

## **ELIGHT RC 200 TECHNICAL DATA**

### **SINUSOIDAL CONSTANT CURRENT REGULATOR (CCR) – THREE PHASE SUPPLY - STORAGE BATTERY (OPTION)**

#### **1. FEATURES**

ELIGHT RC 200 constant current regulators are expressly developed for the power of lamps series circuits to airport and heliport systems.

#### **2. EQUIPMENT DESCRIPTION**

The apparatus is composed by:

- RFI filter
- Contactor to connect the regulator
- Inductance to reduce harmonic distortion
- Diodes rectifier bridge, or as option thyristor rectifier bridge for CCR provided with battery
- PWM inverter with IGBT in H bridge configuration
- Insulation transformer
- Control Logic
- Interface relays circuit.

#### **3. PRINCIPLES OF WORKING**

The rectifier transforms alternated voltage into a continuous DC link voltage. IGBT inverter transforms the continuous voltage into an alternating sinusoidal stabilized and programmable voltage. Voltage sags or other mains disturbs above the CBMA curve don't influence the regulator working since they are absorbed by input inverter filter. The diodes rectifier performs an input power factor as 0.95. On request It is available a battery cabinet with its battery charger. If a black out occurs, the regulator will go on working without any interruptions on lamp circuits during the backup time of the battery or the time needed for the starting of a generating set. When the mains comes back, the battery charger provide to restore the battery performance. The charge is performed to constant current and increasing voltage up to floating value. Constant Current Regulator provided with battery feature has a THDi of 25% as standard and 10% with 12 pulses rectifier option.

#### **4. CHARACTERISTICS**

- |  |                                 |
|--|---------------------------------|
| – Input voltage:                                     | 342 ÷ 456 3Ph                   |
| – Input frequency:                                   | 40 ÷ 65Hz                       |
| – Input THD:   | 25% (10% as option)             |
| – Output current step settable:                      | 2.8A, 3.4A, 4.1A, 5.2A and 6.6A |
| – Static stability:                                  | ±1%                             |
| – Transfer time:                                     | <250msec.                       |
| – Working from 100% load to short circuit            |                                 |
| – Working up to 30% A.T. circuit series switched OFF |                                 |
| – Output harmonic current distortion:                | 5%                              |
| – Input power factor at nominal load:                | 0.95                            |
| – Efficiency:  | >90%                            |
| – Altitude without downgrading:                      | 1000mt                          |
| – Noise at 1 mt.:                                    | 65 dbA                          |

- Protection degree: IP 21
- Color: RAL 7035
- Battery cabinet according to back up time required
- Wheels

## 5. COMANDS

Switch operator at three positions.

- R position: remote control
- OFF position: regulator disconnected
- L position: local control

Switch operators at six positions

- 2.8 position: regulator connected with load 2.8A.
- 3.4 position: regulator connected with load 3.4A.
- 4.1 position: regulator connected with load 4.1A.
- 5.2 position: regulator connected with load 5.2A.
- 6.6 position: regulator connected with load 6.6A.

The intensity passages take place with ramp

Silence siren push bottom

Emergency Power Off

## 6. SIGNALING AND REMOTE CONTROLS

The following signaling are performed with a two colors LED's: green for normal working condition, red for alarm or manual working condition.

Signaling	Green	Red
– Regulator	Connected	Disconnected
– Control	Remote	Local
– CCR Working	Normal	Abnormal
– Temperature	Normal	High
– Series circuit	Normal	Open
– No. fault lamps	less than 30%	More than 30%

The alarm is signaled with siren locally (hush able).

All light signals are available in terminal board with dry contacts

## 7. METERS

- Output current ammeter
- Output voltage voltmeter
- Working hour counter

## 8. OPTION

Lonwork Echelon remote control

## 9. STANDARDS

- FAA Advisory Circular AC 150/5345-10E
- ICAO Aerodrome Design Manual Part. 5 from 3.2.1.4 to 3.2.1.6
- IEC 61822
- ENV 50231

### BACK UP TIME ACCORDING TO POWER

Battery type	30kW	25kW	20kW	15kW	10kW	7.5kW	5kW
07Ah	--	--	--	--	03min	05min	10min
12Ah	--	--	--	--	08min	15min	20min
17Ah	--	--	04min	06min	12min	20min	30min
24Ah	03min	05min	08min	13min	17min	30min	50min
40Ah	08min	11min	16min	23min	40min	55min	95min
65Ah	20min	23min	35min	48min	90min	112min	03h

### RANGE RC-200 ELIGHT SERIES

Rated power kW	Dimensions WxDxH cm	Weight kgs
40	80x60x180	400
30	60x80x120	320
25	60x80x120	280
20	60x80x120	260
15	60x80x120	240
10	60x80x120	210
7.5	60x80x120	190
5	60x80x120	170
4	60x80x120	150

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