

Stackable Constant Current Regulator (IGBT)



**IGBT REGULATOR
COMPACT AND STACKABLE
LOW MAINTENANCE
DIGITAL TECHNOLOGY
ADAPTABLE
TO THE LOAD
SINUSOIDAL CURRENTS
LOW HARMONIC
EMISSION
NO DEGRADATION OF THE
POWER FACTOR**

The CCRs DIAM3200 are optimized static power supplies, controlled by IGBTs (insulated gate bipolar transistors), designed to maintain a constant output current, independent of load or supply power fluctuations.

These devices are specially designed for supplying airport visual aids, in compliance with all international standards.

Equipped with great flexibility, they may be adapted to different types of load, LED signals, halogen signals, electronic converters or combined systems.

Compliance:

Aerodrome design manual, part 5 **ICAO**

61822, Edition 2.0 **IEC**

ocem



DIAM3200

Stackable Constant Current Regulator (IGBT)

GENERALITY - DIAM3200

The single-phase/two-phase constant current regulators (URCC) of the DIAM3200 series are optimized static power supplies, whose control is ensured by insulated gate bipolar transistors (IGBT), capable of maintaining constant the output steps independently from the load fluctuations and the supply voltage.

The DIAM3200 power supplies are stackable to optimize the space they occupy on the ground.

CONSTRUCTION DETAIL

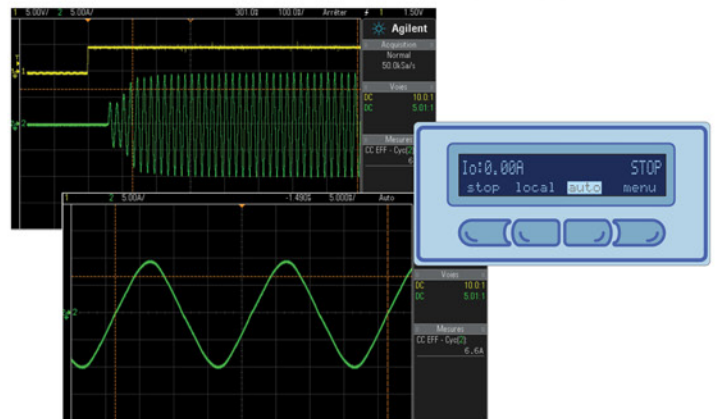
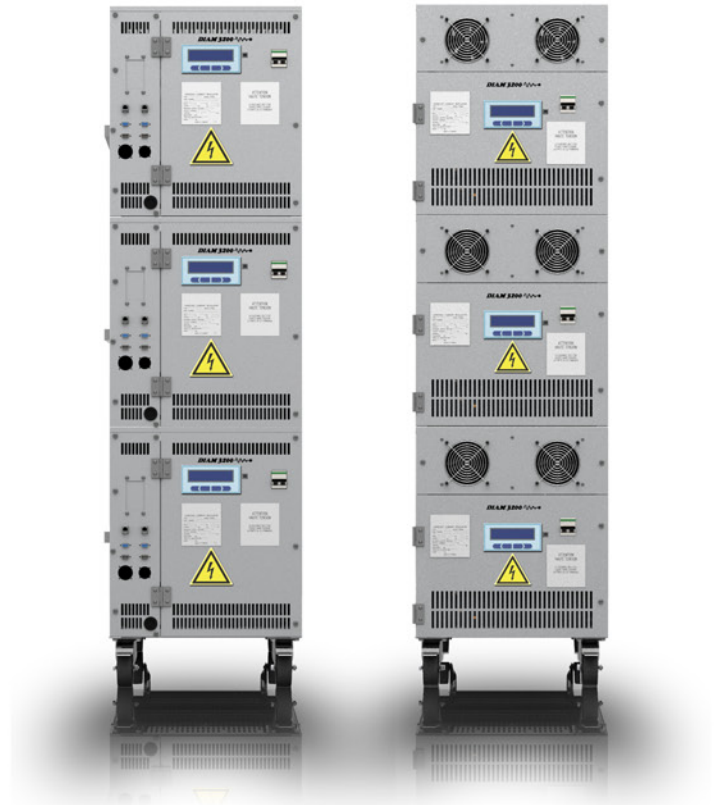
The DIAM3200 power supplies are characterized by an innovative evolution of the experienced electronic architecture. The system is built around electronic boards using a powerful DSP processor, having a fast and efficient computing and processing capabilities. The modules equipped with elevated power module (5,0-6,5 kVA) are equipped with fans to assure the proper light flow to cool the components.

A front USB socket allows to connect a setting lap-top computer. The operation is possible even when the device is powered off.

Remote control interface supports all network connections (with or without redundancy), and complies with all market standards.

