

centiel

continuous power availability



PremiumTower™

Class leading availability
Three-phase UPS 10-250 KW



www.centiel.com
www.centiel.co.uk



PremiumTower™

PremiumTower™ is a Swiss made 3-phase, online double-conversion Uninterruptible Power Supply.

From **10 to 250kW**, PremiumTower™ provides the best solution for small and medium data center, comms rooms, IT networks and any mission critical application demanding high availability and unbeatable energy efficiency.

PremiumTower™ offers built-in internal batteries from 10 to 60kW minimizing the footprint utilization, eliminating extra costs for external battery frames and avoiding complex installation.

The flexibility in the number of battery blocks (30 to 50) allows the system designer to optimize costs vs autonomy time.

At the same time, the high efficiency of 96.6% in double conversion (VFI) and 99.4% in Ultra-safe ECO mode guarantees maximum energy savings and the lowest Total Cost of Ownership.

Proven Reliability
30 years of experience

Advanced Performance
Cost Savings

Unbeatable Efficiency 96.6%
Lowest Operating Cost

Unity Power Factor
kVA = kW

**Outstanding
Overload Capability**

Ease of Service
Swappable Plug
& Play Internal Components

Flexibility
Wide Range of Options



+96.6% **Efficiency**
VFI



Advanced Performance

Unity Power Factor (kVA = kW)

PremiumTower™ provides unity power factor which avoids the need for system oversize to support today's power factor corrected loads.

High Battery Charging Current

With the ability to provide up to 5 times more charging current than typical standalone, PremiumTower™ reduces the total system cost by eliminating the need for external battery chargers.

High Efficiency 96.6% (VFI)

With a best in class efficiency of 96.6% in double conversion mode (VFI), PremiumTower™ provides the lowest Total Cost of Ownership.

Outstanding Overload Capability

With a 124% continuous operation in overload condition, mission critical applications can be safe on the event of unexpected load demands.

Ultra-Safe Eco Mode

With a 99.4% efficiency in Eco mode operation and an ultrafast reaction time of <1.9 ms, Ultra-Safe ECO mode enables an excellent trade-off between power quality and energy efficiency.

Exceptional Short Circuit Capability

With a Short Circuit capability of 3 times nominal current (3 x In), PremiumTower™ is able to clear output circuit protection in milliseconds.

Flexibility and Cost of Ownership

Internal Isolation Transformer

If galvanic isolation, voltage step-up or voltage step-down is required, PremiumTower™ can integrate the transformer within the same UPS increasing the flexibility on system development.

Minimized Footprint

With only 0.28 m² for 10 /20 kW and 0.41 m² for 30/40/60 kW, PremiumTower™ optimizes valuable floor space, eliminates the cost of the battery cabinet, and simplifies the installation.

Ease of Service

Direct access to components and plug-and-play internal modules minimize mean time to repair (MTTR) and simplifies routine maintenance.

Matching Battery Cabinets (MBC)

To keep the flexibility to connect different types of batteries while maintain the same look. PremiumTower offers a variety of MBC.

Internal Batteries from 10kW to 60kW

Internal batteries are possible for the whole product range. Up to 160 battery blocks can be fitted in the PremiumTower™, reducing the total footprint and optimizing costs.

30 to 50 **Flexible Battery Blocks**





Maximum Reliability and Availability

Swiss Quality

Developed and manufactured in Switzerland, PremiumTower™ provides the highest standard of quality in components and manufacturing processes approved by the Swiss made label.

Distributed Active-Redundant Parallel Architecture (DARA)

PremiumTower™ implements Centiel's DARA parallel architecture with an unlimited number of parallel units to add redundancy and scalability to the system.

High Reliability by Design

Three independent power converters increase system reliability and provide power continuity even in cases of power component failure.

Dual Input Feed

PremiumTower™ can be supplied with two independent AC sources to further increase the power availability of the installation.

