

is a Company specialized in the design and production of custom emergency power systems (AC and DC UPS), for Oil & DC UPS), for



The range of UPS produces by **ZULLIDINIC**, goes from 1KVA to 200KVA, thus covering all customer needs.

The most recent series adopt the new 3-level IGBT technology that guarantees greater efficiency and a simple interface (HMI), for the control of data and operational functions.

Our communication interfaces use the latest technologies via SNMP / Internet / 4G, and soon 5G.



# GDCA3 UPS ONLINE DOUBLE CONVERSION 3 LEVEL IGBT TECHNOLOGY UPS







UPS ONLINE DOUBLE CONVERSION 3 LEVEL IGBT TECHNOLOGY UPS













- **3** UPS LEVEL
- **▶** KVA=0,9 KW
- ▶ Efficiency 96%





















The new series of **UPS GDCA3** is composed by a huge range of On-Line Double Conversion models, completely digital controlled, suitable to protect different kind of loads, from servers to computers networks, from medical instruments to security and surveillance systems.

- Online UPS double conversion with output power factor 0.9
- Wide input voltage tolerance
- Manual Start by batteries
- Digital control batteries
- Cooling fans at a controlled speed
- EMI/RFI filters
- RS232 port for monitoring software

- Auto Electronics Protection
- Filter for network / fax / modem
- LCD display complete with all the informations
- Automatic battery testing
- Lightning and HF interference
- PFC technology for harmonic low input

#### **GUARANTEED PROTECTION**

Thanks to the availability of additional battery chargers, the backup time of the IST3 UPS may be extended up to 4 hours. The models can be connected in active and redundant parallel configuration, without any additional hardware or modification. It is possible to interface the UPS to protected computer through software and its own serial/USB cable (standard) or to intra and internet networks through an SNMP agent (optional).

# GDCA3

1 KVA



2. RS232

3. EPO

4. Output

5. External battery slot

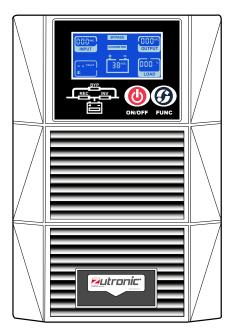
6. Network surge protection

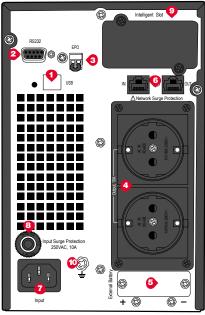
7. Input

8. Input surge protection

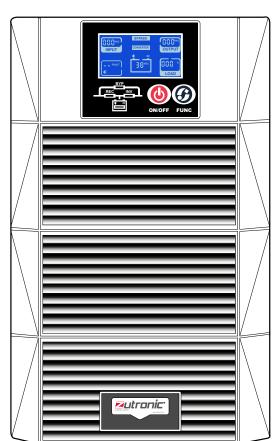
9. Intelligent slot

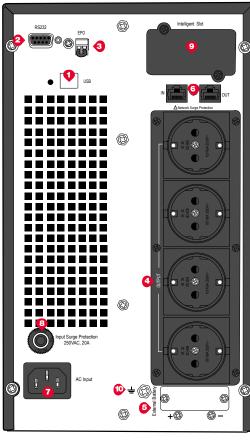
10. Ground











- 1. USB
- 2. RS232
- 3. EPO
- 4. Output
- 5. External battery slot
- 6. Network surge protection
- 7. Input
- 8. Input surge protection
- 9. Intelligent slot
- 10. Ground





