

# HE 1K-3K IoT Series

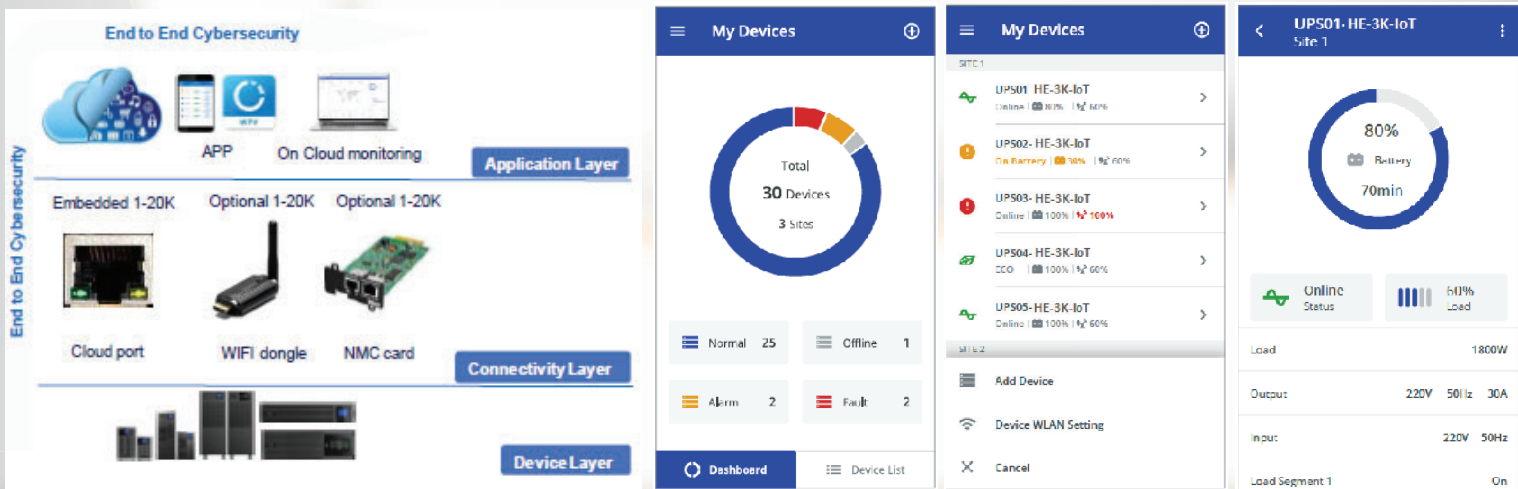
## Features

- DSP Control
- Output PF 1.0 provide maximum power in compact size
- Wide Input Range 110-300VAC
- Online efficiency up to 93%, ECO up to 97%
- 125% overload for 3 minutes
- Frequency Converter Mode
- Input THDI < 5%
- Output THDv < 1% linear load
- Auto Self-Testing System
- Intelligent 2-stage charging & temperature compensated
- Automatic detect additional EBM quantity for simplify
- Fan Speed Control
- Low audible noise at typical load
- Multiple Communication Port
- Wide operating environment 0-45 celsius
- Dot matrix LCD support up to 8 languages
- Embedded Ethernet port solution for safe network connection to Cloud with IoT features trend
- WLAN module for IoT connection, wireless connection (WIFI dongle) as optional
- Mobile APP for monitoring, configuration, Support Android/IOS
- USB HID enable monitoring on UPS without software installation
- IP protection level: IP20
- Built-in Over Voltage Cut-Off device (OVCD) for Tough environment, fan lock detection, overtemp, overload warning to enhance the product reliability



HE-2K/3K-IoT

HE-1K-IoT



## The New full range HE IoT series, built for the most reliability, purity and power

HE IoT series UPS is the high density, true online double conversion on-line power protection for IT and OT application. Capable of supporting load from 1 to 20kVA in a compact tower and RT (rack-tower) form.

These latest range of UPS comes with future-proof connectivity design having the capability to connect to Cloud seamlessly to allow the monitoring of the UPS online through any internet connected device. To ensure users information is safe and protected, these connectivity is compliant with IEC standard cybersecurity.

- Easy to setup the Safe connection to Cloud
- E2E Cybersecurity and GDPR and IEC 62443 certificated device for IoT
- Connect to Cloud through MQTT protocol (the most widely used IoT protocol)
- Real time health monitoring on the equipment to enable business continuity and failure prevention
- Remote monitoring, scheduled maintenance and UPS firmware upgrade \*launched soon
- Reduce the responsive time on product failure as Cloud push the exact information to end user and service people at the same time.