Communication Features

Output General Alarm Relay

5x Programmable Output Relays

SNMP, ModBus, Modbus over IP

RS232 Port

On Generator Operation

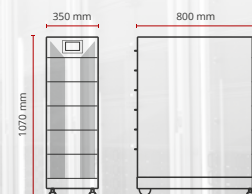
2x Programmable Input Contacts

Temperature sensor for external batteries

PremiumTower™ 3:1

From 10kW to 30kW

Tower D



kW	Battery
10	80
20	80
30	80

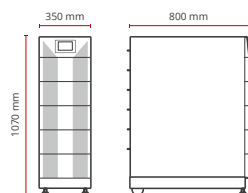
Modell	PT010-31-I080-D0	PT020-31-I080-D0	PT030-31-I080-D0
Max Power [kVA/kW]	10/10	20/20	30/25
Footprint	0.28 m²	0.28 m²	0.28 m²
Battery blocks range	20 to 50	30 to 50	30 to 50



PremiumTower™ 3:3

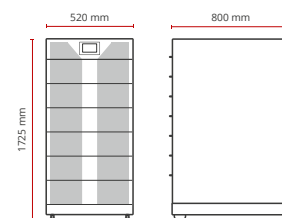
From 10kW
to 250kW

Tower E



kW	Battery
10	80
20	80
30	-
40	-
60	-

Tower D



kW	Battery
-	-
-	-
30	160
40	160
60	160

Modell	PT010-I080-D0	PT020-I080-D0	PT030-E-D0 PT030-I160-E0	PT040-E-D0 PT040-I160-E0	PT060-E-D0 PT060-I160-E0
Max Power [kVA/kW]	10/10	20/20	30/30	40/40	60/60
Footprint	D 0.28 m ²	D 0.28 m ²	D 0.28 m ² E 0.41 m ²	D 0.28 m ² E 0.41 m ²	D 0.28 m ² E 0.41 m ²
Battery blocks range	20 to 50	30 to 50	30 to 50	30 to 50	30 to 50

Tower F



Tower G



Tower H



Modell	UPS-PT080-E30-F0 UPS-PT080-E40-F0	UPS-PT100-E30-F0 UPS-PT100-E40-F0	UPS-PT120-E30-F0 UPS-PT120-E40-G0	UPS-PT160-E30-G0 UPS-PT160-E40-G0	UPS-PT200-E30-H0 UPS-PT200-E40-H0	UPS-PT250-E40-H0
Max Power [kVA/kW]	80/80	100/100	120/120	160/160	200/200	250/250
Footprint	F 0.36 m ²	F 0.36 m ²	F 0.36 m ² G 0.43 m ²	G 0.43 m ²	H 0.51 m ²	H 0.51 m ²
Battery blocks range	E30 30 to 50 / E40 40 to 50					

MODEL	UPS-PT010-I080-D0	UPS-PT020-I080-D0	UPS-PT030-E-D0 UPS-PT030-I160-E0	UPS-PT040-E-D0 UPS-PT040-I160-E0	UPS-PT060-E-D0 UPS-PT060-I160-E0
GENERAL DATA					
Product name	PremiumTower™ UPS				
Topology/Technology	Online double conversion				
INPUT					
MAINS					
Input Wiring	3Ph+N+PE				
Rated Voltage	380/400/415Vac				
Voltage Range	For loads <100% (−25%, +20%) <80% (−32.5%, +20%) <60% (−35%, +20%)				
Input Frequency	40-70 Hz				
Total Harmonic Distortion	THDi<3% for linear load, THDi<5% for nonlinear load				
Input Power Factor	0,99				
BYPASS					
Input Wiring	3Ph+N+PE				
Rated Voltage	380/400/415 Vac				
Change over tolerance	±30...±10% (Voltage) (According to VFI-SS-111)				
Input Frequency	50/60 ±2/4% (selectable)				
BATTERY					
Rated Voltage	360-480 Vdc (the number of batteries can be selected)				
Internal Batteries (7/9Ah)	I 080: 80	I 080: 80	E External I160: 160	E External I160: 160	E External I160: 160
Type	Lead-Acid/NiCad/Lithium				
Blocks [LA]/Cells[NiCad]	Flexible: 30...50				
Charger (Amp)	20	20	40	40	40
OUTPUT					
INVERTER					
Output Wiring	3Ph+N+PE				
Nominal Power [kVA]	10	20	30	40	60
Nominal Power [kW]	10	20	30	40	60
Voltage	380/400/415 Vac±1%				
Frequency	Tracking the bypass input (Online Mode); 50/60 Hz±0.1% (Battery Mode)				
Waveform	Sine wave (THDv < 2% for linear load; THDv<3% for non-linear load)				
Output Power Factor	1				
Efficiency	96,6%				
Overload Capacity	Inverter < 120% continuous; ≥ 120% for 10 min; ≥150% for 1 min Bypass 135% for long term; <1000% for 100ms				
Short circuit capability	3 x IN				
BYPASS					
Efficiency	99,4%				
ENVIRONMENT					
Operating Temperature	0-40°C (No power derating)				
Storage Temperature	-40-70°C				
Relative Humidity	0%-95% (No condensing)				
Maximum Operating Altitude	1000 m. Above 1000 m, derating 1% for each additional 100 m				
Audible Noise	< 65dB				
OTHERS					
Dimensions (H x W x D) [mm]	D0 1,075 x 350 x 850 E0 1,725 x 520 x 850				
Weight [Kg] withouth batteries	D 80 E 105				
Colour / Protection Level	RAL 9017 (traffic black) / IP20				
Certifications	EN/IEC 62040-1 EN/IEC 62040-2 EN/IEC 62040-3 CE RoHS				
Communications	Std 1 x RS232, 2 x Dry In, 1 x Dry Out, 2x Expansion slots. Option 5 x Dry Output contacts, 4 x Dry Input contacts, Bluetooth, SNMP Slot				

