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COMPLIANCE

ICAO Aerodrome Design Manual Part 5
FAA AC150/5345 -10H, L829
IEC 61820-3-2:2023

FEATURES & BENEFITS

- Free Standing Unit
- Housing Divided into Three Areas :
Electronic Control, Low Voltage & High Voltage
- Natural Air Cooled
- Operating Temperature Range -40 to +55°C
- Output Current : 6.6 or 20 Amps (1 ,3 ,5 or 7 Steps) Option : Non Illumination Step
- Rating From 2.5 to 30 KW
- Output Current Regulation ±1.0%
- Efficiency : Not Less Than 90%
- Open Circuit Protection
- Input Power Loss Monitoring

- Elapsed Time Monitoring
- Local Control
- Parallel Remote Control
- Power Factor : Not Less than 90%
- Over Current Protection
- Regulation Error Monitoring
- Lamp Fault Monitoring
- V1, I1, V2, I2, VA2 Monitoring

COMPONENT

CONTROL SECTION

This Section Constitutes the Control & Monitoring System of the Constant Current Regulator Using a Micro Processor. All Settings and Controls are Made Through a Key Pad and the Actual Values of the CCR are Presented on a HMI and Through LED Indicators.

The Main Components of the Control Section are as Follows :

- Interface Card
- CPU Card
- Power Supply Card
- Earth Fault Power Supply Card
- DO Card
- DI Card

HIGH VOLTAGE SECTION

The High Voltage Section Supplies Current to the Series Circuit and its Main Components are as Follows :

- Output Transformer
- Current Transformer
- Lighting Arrester
- Output Terminal
- Coupling Choke

LOW VOLTAGE SECTION

The Low Voltage Section Receives the Input From the Control Section and Executes the phase Control Through the Thyristor.

It Supplies Power to the Output Transformer.

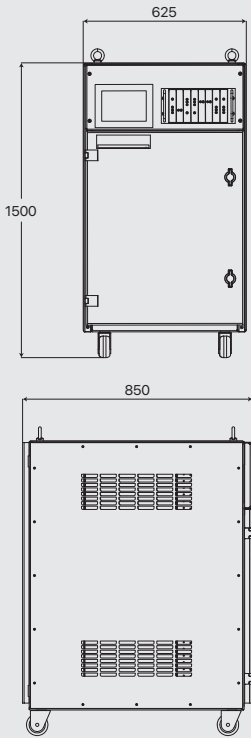
The Main Components of the Low Voltage Part are as Follows :

- Circuit Breaker
- Power Relay
- Magnet Contact
- Thyrstitor Moudle
- Input Choke
- Thyristor Drive Board

Volume & Weight

Weight	Volume (m³)
220 Kg	0.8

DIMENSIONS



OUTPUT CURRENT

6.6A				20A
1 Step	3 Step	5 Step	7 Step	5 Step
1:6.6A	3:6.6A	5:6.6A	7:6.6A	5:20A
	2:5.5A	4:5.2A	6:6.4A	4:15.8A
	1:4.8A	3:4.1A	5:5.2A	3:12.4A
		2:3.4A	4:4.1A	2:10.3A
		1:2.8A	3:3.4A	1:8.5A
			2:2.8A	
			1:2.2A	
Non illumination step : 1.8A (option)				

SPECIFICATION

Type	Thyristor Phase Control
Ratings	2.5, 4, 5, 7.5, 10, 15, 20, 25, 30 KW
Input Voltage	Single Phase 220V 50 / 60 Hz (other voltage upon request)
Output Current	6.6 A max (20 Amp upon request)
Brightness Step	7 Adjustable steps (1, 3, 5 or 7 steps)
	Option : Non illumination step 1.8A
Accuracy	All steps : within ±1%
Power Factor	>90% at nominal input and full load
Efficiency Control	>90% at nominal input and full load
Remote Control	Parallel : 24 VDC to 60 VDC Serial : RS-485 Dual line
Protection	Over Current Protection 12 = 6.85A < 4 sec / 12 = 6.93A < 2 sec 12 = 7.10A < 1 sec / 12 = 8.30A < 0.3 sec Open circuit protection I ₂ = 1.50A < 1 sec
Monitoring	Over current monitoring Open circuit monitoring Fuse fault monitoring Current regulation error monitoring Input power loss monitoring Output V-A Drop monitoring Lamp fault monitoring Earth fault monitoring V1, I1, V2, I2, VA2 monitoring Elapsed time monitoring
Ventilation	Natural air cooled
Temperature	0 to +55°C operation range
Humidity	10 ~ 95 % operation range
Altitude	0 to 2000 m. above sea level

Model Name
CCR

Output Current
1:6.6A, 2:20A

Input Voltage
1 : 208V 2 : 220V
3 : 380V 4 : 480V
5 : User Request

Capacity
04: 4KW 05: 5KW
07: 7.5KW 10: 10KW
15: 15KW 20: 20KW
25: 25KW 30: 30KW

Frequency
1: 50Hz 2: 60Hz

Option
A : Communication Module
B : Lamp Fault Module
C : Earth Fault Module
D : Circuit Selector S/W

CCR 1 1 04 1 ABCD