The HMI user interface is composed by a polyester membrane keyboard equipped with buttons and a dot-matrix display screens to display messages, alarms and parameters.

The DIAM3200 power supplies can be remote controlled and monitored through electromechanical interface (multiwire): through contacts or with control power supply (from 20 to 60 V_{DC} or 120 V_{AC}).



CHARACTERISTICS

- Degree of mechanical protection: IP21
- Operational temperature: IEC/AENA -20° - +55°C
- Tropicalized components (cards and transformers)
- Supply: IEC 220 V - 240 V o 380 V - 415 V ±10%
- Automatic switch at the entrance
- Frequency: 45 - 66 Hz
- Performance: >90% nominal
- Power factor: >97% typical
- Surge protective device (3 levels)
- Open circuit protection
- Identification of capacitive loads
- Burnt lamps detection (compatible with each way of the integrated circuit selector)
- Time meters

- USB interface connection for configuration and maintenance
- Swivel castors and lifting rings

OPTIONAL DEVICES

- Earth fault detector, two thresholds
- Electromechanical interface for power and control: IEC, AENA (rectangular connectors 2x16-pin), circular connectors SORIAU
- Power and control bus (single or double): ModBus, RS485, Ethernet, LonWorks
- Current loop 4 - 20 mA for remote sending of current and power, or insulation values
- Input discharger
- CUT-OUT output disconnector
- Integrated circuit selector (from 2 to 6 ways)

HOW TO ORDER

example: D32 - IEC 5 - 40D2 - F 6 6 A - ICS2 - S2 - DTxxxx	
Reference standards¹: IEC = IEC (61822, Edition 2.0) (■) AEN = AENA (DIN/DNYM/PPT/002-05/13) (▲)	
Nb. of steps (brightness - from 1,8 to 6,6 A): from 1 = 1 nb. of steps to 8 = 8 nb. of steps	
Supply voltage: 22 = 220 V _{AC} 38 = 380 V _{AC} 23 = 230 V _{AC} 40 = 400 V _{AC} 24 = 240 V _{AC} 41 = 415 V _{AC}	
Nominal power: D2 = 2,5 kVA (without fans) F5 = 5,0 kVA (with fans) F6 = 6,5 kVA (with fans)	
(Wired) remote control: 0 = not present (■) E = Dry contacts (auxiliary internal supply V _{DC}) (■) F = Dry contacts (auxiliary external supply V _{DC}) (■) I = 32 Pins terminal (▲)	
Communication network (default: 1): 1 = RS485 (x1) 5 = RS485 + Ethernet 2 = RS485 (x2) 6 = Ethernet (x2) 3 = LonTalk (x1) 7 = RS485 + LonTalk 4 = Ethernet (x1) 8 = LonTalk + Ethernet	
Protection systems (sum of the figures): 1 = Input discharger ILA 2 = Thermal-magnetic circuit breaker CB (standard) 4 = Earth fault detector EFD	
CUT-OUT output disconnecter: 0 = None (■) A = Disconnector SIMALT2 (with jumper, 3 positions) (■) D = Disconnector SCC (with handle*, 3 positions) ³ (▲)	
Options²: ICSx = Selector ICS with x output (max. 6) ⁴	
Stacked setting up S2 = 2 CCR - ICS possible (connected to lower CCR) S3 = 3 CCR - ICS not possible	
Particular equipments⁵: DTxxxx = Specifications project identification code	

¹ Always check the compatibility of the options with the selected reference standard: (■) available only for D32-IEC version..., (▲) available only for D32-AEN version...; ² Any additional codes identify the options integrated in the device (if no option is available, this field is absent); ³ The Disconnector SCC is installed at the front in the version 2.5 kVA and at the rear in the version 5.0/6.5 kVA; ⁴ The Selector ICS is compatible only with single CCR or with stacked setting up S2; ⁵ Any code DTxxxx is assigned by the manufacturer to identify any design specifications implemented in the device (if no particular equipment is available, this field is absent).