GDCA3 1000 GDCA3 3000

CAPACITY	1KVA/0,9KW	3KVA/2,7KW			
COLD START	YES, default frequency = 50Hz or settable				
	110VAC	- 288VAC			
	100% load	@ > 176VAC			
ACCEPTABLE INPUT VOLTAGE	80% load @	2 > 154VAC			
	70% load @	2 > 132VAC			
	50% load (	@ >110VAC			
PHASE	single phase in,	single phase in, single phase out			
NPUT POWER FACTOR	≥0	,95			
NPUT CURRENT	4,8 A	14,4 A			
NPUT FREQUENCY RANGE	40-7	0 Hz			
REQUENCY ADAPTABLE	YI	ES			
DUTPUT					
OUTPUT PF	0	,9			
NOMINAL VOLTAGE	220/230/	/240 VAC			
VAVEFORM	pure sine wave (double co	onversion ON LINE - VFI)			
OLTAGE REGULATION	± 1	1%			
	<1% THD,	linear load			
ΓHD		ot linear load			
FREQUENCY ONLINE	± 5	± 5Hz			
FREQUENCY BATTERY MODE	± 0,	1Hz			
EFFICIENCY (LINE MODE)	92	%			
ECO MODE	98	98%			
TRANSFER TIME					
line mode to battery	(				
Inverter/Bypass	2r	ns			
CHARGER	1A	1A			
		g to bypass after 1 minute			
OVERLOAD CAPABILITY (LINE MODE)	131%-150% with switching to bypass after 30 second				
overteen en in Neier in (envenione)		From 151% immediate switching to bypass			
CREST RATIO	3				
BATTERY	3	.1			
BATTERY TYPE	cooled lead gold ma	intenace free battery			
BATTERY VOLTAGE VDC	36	96			
DISPLAY	30	90			
DISPLAY	LED-	LI CD			
INTERFACE	LEU-	- LOD			
COMMUNICATION	DD0 nost/D0000 dm, contest/-stissed	LISP port (optional) SNIMD (optional)			
	porv nozaz, ary contact (optional	), USB port (optional), SNMP (optional)			
MECHANICAL	47.40	. 50 ID			
NOISE (dB)	< 47dB	< 50dB			
P CLASS		20 NCK			
COLOR  DIMENSIONS I *P*A (mm)		190*/27*336			
DIMENSIONS L*P*A (mm)	145*353*228 12	190*427*336 26			
NET WEIGHTS WITH BATTERIES (Kg)					
PACKED GROSS WEIGHTS (Kg) STANDARDS	Standards European directives: L V 2014/35/EU low voltag Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62	Standards European directives: L V 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with I 62040-3 (Voltage frequency Indioendent) VFI - SS - 111			

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Efficiency 96%





















HOME/OFFICE

TRANSPORT



The new series of UPS GDCA3 6-20kVA smart high frequency online UPS uses full digital control technology and the latest high frequency converter technology and it has high efficiency, high power factor and other advantages. It has significant energy savings and greatly reduces operation costs. It has integrated functions such as AC regulation, backup power supply, surge protection and other functions to provide protection to equipments in harsh power grid environments and to provide clean, safe, and stable power to loads.

- High efficiency, up to 96%
- KVA=KW, Output PF=1
- 3 levels Technology IGBT Rectifier and Inverter
- Self-aging function
- Intelligent digital charging management with

maximum charger current up to 12A

- Smaller and compact size with higher power density
- Parallel up to 4 units
- Back up time up to 4 hours

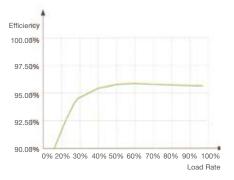
#### **HIGH RELIABILITY**

- Super wide input voltage range -60%~+25%
- · Robust overload ability
- Dual system control card prevent single failure point
- IGBT rectifier benefit with low THDi (<3%) and high power factor
- Bus synchronization control function provides reliable high power for the dual bus application
- 3 levels IGBT inverter ensures excellent performance

Intelligent fan control according the load capacity reduces the noise and prolongs fan service life

#### HIGH EFFICIENCY

- High efficiency in online mode (≥96%) reduces heat dissipation and limits power consumption costs
- Efficiency>99% in ECO mode gives significant costs reduction

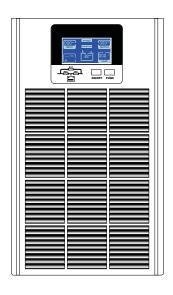


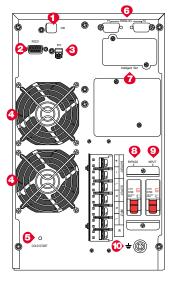


#### 6-20KVA

#### MODEL: 6K-L, 10K-L, 15K e 20K

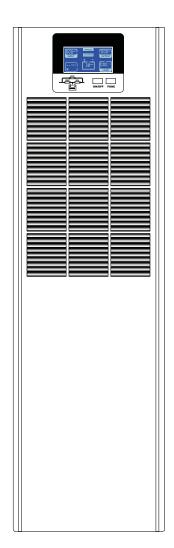
- 1. USB
- 2. RS232
- 3. EPO
- 4. Fans
- 5. Cold Start
- 6. Parallel P1-P2
- 7. Intelligent slot
- 8. Bypass switch
- 9. Input switch
- 10. Ground

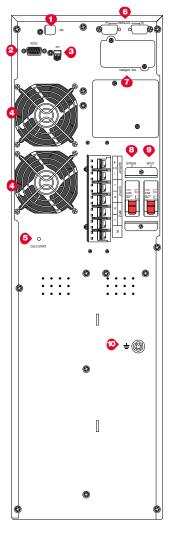




#### MODEL: 6K e 10K

- 1. USB
- 2. RS232
- 3. EPO
- 4. Fans
- 5. Cold Start
- 6. Parallel P1-P2
- 7. Intelligent slot
- 8. Bypass switch
- 9. Input switch
- 10. Ground









