

# THYCON

Est.1968



## FLEXIPOWER UPS

### **Series 25**

10 - 250kW

### **Series 60**

50 - 3600kW



**THYCON's FlexiPower UPS** boasts the highest performance, lowest total cost of ownership (TCO) and greatest availability of any modular UPS system.

**FlexiPower Series 25 Frame Technology** scales from 10kW to 250kW at up to 322kW/sqm.

**FlexiPower Series 60 Frame Technology** scales from 50kW to 3600kW at up to 533kW/sqm.

FlexiPower Technology allows you to scale your power or provide redundancy whenever you require it without risk to your site.

**THYCON's FlexiPower Frame Technology** features hot-swappable:

- UPS Power Modules
- CB Modules
- Battery Modules

that allow safe removal and/or insertion without the need to power down or transfer to raw mains supply.

These unique features directly address today's requirement for continuous uptime by achieving **99.999999% availability** (nine nines).

**THYCON's FlexiPower UPS Power Module Technology** offers leading performance advantages:

- 97% energy efficiency
- Smooth input current ramp up, so no need to oversize diesel generator or distribution
- Safe battery tests (no need to disconnect mains during tests)
- Continuous monitoring of Battery Modules and System Temperature & Humidity to ensure environmental continuity
- Local and remote monitoring 24/7 to ensure any unlikely performance or environmental issues are informed and managed immediately
- 20 year lifetime design

**Thycon FlexiPower Technology™ achieves the Highest Efficiency & Availability as well as the ability to maintain while online.**

**UPS & Battery Maintenance can be performed online at all times**

- In a redundant system, each UPS Power and Battery Module can be unplugged, checked, and reinstated in the system without taking the entire system offline. UPS power is maintained to your critical load during each service.

**Fully Monitored Service**

- Each Isolator, UPS Power and Battery Module is monitored for performance, temperature and humidity.
- Full monitoring and reporting are available as desired or required allowing the THYCON Service Team to be fully aware and prepared in the unlikely event of a failure.

**Lifetime Product Warranty**

- Competitive monitoring and service contracts allow THYCON to provide ongoing warranty for the lifetime of the product.

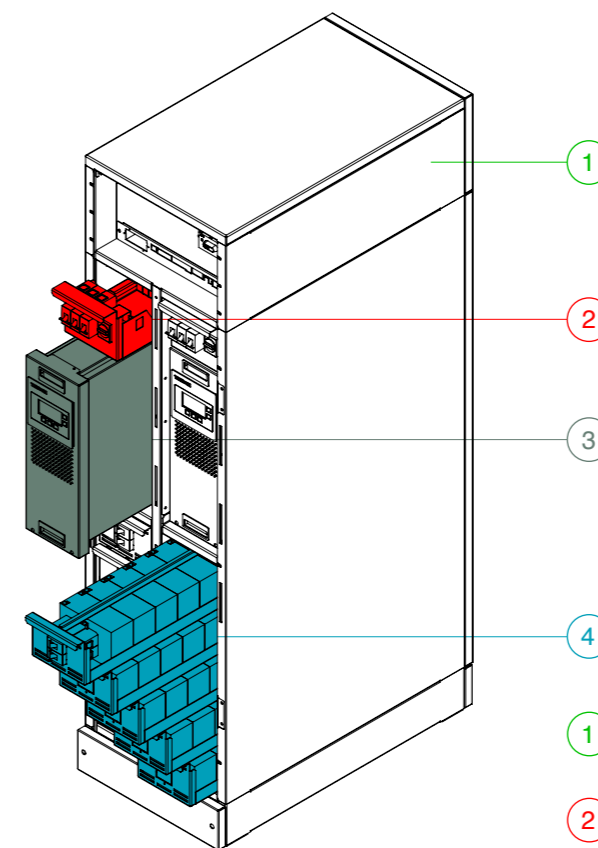
- ① **Frame Design**
- Top or bottom cable entry
  - Single or Dual Input Feed
  - Interchangeable UPS Power Modules or Battery Modules
  - Fault-Tolerant Parallel Ring Communications Bus between frames ensures communication even when the cable is cut, short circuited or disconnected.

