

3-phase modular UPS

THOR II T100 100-1200 kVA



With the THOR II T100, EFFEKTA® offers a modern online continuous converter with powerful 100 kW power modules and 3-phase input and output in 3-level inverter technology.

Intelligent battery management with configurable charging mode ensures a long battery life. In addition, the battery tests can be configured individually.

For easy commissioning, operation, and maintenance, all controls, interfaces, and power modules are accessible from the front.

With an efficiency of up to 98% in normal operation, it is one of the most effective and economical UPS systems on the market and therefore ideally suited for saving money.



■ Detailed views



Top 100 kW power module,
bottom IO/parallel control panel



THOR II T100, 600 kVA with
6 x 100 kVA modules

Options for advanced communication and maximum availability:

- SNMP/Web for monitoring in network environments
- Additional battery modules to increase the backup time to several hours
- External manual bypass for planned UPS maintenance or replacement of the UPS without shutdown
- Custom designs available for industrial applications (connectors/special enclosures, etc.)

Convenient service concept

Modular and easy to maintain

- Easily replaceable power modules
- Fan replacement from the front
- Filter replacement from the front
- User-friendly multilingual LCD control panel
- Firmware upgrade directly on the LC display via USB stick or SD card
- Superior MTBF & MTTR
- Options for remote monitoring and connectivity



Safety first

Redundant power modules

The THOR II T100 can be equipped with 100 kVA modules. Redundancy ensures easy servicing and comprehensive reliability. If one of the modules is out of service but the remaining modules are within the total capacity of the load, the UPS continues to operate without interruption.

In addition to the power supply, the fans are also designed to be redundant, so that if one fan fails, for example, the system does not shut down but can still supply up to 50% of the load.

Power Walk In / Inter Power Walk In

Power Walk In:

This function ensures a progressive rectifier start when power is restored. This means that the power modules are switched on one after the other, preventing start-up peaks in your power supply.

Inter-Power Walk In:

This is a similar function, but when power returns, several UPSs connected in parallel are restarted sequentially.

Low acquisition and operating costs:

- Scalable power and autonomy time = less initial investment; invest as you grow.
- High and constant efficiency of up to 98%.
- Intelligent sleep mode saves energy: Modules in sleep mode remain in inverter mode but with the output switched off and are activated as needed without switchover time.
- The modules are hot-swappable, and the fans can be replaced from the front.
- Front access for ease of service and maintenance.

Clear connections

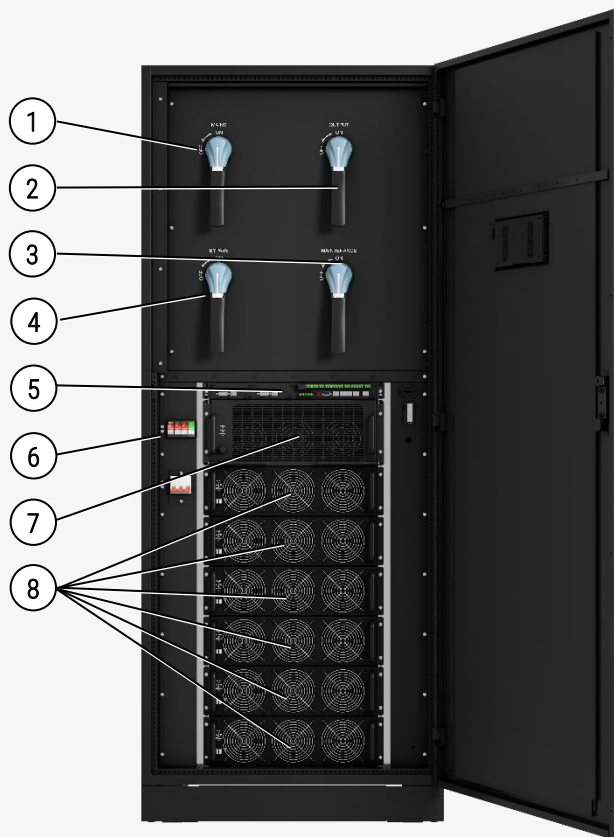
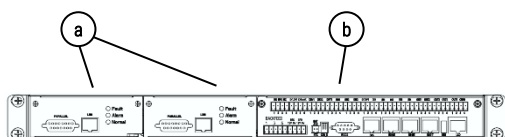
THOR II T100 600 kVA open front