GDCA3 6K GDCA3 6K-L GDCA3 10K GDCA3 10K-L

	N	D		T
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CAPACITY	6K	VA/6KW	10KVA/10KW			
COLD START	YES, default frequency = 50Hz or settable					
	110VAC - 288VAC					
	100% load @ > 176VAC					
ACCEPTABLE INPUT VOLTAGE			@ > 154VAC			
			@ > 132VAC			
			I @ >110VAC			
PHASE		single phase in, single phase out				
INPUT POWER FACTOR			0,99			
INPUT CURRENT	30 A / 220 V	34 A / 220 V	49 A / 220 V	53 A / 220 V		
INPUT FREQUENCY RANGE		40-	-70 Hz			
FREQUENCY ADAPTABLE			/ES			
OUTPUT						
OUTPUT PF			1			
NOMINAL VOLTAGE			0/240 VAC			
WAVEFORM	_		conversion ON LINE - VFI)			
VOLTAGE REGULATION			1%			
			D, linear load			
THD	<2% THD, intear load					
FREQUENCY ONLINE	± 5Hz					
FREQUENCY BATTERY MODE	± 0,1Hz					
EFFICIENCY (LINE MODE)	95%					
ECO MODE	98%					
TRANSFER TIME	98%					
- line mode to battery			0			
- Inverter/Bypass			2ms			
CHARGER	1A	8A	1A	8A		
ORANGEN	IA .			OA OA		
OVERLOAD CAPABILITY (LINE MODE)			ing to bypass after 1 minute			
OVERLOAD CAPABILITY (LINE WODE)			ng to bypass after 30 second			
ODEST DATIO			te switching to bypass			
CREST RATIO		<u>'</u>	3:1			
BATTERY						
BATTERY TYPE	4001/		aintenace free battery	100/010/010/		
BATTERY VOLTAGE VDC	192V	192/216/240V adjustable	192V	192/216/240V adjustabl		
DISPLAY						
DISPLAY		LEC	D+LCD			
INTERFACE						
COMMUNICATION	D	B9 port/RS232, dry contact (optional	al), USB port (optional), SNMP (op	otional)		
MECHANICAL						
NOISE (dB)	< 47dB < 50 dB		60 dB			
IP CLASS		ll l	P20			
COLOR		BL	ACK			
DIMENSIONS L*P*A (mm)	190*426*705	190*426*336	190*485*705	190*485*336		
NET WEIGHTS WITH BATTERIES (Kg)	56	14 without batteries	66	16 without batteries		
PACKED GROSS WEIGHTS (Kg)	61	15	73	17		

Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage frequency Indioendent) VFI - SS - 111





	<b>GDCA3</b> 15K	GDCA3 20K			
INPUT					
CAPACITY	15KVA/15KW	20KVA/20KW			
COLD START	YES, default frequency = 50Hz or settable				
	190VAC - 2				
ACCEPTABLE INDUT VOLTAGE	100% load @ 				
ACCEPTABLE INPUT VOLTAGE	70% load @ 3				
	50% load @ 5				
PHASE	single phase in, si				
INPUT POWER FACTOR	≥0,9				
NPUT CURRENT	68 A / 220 V	91 A / 220 V			
NPUT FREQUENCY RANGE	40-70	Hz			
FREQUENCY ADAPTABLE	YES				
OUTPUT					
OUTPUT PF	1				
NOMINAL VOLTAGE	220/230/24	40 VAC			
WAVEFORM	pure sine wave (double con	version ON LINE - VFI)			
VOLTAGE REGULATION	± 1%	ó			
THD	<1% THD, lin	near load			
Ind	<3% THD, not	linear load			
FREQUENCY ONLINE	± 5H	Z			
FREQUENCY BATTERY MODE	± 0,11	lz			
EFFICIENCY (LINE MODE)	94,4% @100% load, 95%70% load	94,2% @100% load, 95%50% load			
ECO MODE	98%				
TRANSFER TIME	0				
CHARGER	5A	5A			
	105%-110% with switching to bypass after 10 minutes				
OVERLOAD CAPABILITY (LINE MODE)	111%-125% with switching to bypass after 1 minute				
	126%-150% with switching t	o bypass after 30 second			
CREST RATIO	3:1				
BATTERY					
BATTERY TYPE	sealed lead acid maint	<u> </u>			
BATTERY VOLTAGE VDC	192/240V ac	ljustable			
DISPLAY					
DISPLAY	LED+L	CD			
INTERFACE					
COMMUNICATION	DB9 port/RS232, dry contact (optional),	USB port (optional), SNMP (optional)			
MECHANICAL					
NOISE (dB)	< 53dB@<70% load - 66dB@>70% load				
IP CLASS	IP20				
COLOR  DIMENICIONIC L*P*A (*****)	BLAC				
DIMENSIONS L*P*A (mm)	190*485	~33b			
NET WEIGHTS WITH BATTERIES (Kg)	33				
PACKED GROSS WEIGHTS (Kg) STANDARDS	34  Standards European directives: L V 2014/35/EU low voltage Directive EMC 2014/30/EU electromagnetic compatibility Directive Standards: Safety IEC EN 62040-1; EMC IEC EN 62040-2; RoHS compliant Classification in accordance with IEC 62040-3 (Voltage)				