# Product Information

# HE 1K-3K IoT Series

| MODEL                   |                                | HE-1K-IoT   | HE-1KS-IoT   | HE-2K-IoT        | HE-2KS-IoT                                      | HE-3K-IoT        | HE-3KS-IoT                                      |  |
|-------------------------|--------------------------------|---|--|------------------|---|------------------|---|--|
| CAPACITY                | VAWATT                         | 1KVA/1KW (PF1.0)  |  | 2KVA/2KW (PF1.0) |   | 3KVA/3KW (PF1.0) |   |  |
| INPUT                   | Voltage Range                  | 110 - 300 VAC   |  |                  |   |                  |   |  |
|                         | Frequency Range                | 50 Hz ± 10% (Auto sensing)  |  |                  |   |                  |   |  |
|                         | Phase                          | Single phase with ground  |  |                  |   |                  |   |  |
|                         | Current THDI                   | <5%   |  |                  |   |                  |   |  |
|                         | Power Factor                   | ≥ 0.99  |  |                  |   |                  |   |  |
|                         | Generator Input                | 2 x UPS Rating Power  |  |                  |   |                  |   |  |
| OUTPUT                  | Voltage Range                  | 200/208/220/230/240 VAC ± 1%  |  |                  |   |                  |   |  |
|                         | Phase                          | Single phase with ground  |  |                  |   |                  |   |  |
|                         | Frequency (Synchronized Range) | 50 Hz ± 10%   |  |                  |   |                  |   |  |
|                         | Frequency (Battery Mode)       | 50 Hz ± 0.1%  |  |                  |   |                  |   |  |
|                         | Current Crest Ratio            | 3:1   |  |                  |   |                  |   |  |
|                         | Harmonic (THDv)                | < 1% THD ( Linear Load), < 5% THD (100% Non-linear Load)  |  |                  |   |                  |   |  |
|                         | Protection                     | Short Circuit Protection  |  |                  |   |                  |   |  |
|                         | Output Waform                  | Pure Sinewave   |  |                  |   |                  |   |  |
|                         | Outlet                         | 4 x Thai Universal  |  |                  | 8 x Thai Universal and 1 x H/W terminal         |                  |   |  |
|                         | Overload Capacity              | Line Mode   | Continuous @ 100%~105% ; 5 mins @ 105% ~ 125% ; 30 secs @ 125%~ 150% ; 500 ms @ > 150% |                  |   |                  |   |  |
|                         |                                | Battery Mode  | Continuous @ 100%~105% ; 2 mins @ 105% ~ 125% ; 10 secs @ 125%~ 150% ; 500 ms @ > 150% |                  |   |                  |   |  |
| EFFICIENCY              | AC Mode / Battery Mode         | > 89% / >86.5%  |  |                  | > 93% / 89%                                     |                  |   |  |
|                         | ECO mode                       | > 96%   |  |                  | > 97%   |                  |   |  |
| BATTERY                 | Number of Batteries Per Set    | 3   | Depending on the capacity of external batteries  | 6                | Depending on the capacity of external batteries | 6                | Depending on the capacity of external batteries |  |
|                         | Battery Capacity (Ahr)         | 12V/(7/9)Ahr  |  | 12V/(7/9)Ahr     |   | 12V/(7/9)Ahr     |   |  |
|                         | Backup Time (depend on load)   | >15 min   |  | >15 min          |   | >15 min          |   |  |
|                         | Recharge Time (to 90%)         | 3 Hours   |  | 3 Hours          |   | 3 Hours          |   |  |
|                         | Charging Current (Max.)        | 1.5A  | 8.0A adjustable  | 1.5A             | 8.0A adjustable                                 | 1.5A             | 8.0A adjustable                                 |  |
|                         | Battery Type                   | Sealed Lead Acid Maintenance Free   |  |                  |   |                  |   |  |
| TRANSFER TIME           | AC to DC                       | Zero  |  |                  |   |                  |   |  |
| INDICATOR               | LCD                            | Input information: Voltage/Frequency/Ambient Temperature/Utility Present/Utility Lost, Output information: Voltage/Frequency/DC BUS/Utility Present/Utility Lost, Load Information: %Watt/%VA/Current(A)/Overload/Short Circuit/Load Level, Battery Information: Voltage/Battery Level/Low/Backup time/Remaining time/Charging status/EBM status/Over charging/Discharging, Mode information: UPS status/Event log/Measurements/Control/Settings/Identify/Mode icon |  |                  |   |                  |   |  |
| AUDIBLE ALARM           | Battery Mode                   | Sounding every 4 seconds  |  |                  |   |                  |   |  |
|                         | Low Battery                    | Sounding every second   |  |                  |   |                  |   |  |
|                         | Overload                       | Sounding twice every second   |  |                  |   |                  |   |  |
|                         | Fault                          | Continuously Sounding   |  |                  |   |                  |   |  |
| DIMENSION               | W x H x D mm                   | 145 x 220 x 400   |  |                  | 192 x 318 x 424                                 |                  |   |  |
| WEIGHT                  | kg                             | 12.8  | 6.4 ex.bat   | 26               | 11 ex.bat                                       | 26.4             | 11.4 ex.bat                                     |  |
| ENVIRONMENT             | Operating Environment          | 0-45° C   |  |                  |   |                  |   |  |
|                         | Relative Humidity              | 0-95% (NON-CONDENSING)  |  |                  |   |                  |   |  |
|                         | Noise Level                    | <40dB   |  | <45dB            | <46dB   | <45dB            | <46dB   |  |
| INTERFACE *build-in     | RJ45 (Ethernet) /WLAN *        | Free Mobile App support IoT, Android connect to GDPR IEC 62443 compliance Cloud service for IoT solution  |  |                  |   |                  |   |  |
|                         | USB 2.0(HID) & RS-232 *        | Software supports Windows Family, Linux, Sun Solaris, IBM AIX, Compaq True64, SGI IRIX, FressBSD, HP-UX and MAC   |  |                  |   |                  |   |  |
|                         | Others interfaces *            | RJ45 for EBM & Li-Ion battery type detection; EPO Dry In & Dry out contract for various external H/W control  |  |                  |   |                  |   |  |
|                         | Inteligent Slot (Option)       | For an install an optional SNMP Adapter/ AS400 Relay Card / RS485 / USB   |  |                  |   |                  |   |  |
| INTERNATIONAL STANDARDS | CE (EMI/EMS)                   | Conduction/Radiation:C2, ESD:IEC/EN 61000-4-2, RS: IEC/EN 61000-4-3, EFT: IEC/EN 61000-4-4, Surge: IEC/EN 61000-4-5   |  |                  |   |                  |   |  |

Specification are subject to change without prior notice.



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