

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.

High Reliability by Design

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

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.

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

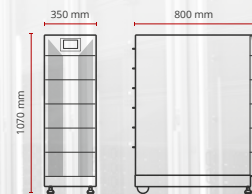
2x Programmable Input Contacts

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 m ² | 0.28 m ² | 0.28 m ² |
| Battery blocks range | 20 to 50 | 30 to 50 | 30 to 50 |

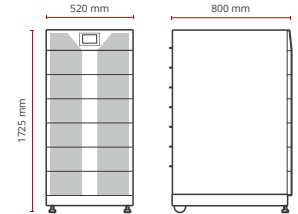
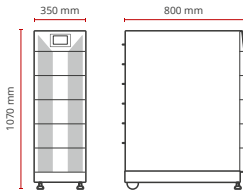


PremiumTower™ 3:3

From 10kW
to 250kW

Tower E

Tower D



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



| 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 0.41m ² | D 0.28 m ² E 0.41m ² | D 0.28 m ² E 0.41m 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 0.43m ² | G 0.43m ² | H 0.51m ² | H 0.51m 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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