

CCR1

CONSTANT CURRENT REGULATOR



CCR 1 : ANALOG TYPE CONSTANT CURRENT REGULATOR

Compliance with standards

ICAO : Aerodrome Design Manual Part 5

IEC : 61822

FAA : AC 150/5345-10, L-828

K S : KS W 5091(Korean Standard)

The YCR 3000 CCR1 has been specially developed for use in airfield lighting series circuits taking into account specific requirements and for reliability, accuracy and ease of maintenance. The YCR 3000 CCR1 is a simple and sturdy unit benefiting from the long experience of Youyang in this field. This means compact construction and easy adaptation to operational demands as well as to individual demands for special features.

Features

- Free Standing Unit
- Housing divided into three areas: electronic control, low voltage and high voltage
- Natural Air Cooled
- Operating Temperature Range: -20°C to +55°C
- Output Current: 6.6 Amp (20 Amp available on request): 3 or 5 brightness steps
- Rating from 4 to 30 KW
- Local and Remote Control
- Output Current Regulation: +1.5%, - 3%
- Efficiency: not less than 90%
- Power Factor: not less than 90%
- Over Current Protection
- Open Circuit Protection
- Regulation Error Protection



CCR1

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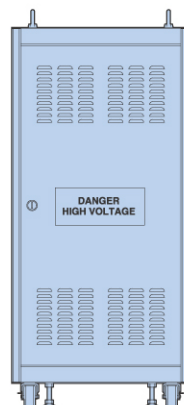
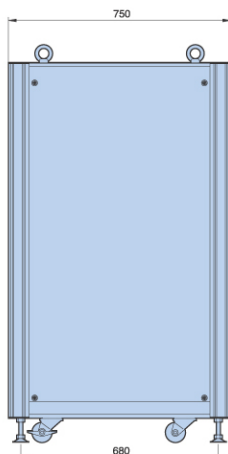
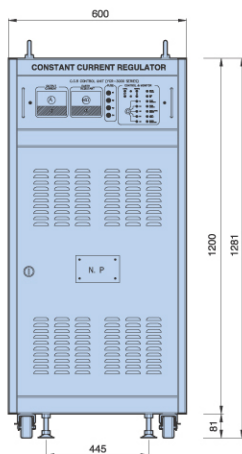


Brief Specifications

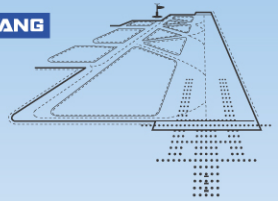
Description	Specification
Type	Thyristor Phase Control
Ratings	4, 5, 7.5, 10, 15, 20, 25, 30 KW
Input Voltage	Single Phase 220V or 380V 50/60 Hz (Other voltages upon request)
Power Factor	> 90% at nominal input and full load
Efficiency	> 90% at nominal input and full load
Output Current	6.6A max(20 Amp upon request)
Accuracy	Within +1.5% , - 3%
Remote Control	24VDC, 48VDC
Ventilation	Natural air cooled
Temperature	- 20°C to + 55°C in operation
Humidity	10 ~ 95% Max
Altitude	0 to 2000 m. above sea level

Output Current

6.6A(4kw~30kw)			20A(15kw~30kw)
1 Step	3 Step	5 Step	5 Step
1: 6.6A	3: 6.6A	5: 6.6A	5: 20A
	2: 5.5A	4: 5.2A	4: 15.8A
	1: 4.8A	3: 4.1A	3: 12.4A
		2: 3.4A	2: 10.3A
		1: 2.8A	1: 8.5A



Unit:mm



Component

Control Section



High Voltage Section



Low Voltage Section



● CONTROL SECTION

The Control Section is the core of the Constant Current Regulator and its main components are as follows;

- Regulation board
- Monitor board
- Control transformer
- Analog A-meter
- Analog Insulation resistance meter
- Fuse

● 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

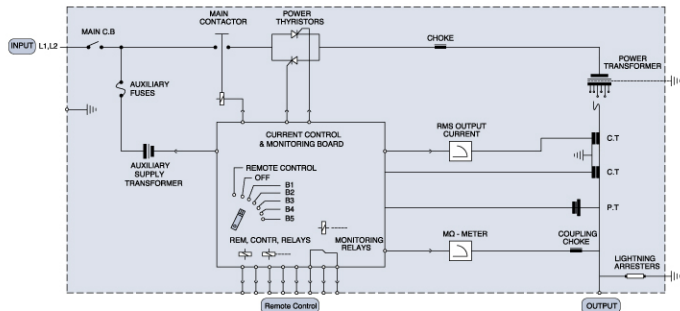
● LOW VOLTAGE SECTION

The Low Voltage Section receives signals from the Control Section and executes the phase control through the thyristor and it supplies power to the output transformer.

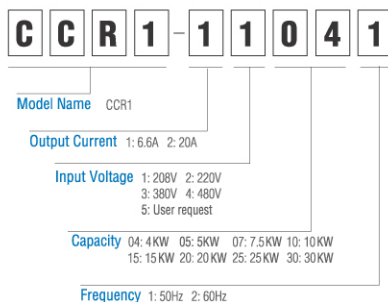
Main components of the low voltage section as follows;

- Circuit breaker
- Magnet contact
- Power Relay
- Thyristor module
- Input choke
- Thyristor drive board

Block Diagram



Ordering Code



Description

Model Name	Item	Specification
CCR1	Constant Current Regulator(L-828)	4KW~30KW

Spare Parts

Description	Specification	Ordering code
Current control board	PCB 3410	122-007A
Trigger Drive Board	PCB 3406	122-006A
Monitor Board	PCB 3019	122-026A
Thyristor	1,200V 80A	125-081A
Thyristor	1,200V 150A	125-077A
Thyristor	1,200V 350A	125-079A
Fuse	250V 2A	126-378A
Fuse	250V 4A	126-379A

Head Office