



### CertaUPS C450R Technical Specification

| Model                        | C450R-010-B                                                          | C450R-010-C | C450R-020-B    | C450R-020-C | C450R-030-B    | C450R-030-C |
|------------------------------|----------------------------------------------------------------------|-------------|----------------|-------------|----------------|-------------|
| Capacity                     | 1000VA / 1000W                                                       |             | 2000VA / 2000W |             | 3000VA / 3000W |             |
| <b>EFFICIENCY</b>            |                                                                      |             |                |             |                |             |
| Line Mode                    | 89%                                                                  |             | 93%            |             |                |             |
| ECO Mode                     | 96%                                                                  |             | 97%            |             |                |             |
| <b>INPUT</b>                 |                                                                      |             |                |             |                |             |
| Input Voltage Range          | 160-300V 100% load, 110-160V derating to 50% load linearly           |             |                |             |                |             |
| Frequency                    | 50Hz / 60Hz                                                          |             |                |             |                |             |
| Power Factor                 | >0.99                                                                |             |                |             |                |             |
| THDI                         | <5%                                                                  |             |                |             |                |             |
| <b>INPUT CONNECTION</b>      |                                                                      |             |                |             |                |             |
| Socket                       | 1x IEC C14                                                           |             | 1x IEC C20     |             |                |             |
| <b>OUTPUT</b>                |                                                                      |             |                |             |                |             |
| Voltage Regulation (AC Mode) | 200/208/220/230/240 VAC (derating 10% at 208V, derating 20% at 200V) |             |                |             |                |             |
| Rated Frequency              | 50Hz / 60Hz                                                          |             |                |             |                |             |
| Maximum Power Factor         | PF = 1                                                               |             |                |             |                |             |
| Voltage accuracy             | ±1%                                                                  |             |                |             |                |             |
| THDv                         | <1% linear load; <5% nonlinear load                                  |             |                |             |                |             |
| Transfer Time                | 0ms Online -> battery; 4ms Online -> bypass; 10ms ECO ->Inverter     |             |                |             |                |             |
| Waveform (batt. Mode)        | Pure sine wave                                                       |             |                |             |                |             |

|                              |                                                                                                          |     |             |                                                                                                           |             |     |
|------------------------------|----------------------------------------------------------------------------------------------------------|-----|-------------|-----------------------------------------------------------------------------------------------------------|-------------|-----|
| Crest Ratio                  | Max 3:1                                                                                                  |     |             |                                                                                                           |             |     |
| Overload Capacity            | 100%<load≤105% continuous. 105%< load ≤125% for 3 minutes. 125%<load≤150% for 30 seconds >150% for 500ms |     |             |                                                                                                           |             |     |
| <b>OUTPUT CONNECTION</b>     |                                                                                                          |     |             |                                                                                                           |             |     |
| Socket                       | 1 main outlet group (with 4 x IEC C13)<br>1 programmable outlet group (with 4 x IEC C13)                 |     |             | 1 main outlet group (with 1 x IEC C19 +<br>4 x IEC C13) 1 programmable outlet<br>group (with 4 x IEC C13) |             |     |
| Load Segment Control         | 1 programmable load segment control                                                                      |     |             |                                                                                                           |             |     |
| <b>SHORT CIRCUIT CURRENT</b> |                                                                                                          |     |             |                                                                                                           |             |     |
| Bypass Mode                  | 550A / 2.8ms                                                                                             |     | 699A / 7ms  |                                                                                                           |             |     |
| Normal / Battery Mode        | 20A / 100ms                                                                                              |     | 36A / 100ms |                                                                                                           | 54A / 100ms |     |
| <b>BATTERY</b>               |                                                                                                          |     |             |                                                                                                           |             |     |
| Voltage                      | 36V                                                                                                      |     | 72V         |                                                                                                           |             |     |
| Maximum EBM quantity         | 4                                                                                                        |     |             |                                                                                                           |             |     |
| EBM Auto Detection           | Yes                                                                                                      |     |             |                                                                                                           |             |     |
| Battery Hot Swappable        | Yes                                                                                                      |     |             |                                                                                                           |             |     |
| <b>CHARGER</b>               |                                                                                                          |     |             |                                                                                                           |             |     |
| Charging Method              | Optimize Battery Management (OBM)                                                                        |     |             |                                                                                                           |             |     |
| Charging Current             | 1.5A                                                                                                     | 8A  | 1.5A        | 8A                                                                                                        | 1.5A        | 8A  |
| Recharge Time                | 3h to 90%                                                                                                | N/A | 3h to 90%   | N/A                                                                                                       | 3h to 90%   | N/A |
| <b>OTHER MODE</b>            |                                                                                                          |     |             |                                                                                                           |             |     |
| CVCF                         | Yes (deterating to 60% load)                                                                             |     |             |                                                                                                           |             |     |
| <b>HMI</b>                   |                                                                                                          |     |             |                                                                                                           |             |     |
| Display                      | Dot matrix LCD (optional segment LCD)                                                                    |     |             |                                                                                                           |             |     |
| Language                     | Multi-language                                                                                           |     |             |                                                                                                           |             |     |
| USB                          | USB 2.0 with HID power device                                                                            |     |             |                                                                                                           |             |     |

|                             |                                                           |                       |
|-----------------------------|-----------------------------------------------------------|-----------------------|
| RS232                       | Yes (DB9)                                                 |                       |
| Dry in/out                  | 1 programmable dry in; 1 programmable dry out             |                       |
| RPO                         | Yes                                                       |                       |
| Intelligent Slot            | Yes                                                       |                       |
| Network Card                | Optional, NMC                                             |                       |
| Modbus Card                 | Optional, CMC                                             |                       |
| Dry Contactor Card          | Optional, AS400                                           |                       |
| Wireless Module             | Optional                                                  |                       |
| IOT Ethernet Port           | RJ45                                                      |                       |
| Monitoring Software         | Winpower, CertaUPS Monitor App                            |                       |
| <b>PHYSICAL PERFORMANCE</b> |                                                           |                       |
| Dimension (WxDxH) mm        | 438 x 445 x 85.5 (2U)                                     | 438 x 600 x 85.5 (2U) |
| IP Protection Level         | IP20                                                      |                       |
| <b>ENVIRONMENT</b>          |                                                           |                       |
| Operating Temperature       | 0-40°C                                                    |                       |
| Relative Humidity           | 0-95%                                                     |                       |
| Operating Altitude          | 0-3000m (the load derating 1 % every up 100m @1000~3000m) |                       |
| Acoustic Noise              | <45dB at front 1m                                         | <50dB at front 1m     |
| Certification               | CE, IEC/EN 62040, UKCA                                    |                       |
| <b>EMS</b>                  |                                                           |                       |
| ESD                         | EC/EN 61000-4-2                                           |                       |
| RS232                       | IEC/EN 61000-4-3                                          |                       |
| EFT                         | IEC/EN 61000-4-4                                          |                       |
| Surge                       | IEC/EN 61000-4-5                                          |                       |

| ACCESSORIES        |                      |
|--------------------|----------------------|
| Input Power Cable  | Yes                  |
| Output Power Cable | Yes (For IEC models) |
| EBM Cable          | Yes (in EBM)         |
| USB Cable          | Yes                  |
| Rail Kit           | Included             |
| Tower Feet         | Yes                  |
| Rack Ears          | Yes                  |
| Manual (English)   | Yes                  |

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