

DC-CA 1000 CAL-BOX



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Description

The DC-CA 1000 CAL-BOX is a precision calibration device specifically designed for the on-site calibration and verification of the DC-CA 1000 Charger/Analyzer. It converts load current into a precise millivolt signal (50 mV at 150 A) and features a voltage tap function for accurate measurement control. Thanks to its compact aluminum housing and high-precision shunt technology, it enables reliable, traceable calibration directly on-site—eliminating the need to send the DC-CA 1000 away for servicing.

General Information

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|--------------|--|
| Product Name | DC-CA 1000 CAL-BOX |
| Manufacturer | Proponent Battery Services GmbH |
| Application | Calibration device for DC-CA 1000 Charger/Analyzer |
| Target Users | Service technicians, calibration laboratories, quality assurance |



Electrical Specifications

Current Measurement

| | |
|------------------------------|---|
| Shunt Type | 150-50 |
| Transfer Factor | 150A = 50mV |
| Operating Current Range | 0 to ± 100 A |
| Peak Current | Up to 150 A |
| Output Voltage (at 150 A) | 50 mV |
| Linearity | $\leq \pm 0.02\%$ of reading at 23°C |
| Temperature Coefficient | ≤ 10 ppm/°C (target), max. 15 ppm/°C |
| Calibration Uncertainty | $\leq 0.02\%$ (k=2) at 23°C |
| Overall Expanded Uncertainty | $\leq 0.15\%$ up to 150 A @ 23°C $\pm 5^\circ\text{C}$ (includes DMM, temp drift, self-heating) |
| Current Output Terminals | 2x 4 mm yellow safety banana jacks (Kelvin pair, + and -) |

Voltage Measurement

| | |
|-------------------------|--|
| Voltage Range | 0 to ± 60 VDC |
| Voltage Sense Terminals | 2x 4 mm safety banana jacks (red +, black -) |
| Input Impedance | High (sense pick-off only, DUT impedance irrelevant) |

Power Connections

| | |
|------------------------|---|
| Battery/DUT Interface | Circular high-current connectors (top and bottom) |
| Top Connector Label | DC-CA 1000 Charge/ Discharge Connector |
| Bottom Connector Label | DC-CA 1000 Charge/Discharge Cabel Connector |
| Current Capability | ≥ 150 A short-time, ≥ 80 A continuous |
| Contact Resistance | ≤ 0.5 m Ω per contact path |
| Mechanical Features | Keying/polarization to prevent incorrect connection |

Mechanical Specifications

| | |
|------------|--|
| Dimensions | 120 mm × 103 mm × 53 mm |
| Weight | 1.2 kg |
| Material | Aluminum extrusion with 2-3 mm aluminum top/bottom plates, black corner caps |
| Finish | Natural anodized, laser engraving or photo-anodized graphics |
| Fasteners | Stainless steel, Torx, countersunk |



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