


|   |   |   |
|---|---|---|
|  | <b>PRODUCT SPECIFICATIONS</b>                               | REF. No. :<br>EN-VN-CL010825-3C3 HD 20-200K |
|   | PRODUCT SERIES : Santak Castle Series                       | Page No.                                    |
|   | MODEL : 3C3 HD-20K<br>TECHNOLOGY : Online double conversion | 1 OF 4                                      |

### **INPUT**

|   |  |
|---|--|
| Nominal Voltage                                       | : 230VAC / 400VAC<br>Selectable: 220VAC / 380VAC<br>240VAC / 415VAC  |
| Phase   | : Three Phase with Neutral plus ground (4 wires + Ground)  |
| Power Factor  | : $\geq 0.99$  |
| Voltage Range (Rectifier input)                       | : 116 ~ 276VAC / 201 ~ 478VAC (- 50% + 20%),<br>100% Load: 190 ~ 276VAC / 330 ~ 478VAC (- 15%, + 20%),<br>50% Load: 116 ~ 276VAC / 201 ~ 478VAC (- 50%, + 20%) |
| Nominal Frequency                                     | : 50/60Hz, configurable  |
| Frequency Range                                       | : 42 ~ 70Hz  |
| THDi  | : < 3%   |
| AC Input Full Load Current<br>(Plus Battery charging) | : 36A (230/400VAC)   |
| Protection  | : Fuse & Breaker   |
| Connection  | : Terminal block   |


### **BYPASS**

|                           |  |
|---------------------------|--|
| Nominal Bypass Voltage    | : 230VAC / 400VAC<br>Selectable: 220VAC / 380VAC<br>240VAC / 415VAC    |
| Phase                     | : Three Phase with Neutral plus ground (4 wires + Ground)              |
| Bypass Voltage Range      | : 230VAC / 400VAC $\pm$ 15% (Default)<br>Max selection range $\pm$ 20% |
| Protection                | : Fuse & Breaker   |
| Maintenance Bypass Switch | : Available  |
| Connection                | : Terminal block   |

Auto transfer to Bypass mode when UPS is abnormal and Overload < 110%


Overload bypass: 60 min for 110% ~ 125%; 10 min for 125% ~ 150%; 1 min for >150%

Or manual transfer to bypass mode via Maintenance Bypass Switch (MBS)

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## **OUTPUT**

|                             |   |
|-----------------------------|---|
| Power Capacity              | : 20kVA / 20kW  |
| Power Factor                | : 1   |
| Nominal Voltage             | : 230/400VAC, Configurable: 220/380VAC, 240/415VAC  |
| Voltage Regulation          | : < 1% at steady state  |
| Phase                       | : Three Phase with Neutral plus ground (4 wires + Ground)   |
| Waveform                    | : True Sine wave  |
| Voltage Distortion          | : < 2% for Linear load, < 5% for Non-linear load  |
| Frequency                   | : 50/60Hz, configurable   |
| Unbalanced load             | : 100%  |
| Load Crest Ratio            | : 3:1   |
| Efficiency                  | : Up to 96% in double-conversion mode<br>Up to 99% in ECO mode  |
| Overload Capability         | : 60 min for 102% ~ 110% load<br>10 min for 111% ~ 125% load<br>1 min for 126% ~ 150% load<br>150 ms for >151% load |
| AC Output Full Load Current | : 29A (230/400VAC)  |
| Connection                  | : Terminal block  |

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### **BATTERY & CHARGER**


|                              |   |
|------------------------------|---|
| Type                         | : 12VDC - VRLA, Gel, NiCad, Lithium-ion   |
| Nominal DC Voltage           | : Default 432VDC, adjust from 320VDC to 607VDC  |
| VRLA 12V quantity            | : 36pcs, adjustable: from 32 to 44pcs (192 to 264 cell)   |
| Capacity range               | : Option (Selected according to the required backup time)   |
| Backup time                  | : Depends on the external battery capacity  |
| Charging configuration       | : ABM or float charge   |
| Charge Voltage               | : ABM Flood Voltage 2.30V/Cell<br>Battery Constant Float Voltage 2.28V/Cell<br>Battery Opportunity Charge Voltage 2.1V/Cell |
| Battery Low Alarm Voltage    | : 1.81V/Cell  |
| Battery Low Shutdown Voltage | : 1.75V/Cell  |
| Discharge end off voltage    | : 1.67V/Cell  |
| Over Voltage Protection      | : 2.45V/Cell  |
| Charging current             | : 25A, configurable   |
| Protection                   | : Internal Fuses  |
| Connection                   | : Terminal block  |

### **TRANSFER TIME**

|                                   |         |
|-----------------------------------|---------|
| Line mode to Battery mode         | : 0ms   |
| Bypass to Inverter and vice versa | : 0ms   |
| ECO mode to Line mode             | : < 2ms |

### **INTERFACE & CONTROL**

|                     |   |
|---------------------|---|
| Indicators          | : LED & 5" Color touch screen LCD   |
| Software            | : Option: WebPower (NMC Card)   |
| DC Power Start      | : Yes   |
| Communications Port | : RS232<br>Intelligent Slot * 2 (Options: NMC Card, CMC or AS400 Card)<br>Building Alarm Ports<br>Dry contact |
| EPO                 | : Available   |
| Parallel            | : Available up to 4 units   |
| Cooling             | : Force air cooling   |

|   |   |   |
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## **ENVIRONMENTAL**

|                       |   |
|-----------------------|---|
| Operating Temperature | : 0–40°C , the recommended operating temperature is 25°C<br>The use shall be derated at 40–50°C |
| Storage Temperature   | : -15°C ~ 55°C (placed in the protective packaging materials)                                   |
| Humidity              | : 5% ~ 95%, Non-condensing  |
| Altitude              | : < 1000 m  |
| IP Rating             | : IP20  |

## **STANDARD & SAFETY**

|   |  |
|---|--|
| Audible Noise (Within a distance of 1m) | : 61dB   |
| Safety                                  | : IEC 62040-1, IEC 60950-1   |
| EMC, Emissions                          | : IEC 62040-2 2016   |
| EMC electromagnetic susceptibility      | : IEC 61000-2-2 (Low-frequency conducted)<br>IEC 61000-4-2 (ESD)<br>IEC 61000-4-3 (RF electromagnetic field)<br>IEC 61000-4-4 (Electrical Fast Transient/Bursts Immunity Test)<br>IEC 61000-4-5 (Surge)<br>IEC 61000-4-6 (Conducted RF common mode)<br>IEC 61000-4-8 (Power frequency magnetic field)<br>IEC 61000-4-11 (Voltage dips and Voltage interruptions) |

## **MECHANICAL FEATURES**

|                            |                      |
|----------------------------|----------------------|
| Unit                       |                      |
| Dimensions: W x D x H (mm) | : 330 x 668 x 521 mm |
| Weight (kg)                | : 41 kg              |
| Packaging                  |                      |
| Dimensions: W x D x H (mm) | : 460 x 800 x 765 mm |
| Weight (kg)                | : 50 kg              |

Specifications are subject to change without notice.