MODEL	UPS-PT080-E30-F0 UPS-PT080-E40-F0	UPS-PT100-E30-F0 UPS-PT100-E40-F0	UPS-PT120-E30-F0 UPS-PT120-E40-G0	UPS-PT160-E30-G0 UPS-PT160-E40-G0	UPS-PT200-E30-H0 UPS-PT200-E40-H0	UPS-PT250-E40-H0
GENERAL DATA						
Product name	PremiumTower™ UPS					
Topology/Technology	Online double conversion					
INPUT						
MAINS						
Input Wiring	3Ph+N+PE					
Rated Voltage	380/400/415Vac					
Voltage Range	For loads <100% (–25%, +20%), <80% (–32.5%, +20%), <60% (–35%, +20%)					
Input Frequency	40-70 Hz					
Total Harmonic Distortion	THDi<3% for linear load, THDi<5% for nonlinear load					
Input Power Factor	0,99					
BYPASS						
Input Wiring	3Ph+N+PE					
Rated Voltage	380/400/415 Vac					
Change over tolerance	±30...±10% (Voltage) (According to VFI-SS-111)					
Input Frequency	50/60 ±2/4% (selectable)					
BATTERY						
Rated Voltage	360-480 Vdc (the number of batteries can be selected)					
Type	Lead-Acid/NiCad/Lithium					
Blocks [LA] /Cells[NiCad]	Flexible: 30...50 E30 Minimun 30 blocks (flexible from 30 to 50) / E40 Minimun 40 blocks (flexible from 40 to 50)					
Charger (Amp)	TBA					
OUTPUT						
INVERTER						
Output Wiring	3Ph+N+PE					
Nominal Power [kVA]	80	100	120	200	160	250
Nominal Power [kW]	80	100	120	200	160	250
Voltage	380/400/415 Vac±1%					
Frequency	Tracking the bypass input (Online Mode); 50/60 Hz±0.1% (Battery Mode)					
Waveform	Sine wave (THDv < 2% for linear load; THDv<3% for non-linear load)					
Output Power Factor	1					
Efficiency	96,6%					
Overload Capacity	Inverter < 124% continuous; ≥ 125% for 10 min; ≥150% for 1 min Bypass 135% for long term; <1000% for 100ms					
Short circuit capability	3 x IN					
BYPASS						
Efficiency	99,4%					
ENVIRONMENT						
Operating Temperature	0-40°C (No power derating)					
Storage Temperature	-40-70°C					
Relative Humidity	0%-95% (No condensing)					
Maximum Operating Altitude	1000 m. Above 1000 m, derating 1% for each additional 100 m					
Audible Noise	< 65dB					
OTHERS						
Dimensions (H x W x D) [mm]	F0 1,985 x 600 x 600 G0 1,985 x 730 x 600 H0 1,985 x 850 x 600					
Weight [Kg] without batteries	-					
Colour / Protection Level	TBA / IP20					
Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; RoHS					
Communications	Std 1 x RS232, 2 x Dry In, 1 x Dry Out, 2x Expansion slots. Option 6 x Dry Output contacts, 4 x Dry Input contacts, Bluetooth, SNMP Slot					

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