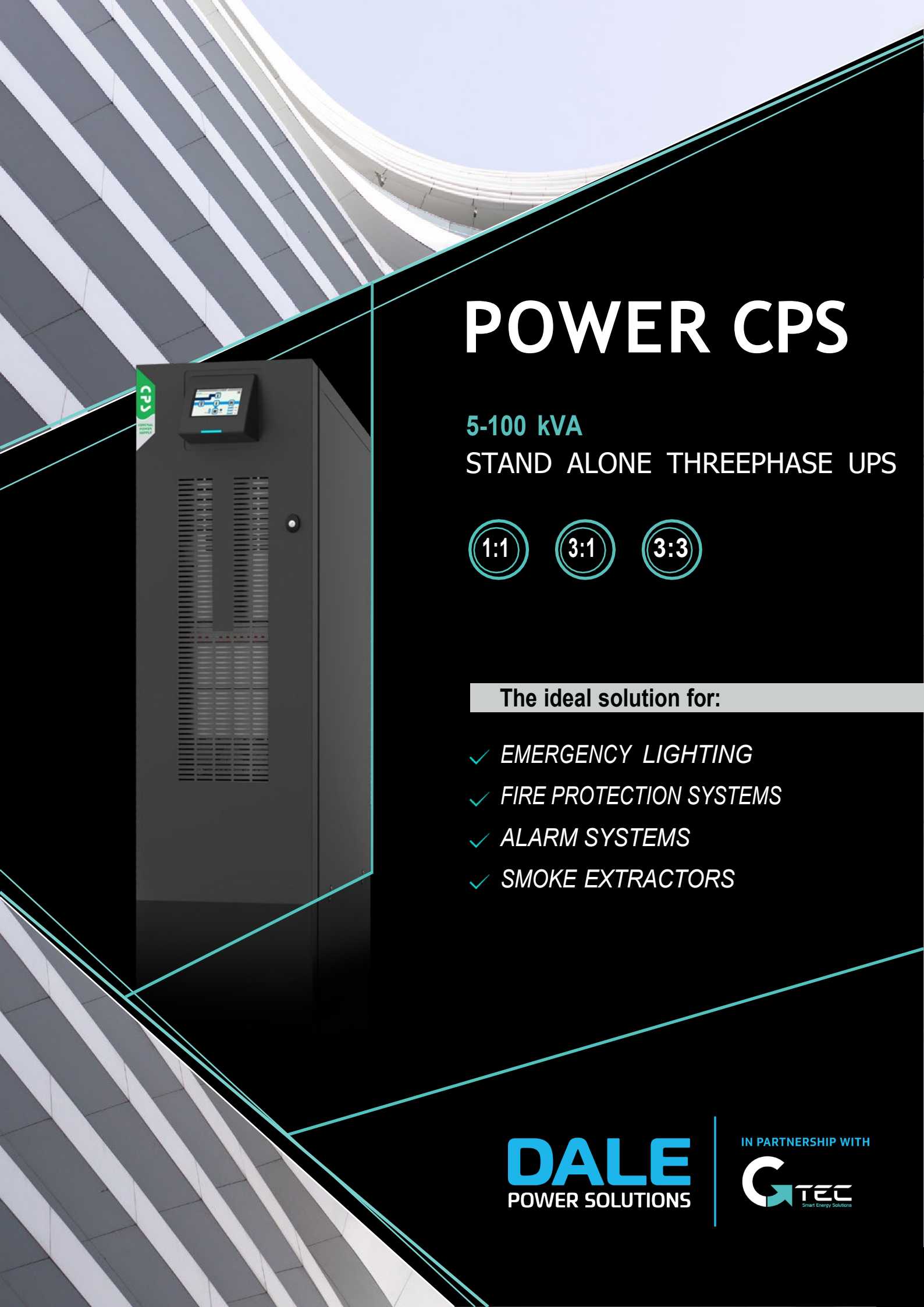


POWER CPS

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*

DALE POWER SOLUTIONS

IN PARTNERSHIP WITH GTEC Smart Energy Solutions

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.

