

HIGH POWER RECTIFIERS

Compact Rectifier - Air Cooled Series

Reliable DC Power



CRA Series:

100A to 25kA, 10V to 400V Air-cooled rectifiers for industrial applications with fully digital control for regulation, protection and communication

01 PowerIT Compact Rectifier CRA Series

The Main Features (CRA - Series)

The Compact Rectifiers are complete all-in-one, cabinet-mounted rectifier units including LV-transformer, rectifier, cooling, controller and operator panel facilities.

Compact Rectifiers of the CRA-series are air-cooled with standard enclosure protection class of IP20. The unit with it's digital control is pre-engineered, ready for fast and simple installation, start-up and operation.

ABB Compact rectifiers are manufactured on highest quality standards based on proved designs and a long history of rectifier experience. All components are carefully selected for maximum efficiency and lifetime. The heart of the Compact Rectifier is ABB's well known DC-drive technology DCS 800 controller for full digital control and protection. Interface signals and various serial communication protocols are available and allow easy integration into existing plant automation, remote operation and diagnosis.

Whenever needed, whatever your industry is and wherever you are located, ABB's worldwide services are at your disposal by our power-electronics and converter specialists in your country.

ABB Compact Rectifiers are the right choice to reliable and economical dc-power supplies in your plant

Technical Summary

Basic Data					
Rated supply voltage:	Up to 690 Vac 3-ph				
Rated frequency:	50 Hz or 60 Hz				
DC current range:	See table 'Range of CRA-Series'				
DC voltage range:	See table 'Range of CRA-Series'				
Output:	Unipolar				
Ripple:	< 5 % at full output power				
Control:	Current / Voltage				
Number of pulses:	6				
Cooling:	Air-cooling				
Degree of protection:	IP20				
Controller:	ABB DCS family digital controller				
Operating Conditions					
Ambient temperature	0 to 40°C (32 to 104°F)				

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Relative humidity:	5 to 95%, no condensation				

Indication and Operation

Meters:	Analogue dc-current and dc voltage				
Switches / Button:	On/Off, Reset, Emergency Stop				
Indication:	On/Off, Ready, Trip, Alarm				
Control:	Current reference setting via potentiometer				

Protections and Alarms

- Automatic mains breaker or Contactor on ac side for protection against ac and dc overload
- RC-snubber circuits parallel connected to input line and to semiconductors for protection against surge voltage
- SCR firing pulse suppression device (fast overload)
- Temperature thermostats placed on SCR heat sinks and in the main transformer windings
- Automatic circuit breakers or Contactors independently protect auxiliary circuits and
- · Wrong phase sequence and phase loss protection

Options

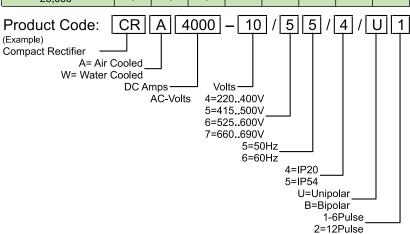
•	Control:	Input Panel Analogue or Digital AC current and AC voltage meter Signals 4 - 20 mA Potential free contacts				
	Meters:					
	AC Meters:					
•	Remote control:					

•	 On request (please consult manufact 				
•	Rated supply voltage:	Medium Voltage			
	Degree of protection:	IP54 with water-recooling of internal air-circuit			
•	Number of pulses:	12			
•	Output:	Bipolar operation			
•	Ripple:	Smoothing filter for ripple < 5%			
•	Communication:	Modbus, Profibus or others			
•	Soft start to avoid large inrush currents				
•	DC current ramp				
	Cooling	Water cooled rectifier with air- recooling (IP20) or water-recooling (IP54)			

• Other / Higher Current and Voltage ratings available

NB: Actual products might

DC Voltage	10	16	25	35	60	100	300	400
100							•	•
300					•	•	•	•
750					•	•	•	•
1,000	•	•	•	•	•	•	•	•
2,000	•	•	•	•	•	•	•	•
3,000	•	•	•	•	•	•		
4,000	•	•	•	•	•	•		
8,000	•	•	•	•	•	•		
10,000	•	•	•	•				
12,000	•	•	•					
20,000	•	•	•					
25,000	•	•	•					



vary from pictures shown