

# SHIELD

6-10 kVA

SINGLE-PHASE ONLINE UPS

1:1

The ideal solution for:

- ✓ *SERVER*
- ✓ *INFORMATION TECHNOLOGY*
- ✓ *LOCAL AREA NETWORKS*
- ✓ *TELECOMMUNICATIONS*
- ✓ *SECURITY SYSTEMS*

# OVERVIEW

**SHIELD represents the state of the art in the Online single-phase UPS field**, thanks to excellent performance and a very high efficiency level.

With 6 kVA and 10 kVA versions available, **SHIELD is the ideal solution for servers and IT systems protection, as well as for security and telecommunication systems.**

**PF1**

**Power Factor 1**

**98%**

**Efficiency up to 98%**

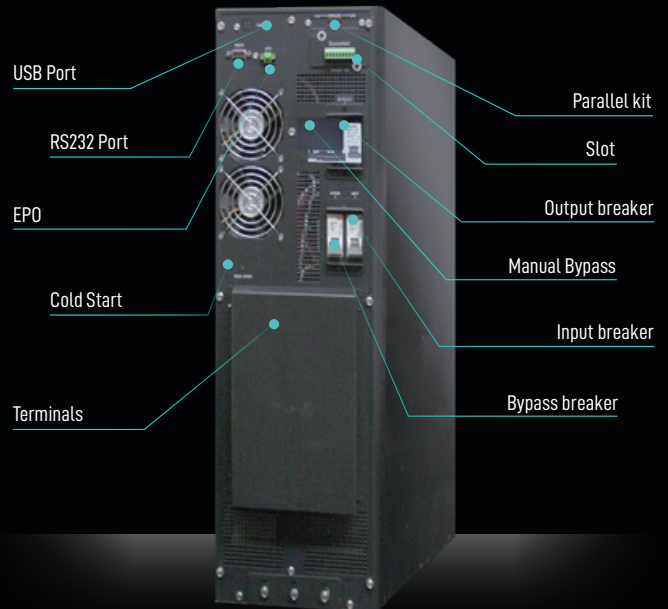


## BEST PERFORMANCE

Since the design phase GTEC took care about every single detail of SHIELD series, making an Uninterruptible Power Supply that feels unrivaled in the single-phase UPS class.

The system is equipped with **the best technology available**, such as the IGBT rectifier and the DSP digital control, **with parallel option also available up to 4 units.**

**Power Factor 1 and efficiency up to 98%** are tangible proof of the extraordinary work done by GTEC technicians on this UPS, that also offers one of the smallest and lowest weighted tower case available on the market.



## COMPLETE BATTERY MANAGEMENT

**SHIELD is equipped with a digitally controlled battery charger** that allows unmatched flexibility level for battery management.

You can change the charge current, as well as **you can choose between two levels of charge voltage, Float and Boost**, just like higher power three-phase UPS can usually do.

These functions, as well as programmable discharge test, allow to optimize batteries setting and management, extending their expected life.



## HIGH FLEXIBILITY

Besides some ordinary options, such as SNMP card and Dry Contacts, SHIELD provides a wide range of customizable settings, **including the 16 or 20 internal batteries setup choice.**

**Maximum flexibility is also guaranteed by the chance to set the system with 110 Volt output voltage**, so as to satisfy a wide range of installation requirements.

Additional battery cabinets are also available for each model, **in order to increase autonomy according to specific user's need**, as well as the super charger version (KS version).

# SOFTWARE

**SHIELD can be equipped upon request with a high professional setup software**, that is usually provided with the most powerful three-phase UPS models.