Image on the right:

- 1.) Switch input
- 2.) Switch output
- 3.) Maintenance switch
- 4.) Slot switch bypass
- 5.) Control unit
- 6.) SPD
- 7.) Bypass module
- 8.) Power module(s)

Image below (control unit):

- a) ECU1/2: Centralized control unit
- b) Monitoring unit



Can be connected in parallel

THOR T100 in parallel operation

Up to 6 THOR II T100 (400-600 kVA systems) and 4 800-1200 kVA systems can be operated in parallel. Such a group of parallel-connected UPS units behaves like one large UPS system but offers the advantage of greater reliability and redundancy.



Left: 4x Thor 100, 800 kVA

Features

- UPS classification VFI-SS-111 according to IEC 62040-3
- Online continuous converter with sine wave output, switchable to high efficiency mode
- UPS software for all common operating systems
- Dry-in/dry-out interface as standard
- Easy service thanks to modular design

Special

- Excellent power factor of 1.0
- Supports lead-acid and lithium batteries
- N+X parallel redundant operation of up to 6 systems possible
- Super Charger with max. 100 A charging power/module
- Redundant power modules and fans
- Outstanding efficiency of over 98% in normal operation, over 99% in Eco mode

Technical data

THOR II T100			400 kVA – 600 kVA			800 kVA	1000 kVA	1200 kVA
Power	Nominal power in kVA/kW		100	100-500	100-600	100-800	100-1000	100-1200
	Power per module		100 kVA/kW					
	Max. number of modules		4	5	6	8	10	12
Bridging time			On request / depending on battery configuration					
Technology	Online continuous converter		n+x technology scalable / VFI-SS-111 according to IEC 62040-3					
Phases	Input / Output		3-phase / 3-phase					
Input	Nominal voltage configurable		380/400/415 VAC					
	Input voltage range		304~485 VAC					
	Input frequency range		40Hz-70Hz					
Mains feedback	THDI		≤3% (100% linear load)					
Output	Output voltage / regulation		380/400/415 VAC / ±1%					
	Frequency range	Normal operation	Synchronized with input if input frequency is >±10% (±1%/±2%/±4%/±5% optional), output 50/60 (±0.1 Hz)					
		Battery operation	(50/60 ±0.1) Hz					
	Switchover time		None					
	Overload capacity Inverter	Inverter mode	≤110% 60 min., ≤125% 10 min., ≤150% 1 min., >150% 1.2 sec.					
		Bypass mode	At 30°C: 135% long-term overload; at 40°C: 125% long-term overload; >1000% overload for 100 ms					
	Voltage waveform		Sine					
Efficiency	Normal mode / ECO mode		max. 98.04% / 99%					
Battery	Battery voltage	VRLA battery	360Vdc~600Vdc (30~50 units continuously adjustable, 40~50 units no power reduction, 36~39 units output power factor 0.9, 32~35 units, output power factor 0.8, 30/31 units output power factor 0.7)					
		Lithium battery	512 VDC (standard)					
	Expected service life		VRLA battery 10 years/ Lithium battery over 2000 charge/discharge cycles					
	Maximum charging current		100 A per module (the charging current is set according to the battery bank capacity)					
	Recharge time		Depending on battery capacity					
Communication	Interfaces		CAN, RS232, RS485, LBS, parallel, relay contacts, SNMP card (optional)					
	Display		Multilingual 7" LC display					
UPS dimensions	(HxWxD in mm)		2000 x 800 x 1000			2000 x 1400 x 1000	2000 x 1800 x 1000	
Weight of UPS	UPS cabinet without modules [kg]		350	380	410	780	850	920
	Battery extension		Depending on battery configuration					
Dimensions/weight UPS modules	UPS modules (HxWxD in mm)		130 (3U) x 440 x 755					
	UPS module in kg		56					
	Protection class		IP21					
Connections	Input		Permanent connection to terminals					
	Output		Fixed connection to terminals					
Ambient conditions	Temperature		0°C – 40°C, 20°C recommended					
	Humidity		0-90% RH @ 0-40°C (non-condensing)					
	Operating noise		< 70 dB					
Protection/Standards	Safety EMC Operation		IEC 62040-1 IEC 62040-2 IEC 62040-3					
	Approvals		CE					

Subject to change/errors excepted