



# X6-TTP Series 100-800kVA

PROGRAMMABLE DOUBLE CONVERSION ON-LINE



The three-phase double conversion UPS range of the TTP series, ranging from 100 to 800kVA, is an uninterrupted power supply system that sums up many unique, innovative and flexible characteristics that can cope with any demand of the market.

## FEATURES:

- Double conversion with transformer
- VFI – SS – 111 classification according to EN 62040–3
- It can be used as frequency converter and voltage stabilizer
- High overall efficiency
- Parallelable in Redundancy or Power configuration (up to 4 units)
- RS232 communication (RS485 optional) on Megatec protocol
- SNMP Megatec protocol, monitoring and shutdown management software (Megatec)
- “Green Mode” option
- Control panel with LED synoptic diagram and LCD display

Powerful and compact power supply systems in a complete range of advanced electric protection systems suitable for all needs.

In a corporate environment the availability of information is a key factor. The tolerance for blackout periods is always lower, due to the users needs and technical reasons. When information on key activities depends on the availability of power supply, the starting point for the development of any project is the availability of uninterrupted energy.





From 100 to 150 kVA



From 200 to 800 kVA

#### QUALITY POWER SUPPLY

VFI double-conversion technology with filtered and stabilized output voltage. This kind of product is highly immune to power line disturbance and ensures an effective protection against loads.

#### HIGH OVERALL EFFICIENCY

The UPS of the TTP series has been designed to obtain the best possible ratio between costs and the overall efficiency of the system. This leads to a reduced running cost for the users and to a higher respect for the environment, since it reduces the waste of precious energy.

#### HIGH RELIABILITY

The UPS of the TTP series have been designed to ensure the highest availability of power and the maximum reliability in time. The digital control of the system and their building technology are the key factors of their efficiency.

#### PROTECTED BATTERIES

The TTP system have a voltage compensation system of the accumulators according to the ambient temperature, in order to optimize the charge level and the life of the device. The TTP system can also be used as Ni-Cd accumulators.

#### SCALABILITY AND EXPANDABILITY

The UPS of the TTP series have been designed according to the many different needs of customers. These systems are parallelable in Redundancy or Power configuration.

#### EASY TO USE, EASY TO MAINTAIN

The TTP systems have an easy and user-friendly operator-machine interface. The final user can quickly get used to the system, without useless complications, increasing the level of familiarity with complex systems like a UPS. The design of the TTP series not only makes it easier for users

to use, but also facilitates maintenance, ensuring a frontal access to all parts. This series is extremely user- friendly both for ordinary and extraordinary.

#### COMMUNICATION WITH THE EXTERNAL WORLD

The TTP system has the RS232/485 communication system that allows connecting to normal PC and to dedicated SNMP interfaces for a LAN network monitoring. This kind of interface can also be supported by software for server and workstation shutdown in case of long blackouts.

#### INDUSTRIAL APPLICATIONS

The high level of flexibility of the TTP systems allows them to be used in a wide range of applications such as:

- Voltage and/or frequency converters (50-60-400Hz) with standard and custom working voltage/frequency
- Voltage generators for remotely controlled measurement labs
- Voltage/frequency variable generators for tests and trials
- Emergency light as Off-line or Green Mode back-up
- Voltage stabilizers
- DC/AC converters for solar/wind energy

#### REDUCED SIZE

Thanks to the new architecture of the TTP systems, the necessary spaces are reduced, with a reduction of the installation costs of the system.

#### PACKAGING AND MANUALS

All systems are packed and have their installation, user's and maintenance manuals. When possible, UPS-CI uses recyclable materials with a reduced environmental impact and reduces the use of plastic materials and virgin wood. All the manuals of the TTP series are printed on recycled paper.