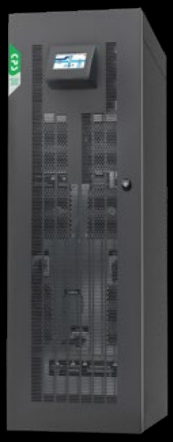
PRODUCT RANGE

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 501

- 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

moke extraction equipment and carbon monoxide detection devices.

MODEL	CPS006TM	CPS008TM	CPS010TM	CPS015TM	CPS020TM
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
MAIN INPUT					
Grid system	3F+N+PE / 1F+N+PE				
Rated voltage / Frequency	380/400/415 VAC (3ϕ), 220/230/240 VAC (1ϕ), 50/60 Hz				
Voltage range	320~480 VAC full load, 240~480 VAC at 50% load (3ϕ) 184~276 VAC full load, 140~276 VAC at 50% load (1ϕ)				
Maximum input current	14 A (3ϕ) 42 A (1ϕ)	17 A (3ϕ) 51 A (1ϕ)	17 A (3ϕ) 51 A (1ϕ)	31.5 A (3ϕ) 94.5 A (1ϕ)	40 A (3ϕ) 120 A (1ϕ)
Frequency range	40~72 Hz (rectifier operating range)				
Power factor	0.99				
Current THDi	≤4%	≤3%	≤2.5% (1ϕ), ≤3% (3ϕ)	≤2.5% (1ϕ), ≤3% (3ϕ)	≤2.5% (1ϕ), ≤3% (3ϕ)
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
Floating voltage	2.27 V/cell default (settable)				
Boost voltage	2.38 V/cell default (settable)				
Recharge time	<12 h for l'80% capacity recharge				
SYSTEM					
Efficiency - Normal operation	95.9	95.9	95.8	96.0	95.7
Efficiency - Eco Mode operation	99.0	99.1	99.0	98.9	98.9
Efficiency - Battery operation	95.9				
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	102	103	105	107
Colour	RAL 7016				

Note: technical specifications and data could be changed without notification

MODEL	CPS010TT	CPS015TT	CPS020TT	CPS030TT	CPS040TT
Usage load according to EN50171	8 kVA / 8 kW	12 kVA / 12 kW	16 kVA / 16 kW	24 kVA / 24 kVA	32 kVA / 32 kVA
MAIN INPUT					
Grid system	3F+N+PE				
Rated voltage / Frequency	380/400/415 VAC, 50/60 Hz				
Voltage range	320~480 VAC full load 240~480 VAC at 50% load				
Maximum input current	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	≤3%				
OUTPUT					
Rated voltage / Frequency	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	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 l'80% capacity recharge				
SYSTEM					
Efficiency - Normal operation	96.1	96.2	95.9	96.1	96.1
Efficiency - Eco Mode operation	99.3	99.5	99.5	99.6	99.8
Efficiency - Battery operation	95.9	96.4	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)	103	105	107	112	116
Colour	RAL 7016				

Note: technical specifications and data could be changed without notification

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	396 VDC										
Batteries arrangement	Internal and/or external					External					
Number and capacity of internal batteries	2 x 32 12V 9 Ah					Batterie esterne					
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 (settabile)										
Boost voltage	2.40V/cell default (settabile)										
Recharge time	<12 h for l'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

DALE
POWER SOLUTIONS

IN PARTNERSHIP WITH

GTEC
Smart Energy Solutions

Dale Power Solutions Ltd
Salter Road, Eastfield Industrial Estate,
Scarborough, YO11 3DU
Tel. 0330 999 3000
hello@dalepowersolutions.com
www.dalepowersolutions.com

GTEC Europe srl
Strada Marosticana, 81/13
36031 Dueville (VI), Italy
Tel. +39 0444.361321
info@gtec-power.eu
www.gtec-power.eu

GTEC France
france@gtec-power.eu

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