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- **3** UPS LEVEL
- ▶ KVA=**KW**
- ▶ Efficiency 96%





















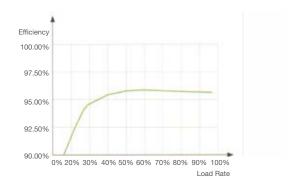
The new series of **UPS GDCA4** is composed by an Innovative True Three Level Technology, On-Line Double Conversion models, completely digital controlled, suitable to protect different kind of loads, from servers to computers networks, from medical instruments to security and surveillance systems.

- Advanced microprocessor control and IGBT inverter
- High energy efficiency and low waste heat dissipation
- Active battery management for fault prediction
- High efficiency up to 96%
- kVA=kW Output PF=1
- 3 levels Technology IGBT Rectifier and Inverter
- Self-aging function
- Intelligent digital charging management with maximum charger current up to 12A

- Smaller and compact size with higher power density
- Parallel up to 4 units
- Back up time up to 4 hours
- Optional specialised ups management software
- Failsafe internal bypass switch with manual control

#### **HIGH EFFICIENCY**

- High efficiency in online mode (≥96%) reduces heat dissipation and limits power consumption costs
- Efficiency>99% in ECO mode gives significant cost reduction



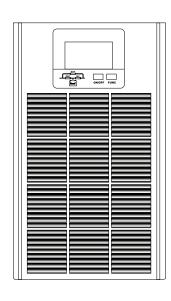
#### **HIGH RELIABILITY**

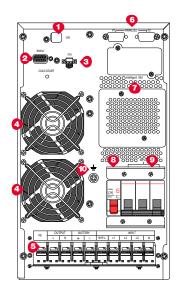
- Super wide input voltage range -60%~+25%
- · Robust overload ability
- Dual system control card prevent single failure point
- IGBT rectifier benefit with low THDi (<3%) and high power factor
- Bus synchronization control function provides reliable high power for the dual bus application
- 3-levels IGBT inverter ensures excellent performance

Intelligent fan control according the load capacity reduces the noise and prolongs fan service life



- 1. USB
- 2. RS232
- 3. EPO
- 4. Fans
- 5. Terminal block
- 6. Parallel P1-P2
- 7. Intelligent slot
- 8. Bypass switch
- 9. Input switch
- 10. Ground









**GDCA4** 10K **GDCA4** 15K **GDCA4** 20K

INFOI					
CAPACITY	10KVA/10KW	15KVA/15KW	20KVA/20KW		
COLD START	YES, default frequency = 50Hz or settable				
	190VAC - 499VAC				
ACCEPTABLE INPUT VOLTAGE		100% carico @ > 305VAC			
		80% carico @ > 230VAC			
		70% carico @ > 228VAC			
		50% carico @ >190VAC			
PHASE		Three-phase in and single phase out			
INPUT POWER FACTOR		≥0,99			
INPUT CURRENT	20 A	30 A	40 A		
INPUT FREQUENCY RANGE		40-70 Hz			
FREQUENCY ADAPTABLE		YES			
OUTPUT					
OUTPUT PF		1			
NOMINAL VOLTAGE		220/230/240 VAC			
WAVEFORM	p	ure sine wave (double conversion ON LINE - VF	1)		
VOLTAGE REGULATION		± 1%			
THD		<1% THD, linear load			
וחט		<3% THD, not linear load			
FREQUENCY ONLINE		± 5Hz			
FREQUENCY BATTERY MODE		± 0,1Hz			
EFFICIENCY (LINE MODE)	94% @100% load, 94,5%70% load 94,4% @100% load, 95%70% load		94,2% @100% load, 95%50% load		
ECO MODE		98%			
TRANSFER TIME		0			
CHARGER	5A	5A	5A		
	10	5%-110% with bypass switching after 10 minut	es		
OVERLOAD CAPABILITY (LINE MODE)	11	1%-125% with switching to bypass after 1 minu	ute		
	126	6%-150% with switching to bypass after 30 second	ond		
CREST RATIO		3:1			
BATTERY					
BATTERY TYPE		sealed lead acid maintenace free battery			
BATTERY VOLTAGE VDC	192V	192/240V ac	ljustable		
DISPLAY					
DISPLAY		LED+LCD			
INTERFACE					
COMMUNICATION	DB9 port/RS23	32, dry contact (optional), USB port (optional), SI	NMP (optional)		
MECHANICAL					
NOISE (dB)		< 53dB@<70% load - 66dB@>70% load			
IP CLASS		IP20			
COLOR		BLACK			
DIMENSIONS L*P*A (mm)	190*485*336	190*485	*336		
NET WEIGHTS WITH BATTERIES (Kg)	22				
PACKED GROSS WEIGHTS (Kg)	23	34			
STANDARDS		I 4/35/EU low voltage Directive EMC 2014/30/EU IEC EN 62040-2; RoHS compliant Classification frequency Indioendent) VFI - SS - 111			

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- KVA=**KW**
- Efficiency 96%





















The UPS GDCA7, series 3-Phase in, 3-Phase out UPS uses advanced 3 level inverter technology and digital technology for full interconnection and has advantages such high efficiency, high power density and occupies only a small amount of floor space.