- ② **Hot-Swappable Isolator Modules**
- CB25 and CB60 allow testing of each UPS Power Module prior to connection as well as independent connection of input, bypass, battery and output power.

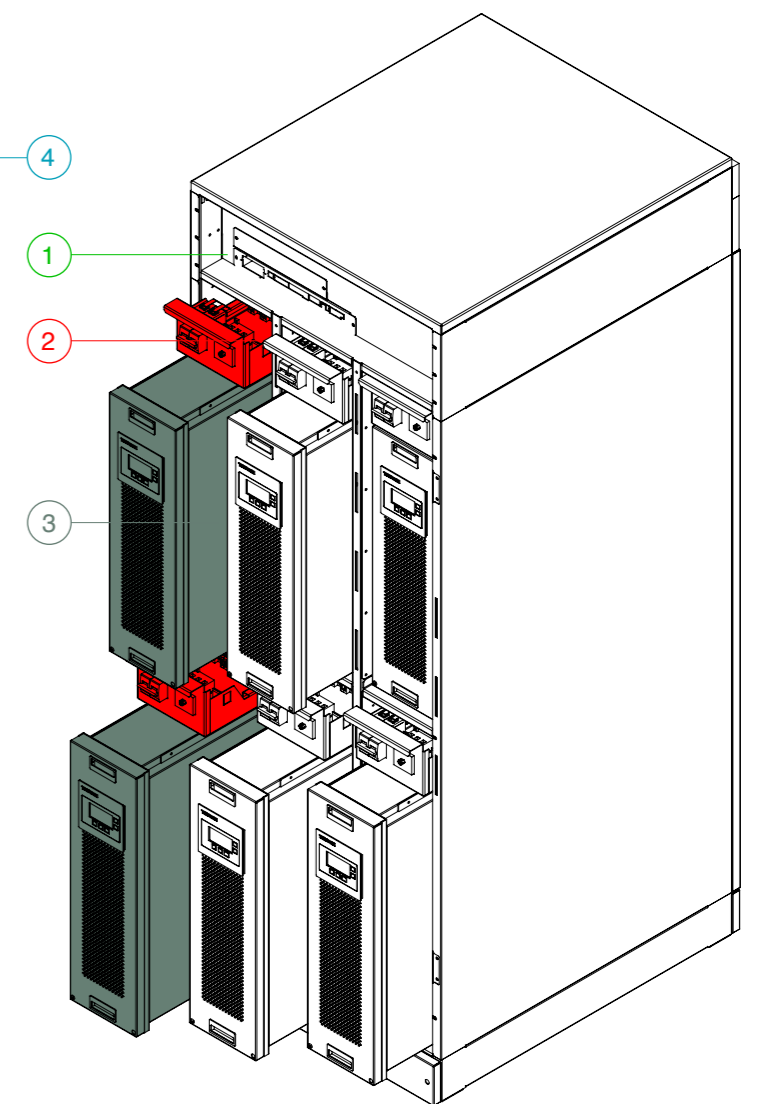
- ③ **Hot-Swappable UPS Power Modules**
- UP25 and UP60 each contain a display, controller, rectifier, inverter, static bypass and back-feed protection and provide ultimate redundancy by achieving 99.9999999% availability.
  - UPS Modules are 97% Energy Efficient.
  - Vertical module design achieves significant power/sqm gains of up to 533kW/sqm.