### Technical Specifications:

Model	TTP-100	TTP-120	TTP-150	TTP-200	TTP-250	TTP-300	TTP-350	TTP-400	TTP-500	TTP-600	TTP-800
Rated Power: (kVA)	100	120	150	200	250	300	350	400	500	600	800
Active Power: (kW)	80	96	120	160	200	240	280	320	400	480	640
Overall Efficiency Ac/Ac at 100% charge	91.7%	91.8%	91.8%	92%	92%	92.1%	92.2%	92.2%	92.4%	92.4%	92.5%
Noisiness (at 7 metres) [dB(A)]	59	62	63	63	63	65	65	66	68	68	68
RECTIFIER											
Configuration	Fully-controlled thyristor bridge - 12 and 18 pulses option										
Working Rated Voltage	380-400-415Vac, three-phase + N + PE										
Frequency	50/60Hz, ± 10% selectable										
Power Factor	0.85 Inductive @ 100% load @ 400Vac										
Tolerance on DC Voltage	±1%										
Ripple Overlapping the DC	≤1%										
Max Accumulator Recharge Current	15	15	15	15	20	20	20	20	20	20	20
BATTERY											
Compatible Batteries	VRLA Sealing lead batteries - NiCd										
Buffer Voltage at 20 C	436V										
Discharge Voltage	320 VDC (adjustable)										
INVERTER											
Configuration	Three-phase IGBT bridge pwm controlled										
Tensione di Uscita Nominale	Rated output voltage 380-400-415V, three-phase + N + PE										
Inverter Transformer	Standard										
Output Wave Form	Pure Sinusoidal										
OUTPUT VOLTAGE TOLERANCE											
System Static Stability	± 1%										
Charge Outlet 0% - 100% - 0%	± 8% with retrieval within the static tolerance in 40mSec										
Charge Outlet 0% - 50% - 0%	± 3% with retrieval within ± 1% in 40mSec										
100% Unbalanced Load (IEC62040)	Output voltage within ± 3%										
OUTPUT VOLTAGE DISTORTION											
100% Linear Charge	2% Maximum THD										
80% Non Linear Charge (IEC62040)	5% Maximum THD										
Accepted Peak Factor	3:1 Factor with load applied at 80%										

## Technical Specifications:

Model	TTP-100	TTP-120	TTP-150	TTP-200	TTP-250	TTP-300	TTP-350	TTP-400	TTP-500	TTP-600	TTP-800
VECTOR BEHAVIOR											
100% Linear Charge	120 ±1%										
100% Unbalanced load (80%-0-80%)	120 ±2%										
OUTPUT FREQUENCY											
Internal Oscillator	50/60Hz, ±0.01%										
Synchronism Window	±5%										
Overload Capacity (on inverter)	125% for 10 minutes – from 125% to 150% for 60 seconds										
Short Circuit Capacity (on inverter)	150% of the rated current for 60 sec. with limitation system										
Output Current at 400V and Cosphi 0.8 (A)	144.51	173.41	216.76	289.02	361.27	433.53	505.78	578.03	722.54	867.05	1156.07
STATIC BYPASS											
Configuration	separated input										
Voltage Tolerance	± 10% of the system rated voltage (adjustable)										
Overload Capacity (on bypass)	125% continuous – 200% for 5 minutes – 1000% for 1/2 cycle										
Manual Bypass Isolator	Standard										
COMMUNICATIONS AND OPTIONS											
Serial Communication	RS232 with Megatec protocol / optional SNMP adapter / RS485 optional as an alternative to RS232										
Relay Card	Available with 1 general alarm contact / programmable relay card										
AUTONOMY — SIZE — WEIGHT											
UPS Power	100kVA	120kVA	150kVA	200kVA	250kVA	300kVA	350kVA	400kVA	500kVA	600kVA	800kVA
Standard Autonomy [min]	8	6	8	7	10	8	7	7	7	8	5
UPS Size (WxDxH) [mm]	1400x 750x 1200	1400x750x1200		1000x800x1800		2000x800x1800		2800x 800x 1800	3000x 800x 1800	4000x 800x 1800	4800x 800x 1800
External Battery Rack Size (WxDxH) [mm]	800x800x1800				(2x) 800x 800x 1800	(2x) 800x800x1800			(3x) 800x 800x 1800	(4x) 800x800x1800	
UPS Weight with Batteries [Kg]	1510	1510	1945	2700	3850	4250	4550	5800	7700	11400	12400
UPS Size (WxDxH) [mm]	800x 750x 1200	1400x750x1200		1000x800x1800		2000x800x1800		2800x 800x 1800	3000x 800x 1800	4000x 800x 1800	4800x 800x 1800
UPS Weight [Kg]	660	680	710	1250	1400	1800	2100	2900	4000	6500	7500