It provides safe, stable, clean, and environmentally friendly power to loads and can provide safe and reliable comprehensive protection to data centers, IT server rooms, precision instruments and others.

- 3 level IGBT technology UPS;
- · Modular design;
- Upgradable on site (50-200KVA);
- 96% Efficiency;
- Output power factor 1;

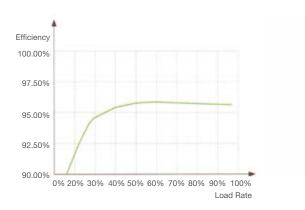
- Fully settable from displayon site;
- Self-cleaning function;
- Capture wave-form graphicson display (black box);
- Hot-swappable battery packs.

#### **GUARANTEED PROTECTION**

- The UPS GDCA7 Series with Innovative 3 Levels Technology is a true on-line double conversion, three-phases UPS system that provides one of the highest level energy efficiencies in the industry.
- Three levels inverter & rectifier design **GDCA7** Series brings the newest power conversion technology and delivers efficiency up to 96% at 50-75% load operation which is the most common operating range.

#### **HIGH EFFICIENCY**

- High efficiency in online mode (≥96%) reduces heat dissipation and limits power consumption costs
- Efficiency>99% in ECO mode gives significant cost reduction



### INTELLIGENT MANAGEMENT SMARTER OPERATION AND MAINTENANCE MANAGEMENT

- Modular design allows operations of maintenance and reparations to be quicker and safer.
- Replacing Power Module of an industrial **UPS three-phase GDCA7** has never been so easy and fast, in fact, the average time to replace the faulty component is less than 30 minutes, reducing all costs of reparations by 50%.
- Full digital interconnection, advanced dual DSP control technology, fast fault self-diagnosis, full redundancy coverage, no more single point of failure, and good system compatibility ensures reliable power supply to the load from an ultra-wide range of input from the power grid, while the smart generator control enables flexible adaptation to various complex power grid environments.

#### **HIGH RELIABILITY**

- $\bullet$  Super wide input voltage range -60%~+25%
- · Robust overload ability
- Dual system control card prevent single failure point
- IGBT rectifier benefit with low THDi (<3%) and high power factor
- Bus synchronization control function provides reliable high power for the dual bus application
- 3-levels IGBT inverter ensures excellent performance

Intelligent fan control according the load capacity reduces the noise and prolongs fan service life

#### **MODULAR DESIGN**

The **GDCA7** are industrial **UPS** units with high power density, 200 kW; **GDCA7** occupies only 0.54 square meters of area and saves a lot of space in the client's server room while having an ecological design.

The three-phase **UPS GDCA7** uses the latest 3-level IGBT rectification technology and its input power factor approaches the unit's power factor; improves energy efficiency up to 96%

#### **SELF-CLEANING FUNCTION**

- GDCA7 series three-phase UPS, the new self-cleaning mode periodically expels all the dust from the power module to reduce the risk of PCB failures due to dust corrosion by over 30%.
- The automatic self de-dusting mode in industrial UPS can be set daily, weekly, or periodically at the user's discretion based on company needs.

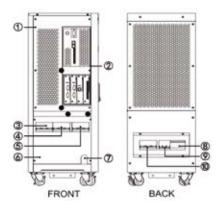
#### **BLACK BOX**

- The operating system incorporated in the computerized display can analyze and record the waveforms of each component of the Uninterruptible Power Supply online.
- Through the display it is possible to display all the waveforms
  passing through each component on the color screen,
  thus simplifying the localized identification of problems
  or distortions of any kind inside or outside the apparatus.





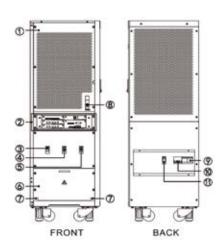
#### 10-40KVA



- 1. TOP COVER PLATE:
- 2. CONTROL UNIT:
- 3. POWER BREAKER;
- 4. BYPASS BREAKER;
- 5. OUTPUT BREAKER;
- 6. WIRING COVER PLATE:
- 7. WIRING HOLES OF COMMUNICATION WIRES:
- 8. SURGE PROTECTION DEVICE (OPTIONAL);
- 9. SURGE PROTECTION BREAKER (OPTIONAL):
- 10. MAINTENANCE BUPASS BREAKER.



