverter Standby Off Mode: load powered only during mains failure or through external control EcoMode: load supplied on static bypass mode EOS Mode: 2 split loads, one load works in Online Mode and the second in Standby Off Mode			
Transfer load time	0 ms in Online Mode			
Compliance ormative	EU Directive: 2014/35/EU Low voltage directive; e 2014/30/EU Electromagnetic compatibility directive • Safety: EN62040-1 • EMC: EN62040-2 C2 • Performance: EN62040-3 (Voltage Frequency Independent) VFI - SS - 111 • Centralised power supply systems: EN50171			
MECHANICAL DATA				
Dimensions W*D*H (mm)	440*840*1320	500*830*1600		
Weight (Kg)	130	173	181	199
Colour	RAL 7016			

Note: technical specifications and data could be changed without notification

* IP21/31 protection degree and Dust Filter are available on request

MODEL	CPS006KTM3	CPS010KTM3	CPS015KTM3	CPS010KTT3	CPS015KTT3	CPS020KTT3	CPS030KTT3	CPS040KTT3	CPS060KTT3	CPS080KTT3	CPS100KTT3	
Usage load according to EN50171 (kVA / kW)	6 / 5.4	10 / 9	15 / 13.5	10 / 9	15 / 13.5	20 / 18	30 / 27	40 / 36	60 / 54	80 / 72	100 / 90	
MAIN INPUT												
Grid system	3F+N+PE											
Rated voltage / Frequency	380/400/415 VAC , 50/60 Hz											
Voltage range	300-480 VAC											
Frequency range	45 - 65 Hz											
Power factor	0.99											
Current THDi	≤30%											
OUTPUT												
Load connection	1F+N+PE				3F+N+PE							
Rated voltage / Frequency	220/230/240 VAC, 50/60 Hz				380/400/415 VAC + N, 50/60 Hz							
Load power factor	0.9											
Sinewave	Pure sine wave											
Voltage THDv	≤1% (linear load), ≤3% (non-linear load)											
Voltage precision	±1% (0-100% linear load)											
Inverter overload	<120% long term operation, 120-130%, 60 minutes, 130-145%, 10 minutes, 145-170%, 1 minute											
Bypass overload	120% long term operation, 120-130%, 60 minutes, 130-145%, 10 minutes, 145-170%, 1 minute											
Frequency regulation	0.05% (battery mode)											
Synchronized range	2% (Selectable ± 1% ~ ± 6%)											
Synchronized slew rate	1 Hz/S											
Crest factor	3.6 : 1											
BATTERIES												
Battery type	Pb 10 years											
Number of batteries in series	32								33			
Nominal voltage	384 VDC								396 VDC			
Batteries arrangement	Internal and/or external						External					
Number and capacity of internal batteries	2 x 32 12V 9 Ah						-					
External battery capacity	Selectable											
BATTERY CHARGER												
Discharge battery alarm	Settable (in order to guarantee 10 minutes as minimum pre-alarm time)											
Recharge current	12 A	13 A	14 A	13 A	14 A	24 A	28 A	52 A	55 A	60 A	67 A	
Floating voltage	2.26V/cell default (settable)											
Boost voltage	2.40V/cell default (settable)											
Recharge time	<12 h for 1'80% capacity recharge											
SYSTEM												
Efficiency - Normal operation	91.5%			88%	90%	92%				92.7%		
Efficiency - Eco Mode operation	98%											
Efficiency - Battery operation	95%			94%						95%		
Display	LED + LCD											
Protection degree	IP20											
Interface	2 slots for communication interface / 2 RS232 serial ports											
Operating mode	Online Mode: load always supplied by inverter Stanby Off Mode: load powered only during mains failure or through external control Eco Mode: load supplied on static bypass mode											
Transfer load time	0 ms in Online Mode											
Compliance	EU Directive: 2014/35/EU Low voltage directive; e 2014/30/EU Electromagnetic compatibility directive • Safety: EN62040-1 • EMC: EN62040-2 C2 • Performance: EN62040-3 (Voltage Frequency Independent) VFI - SS - 111 • Centralised power supply systems: EN50171											
MECHANICAL DATA												
Dimensions W*D*H (mm) imensioni L*P*A (mm)	555 x 740 x 1400							800 x 740 x1400		800 x 800 x 1900		
Weight (Kg)	200	220	230	241	256	315	335	460	540	600	610	
Colour	RAL 7016											

Note: technical specifications and data could be changed without notification

Note 2: power over 100 kVA available on request

GTEC SERVICE

GTEC supports its customers throughout the whole product life cycle, providing technical assistance and after-sales service at the highest professional standards, so to produce the best partnership experience.



MAINTENANCE is an essential activity in order to guarantee a safe and stable load protection. GTEC shows maximum care about this topic, providing the best service in terms of experience, instrumentation and safety level.



The **TECHNICAL SUPPORT** service, delivered through the dedicated Help Desk platform, guarantees prompt answers to customers' requests and allows them to directly schedule maintenance activities.



The partnership between GTEC and its customers gets consolidated through the **TRAINING SESSIONS** proposal for technical staff, so that each user can operate on the UPSs with maximum consciousness and safety.



Also, in the GTEC Service offers, a **PROJECT CONSULTING** team is available, in order to provide the best solution according to the designer's needs.

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