

## Constant Current Regulator Type CR200



### Application

The constant current regulator CR200 is a proven reliable regulator, that provides a compact, stackable, lighting intensity controller for aeronautical ground lighting series circuits. The CR200 is particularly suitable for helipads and sites where space is at a premium.

### Standard features

- Seven stages of brightness individually pre-settable
- Remote control by standard control switch, microprocessor controller or two wire system
- Accurate current control with fluctuating supply voltage compensation
- Independent control and protection circuits
- Current flowing back indication
- Ammeter for RMS output current
- Total hours run meter
- Variable load facility
- On/off switching, load switching and brightness selection at any time, with soft start facility
- Interface to external output circuit selector unit provided
- Fully set up and commissioned at the CCR

### Performance

Output current accuracy  $\pm 1.0\%$  with input voltage within  $+6\%$  and  $-10\%$  and load variation from rated load to 50% of rated load with up to 30% of lamp filaments failed.

Ambient temperature range  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  (natural ventilation, no fans)

Tapped output transformer for close matching of output rating to load and double wound for electrical isolation.

Two-stage over current protection - first stage ramps current to zero, with automatic reset to correct output level: second stage trips input isolator with manual reset.

User selectable (enable/disable) first stage phase back over current protection.

Local/ standby/ remote control selector switch on CCR front panel.

Seven stage brightness selection switch on CCR front panel for local control. Each brightness step individually adjustable by internal potentiometer.

### Appropriate specifications

ICAO - Aerodrome Design Manual, Part 5, Para 3.2.1.4 to 3.2.1.6

CAP168 - Chapter 6, Sect 13.5

### Construction

A free standing, drip-proof ventilated cubicle, provided with removable lifting and stacking brackets. Units may be stacked up to 3 units high. Cable connections are via the rear gland plate. Electronic components are mounted behind the removable front panel. All routine adjustments and maintenance is carried out from the front of the unit.

## Constant Current Regulator Type CR200

### Optional features

The following features are available by customer request:-

- 6.6A or 12A output
- 380/440V phase/ phase or 200/250V AC phase/ neutral 50/60Hz input

- Internally mounted output lighting arrestors
- Lamp filament failure detection
- Earth leakage detection
- Two wire remote brightness control through an externally mounted relay interface unit

- External output circuit selector panel available
- Remote indication of True RMS output current by 4-20mA analogue current loop
- 50V DC internal power supply for remote control

### Brief Specifications

Type:	Solid State Thyristor Control
Ratings available:	1.5, 2.7, 4, 5, 7.5kW
Input Voltage:	Single Phase 200-250V 50/60Hz (1.5-5kW)
	Single Phase 380-450V 50/60Hz (1.5-7.5kW)
Power Factor & Efficiency:	Better than 90% at nominal input voltage with resistive matched load
Output Current:	6.6 Amp or 12A
Output Current Accuracy:	±1% of setting for supply variations +6% and -10% and loads from 0-100%
Response Time:	Less than 300mS (soft start on all settings)
Over Current Protection:	Automatic phase back and retry at 103% (selectable) De-energize at 105%
Open Circuit Protection:	De-energize within 100mS
Remote Control:	Selectable 24/48V DC multi-wire and 2 wire 0-10mA
Ventilation:	Natural air cooled
Temperature Range:	-20°C to +55°C (operating)
Humidity:	Max 95% Non-condensing
Altitude:	Zero to 2000m above sea level
Cabinet:	All steel construction to IP21 (IP41 available on request)

### Dimensions and Weights

Rating	Weight
1.5kW	80kg
7.5kW	135kg

All ratings housed in standard size cabinet

Cabinet size: -

Height = 476mm

Width = 550mm

Depth = 645mm

Lifting brackets supplied as standard.

Add 50mm to height.