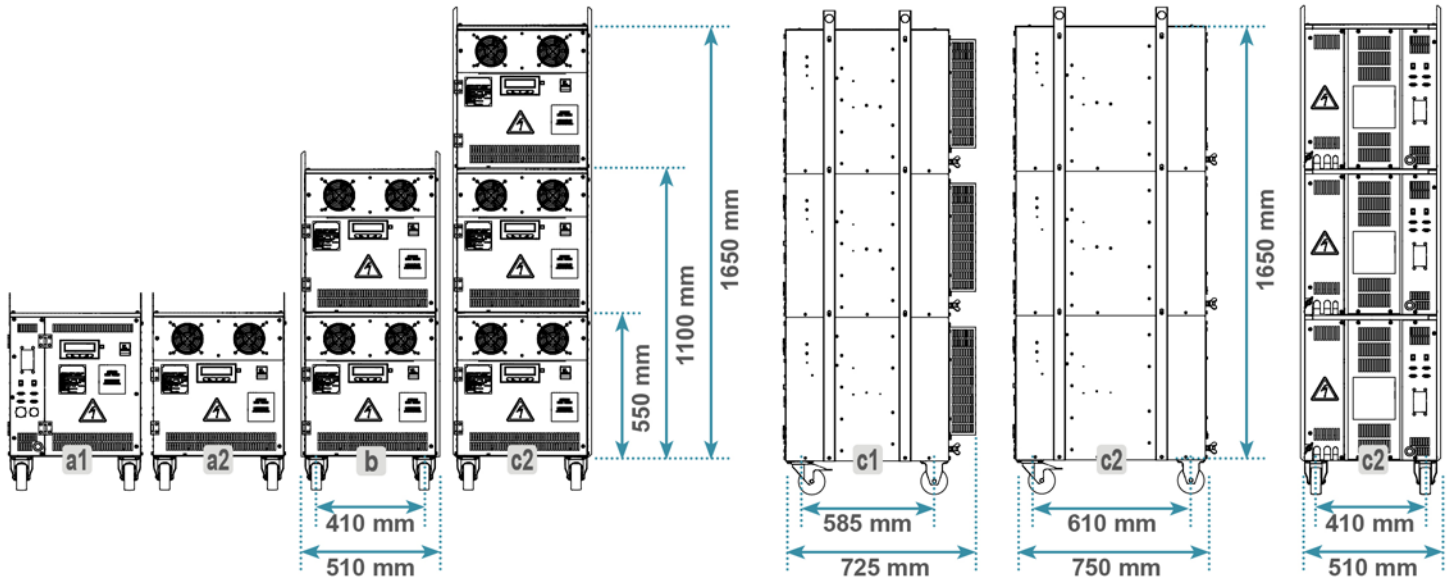
In the example **D32-IEC5-40D2-F66A-ICS2-S2**: CCR module made up of 2 units model DIAM3200 without fans (equal to each other). The CCRs are compliant IEC 61822, 5 steps. Supply voltage 400 V_{AC}, nominal power 2.5 kVA. Wired remote control through standard dry contacts (with auxiliary external supply V_{DC}). Ethernet communication network (2 doors). Equipped with thermal-magnetic circuit breaker CB (standard) and earth fault detector (EFD). CUT-OUT disconnecter SIMALT2 type with 3 positions jumper. 2 ways integrated circuit selector ICS (connected to lower CCR).

Included options: Tropicalization of electronic cards and of magnetic components; Output dischargers; Hour counter; Burnt lamps detection; Swivel castors; Lifting rings.

Front View

Side View

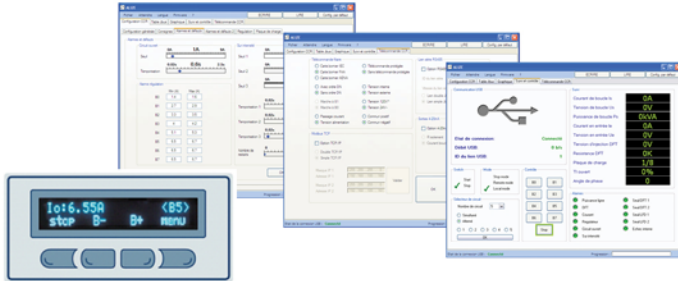
Rear View



Note:

- a** single setting up: 1) version 2.5 kVA; 2) version 5.0-6.5 kVA (with fans)
- b** two overlapping stage setting up
- c** three overlapping stage setting up: 1) version 2.5 kVA; 2) version 5.0-6.5 kVA (with fans)

INTERFACE AND SOFTWARE ALIZE



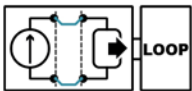
Note:

The user-friendly Windows-compatible diagnostic software allows to see all parameters and waveforms from the CCR. It allows any modifications, software releases, complete operation tests, etc...

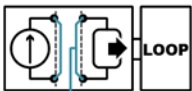


CUT-OUT DISCONNECTORS

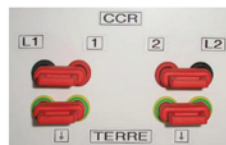
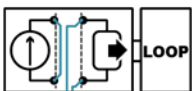
IN SERVICE



IN MAINTENANCE/SAFE CONDITION



ON MEASUREMENT



A

SIMALT2



D

SCC

The Manufacturer reserves the right to modify or update the technical parameters at any time without prior notice to Customer.

