



# 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, the DSP digital control, varnished boards and **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.

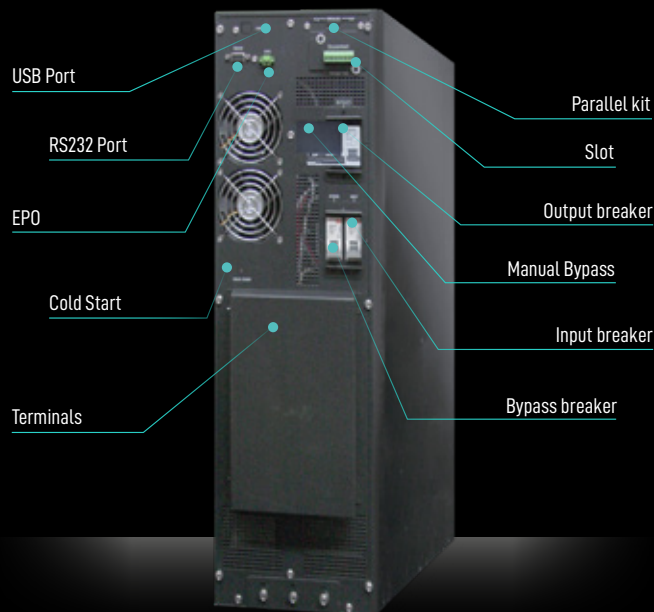


## HIGH FLEXIBILITY

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   |  |
| <b>MAIN INPUT</b>              |  |  |  |  |
| 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%  |  |  |  |
| <b>OUTPUT</b>                  |  |  |  |  |
| 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);<br>≤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<br>110-125%, 1 minute<br>125-150%, 30 seconds                                   |  |  |  |
| Bypass overload                | 100-125% long term operation<br>125-130%, 5 minutes<br>130-150%, 1 minute<br>>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  |  |  |  |
| <b>BATTERIES</b>               |  |  |  |  |
| 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<br>75% load: up to 7 minutes<br>100% load: up to 3.5 minutes              | Depending on external batteries capacity | 50% load: up to 8 minutes<br>75% load: up to 4 minutes<br>100% load: up to 1.5 minutes | Depending on external batteries capacity |
| <b>BATTERY CHARGER</b>         |  |  |  |  |
| 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 |
| <b>SYSTEM</b>                  |  |  |  |  |
| Efficiency                     | Normal operation: 95%<br>Battery operation: 94.6%<br>Eco Mode operation: 98%                         |  |  |  |
| Display                        | LED + LCD  |  |  |  |
| Protection degree              | IP20   |  |  |  |
| Interface                      | Standard equipment: RS232, USB, Cold Start, EPO<br>Optional: RS485, SNMP, dry contacts, parallel kit |  |  |  |
| <b>ENVIRONMENT</b>             |  |  |  |  |
| 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  |  |  |  |
| <b>MECHANICAL DATA</b>         |  |  |  |  |
| Dimensions W*D*H (mm)          | 190*540*705  |  |  |  |
| Weight (Kg)                    | 56   | 21                                       | 66   | 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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