



CONVERTITORI STATICI d'ENERGIA ELETTRICA

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.

ELIGHT RC 200 CCR are conforming to international standards regarding civil airports (FAA Advisory Circular AC 150/5345 – 10E. ICAO Aerodrome Design Manual Part 5 form 3.2.1.4 to 3.2.1.6 IEC 61822, ENV 50231).

On request apparatus conforming to military standards are available (MIL, STANAG).

2. Equipment description

The apparatus is composed by:

- RFI filter
- Contactor to connect the regulator
- Inductance to reduce harmonic distortion
- Diodes rectifier bridge
- 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 disturbances 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 > 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 back up time of the battery or the time needed for the starting of a generating set. When the mains comes back, the battery charger provides to restore the battery performance. The charge is performed to constant current and increasing voltage up to floating value.

4. Characteristics

- Input voltage: 342V ÷ 456V 3Ph
- Rated mains frequency: 40Hz ÷ 65Hz
- Rated power (kVA): 5 - 7.5 - 10 - 15 - 20 - 25 - 30
- Output current step settable: 2.8A, 3.4A, 4.1 A, 5.2A, 6.6 A
- Static stability: ± 1%
- Working from 100% of load to short circuit
- Working up to 30% A.T. circuit series switched OFF
- Output harmonic current distortion: 3%
- Input power factor in all load conditions: 0.95
- Temperature of working: 0°C ÷ 55°C
- Altitude without downgrading: 1000m slm
- Noise at 1 mt.: 65dBA
- Protection degree: IP 21
- Colour: RAL 7035

5. Board Comands

- Switch operator at three positions:
 - R pos.: remote connected
 - OFF pos.: regulator disconnected
 - L pos.: local connected

- Switch operator at six positions:
 - 1.8 pos.: regulator connected with 1.8A of load (no-illumination current step) (option)
 - 2.8 pos.: regulator connected with 2.8A of load
 - 3.4 pos.: regulator connected with 3.4A of load
 - 4.1 pos.: regulator connected with 4.1A of load
 - 5.2 pos.: regulator connected with 5.2A of load
 - 6.6 pos.: regulator connected with 6.6A of load

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Silencer siren
Emergency Power Off

6. Signalling and remote controls

Two colours LED's signal main operating conditions: green for normal working condition, red for alarm or manual working condition.

Signalling	Green	Red
• Regulator	Connected	Disconnected
• Control	Remote	Local
• Working	Normal	Alarm
• Temperature	Normal	High
• Series circuit	Normal	Opened
• No. fault lamps (option)	Less than 30%	More than 30%
• Leak to ground, prealarm threshold (option)	Lower	Upper
• Leak to ground, alarm threshold (option)	Lower	Upper

Alarms are local signalled with siren (on request)
All LED's signalling are available on dry contacts interface.

7. Meters

- Output current amperometer
- Output voltage voltmeter

8. On Request

- Fault lamps signalling
- Leak to ground
- Output discharger
- Dissection and grounding output circuit
- No-illumination current step
- RS 485 interface
- Custom input voltage and frequency
- Working temperature: - 40°C ÷ +55°C
- Wheels for moving
- Battery cabinet with charger

BACK UP TIME REGULATOR

BAT	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

CCR ELIGHT RC 200 RANGE

Rated power	Dimensions	Weight
[kW]	WxDxH [cm]	[kg]
30	80x60x150	320
25	80x60x150	280
20	80x60x150	260
15	80x60x150	240
10	80x60x150	210
7.5	40x60x120	190
5	40x60x120	170

ELIT Srl reserves his right to do modifications to his products without notice