

HIGH POWER RECTIFIERS

Compact Rectifier - Water Cooled Series

Reliable DC Power



01 PowerIT Compact Rectifier CRW Series

The Main Features (CRW - 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 CRW-series are water-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 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.

CRW Series :

100A to 25kA, 10V to 400V

Water-cooled rectifiers for industrial applications with fully digital control for regulation, protection and communication

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 CRW-Series'
DC voltage range:	See table 'Range of CRW-Series'
Output:	Unipolar
Ripple:	< 5 % at full output power
Control:	Current / Voltage
Number of pulses:	6
Cooling:	Deionised water Plate Heat Exchanger
Degree of protection:	IP20
Controller:	ABB DCS family digital controller

Operating Conditions

Ambient temperature:	0 to 40°C (32 to 104°F)
Relative humidity:	5 to 95%, no condensation

Indication and Operation

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

Options

Control:	Input Panel
Meters:	Analogue or Digital
AC Meters:	AC current and AC voltage meter
Remote control:	Signals 4 - 20 mA Potential free contacts
On request	(please consult manufacturer)
Rated supply voltage:	Medium Voltage
Degree of protection:	IP54
Number of pulses:	12
Output:	Bipolar operation
Ripple:Smoothing filter for ripple < 5%	Smoothing filter for ripple < 5%
Communication:	Modbus, Profibus or others
Soft start to avoid large inrush currents	
DC current ramp	
Cooling:	Stand-by Pump or Heat Exchanger
Other / Higher Current and Voltage ratings available	

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 devices
- Wrong phase sequence and phase loss protection

DC Voltage \ DC Current	10	16	25	40	60	100
3 000	●	●	●	●	●	●
10 000	●	●	●	●	●	●
12 000	●	●	●	●	●	
15 000	●	●	●	●	●	
20 000	●	●	●	●		
25 000	●	●	●	●		

NB: Actual products might vary from pictures shown

