

T1.series

Programmable double conversion on line

CI
converter industry

The three-phase double conversion UPS range of the T1 series by Converter Industry®, ranging from 10 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.

- 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
- Paralleable 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 to technical reasons. When information a key activities depend on the availability of power supply, the starting point for the development of any project is the availability of uninterrupted energy.



From 10 to 50 KVA



The T2000 has been sold in thousands of units. The three-phase range has been therefore enlarged with the new T1 series, designed with a more evolved and reliable architecture:

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

High overall efficiency: The UPS of the T1 series have 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 T1 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 T1 systems 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 T1 systems can also be used as Ni-Cd accumulators.

Scalability and expandability: The UPS of the T1 series have been designed according to the many different needs of the customers. These systems are parallelable in Redundancy or Power configuration.

Easy to use, easy to maintain: the T1 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 T1 series not only makes the use easier for the user, but it also facilitates maintenance, ensuring a frontal access to all parts. This series is extremely user-friendly both for ordinary and extraordinary.



From 60 to 150 KVA



From 200 to 800 KVA



T1.series

Programmable double conversion on line



Communication with the external world: The T1 system has the RS232/RS485 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 T1 systems allows to use them 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 T1 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, use and maintenance manuals. When possible, Converter Industry uses recyclable materials with a reduced environmental impact and reduces the use of plastic materials and virgin wood. All the manuals of the T1 series are printed on recycled paper.



This sign highlights the commitment of the company to the constant improvement of the products in terms of environmental impact and energy saving

Homologations:



Model	TI-10	TI-15	TI-20	TI-30	TI-40	TI-50	TI-60	TI-80	TI-100	TI-120	TI-150	TI-200	TI-250	TI-300	TI-350	TI-400	TI-500	TI-600	TI-800
Rated power : (Kva)	10kva	15kva	20kva	30kva	40kva	50kva	60kva	80kva	100kva	120kva	150kva	200kva	250kva	300kva	350kva	400kva	500kva	600kva	800kva
Active power : (kw)	8kw	12.5kw	16kw	24kw	32kw	40kw	48kw	64kw	80kw	96kw	120kw	160kw	200kw	240kw	280kw	320kw	400kw	480kw	640kw
Overall efficiency Ac/Ac at 100% charge	90.5%	90.6%	90.7%	90.9%	91%	91.1%	91.2%	91.5%	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)]	52	52	54	54	57	57	59	59	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 380-400-415 Vac, three-phase + N + PE.
 Frequency 50/60Hz, +/- 10% selectable
 Power factor 0.85 inductive @ 100% load @ 400vac
 +/- 1%
 Tolerance on DC voltage <1%
 Ripple overlapping the DC
 Max accumulator recharge current 5

Battery

Compatible batteries VRLA Sealing lead batteries - stationary batteries
 Buffer voltage at 20 C 436V
 Discharge voltage 320VDC (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% +/- 9% with retrieval within the static tolerance in 40mSec
 Discharge outlet: 0% - 50% - 0% +/- 9% with retrieval within +/- 1% in 40mSec
 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%

Vector behaviour

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) 14.45 21.68 28.90 43.35 57.80 72.25 86.71 115.61 144.51 173.41 216.76 289.02 361.27 433.53 505.78 578.03 722.54 867.05 1156.07

Static bypass

Configuration Input configuration shared with rectifier line / separated input (option)
 Voltage tolerance +/- 10% of the system rated voltage (adjustable)
 Overload capacity (su bypass) 125% continuous – 200% for 5 minutes – 1000% for 1/2 cycle
 Manual bypass isolator Standard

Communication and options

Serial communication with RS232 display option
 Relay card : Available with 1 general alarm contact /programmable relay card

Autonomy – Size – Weight

UPS power	10KVA	15KVA	20KVA	30KVA	40KVA	50KVA	60KVA	80KVA	100KVA	120KVA	150KVA	200KVA	250KVA	300KVA	350KVA	400KVA	500KVA	600KVA	800KVA
Standard autonomy [min]	10	6	10	9	8	7	7	10	8	6	8	7	10	8	7	7	7	8	5
UPS size (WxDxH) [mm]	400x800x1000	400x800x1000	400x800x1420	400x800x1420	400x800x1000	800x750x1200	800x750x1200	800x800x1800	800x800x1800	1400x750x1200	1000x800x1800	1000x800x1800	2000x800x1800	2000x800x1800	2000x800x1800	2800x800x1800	3000x800x1800	4000x800x1800	4800x800x1800
External battery rack size (WxDxH) [mm]	230	240	340	350	530	620	1120	1450	1510	1510	1945	2700	3850	4250	4550	5800	7700	11400	12400
UPS weight with batteries [Kg]	150	160	180	190	200	210	580	620	660	680	710	1250	1400	1800	2100	2900	4000	6500	7500
UPS size (WxDxH) [mm]	400x800x1000	400x800x1420	400x800x1000	400x800x1000	800x750x1200	800x750x1200	800x800x1800	800x800x1800	1400x750x1200	1000x800x1800	1000x800x1800	2000x800x1800	2000x800x1800	2000x800x1800	2800x800x1800	3000x800x1800	4000x800x1800	4800x800x1800	4800x800x1800
UPS weight [Kg]	150	160	180	190	200	210	580	620	660	680	710	1250	1400	1800	2100	2900	4000	6500	7500

RS232 with Megatec protocol / optional SNMP adapter / RS485 optional as an alternative to RS232