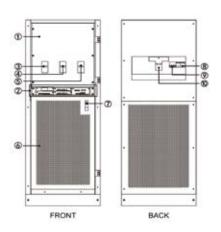
#### 50-120KVA



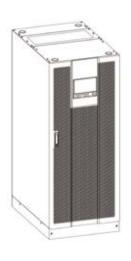
- 1. TOP COVER PLATE:
- 2. CONTROL UNIT;
- 3. POWER BREAKER;
- 4. BYPASS BREAKER;
- 5. OUTPUT BREAKER;
- 6. WIRING COVER PLATE;
- 7. WIRING HOLES OF COMMUNICATION WIRES;
- 8. BATTERY SLOW START BOTTON:
- 9. SURGE PROTECTION DEVICE (OPTIONAL);
- 10. SURGE PROTECTION BREAKER (OPTIONAL):
- 11. MAINTENANCE BUPASS BREAKER.



#### 160-200KVA



- WIRING COVER PLATE;
- 2. CONTROL UNIT;
- 3. POWER BREAKER:
- 4. BYPASS BREAKER;
- 5. OUTPUT BREAKER;
- 6. BOTTOM COVER PLATE;
- BOTTOM START BUTTON;
- 8. SURGE PROTECTION DEVICE (OPTIONAL):
- 9. SURGE PROTECTION BREAKER (OPTIONAL);
- 10. MAINTENANCE BUPASS BREAKER.





## UPS DOUBLE CONVERSION



GDCA7 10K GDCA7 10K-L | GDCA7 15K-L | GDCA7 20K-L | GDCA7 30K-L | GDCA7 40K-L

GDCA7 15K

GDCA7 20K

GDCA7 30K

GDCA7 40K

#### **INPUT**

CAPACITY	10KVA/KW	15KVA/KW	20KVA/KW	30KVA/KW	40KVA/KW
INPUT VOLTAGE				33.17771117	
INPUT CONNECTION	380/400/415V				
POWER FACTOR	3 - 4W+PE				
INPUT CURRENT THD		≥0,99			
			<3% -20%    +15% full load		
INPUT VOLTAGE WINDOW					
FREQUENCY WINDOW			40-70Hz		
BYPASS INPUT					
BYPASS VOLTAGE			380/400/415V		
BYPASS VOLTAGE WINDOW			-20% - +15% full load		
FREQUENCY WINDOW			± 5Hz		
BATTERY	1			1	
BATTERY TYPE			VRLA		
BATTERY VOLTAGE VDC			±192/±216		
MAX CHARGING CURRENT		up t	o 20% of the ups rated p	ower	
VOLTAGE PRECISION OF CHARGING			1%		
ОUТРИТ				1	
OUTPUT PF		L-N:220/23	30/240V±1% L-L:380/400	0/415V±1%	
NOMINAL VOLTAGE		±0,5% (	balance load) 1% (unbala	nce load)	
WAVEFORM		pure sine wa	ave (double conversion Of	N LINE - VFI)	
VOLTAGE PRECISION		Ę	5% (0-100 increase in load	d)	
THD	_	THD<1%, (I	inear load)    THD<5%, (no	ot linear load)	
EFFICIENCY			up to 96%		
POWER FACTOR			1		
FREQUENCY			50/60Hz±3Hz, adjustable	)	
PHASE			as an input		
FREQUENCY PRECISION (FREE RUNNING)			±0.02%		
PHASE TOLERANCE			150° ±0.5°		
VOLTAGE UNBALANCE DEGREE		da	a 0,5Hz/s a 5Hz/s adjusta	ble	
CREST RATIO			3:1		
OVERLOAD ALLOWED BY INVERTER	105% ~ 115% afte	r 1 hour    130% after 10	min  131-150% after 1 mi	n > 150% after 200 ms	switching to bypass
OTHERS					
DISPLAY			TOUCH SCREEN + LED		
ALARMS		abnormal VAC	input, low battery, overlo	ad, errors, etc.	
PROTECTION	short-circuit output, overload, high temperature, etc.				
EMI FILTER			IEC62040-2		
EMC REGULATIONS		IEC61000-4-2 (ESD), IE	EC61000-4-3(RS)IEC6100	-4-4(EFT). IEC6100-4-5	
IP CLASS		·	IP20		
COMMUNICATION		RS485 modbus	, dry contact (SNMP option	onal and RS232)	
OPERATION TEMPERATURE			0-40°C		
RELATIVE HUMIDITY			0-95% (non condensing)		
NOISE (DB)			<65dB		
WEIGHT (KG) INTERNAL BATT MODEL	240	250	250	350	350
WEIGHT (KG) EXTERNAL BATT MODEL	120	120	120	120	120
DIMENSION (W*D*H) (MM) INTERNAL BATT MODEL	320*840*1030	320*840*1030	320*840*1030	320*840*1400	320*840*1400
DIMENSION (W*D*H) (MM) EXTERNAL BATT MODEL	320*840*867	320*840*867	320*840*867	320*840*867	320*840*867
		1	l.	1	