The software is really user friendly and it offers many functions and configurations, such as:

- Downloading the event log (alarms, states and warnings on a time basis)
- Setting up input/output voltage
- Editing all battery parameters



MODEL	SHIELD-6K		SHIELD-6K-KS*	SHIELD-10K-11	SHIELD-10K-11-KS*
Power	6 kVA / 6 kW			10 kVA / 10 kW	
MAIN INPUT					
Grid system	1 Phase + Neutral + Ground				
Rated voltage / Frequency	230VAC, 50/60 Hz				
Voltage range	110~288 VAC (derating with main <176 VAC)				
Rating (nominal input voltage)	30 A	34 A		49 A	53 A
Frequency range	40~70Hz (rectifier operating range)				
Power factor	>0.99				
Current THDi	<4%				
OUTPUT					
Rated voltage / Frequency	220/230/240 VAC, 50/60 Hz (110 VAC version available upon request)				
Power Factor	1				
Wave form	Pure sine wave				
Voltage THDv	≤1% (linear load); ≤5% (non-linear load)				
Voltage precision	±1% (0-100% linear load)				
Transient recovery	Compliant to EN62040-3 VFI-111 Standard				
Inverter overload	105-110%, 10 minutes 110-125%, 1 minute 125-150%, 30 seconds				
Bypass overload	100-125% long term operation 125-130%, 5 minutes 130-150%, 1 minute >150%, 200 milliseconds				
Frequency regulation	50/60 Hz ±0.1%				
Synchronized range	Selectable, default ±5 Hz				
Synchronized slew rate	Selectable (1 Hz/S ~ 5 Hz/S)				
Crest factor	3:1				
BATTERIES					
Battery type	Pb				
Battery capacity	12 V / 7 Ah	Selectable		12 V / 9 Ah	Selectable
Number of batteries in series	16 (standard)				
Battery range	From 16 to 20	From 16 to 24		From 16 to 20	From 16 to 24
Battery rate voltage	192 / 240 VDC	192 / 288 VDC		192 / 240 VDC	192 / 288 VDC
Backup time	50% load: up to 12 minutes 75% load: up to 7 minutes 100% load: up to 3.5 minutes	Depending on external batteries capacity		50% load: up to 8 minutes 75% load: up to 4 minutes 100% load: up to 1.5 minutes	Depending on external batteries capacity
BATTERY CHARGER					
Charging voltage	2.25 V/cell default (settable)				
Charging current	1 A	5 A (settable)		1 A	5 A (settable)
Charging time	8 h to recover 80% capacity	Depending on external batteries capacity		8 h to recover 80% capacity	Depending on external batteries capacity
SYSTEM					
Efficiency	Normal operation: 95% Battery operation: 94.6% Eco Mode operation: 98%				
Display	LED + LCD				
Protection degree	IP20				
Interface	Standard equipment: RS232, USB, Cold Start, EPO Optional: RS485, SNMP, dry contacts, parallel kit				
ENVIRONMENT					
Operating temperature	0 ~ 40°C				
Storage temperature	-20 ~ 70°C				
Relative humidity	0 ~ 95% (no condensing)				
Noise (dBA at 1 meter far)	< 58				
Altitude	<1000m; load derated 1% per 100m, from 1000 ~ 5000m				
MECHANICAL DATA					
Dimensions W*D*H (mm)	190*525*705				
Weight (Kg)	72	27		77	27
Color	Black				

Note: technical specifications and data could be changed without notification

Note 2: it is available upon request the SHIELD-RC version, which complies with CEI 0-16 requirements for MV/LV transformer substations

\* KS denotes the UPS version with increased battery charger and no internal batteries. These versions are available upon specific request



# GTEC SERVICE

GTEC supports its customers throughout the whole product life cycle, providing technical assistance and after-sales service at the highest professional standards, so to produce the best partnership experience.



**MAINTENANCE** is an essential activity in order to guarantee a safe and stable load protection. GTEC shows maximum care about this topic, providing the best service in terms of experience, instrumentation and safety level.



Through the dedicated **CALL CENTER**, customers receive prompt answers to any request, and the specialized technicians directly schedule maintenance activities.



The partnership between GTEC and its customers gets consolidated through the **TRAINING SESSIONS** proposal for technical staff, so that each user can operate on the UPSs with maximum consciousness and safety.



Also, in the GTEC Service offers, a **PROJECT CONSULTING** team is available, in order to provide the best solution according to the designer's needs.

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