AEC T 2000 20 kVa UPS Emergency Power System

Stock No	MU466
Model	T 2000 20 kVa
Serial	PR6604/W12624-0
Location	Our Central Warehouse, Aldridge, UK

Description

T2000 3 PHASE UNINTERRUPTIBLE POWER SUPPLY T2000 - P SERIES 200 KVA

T2000 Uninterruptible power supplies are a leading quality UPS made in Italy and installed worldwide.

T2000 is designed for use in mission critical environments from Industrial process control, data centres, local government offices through to Railway Networks, and are installed throughout Europe and the World.

The T2000 Protects critical systems from power outages or surges UPS systems provide reliable, automatic emergency back-up power when mains power outages occur.

They provide power for the time needed to shut servers down safely and avoid damage to your data.

If your configuration includes a standby generator, the UPS bridges the gap between the mains failure and the generator coming online.

Why have a UPS system?

A power surge or a brownout can cause your servers to switch off suddenly or it can damage your equipment. Power failure can cause your whole data centre or server room to shut down without giving the servers time to save data and shut down properly, thus risking a loss of data.

Installing UPS units protects your equipment from both eventualities, as well as providing realtime information about the power supply to your server room.

What are “brownouts” and “blackouts”?

A brownout is a “dip” in the voltage level of the electrical line; the voltage drops from its normal level to a lower voltage and then returns. Brownouts are extremely common and can wreak havoc with IT loads. They can be worse than blackouts as devices may continue to get power but at a reduced level, and some devices will malfunction rather than fail totally.

A blackout is a total failure of the power supply. The damage caused depends on its timing. If the system is idle, there may be little or no damage when the power returns. If the system is active there may be considerable damage and data loss.

Is a UPS necessary even for a small server room?

Wherever an organisation is storing and processing crucial business information on a network, however small, it is vital to protect that network from the impact of power failure.

How does a UPS work?

A UPS differs from an auxiliary or emergency power system or standby generator in that it will provide instantaneous protection from input power interruptions, by supplying energy stored in batteries.

The constituent parts of a UPS are a battery which provides the emergency power; an inverter which converts DC voltage to AC voltage; a rectifier which converts AC voltage to DC voltage and recharges the batteries; and a static bypass which ensures that the load drops automatically onto the mains input feed if the inverter fails.

There is also a manual bypass switch to allow repair or maintenance of the UPS unit.

When is N+1 required?

N+1 means that a redundant UPS unit is included in the set-up to provide back-up if a live UPS fails or runs out of battery back-up power during a power outage.

Redundancy is essential for mission-critical applications, such as in data centres or in demanding environments such as industrial process control where downtime for any reason is an expensive and damaging event.

It provides protection against single point of failure power supply risks through the

automatic failover function.

General Data	20Kva
Total efficiency Ac/Ac @ 100% load	90,7%
Total efficiency Ac/Ac @ 50% load	88,4%
Thermal dissipation @ 100% load (Btu)	5.598,9
With recharged batteries (KW)	1,64
Ventilation (77F-86F/25°C-30°C) m3/h	410,14
Noise (from 7 m) dB(A)	54
Operating temperature (UPS)	32F-104F (0°C-40°C)
Relative humidity	0-95% (non condensing)
Max. operating altitude	1000 m AMSL
Max. altitude with derating	1500 m/-5% 2000 m/-9% 2500 m/ -14%
Cabinet protection level	IP20 (from inside)
Cooling	Forced Air
Color	RAL 7032 + RAL 9005
Installation and maintenance	Frontal
Cable Entry	bottom (standard) - top (option)

Rectifier

Configuration	Fully controlled thyristors bridge - 12 and 18-pulse (option)
Nominal operating voltage	380-400-415 Vac, three phase + N + P.E.
Frequency	50/60Hz, +/- 10% selectable
Power Factory	0,85 inductive @ 100% load @ 400 Vac
Inrush currents	Soft start limited
DC voltage tolerance	+/- 1%
Ripple	<1%
Ripple current towards batteries	Max 2% referred to the Ah capacity
Max battery charging current	5 5 5 10 10 15 15

Battery

Compatible batteries	Sealed lead batteries VRLA - stationary batteries - NiCd-
Number of elements	192 (VRLA)

Float voltage @ 20°C	436 V
End of discharge voltage	320 VDC (adjustable)
Earth leakage relay	Option
Automatic-Manual Battery Test	Standard

Inverter

Configuration	IGBT three phase bridge, pwm controlled
Nominal output voltage	380-400-440 Vac, three phase +N + P.E.
Inverter transformer	Standard
Efficiency	0,9276 0,9287 0,9297 0,9317 0,9328 0,9338 0,9348
Output waveform	Pure sinusoidal

Output voltage tolerance

System static stability	+/- 1%
Load step 0% - 100% - 0%	+/-8% recovery within +/-1% 40 mSec.
Load step 0% - 50% - 0%	+/-3% recovery within +/-1% 40 mSec.
100% unbalanced load (IEC62040)	Output voltage between +/-3%

Output voltage distortion

100% linear load	2% THD Max.
80% non-linear load (IEC62040)	5% THD Max.
Accepted Crest factor	3:1 @ 80% load
Neutral conductor sizing	200%

Vector displacement

100% linear load	120° +/-1%
100% unbalanced load (80%-0-80%)	120° +/-2%

Output frequency

Free running oscillator	50/60Hz, +/- 0.01%
Synchronization window	+/-5%
Overload capability (on inverter)	10 min @ 125% load - 60 s @ 125 - 150% load
Short circuit capability (on inverter)	60 s @ 150% nominal current,

	system under current limitation
Output current @ 400V - cosphi 0,8(A)	14,45 21,68 28,90 43,35 57,80 72,25 86,71
Static bypass	
Configuration	input shared with rectifier line (standard), separated input (optional)
Voltage tolerance :	+/-10% nominal system voltage (adjustable)
Overload capability (on bypass)	Continual @ 125% - 5 min @ 200% - 10005 for 1/2 cycle
Electric protection	Fuse sized for 150% system current
Bypass isolator inside the UPS	standard
Backfeed protection	optional
Communication and signals	
Serial communication :	1x RS232 standard 1xRS485 (optional) SNPM
Relay card:	Available with 1 alarm contact (standard), 6 fully programmable alarm contacts (optional)
Available signals and alarms :	EPO dry contact connector available, Stop Sync remote contact,remote start & stop,

Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.