## UPS DOUBLE CONVERSION



INPUT	GDCA7 50K	<b>GDCA7</b> 80K	<b>GDCA7</b> 100K	<b>GDCA7</b> 120K
CAPACITY	50KVA/KW	80KVA/KW	100KVA/KW	120KVA/KW
NPUT VOLTAGE		380/40	0/415V	
NPUT CONNECTION			V+PE	
POWER FACTOR		≥0	,99	
NPUT CURRENT THD		<	3%	
NPUT VOLTAGE WINDOW		-20%    +1	5% full load	
REQUENCY WINDOW		40-7	70Hz	
SYPASS INPUT				
SYPASS VOLTAGE		380/40	0/415V	
BYPASS VOLTAGE WINDOW		-20% - +1	5%full load	
REQUENCY WINDOW		± 5	5Hz	
BATTERY				
SATTERY TYPE		VF	RLA	
ATTERY VOLTAGE VDC		±192	/±216	
MAX CHARGING CURRENT		up to 20% of the	ups rated power	
OLTAGE PRECISION OF CHARGING		1	%	
OUTPUT				
OUTPUT VOLTAGE		L-N:220/230/240V±1%	L-L:380/400/415V±1%	
OLTAGE PRECISION		±0,5% (balance load)	1% (unbalance load)	
UTPUT VOLTAGE TRANSIENT	5% (0-100% load step)			
THD	THD<1% (linear load) THD<5% (non linear load)			
FFICIENCY	up to 96%			
OWER FACTOR				
REQUENCY		50/60Hz±3H	z, adjustable	
PHASE		as ar	input	
REQUENCY PRECISION (FREE RUNNING)		±0.0	02%	
PHASE TOLERANCE		150°	±0.5°	
OLTAGE UNBALANCE DEGREE		da 0,5Hz/s a 5	Hz/s adjustable	
CREST RATIO		3	:1	
OVERLOAD ALLOWED BY INVERTER	105% ~ 115% after 1 hou	ur    130% after 10 min  131-150	% after 1 min > 150% after 200	ms    switching to bypass
OTHERS				
ISPLAY		TOUCH SC	REEN + LED	
ALARMS		abnormal VAC input, low b	attery, overload, errors, etc.	
PROTECTION	short-circuit output, overload, high temperature, etc.			
MI FILTER	IEC62040-2			
MC REGULATIONS	IEC61000-4-2 (ESD), IEC61000-4-3(RS)IEC6100-4-4(EFT). IEC6100-4-5			
CLASS	IP20			
COMMUNICATION		RS485 modbus, dry contact	(SNMP optional and RS232)	
PERATION TEMPERATURE		0-4	0°C	
RELATIVE HUMIDITY		0-95% (non	condensing)	
NOISE (DB)		<65	5dB	
VEIGHT (KG) WITHOUT BATTERIES	160	210	242	242
DIMENSIONS (W*D*H) WITHOUT BATTERIES	450*840*1400	450*840*1400	450*840*1400	450*840*1400

All information contained are purely indicative, specifications or designs can be changed at anytime without notice by **Eutronic** and cannot be used to form any contractual obligations.





### UPS DOUBLE CONVERSION



	<b>GDCA7</b> 140K	<b>GDCA7</b> 160K	<b>GDCA7</b> 200K	
INPUT				
CAPACITY	140KVA/KW	160KVA/KW	200KVA/KW	
NPUT VOLTAGE	380/400/415V			
NPUT CONNECTION	3 - 4W+PE			
POWER FACTOR		≥0,99		
NPUT CURRENT THD		<3%		
NPUT VOLTAGE WINDOW		-20%    +15% full load		
FREQUENCY WINDOW		40-70Hz		
BYPASS INPUT				
BYPASS VOLTAGE		380/400/415V		
BYPASS VOLTAGE WINDOW		-20% - +15% full load		
REQUENCY WINDOW		± 5Hz		
BATTERY				
BATTERY TYPE		VRLA		
BATTERY VOLTAGE VDC		±192/±216		
MAX CHARGING CURRENT		up to 20% of the ups rated power		
OLTAGE PRECISION OF CHARGING		1%		
OUTPUT				
OUTPUT VOLTAGE	L-I	N:220/230/240V±1% L-L:380/400/415V±1	%	
OLTAGE PRECISION		±0,5% (balance load) 1% (unbalance load)		
DUTPUT VOLTAGE TRANSIENT	5% (0-100% load step)			
THD	TH	D<1% (linear load) THD<5% (non linear lo	ad)	
FFICIENCY	up to 96%			
POWER FACTOR		1		
REQUENCY		50/60Hz±3Hz, adjustable		
PHASE		as an input		
REQUENCY PRECISION (FREE RUNNING)		±0.02%		
PHASE TOLERANCE		150° ±0.5°		
OLTAGE UNBALANCE DEGREE		da 0,5Hz/s a 5Hz/s adjustable		
CREST RATIO		3:1		
OVERLOAD ALLOWED BY INVERTER	105% ~ 115% after 1 hour    130%	after 10 min  131-150% after 1 min > 150%	6 after 200 ms    switching to bypass	
OTHERS	<u> </u>			
DISPLAY		TOUCH SCREEN + LED		
NLARMS	abnor	mal VAC input, low battery, overload, error	s, etc.	
PROTECTION		:-circuit output, overload, high temperature	<u>′</u>	
MI FILTER		IEC62040-2		
MC REGULATIONS	IEC61000-4-2 (ESD), IEC61000-4-3(RS)IEC6100-4-4(EFT). IEC6100-4-5			
PCLASS	IP20			
COMMUNICATION	RS485 modbus, dry contact (SNMP optional and RS232)			
DPERATION TEMPERATURE		0-40°C	- 1	
RELATIVE HUMIDITY		0-95% (non condensing)		
NOISE (DB)		<65dB		
	242 320 350			
NEIGHT (KG) WITHOUT BATTERIES				

