



Constant current regulator **IDM 9000**

Protective functions

All protections with adjustable threshold and delay levels, selectable reset mode and remote control indication:

- Open circuit
- Over current

Protections with 2 levels; the first is a pre-warning and the second the actual tripping function:

- Input voltage, 2 levels
- Input frequency, 2 levels
- Temperature, 2 levels

Power unit

- Dry-type output transformer.
- Integrated IGBT diode bridges with controller and RC-filter to ensure reliable operation.
- Passive filter to suppress harmonic distortion.
- EMI filter to suppress RFI interferences.

Local control interface

- Operation rotary switch: Remote / off / brilliancy steps.
- All display, monitoring and protective functions easily accessed via graphical multifunction display and 5 soft keys.

Remote control interfaces

Parallel control:

- Selectable control mode Dec/Bin and static/impulse.
- Selectable control voltage 24/48/60V DC.
- Selectable fail-safe step for static controls.
- 24 potential free back indication signals.
- Optional built in DC-source.

Serial control:

- Integrated field-bus cards available for most major field buses.
- Duplicated interface as an option
- Additional measuring data can be transmitted e.g. no of lamps, isolation resistance etc.

Specification

- IEC 61822.
- ICAO Aerodrome Design Manual, Part 5, Electrical systems.

Application

- Switch mode constant current regulator especially designed for supply and control of airport lighting series circuits.

Characteristics

- Low THD sinusoidal output current
- Powerful and reliable 16-bit microprocessor provides extensive monitoring functions and also possibility for future upgrades.
- Modular electrical design with plug-in electronic boards and possibility to add options later on.
- User and maintenance friendly mechanical design according to latest safety requirements.

Standard functions

Display functions

- Output current and voltage RMS-values.
- Input voltage and frequency.
- Lamp fault no and % of total lamps.

- Earth fault value.
- Actual power and load power factor.
- Apparent power and % of full load value.
- Cumulative energy consumption.
- IGBT element temperature.
- Time and date.
- 10 patch fault log with time and date labels.
- Operating hour counters for all steps.
- CCR/system information aux displays.

Monitoring functions

Lamp fault:

- Accuracy ± 1 lamps up to 10 faults and ± 3 lamps up to 30 lamps on all brilliancy steps with loads from 50% to full of the CCR rating.
- No and % of fault lamps displayed.
- 2 alarm levels with adjustable threshold and delay levels and remote control indication.

VA-drop:

- Monitors the apparent output power against recorded full load values.
- Selectable tripping option for e.g. PAPI tilt-switch applications.
- 2 alarm levels with adjustable threshold and delay levels and remote control indication.

Optional units

Earth fault monitor (E)

- Measuring range from 50 Mohm to 10 kohms.
- Isolation resistance display and 2 alarm levels with adjustable threshold levels and delay times and remote control indication.
- Selectable maintenance mode provides extended protection by tripping the CCR on level 2 earth fault alarm.

Direction changer (1)

- 2 alternative directions can be fed and controlled with dedicated control switch.
- Currentless switching to ensure maximum lamp and contactor contact life.

Circuit selector (4)

- Up to 4 simultaneously controllable circuits.
- Presetable low current when switching off circuits to ensure maximum lamp life and minimum flickering of lights.

Surge arresters (S)

- On request high voltage surge arresters on output and normal surge arresters on input.

Lifting hooks (L)

- 4 hooks for lifting (and moving).

Wheels (W)

- 2 fixed wheels under the rear side.
- 2 swivel wheels under the front side.

Series cut-out switch (U)

In-built, available only for single output CCRs. For multiple output CCRs an optional separate cabinet IDM 8002 is available.

Terminal block (B)

Parallel D37 interface is wired to additional terminals.

Technical data

Supply voltage:

1x230V+N+PE -10 - +10%, 50Hz, 3-15 kVA
 3x230V+N+PE -10 - +10%, 50Hz, 20-30 kVA
 Full power down to -10%.

Power ratings:

3, 7½, 15, 20 and 30 kVA.

Output current:

6,6 A nominal.

Brilliance control:

7-step control standard.
 Others on request.

Remote control:

Parallel or serial interface.

Operating temperature:

-20°C to +55°C
 -40°C to +55°C on request

Dimensions (3-15 kVA):

Width	635 mm
Depth	645 mm
Height	1705 mm
	1735 mm (with hooks)
	1835 mm (with wheels)
	1865 mm (with hooks + wheels)