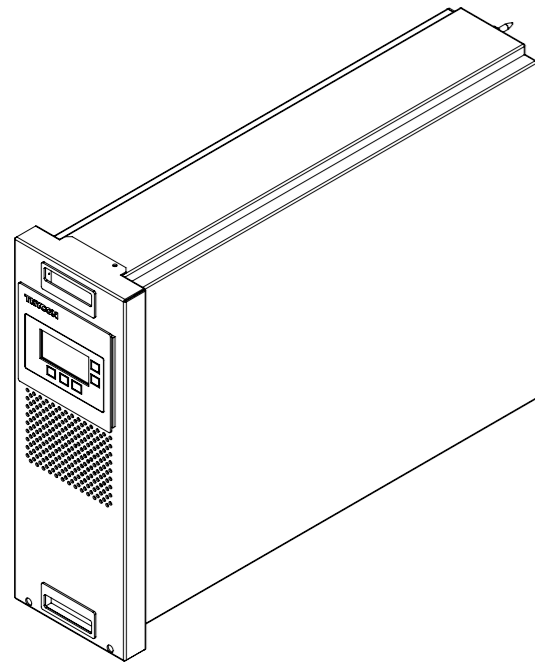
- ④ **Hot-Swappable Battery Modules**
- BT25 contains an isolator, monitoring and 44 x 9Ah batteries allowing each string to be isolated, checked and returned to service without taking the system off-line.

SERIES 25



SERIES 60





**FlexiPower UPS Module UP10, UP20, UP25**

**Each UPS module is a complete UPS**  
 Each module contains a display, independent UPS module control, rectifier, inverter, static bypass and backfeed protection

**97% efficiency VFI/ 99.4% Eco-mode**  
 Reduces TCO. Cost of energy and cooling system is downsized.  
 Pay less for every kWh

**Input current smooth ramp up**  
 No need to oversize Diesel Generator/distribution components.  
 Reduced system costs

**Independent Battery Booster**  
 20 A Battery charging current  
 Safe battery tests (no need to disconnect mains supply during battery test)  
 Battery blocks: 40-50

**Back-feed protection in-module**  
 Reduces system costs  
 Increases safety for service personnel

**≥ 10 years DC capacitors life**  
**“Plug-and-play” AC capacitors**  
 Reduces TCO  
 Simplifies maintenance operation  
 Lower cost spare parts

**Actively controlled fan ventilation**  
 Anticipates unexpected malfunctioning  
 Change only when needed reduces TCO

**Redundant multi processor control logic**  
 Increases availability

**3” User Graphical LCD Interface**  
 Simplifies system configuration & troubleshooting  
 More comprehensive information

**FlexiPower UPS Module UP50, UP60**

**Each UPS module is a complete UPS**  
 Each module contains a display, independent UPS module control, rectifier, inverter, static bypass and backfeed protection

**97% efficiency VFI/ 99.4% Eco-mode**  
 Reduces TCO. Cost of energy and cooling system is downsized.  
 Pay less for every kWh

**Input current smooth ramp up**  
 No need to oversize Diesel Generator/distribution components.  
 Reduced system costs

**Independent Battery Booster**  
 40 A Battery charging current  
 Safe battery tests (no need to disconnect mains supply during battery test)  
 Battery blocks: 40-50

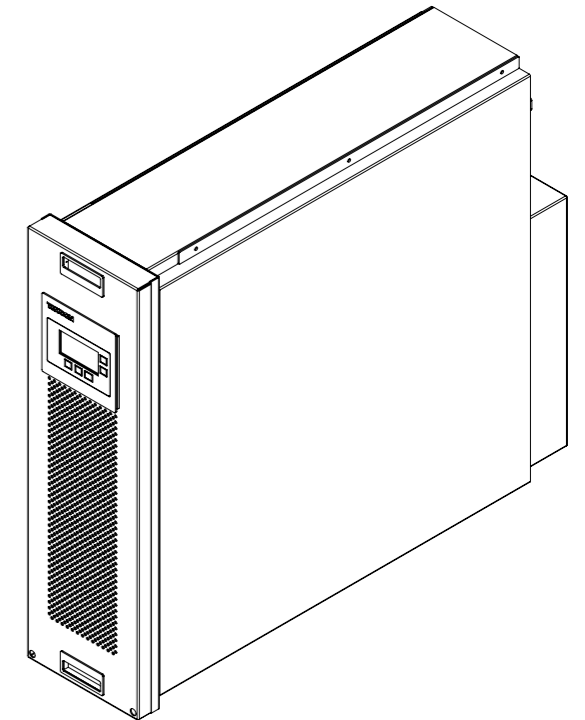
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**3” User Graphical LCD Interface**  
 Simplifies system configuration & troubleshooting  
 More comprehensive information