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### ACCESSORIES



#### DRY CONTACT

The dry contact card allows to have a series of normally open or normally closed dry contacts (voltage free) to indicate the following operations of the UPS:

- Bypass mode
- Absence of the mains
- Inverter mode
- Problems to the batteries
- Presence of a generic alarm

It is also possible to perform a manual or automatic remote shutdown of the UPS

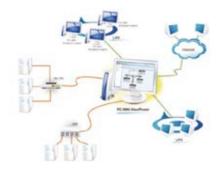
#### **SNMP NET AGENT**

Simple Network Management Protocol (SNMP) was created to address the problem of wide area network management. SNMP is a standard protocol that is part of the Transmission Control Protocol/Internet Protocol (TCP/IP) suite which allows all network devices to transmit management variables across enterprise wide networks.

SNMP is vendor and platform-independent and establishes guidelines for what information will be collected, how it will be structured and how the messages are formed from the network device to the manager and back. Network devices then gather information into a management information base (MIB).



A user's operating system software uses SNMP management software to collect and display the MIB data in an easily understood format.



#### SOFTWARE VIEW POWER PRO

Check the automatic shutdown and programmed to TM windows and Linux applications. Serial cable included in the package.

### **SERVICES**





## POST SELL ASSISTANCE

**ELLIFONIC** can offer several level of assistance based on the needs of the final customer and of the system itself.

Our contracts offer an efficient protection for all installations type. Maintenances activities are performed by our specialized technicians or by authorized company of the territory.

Below the services offered:

- Maintenance agreement (with several level of assistance, that can be also multi-annual), for UPS and Rectifiers battery charger
- Warranty extention connected to the maintenance agreement
- Planned test of batteries charge (capacity and efficiency test)
- Training to the employees that will have in charge the leading of the system
- Old batteries substitution and their disposal
- Phone assistance (or directly to the site) by our specialized technician
- Plant survey

The advantages of a maintenance agreement are:

- Reduction of loss of production and system stop costs
- Guaranteed response time
- Technical report for each intervention
- Historical report of all the activities at the site
- Only original spare parts use
- Certified tools use
- Site assistance by specialized and authorized technicians

### SERVICES OFFERED BY



Technologic devices require a special attention during the set in service and long their working on the site. This is the reason why **ELLIPTIC** company, directly or through local partners, may offer several dedicated services:

#### **PUTTING INTO SERVICE**

It is the activity that, performed by a specialized technician following a precise procedure decided by the Company Quality System, verify all the working conditions both of the site and of the machine as well. Then the first start can be performed.

Briefly, the putting into service consists in:

- Verification that all the site installation conditions comply
- Visual verification of all the devices and batteries to identify possible damages
- Verification that the devices are correctly connected to the system
- Verification that the batteries are correctly connected
- Verification that all security legislation have been fullfilled
- Verification that all security devices (upstream and downstream the machine) have been correctly placed
- Verification of the power supply system
- First start of the machine and check of all working parameters
- Test with a real load
- Simulation of power blackout and return
- Eventual test of comunication devices

The advantages of a Putting into service assisted by our technician are:

- Certainty of the proper working of the machine
- Training of the employees that will have incharge the leading of the site
- Longer life of the system
- Customization of the working parameters due to the real needs of the system
- Possibility to extend the warranty

#### **BATTERIES SUBSTITUTION**

Batteries substitution requires a specific knowledge to guarantee the system efficiency and to prevent serious damages due to a wrong connection. You must keep in mind that just putting the wrong polarity can cause an irreversible damage to the power continuity system.

ensuring the correct return of the service and a correct assitance to old batteries disposal.





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