Model	FP050	FP100	FP150	FP200	FP240	FP360	FP480	FP600
Max # Modules	2	4	6	8	4	6	8	10
Module Type	UP10, UP20, UP25	UP10, UP20, UP25	UP10, UP20, UP25	UP10, UP20, UP25	UP50, UP60	UP50, UP60	UP50, UP60	UP50, UP60
Max Power kVA/kW	50/50	100/100	150/150	200/200	240/240	360/360	480/480	600/600
Maximum Batteries	2 x 44	4 x 44	6 x 44	8 x 44	-	-	-	-
Dim (WxHxD)	415 x 975 x 750	415 x 1,555 x 750	610 x 1,555 x 750	800 x 1,555 x 750	500 x 1,980 x 900	740 x 1,980 x 900	970 x 1,980 x 900	1,200 x 1,980 x 900
Weight frame (no modules)	90kg	142kg	225kg	305kg	250kg	316kg	390kg	454kg
Weight / CB & Module	5 & 25kg	5 & 25kg	5 & 25kg	5 & 25kg	7 & 55kg	7 & 55kg	7 & 55kg	7 & 55kg
Weight / Battery Tray	28kg	28kg	28kg	28kg	-	-	-	-
Colour	Standard (Interpon - Sable Bass GN297A or RAL 9004) Option (Customer request - Interpon colour chart)							

\*Specifications subject to change without notice

Model		FP050	FP100	FP150	FP200	FP240	FP360	FP480	FP600
<b>General Data</b>									
Nominal power per frame [kW]		10-50	10-100	10-150	10-200	50-240	50-360	50-480	50-600
Nominal power per module [kW]		10,20,25	10,20,25	10,20,25	10,20,25	50,60	50,60	50,60	50,60
Number of modules per cabinet		1-2	1-4	1-6	1-8	1-4	1-6	1-8	1-10
Topology / Technology		Online double conversion							
<b>Input</b>									
Mains	Input Wiring	Three phases +N+PE							
	Rated Voltage	400/415Vac							
	Rated Voltage	Load >95% (-20%,+15%), >85% (-27.5%,+15%), ≤75% (-35%,+15%)							
	Input frequency	40-70 Hz							
	THD	<3% for linear load, <5% for non-linear load							
	Input Power Factor	0.99 (with 100% load)							
Bypass	Input Wiring	Three phases +N							
	Rated Voltage	400/415Vac							
	Input Frequency	50/60Hz (±2% / ±4%)							
Battery	Rated Voltage	480-600Vdc (selectable number of batteries)							
	Location	Internal				External			
	Type	Lead-Acid or Ni-Cd							
	Block (for Lead Acid Battery)	20-50							
	Charger (Amp/module)	20A				40A			
<b>Output</b>									
Inverter	Output Wiring	Three phases +N							
	Voltage	400/415 Vac±1%							
	Frequency	Tracking the bypass input (Online Mode); 50/60 Hz±0.1% (Battery Mode)							
	THD	<2% for linear load; <3% for non-linear load							
	Output voltage stability	Static ±1%, Dynamic ±3% (load jump 0-100%)							
	Output power factor	Cos φ = 1							
	Efficiency	97% (module) / 96.7% (full frame)							
	Overload capacity	Inverter: load <125% continuous; 125% for 10 min; 150% for 1 min							
	Short circuit capability	3 x I <sub>n</sub> (>40ms)							
Bypass	Efficiency	99.1%							
	Overload capacity	Bypass: 135% long term; <1000% per 100ms							
	Short circuit capability	Dependent on the calibre of the bypass fuses type gG-gl							
<b>Environment</b>									
Operating System		0-40°C (No power de-rating)							
Storage temperature		- 40° - 70°C							
Relative Humidity		0% - 95% (Non condensing)							
Maximum Operating Altitude		1000 m. Above 1000 m, de-rating 1% for each additional 100 m							
Audible Noise		<65dBA							
Certifications		CE; EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; EN/IEC 62040-4							
Connectivity		Basic: RS485, RS232, Dry Input. Pro: Basic + Dry contacts, Ethernet, Bluetooth.							

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## **THYCON**

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